



The Evolving Marketplace: Essays on How Digitization and Abundance Influence Consumption

Citation

Wilson, Anne. 2020. The Evolving Marketplace: Essays on How Digitization and Abundance Influence Consumption. Doctoral dissertation, Harvard University, Graduate School of Arts & Sciences.

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The Evolving Marketplace:

Essays on How Digitization and Abundance Influence Consumption

A dissertation presented by

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to

The Committee of Business Administration

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

in the subject of

Business Administration

Harvard University

Cambridge, Massachusetts

March 2020

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ABSTRACT

This research investigates consequences of our changing marketplace, particularly as they pertain to digitization and increased accessibility of goods. Across three essays, I examine how the manner and ease with which people can now acquire, consume, and share goods influences how we consume and what our consumption decisions signal to others. Essay one addresses the rise of consumer minimalism. In this essay, I establish a definition of the construct of consumer minimalism and develop a scale for measuring minimalist tendencies. I also explore signaling consequences of being a minimalist versus non-minimalist consumer, showing that minimalism can serve as a particular form of conspicuous non-consumption, which leads to heightened attributions of social status in the eyes of others. In the second essay, I investigate perceptions of

bingeing behaviors, showing that bingeing (vs. not bingeing) is perceived as less utility maximizing, but as a stronger and more authentic signal of one's liking and passion for the consumed good; an effect explained by inferences of lower self-control during consumption. Finally, in essay three, I examine how the digitization of goods can influence interpersonal exchanges. In particular, I show that receiving digital versus physical money and goods results in lower feelings of interpersonal closeness between receivers and givers. Across these three essays, I use a combination of qualitative grounded theory methods, netnographic methods, surveys, experiments, and field studies.

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ACKNOWLEDGEMENTS

To start, I would like to thank my co-authors for their contributions to the essays included in this dissertation: Silvia, Mike, Anat, Shelle, and Neeru. Thank you for working with me on these projects and mentoring me throughout their development.

Of course, a huge thank you to my committee. Mike, thank you for always bringing things into much-needed perspective, for letting me be ‘me,’ and for always reinforcing the importance of focusing on and pursuing the things that really matter in life. I will truly miss our conversations and appreciate all that you have taught me over the past few years—about myself, research, and life. Anat, thank you for showing me how to think bigger, for being a calming and reassuring presence throughout my time as a student, and for always being one of my biggest cheerleaders. Leslie, thank you for being a confidant, for sharing my cynicism, and for encouraging me to push projects forward when my interests waned. Kelly, thank you for believing in me when I cold-emailed you as a lowly research assistant years ago, and for being there as a mentor, role model, and friend ever since. And to my entire committee, thank you all for always reminding me (despite my best efforts to convince you otherwise) that I am capable and worthy of creating a dissertation and pursuing a PhD. And to Mike and Leslie specifically, I want this recorded in an indelible online archive: ‘binging’ and ‘bingeing’ both are and always will be acceptable ways of spelling of the word.

A huge thank you to the entire HBS community. To my classmates, the members of NERD Lab, and to all of the people who have made life at HBS so enjoyable. Ayelet, Donald, Eva, Kate, Liz, and Shelle: thank you for all of the conversations over the past few years and for making the marketing department fun. Ayelet, thank you for your unending support, your fierce loyalty and friendship, and for always giving me an honest opinion—even if I didn’t ask for it. Donald, thank you for always being a voice of reason and wit, and making life in Boston so much more fun. And to Serena, thank you for being the best ‘work wife’ I could have ever asked for and, to borrow your words, for “making our office feel like a home.” I am endlessly grateful for you, and I feel so privileged to have been able to share this experience with you.

Molly, thank you for always believing in me and supporting me in all of my ventures. I am of course infinitely thankful for all that you do, but when it comes to school specifically, thank you for always talking through *all* of my research ideas, for testing my studies, for copy-editing abstracts and papers, for sitting through endless iterations of practice talks, for comforting me after journal rejections and celebrating revisions, and for letting me teach you the difference between moderation and mediation so that you could give even more helpful feedback. You truly deserve an honorary degree.

And last, but not least, thank you to all of my family and friends who have listened to me and supported me along the way, despite not caring at all what “past research says” and having no idea what I have actually been doing the past few years.

INTRODUCTION

Technological advances have lent to the digitization of a number of goods and processes, as well as increased the accessibility of goods for many consumers. As a result, the manners in which people acquire, exchange, and consume goods have changed substantially to reflect this evolving marketplace. For example, platforms like Venmo, Kindle, and Spotify allow for more seamless exchanges of digital money and media, making it easier for people to share resources with one another. Likewise, streaming services make it possible for people to consume more content at a faster rate, and for a lower cost, than ever before. Moreover, improvements in manufacturing and online retail makes it relatively easy for many consumers in today's world to cheaply and quickly acquire an abundance of material goods. However, the advent and proliferation of rental, subscription, access-based, and sharing economies—such as Uber, Rent the Runway, Spotify, Getaround, and Netflix—also means there is less of a need to personally own many things, and that media does not need to be consumed rapidly, because goods and resources can be accessed or borrowed easily and at any time.

Accordingly, the consequences of these changes in the marketplace can be evaluated both in terms of how they influence our consumption behaviors and in terms of what our consumption decisions signal to others. Therefore, in my dissertation, I broadly investigate consequences of digitization and increased accessibility or abundance of goods in terms of resulting behaviors—such as minimalism, bingeing, and digital exchanges—and what they signal to others. In particular, I investigate the phenomenon of consumer minimalism, how rate of consumption affects inferences of passion and product quality, and how digital versus physical exchanges influence interpersonal closeness. Below are three essays that correspond to each of these ideas, linked by the common objective of understanding consequences of our evolving marketplace.

Conspicuous Non-Consumption: Minimalism as a Status Symbol

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Abstract

Minimalism in consumption can be expressed in a multitude of disparate ways, such as monochromatic home design, wardrobe capsules, tiny home living, and decluttering. This research offers a unified understanding of these variegated displays of minimalism by establishing a comprehensive definition of consumer minimalism and developing a scale to measure the construct. Three distinct dimensions of consumer minimalism are identified: number of possessions (reflecting the tendency to own few possessions), sparse aesthetic (reflecting the preference for simple and uncomplicated designs), and mindful consumption (reflecting intentionality in and awareness of one's consumption decisions). Next, a series of studies examining the signaling consequences of being minimalist show that minimalism operates as a particular form of conspicuous non-consumption, signaling heightened social status to observers. The positive effect of minimalism on social status attributions is driven by the perception that minimalist consumers possess greater self-concept clarity, and is moderated by observers' own minimalist tendencies. Finally, these effects have implications for branding: users of brands positioned as more minimalist (vs. non-minimalist) are seen as having higher social status.

Extravagant lifestyles and lavish homes filled with luxurious objects and amenities have long served as popular markers of status (Veblen 1899). Indeed, magazines, blogs, and television shows such as *Lifestyles of the Rich and Famous* and *MTV Cribs* attracted viewers by offering a window into the ostentatious homes of the wealthy. Not surprisingly, brands have historically enticed status-seeking consumers by offering expensive, flashy, or supersized options that create the feeling of a more abundant lifestyle (Dubois and Ordabayeva 2015; Schor 2004). In recent years, however, minimalism has risen to the forefront of consumer culture, with many people embracing notions of decluttering, sparse living spaces, and reduced consumerism. Popular television shows such as *Tiny House Nation* and best-selling books like Marie Kondo's *The Life-Changing Magic of Tidying Up* are dedicated to teaching consumers how to be more minimalistic. Many aspirational brands—such as Muji, Cladwell, Patagonia, and Acne Studios—also actively endorse minimalist aesthetics and values, offering a smaller selection of monochromatic items and encouraging consumers to buy less.

Despite this increasing cultural significance, the concept of minimalism has not been well-defined in academic research or in the popular press. In the current work, we define consumer minimalism by identifying three key dimensions of the construct (i.e., number of possessions, sparse aesthetic, and mindful consumption) and develop a scale assessing these multiple dimensions of minimalist tendencies. We use grounded theory methods, exploratory and confirmatory factor analyses, reliability assessment, and scale and construct validation methods with samples comprised of a total of 1,960 participants, including lay consumers and self-ascribed minimalists recruited from online panels, social media groups, and in the field.

After establishing the construct and creating a scale to measure consumer minimalism, we explore how minimalist versus non-minimalist consumers are perceived by others. We argue

that, in the past, when owning and accessing things was more difficult, “maximalism” and conspicuous consumption were signals of status (Veblen 1899). However, because it has become substantially easier for many people to own goods—both in terms of cost and access (Eckhardt, Belk, and Wilson 2016; Holt 1998)—we propose that minimalism now operates as a particular form of conspicuous non-consumption. Through a series of studies using both between- and within-subjects designs, as well as a variety of visual and non-visual stimuli, we show that minimalism has emerged as a social status symbol.

We provide evidence that being a minimalist confers social status because it gives the impression that a consumer has high self-concept clarity, or a clear and consistent sense of who they are and what they value. In addition, we show that the effect of minimalism on perceived self-concept clarity and subsequent social status is moderated by observers’ minimalist tendencies. We also demonstrate implications of the observed effects for brands and marketers, showing that users of brands positioned as minimalist (vs. non-minimalist) are viewed as higher in social status. Moreover, we show that the positive effects of minimalism on status are stronger for observers who identify as more minimalist themselves.

Our research offers several theoretical and practical contributions. First, this work establishes the construct of consumer minimalism and develops a scale for measuring the three dimensions of minimalism. In doing so, this research serves as a foundational step in understanding, defining, and measuring the construct of minimalism in consumer behavior, branding, and marketing. Moreover, this work contributes to nascent literature on consumer minimalism (Liu et al. 2019; Mathras and Hayes 2019), and extends research on related constructs such as voluntary simplicity (Etzioni 1999; Leonard-Barton 1981; Shaw and Newholm 2002). This work also contributes to the literature on conspicuous consumption and

alternative signals of status (Bellezza and Berger 2020; Bellezza et al. 2014; Berger and Ward 2010; Dubois et al. 2012; Goor et al. 2020; Han et al. 2010) by investigating a novel consumption strategy for attaining status; namely, conspicuous non-consumption, or the visible absence of consumption. Further, we add to the body of work on self-concept clarity (Campbell et al. 1996; Savary and Dhar 2019) by elucidating the relationships between minimalism and self-concept clarity, and between perceived self-concept clarity and social status.

This research also makes important practical contributions. Having a concrete definition and means of measuring consumer minimalism is useful for brand managers seeking to better understand minimalist consumers and for segmentation, targeting, and positioning purposes. Second, we investigate how minimalism as a social status signal affects inferences of users of brands that position themselves as minimalist or not, and how this varies depending on observers' minimalist tendencies. Understanding the impact on consumer perceptions of minimalist brands is essential for marketers hoping to attract status-seeking consumers. Indeed, an increasing number of brands endorse minimalist aesthetics and values. Brands like Muji and Everlane epitomize functional and aesthetic simplicity, retailers such as Patagonia and REI actively encourage limited and mindful consumption, and many subscription, rental, and sharing services market themselves as a means of eschewing owning goods. As a result, understanding how people view users of such brands and services is of growing economic and social relevance.

THEORETICAL FOUNDATIONS

Consumer Minimalism

The term “minimalism” can be traced to a movement in American visual arts beginning in the mid-1960’s, often considered a reaction against the excessive nature of abstract expressionism (Fineberg 1995). In short, minimalist artists sought to strip art of its exaggerated emotion and superfluous symbolism, and instead emphasize simplicity (Minimalism 2012). Thus, minimalism refers to a style of work—whether visual art, architecture, music, or literature—that is spare and reduced to its essentials (VanEenoo 2011).

Over the ensuing decades, minimalism has expanded in influence from a cultural arts movement to consumer culture more broadly, through advertising, fashion, and design (Chayka 2020; McCracken 1986; Pracejus, Olsen, and O’Guinn 2006). Cultural meanings transferred into consumption are often fluid and dynamic in the sense that their interpretations and manifestations change over time (McCracken 1986; Richins 1994). This fluidity and dynamism of meaning is particularly evident in consumer minimalism given the multitudes of forms in which it is expressed today. For example, monochromatic home owners, wardrobe capsule enthusiasts, tiny home residents, luxury minimalists, CEOs committing to wearing the same outfit every day, and downshiffters all emblemize ‘minimalism’ and the de-emphasis of excessive consumerism (Chayka 2020; Currid-Halkett 2017; Fagan 2017). Moreover, different kinds of minimalists express minimalism through different aspects of the consumption process: some minimalists stress the importance of reducing how much they buy (D’Avella 2015), others focus on the disposal of owned goods (Kondō 2014), and still others emphasize how goods are used and visually displayed (Becker 2018).

Notably, the ubiquity and influence of consumer minimalism is not only evolving, but also appears to be expanding, with an increasing number of self-proclaimed minimalists, a swelling of media espousing minimalist values, and a growing number of brands positioning

themselves as minimalist (Currid-Halkett 2017). This interest in minimalism is also reflected in the number of books that mention minimalism: while appearances of ‘maximalism’ have remained stagnant since about 1970, the frequency with which the term ‘minimalism’ appears has been increasing, and the frequency of ‘minimalism’ surpassed the term ‘conspicuous consumption’ in 2008 (Google Ngram; see figure A1.2 in appendix for graphical display). Not surprisingly, some nascent research has been dedicated to investigating consumer minimalism (Liu et al. 2019; Mathras and Hayes 2019). For example, work in progress focuses on the processes by which people become minimalists (Mathras and Hayes 2019).

Nevertheless, the overall scholarly understanding of consumer minimalism remains limited. Most basically, the actual construct of consumer minimalism has not yet been well-defined. Even within minimalist culture, the concept of minimalism remains fuzzy and nebulous, with no clear consensus on what determines whether a consumer is a minimalist or not. Therefore, our first aim in this research was to define the construct of consumer minimalism and develop an assessment measure. The item-generation and scale validation processes identified three core dimensions of minimalism. The first dimension, *number of possessions*, indicates that minimalists are partly defined by owning few things and/or continually seeking to reduce the number of things they own. The enormous success of Marie Kondo’s method of decluttering is one salient example of the current cultural resonance of this dimension; one cultural commentator notes, “In the past century, we’ve swung from ‘buying happiness’ to ‘curating and purging certain bought items brings happiness’” (Janning 2019) while another opines, “People who have it all now seem to prefer having nothing at all” (Chayka 2020). Minimalism in its various forms embraces this notion, focusing on limiting consumption and reducing personal ownership to what is essential.

The second dimension, *sparse aesthetic*, suggests that minimalism is also determined by the extent to which one's design preferences are simple and uncomplicated. Extant work notes that minimalist design is characterized by simplicity via limited decoration, plain colors, often white, basic geometric shapes, and open space (Meyer 2000; Pracejus et al. 2006). In contrast, maximalist design is characterized by richness and a profusion of decorative patterns with limited white space (Ghoshal and Belk 2019; Rivers 2007). Thus, consumer minimalism entails a preference for a sparse aesthetic and an attraction to uncomplicated design. As a preliminary test of this dimension in the domain of fashion, we coded dresses from the "Minimalism Maximalism" exhibition at the museum of the Fashion Institute of Technology (New York, 2019). As expected, the minimalist dresses had significantly fewer colors, fewer patterns, and less volume than the maximalist dresses (see details in appendix).

The third dimension, *mindful consumption*, reflects the idea that consumer minimalism involves intentionality in and awareness of one's consumption decisions. Being mindful means being actively engaged in the present, sensitive to one's environment, and deliberate in decision-making (Langer 1992). Mindfulness allows minimalists to avoid impulse buying, facilitates awareness of objects and how they could be used, and allows for thoughtful display of goods (Etzioni 1999). As a result, minimalism often manifests as a voluntary, strategic, and thoughtful curation of goods (Mathras and Hayes 2019). This dimension of mindfulness is critical in differentiating the minimalist ethos from other seemingly similar consumer behaviors; for example, "forced minimalism," resulting from financial or logistical circumstances rather than agentic choice, does not carry the same cultural and symbolic meaning as mindful minimalism (Fagan 2017; Rodriguez 2018).

Integrating all three dimensions led us to the following definition: *minimalism in consumer behavior is a manner of (non)consumption that involves the mindful acquisition and ownership of few possessions, with a preference for a sparse aesthetic.*

Conspicuous Non-consumption

Conspicuous consumption involves the prominent and visible use of costly goods and services as a means of displaying one's status to others (Packard 1959; Veblen 1899); examples include decorating one's home ostentatiously or using products that have big, visible markers of luxury (Dubois 2020; McFerran, Aquino, and Tracy 2014). Notably, while conspicuous consumption was the primary route to signaling one's status for many years, more recent literature has documented a shift in the efficacy and use of visible status markers in favor of more subtle status signals. Specifically, in developed economies, modern mass-production systems on the supply-side and rising disposable income on the demand-side have made many traditional luxury goods more attainable and ubiquitous (Eckhardt, Belk, and Wilson 2015; Holt 1998). As a result, some high-status consumers have shifted to less recognizable but more expensive luxury products as a way to signal their standing and differentiate from mainstream consumers (Berger and Ward 2010; Han et al. 2010). Put differently, in reaction to the over-saturation of high-quality luxury items in the middle-class market, high-status consumers abandoned traditional conspicuous consumption and began engaging in more sophisticated forms of *inconspicuous consumption* to signal their high standing (Eckhardt et al. 2015; Sullivan and Gershuny 2004).

Building on this idea, we contend that another shift is occurring, driven by the fact that American society has become a culture of consumerism, with people accumulating more stuff than ever before and overwhelmed by the proliferation of choice. In 2017, for example, Americans spent \$240 billion on goods like jewelry, watches, books, luggage, and telephones, double the amount spent in 2002 on the same goods, although the population only grew by 13 percent in that time period (Semuels 2018). Just as increased access to luxury goods led to a shift from relying on conspicuous consumption to using forms of inconspicuous consumption as a status signal (Berger and Ward 2010), we posit that rampant consumerism has now opened the door to a strategy of *conspicuous non-consumption* as a means of signaling social status. In other words, due to the widespread accessibility of material goods, minimalism now serves as a particular form of conspicuous non-consumption, which we suggest—and document in our research—leads to heightened attributions of social status.

Interestingly, this shift was foreshadowed by Blumberg (1974): “Paradoxically, as abundance increases, the social importance of material things may diminish; thus, as American society becomes more materialistic, it may very well become less materialistic.” Recent literature supports this societal change, indicating that the wealthy have moved away from overt materialism and instead increasingly use knowledge, culture, and education as symbolic markers of status (Bellezza and Berger 2020; Currid-Halkett 2017; Holt 1998). Meanwhile, other research shows that this de-emphasis on materialism is reflected in “minimalist luxury” whereby wealthy people choose to stand out from mainstream consumers by deliberately limiting their consumption of luxury goods (Liu et al. 2019). Indeed, extant work also demonstrates that, all else equal, stores with displays that have more interstitial space (higher space-to-product ratio) are seen as more aesthetically appealing and prestigious (Sevilla and Townsend 2016). Even

decluttering, which may seem to have little to do with social class, is viewed as both productive and aspirational (Garrett 2015), and a privilege that can be enjoyed only by those who have a lifestyle that can be pared down (Pinsker 2016). Importantly, minimalism is displayed in other forms not necessarily related to wealth or luxury, such as creating wardrobe capsules or uniforms, van dwelling, and tiny home living. Yet regardless of how it manifests, the common theme amongst the various instantiations of minimalism is that minimalism reflects a form of conspicuous non-consumption, or an observable absence or reduction of consumption. As one blogger notes, “There are a million variations—fitting all your belongings into a single box, small-house or van living, radical de-cluttering, extreme purges of technology or social activity etc.—*but they all hold the same vague, usually unspoken level of superiority*” (Fagan 2017).

Minimalism, Self-Concept Clarity, and Status

Consistent with prior work, we define social status as the extent to which a person is respected, admired, and highly regarded by others (Dubois et al. 2012; Fragale, Overbeck, and Neale 2011; Magee and Galinsky 2008). So how does conspicuous non-consumption confer social status? With conspicuous consumption, prominent consumption of costly luxury goods communicates wealth, which subsequently confers status (Veblen 1899). With inconspicuous consumption, subtly branded luxury goods signal cultural capital or being ‘in the know’ to fellow insiders (Berger and Ward 2010; Han et al. 2010). In the case of conspicuous non-consumption, we propose that minimalism confers social status at least in part through greater perceived self-concept clarity of minimalist (vs. non-minimalist) consumers. Self-concept clarity reflects the

extent to which a person has a subjectively clear understanding of who they are, and this sense is consistent across time, or not changing from day to day (Campbell et al. 1996).

Minimalism and Self-Concept Clarity. Several investigations point to a link between self-concept clarity and minimalism, each of which relate to one of our core dimensions of minimalism: number of possessions, sparse aesthetic, and mindful consumption. First, theories such as the “empty-self theory” and “self-completion theory” suggest that consumers with an unclear sense of identity attempt to create clearer identities by acquiring non-essential goods and consuming material symbols (Cushman 1990; Ledgerwood, Liviatan, and Carnevale 2007; Wicklund and Gollwitzer 1981). In fact, a substantial amount of evidence links compulsive buying, hoarding, and materialism to low self-concept clarity or self-ambivalence (Frost et al. 2007; Reeves, Baker, and Truluck 2012). In contrast, consumers high in self-concept clarity display a greater willingness to dispose of identity relevant goods because doing so does not threaten their sense of self (Savary and Dhar 2019).

Second, people form impressions about others’ personalities and internal states based on their possessions and the way they arrange their environments (Belk 1988; Gosling 2018). Thus, we suggest that sparse aesthetics and displaying few items will convey greater self-concept clarity, compared to environments or possessions adorned with noisy or complex patterns and designs. A home with complicated designs, clutter, and ornate patterns might signal that the owner has a confused inner-world, while a home that is sparse and devoid of noisy design might communicate a clear inner-world. Prior work also shows that cluttered or disorderly environments negatively influence consumers’ internal states (Chae and Zhu 2014).

Finally, our third core dimensions of minimalism centers on the role of mindful consumption. Self-concept clarity is characterized by adherence to internal values and being

unaffected by external influences, reflecting a higher sense of self-awareness and consistency in values (Kraus, Chen, and Dacher 2011; Lee et al. 2010; Mittal 2015; Rios Morrison and Wheeler 2010; Vartanian 2009). Because we suggest that minimalists (vs. non-minimalists) are viewed as being mindful in their consumption decisions—adhering to a particular sense of self or value orientation in regards to material goods—we predict that they will be perceived as having a clearer self-concept.

Self-Concept Clarity and Status. We contend that perceptions of greater self-concept clarity engender higher social status in the eyes of others because people admire others who have a clear understanding of who they are and what they value. As mentioned, we define social status as the extent to which a person is respected, admired, and highly regarded by others (Magee and Galinsky 2008). Self-concept clarity is associated with being comfortable with who one believes they are (Mittal 2015) and with having higher self-esteem (Campbell 1990; Campbell et al. 1996), two admirable qualities that are suggestive of higher social status. Moreover, in the context of the current marketplace, being aware of and maintaining a clear sense of self may be particularly aspirational given the availability of seemingly infinite options for defining, re-defining, and expressing different selves through consumption (Bearden, Netemeyer, and Teel 1989). Indeed, the maxim ‘know thyself’ has long been an oft-touted aspiration (Gregory Wilkins 1917; Wolf 2009), and New Age spiritual thinkers and an abundance of self-help books continue to stress the importance of attaining and boosting a clear sense of self (Rindfleish 2005). Of particular relevance to our investigation is research linking the ability to behave in accordance with internal desires or values to positive attributions of status, competence, and coolness in the eyes of others (Bellezza et al. 2014; Kraus et al. 2011; Warren and Campbell

2014). As such, greater self-concept clarity confers social status because it is highly regarded and admired by others.

Characteristics of the Observer. We also investigate the impact of individual differences in observers' minimalist tendencies on how they perceive consumers who are minimalists (vs. non-minimalists). In particular, we examine the moderating effect of minimalist tendencies on the inferences observers make about minimalist (vs. non-minimalist) consumers and brands. Previous research suggests that people ascribe greater social value to others who embody the positive traits or qualities they possess or desire in themselves. For example, people with a high (vs. low) need for uniqueness view non-conforming behaviors as stronger signals of status (Bellezza et al. 2014) and consumers with countercultural values tend to perceive divergence from the norm as cooler than consumers with lower levels of counter-culturalism (Warren and Campbell 2014). As such, we hypothesize that individual differences in consumer minimalism, measured using the scale we develop, will moderate the effect of minimalism on social status. In particular, differences in perceived social status of minimalists (vs. non-minimalists) should be greater for observers who score higher in minimalism tendencies themselves.

In sum, we argue that inferences of higher social status for consumers who are minimalist (vs. non-minimalist) are mediated by observers' attributions of self-concept clarity and moderated by observers own minimalist tendencies. While "maximalism" has historically served as a signal of social status because acquiring high-quality goods was difficult and expensive, in today's world, where it is relatively easy for most people to consume and own things, minimalism confers higher social status because it signals greater self-concept clarity.

OVERVIEW OF THE PRESENT RESEARCH

We first define the construct of consumer minimalism and create a scale to assess minimalist tendencies. Specifically, in study 1, we use grounded theory methodologies to identify the core dimensions of minimalism, and generate scale items for assessing minimalist tendencies. In study 2, we use exploratory and confirmatory factor analyses, reliability assessments, and scale validation methods to empirically confirm the integrity of the dimensions and scale items. We also assess the importance and necessity of the identified dimensions of consumer minimalism by assessing the contribution of each dimension to inferences of minimalism. Using our definition and core dimensions, we then test our hypotheses and theoretical framework regarding minimalism as a status signal. Studies 3a and 3b examine perceptions of minimalist versus non-minimalist consumers based on visual (study 3a) and non-visual (study 3b) stimuli, showing that minimalists (vs. non-minimalists) are perceived as having greater self-concept clarity, which leads to inferences of heightened social status. Study 4 demonstrates the moderating role of observers' minimalist tendencies on the effect of minimalism on self-concept clarity and status inferences. Finally, study 5 explores branding implications: using brands positioned as minimalist (vs. non-minimalist) can confer higher social status, particularly in the eyes of observers who score high in minimalism.

STUDY 1: CONSTRUCT DEVELOPMENT AND MINIMALIST CONSUMER SCALE

Despite the prevalence of minimalism in consumer culture, the concept of minimalism has not been previously well-defined. Therefore, we begin our research by identifying the key

dimensions of consumer minimalism to better understand and assess the construct. We follow processes consistent with systematic grounded theory methodologies (Corbin and Strauss 1990; Martin and Turner 1986) and open-ended item generation (Paharia et al. 2011; Peck and Childers 2003) to both ascertain the dimensions of the construct of consumer minimalism and create scale items. This methodology ensures that our construct definition is consistent with the views of both self-ascribed minimalists as well as typical consumers.

Method

To start, we drew qualitative data from popular press and media, including books (e.g., *Goodbye Things*, *The More of Less: Finding the Life you Want under Everything You Own*, *Declutter: The Japanese Art of Minimalism*), movies (e.g., *Minimalism: Live a Meaningful Life*), and blogs (e.g., *BuzzFeed*, *Miss Minimalist*, *Becoming Minimalist*, *The Minimalists*). For more detailed descriptions and examples of press and media assessed, see appendix. A review of these sources allowed us to gain an understanding of the general conceptual underpinnings of minimalism and its portrayal in popular media. Reviewing the qualitative data also allowed us to develop a list of the commonly recurring abstract concepts and ideas that were clearly important to minimalism across multiple sources.

Next, we surveyed a sample of people who identify as minimalists. To do this, we joined over twenty minimalist-themed private Facebook groups (e.g., The Minimalist Life, Minimalist Living, Practical Minimalism, Path to Minimalism, Minimalist Designs, Efficient Minimalism Living; for full list of groups, see appendix) and asked self-ascribed minimalists from these groups to complete a short survey in exchange for the chance to win a \$25 Amazon gift card.

Respondents ($N = 96$; 85.4% Female; $M_{Age} = 39.73$) answered a series of questions relating to the practice of minimalism for exploratory purposes.

In particular, using the list of abstract concepts derived from the qualitative data, respondents selected which if any of the following 15 behaviors, presented in randomized order, are important elements of minimalism: (1) the number of things someone owns, (2) being intentional when acquiring new things, (3) valuing empty space, (4) sparse designs, (5) uncluttered living spaces, (6) being environmentally friendly, (7) reducing waste, (8) being thrifty, (9) simplicity in design, (10) not holding onto things, (11) limiting how much stuff one acquires, (12) being mindful of one's consumption, (13) being conscious of all the items one possesses, (14) focusing only on what is essential, and (15) an open-ended 'other' item. Next, participants indicated the extent to which they believed minimalism is "a reaction to someone realizing they spend too much money," "a reaction to someone realizing they have too much stuff," and "a reaction to someone realizing that we, as a society, consume too much" (1 = Not at All, 7 = A Great Deal). Finally, participants answered the question "Do you consider yourself a minimalist?" (yes/no), and to indicate in a free response "why or why not?" Participants also responded to the open-ended prompt, "In as much detail as possible, how would you define 'minimalism?' What are important dimensions of 'minimalism?'" See appendix for a more thorough description of stimuli and descriptive statistics.

In addition to capturing the perspectives of self-identified minimalists, we assessed lay views of minimalism as well. We recruited 200 respondents (44.5% Female; $M_{Age} = 35.08$) from Amazon Mechanical Turk (MTurk) for a similar online study in exchange for \$0.25. In addition to the questions above, this survey also involved a battery of other questions regarding beliefs about consumer minimalism (see appendix for survey details and descriptive statistics).

Results

To develop the construct of consumer minimalism from the qualitative data collected, we used an approach aligned with concept discovery from grounded theory methods (Corbin and Strauss 1990; Martin and Turner 1986); this methodology develops theory that is faithful to everyday realities and induced from diverse data (Glaser and Strauss 2017). Specifically, we examined the qualitative data to identify repeated elements or ideas that could represent common abstract categories (Glaser 1978; Glaser and Strauss 2017). The overarching abstract categories identified and survey responses were then used to extract the most important elements of minimalism and to form the basis for our conceptualization. The qualitative data revealed three dominant emergent themes.

Number of Possessions. First, we noticed a commonly-recurring theme centered on the number or overall amount of possessions a person owns as being an important dimension of consumer minimalism. For example, when asked to define minimalism, self-ascribed minimalists provided responses such as, “Minimalism: living with less, exact amount defined by person...avoiding purchases and critically considering needs to determine what you are willing to live without;” “Having less stuff;” “Use and consume what is necessary. Only buy what is needed and what needs to be replaced. Enjoy life, not unnecessary possessions.” Laypeople offered similar responses including, “Desiring to have less;” “I think minimalism refers to having the fewest number of items possible in order to live and operate;” and “Live with few possessions.” Likewise, many of the books we found teaching minimalist values emphasized the notion of limiting the number of things one owns. For example, Marie Kondo has popularized the idea of only keeping things that “spark joy,” and disposing of all other possessions (Kondō

2014), while book titles include, *Goodbye, Things: The New Japanese Minimalism* and *Minimalism: Less Things in Your Life to Live More Fully*.

The idea of having few possessions was also referenced repeatedly in terms of both reducing acquisition and disposing of unnecessary items. For example, one participant's definition of minimalism read, "Minimalism is owning as few objects as possible...owning only what you need and use, restricting purchases to items in those categories, and throwing out things that you do not need or use." Many blogs and webinars also encouraged the reduction of acquisition of new things with titles such as, "How to Stop Buying Things: 10 Minimalist Tips," "10 Ways to Stop Buying S*** You Don't Need," and "My No Spend Challenge: How I Bought Nothing for Six Months." Marie Kondo writes, "Start by discarding. Then organize your space, thoroughly, completely, in one go" (Kondō 2014), and many social media groups, books, and blogs encourage consumers to engage in minimalist challenges that require disposing of a particular number of goods over a set time period. Indeed, in many of the Facebook groups we joined, members post photos and images of the items they are disposing of throughout such challenges. The specific idea of "decluttering" also appeared repeatedly throughout definitions provided by consumers and in the books, blogs, and movies teaching consumers how to be more minimalist. Overall, whether referring to acquisition or disposal, the concept of limiting the number of possessions was a central dimension of consumer minimalism.

Sparse Aesthetic. The second theme that emerged in reviewing the qualitative data sources was an emphasis on preference for a sparse aesthetic. Consumers' definition of minimalism included, "An aesthetic that emphasizes simplistic design," "Plain, simple, smaller," "Aesthetic movement characterized by simple, linear designs free from ornamentation and excess color," and "Sparseness and simplicity." Indeed, an image search of minimalism also

corroborates such notions yielding images of monochromatic living spaces and wardrobes, and even the covers of minimalist books and movies tended to be simpler and sparser in design. Many blogs and books touched on the ideas that minimalism involves a preference for neutral or monochromatic colors, neatness and limited clutter, and simplicity of appearance. Popular press encouraging limited wardrobes also often featured small collections of clothing or “uniforms” that are comprised of limited colors, patterns, and designs. Thus, the idea that minimalism involves embracing a sparse or Spartan aesthetic was identified as the second key dimension.

Mindful Consumption. The third major theme that emerged when reviewing the data was the idea of consuming with intentionality or being mindful in one’s consumption choices. For example, in the popular documentary *Minimalism: A Documentary about the Important Things*, one of the protagonists states, “Minimalism is about living deliberately. So every choice that I make, every relationship, every item, every dollar I spend...I do constantly ask the question, is this adding value? Am I being deliberate with this decision?” (D’Avella 2015). Respondents to our surveys also defined minimalism saying, “Minimalism is the intentional promotion of the things we most value and the removal of everything that distracts us from it...;” “Minimalism is the act of having less possessions and having more experiences. Being more intentional and deliberate in all of your decisions;” “Minimalism is mindfulness [sic];” “I think minimalism is being aware of your consumption and making mindful choices to enhance your life...;” “Minimalism is bringing in less and being content and mindful of what you do have;” and “Minimalism is the practice of being mindful about one’s purchase and consumptions.” Being aware of what one owns and avoiding the accidental purchase of duplicates or unneeded items also repeatedly appeared in the qualitative data. Overall, the emphasis on the importance of intentionality and being mindful of one’s consumption generally were common refrains across

sources on minimalism. In fact, the most important elements of minimalism for self-ascribed minimalists related to these notions (i.e., “Being intentional when acquiring new things” and “Being mindful of one’s consumption”, see figure A1.3 in appendix).

In sum, the three most commonly repeated themes across the qualitative data collected about consumer minimalism could be abstracted into three key dimensions. While other themes cropped up occasionally—such as a focus on eco-friendliness, frugality, and thrift—the three clearly dominant central themes suggested our three key dimensions of minimalism: number of possessions, sparse aesthetics, and mindful consumption. We therefore developed scale items intended to capture these three macro-themes. Specifically, using recommended grounded theory methods (Corbin and Strauss 1990; Martin and Turner 1986), we noted the specific cited elements of each of the identified abstract themes, and then eliminated repetitive or ambiguous ideas to arrive at five scale items representing each overarching dimension, for a total of fifteen scale items (table 1.1). We worded all items in the first person such that participants can indicate their agreement with each item consistent with the instructions, “Please indicate the extent to which you agree with the following statements about yourself” (seven-point Likert scale, 1 = Strongly Disagree, 4 = Neither Disagree nor Agree, 7 = Strongly Agree).

Study 1 begins the process of defining the construct of consumer minimalism and creating a scale to measure minimalist tendencies using systematic grounded theory methodologies (Corbin and Strauss 1990; Martin and Turner 1986). This process resulted in the creation of the 15-item Minimalist Consumer Scale (table 1.2). In study 2, we use quantitative methods to empirically validate the scale. We assess the reliability and internal validity of the scale (study 2a), we test for confirmation and discriminant validity (study 2b), we examine known-groups validity (study 2c), and we assess construct validity of the three dimensions of

minimalism (study 2d). Together, these studies aim to validate the construct, the three key dimensions, and the specific items derived in the first study.

TABLE 1.1: MINIMALIST CONSUMER SCALE DIMENSIONS AND ITEMS (STUDY 1)

Minimalist Consumer Scale Dimensions and Items
<p>Number of Possessions</p> <p><i>I desire to own as few things as possible.</i></p> <p><i>I regularly seek to reduce the amount of stuff I own.</i></p> <p><i>It's better to own too few things than too many things.</i></p> <p><i>“Less is more” when it comes to owning things.</i></p> <p><i>I try to limit the number of things I purchase.</i></p> <p>Sparse Aesthetic</p> <p><i>I prefer things that look clean and simple.</i></p> <p><i>I prefer simplicity in design.</i></p> <p><i>I like to keep the decoration in my home simple.</i></p> <p><i>I believe that “less is more” when it comes to design.</i></p> <p><i>I prefer sparse designs.</i></p> <p>Mindful Consumption</p> <p><i>I like to be intentional about what I purchase.</i></p> <p><i>I am mindful of what I own.</i></p> <p><i>I am aware of the things/objects I bring into my life.</i></p> <p><i>I am conscious of all of the things I possess.</i></p> <p><i>I try to be thoughtful about what I consume.</i></p>

STUDY 2: SCALE VALIDATION

Study 2a: Reliability and Internal Validity

We recruited 501 participants (47.5% Female; $M_{Age} = 38.10$) from MTurk for an online study in exchange for \$0.20. Participants indicated their agreement with the fifteen items identified in the first study. The order of items was randomized. To determine the number of underlying dimensions, we conducted an exploratory factor analysis (Churchill 1979). We used a maximum likelihood extraction method, followed by an oblique (direct oblimin) rotation. An oblique rotation was chosen to allow the factors to covary. As predicted, the analysis of the scree plot identified three underlying dimensions, and three factors showed Eigenvalues greater than one. The three factors were consistent with our specified dimensions in the item generation step; specifically, number of possessions, sparse aesthetic, and mindful consumption. As reported in table 1.2, the rotated factor pattern indicated all items loaded strongly onto their respective factors (loadings from .58 to .90), and no items cross-loaded onto other factors. Each factor was represented by the expected five items created to reflect each dimension. All factors had high alphas (all $\geq .87$; table 1.2) and the alpha for the full scale was $\alpha = .92$.

Study 2b: Scale Confirmation and Discriminant Validity

In study 2b, we confirmed scale structure and assessed the discriminant validity of the Minimalist Consumer Scale by comparing it to other related existing constructs. We recruited 304 respondents (37.8% Female; $M_{Age} = 34.73$) from MTurk for an online study in exchange for \$0.50. In random order, respondents completed the 15-item Minimalist Consumer Scale, the Voluntary Simplicity Scale (18 items; Cowles and Crosby 1986; Leonard-Barton 1981), the Hoarding Rating Scale (5 items; Tolin, Frost, and Steketee 2010), and the Product Retention

Tendency Scale (19 items; Haws et al. 2012). We selected to test for discriminant validity from the Voluntary Simplicity Scale because it is the most obviously related construct in terms of face validity, and we wanted to ensure there is a meaningful difference between consumer minimalism and voluntary simplicity. Voluntary simplicity also typically involves behaviors that would be considered thrifty, frugal, and eco-friendly, which we felt minimalism does not necessarily involve. For example, items from this scale include: “Make furniture or clothing for the family,” “Contribute to ecologically-oriented organizations (such as Greenpeace, Sierra Club, etc.),” and “Ride a bicycle on errands within two miles of home.” We also wanted to ensure that our construct of consumer minimalism is not merely the inverse of hoarding, a pathological over-accumulation of possessions that causes psychological distress. For example, items on this scale include: “To what extent do you experience emotional distress because of clutter, difficulty discarding or problems with buying or acquiring things?” and “To what extent do you have difficulty discarding (or recycling, selling, giving away) ordinary things that other people would get rid of?” Finally, we chose to test discriminant validity from the Product Retention Index to validate that minimalism is not just related to a tendency to keep or discard items, but is a more nuanced manner of consumption. This scale is comprised of a list of twenty-one items such as “an old clock radio,” “an overcoat from high school,” “your grandmother’s china,” and “a suitcase that has a broken zipper,” and asks participants their likelihood of keeping each item.

Scale Confirmation. To provide further support for the results of the exploratory factor analysis in Study 2a, we first subjected the multidimensional factor structure for the Minimalist Consumer Scale to a confirmatory factor analysis. We fit the model using lavaan version .5-23 (Rosseel 2012) in R version 3.3.1 (R Core Team 2016). We used maximum likelihood estimation, with full information maximum likelihood (FIML) for missing data. We standardized

the latent factors, allowing free estimation of all factor loadings. The model fit was acceptable with a TLI of .95, a CFI of .96, and RMSEA of .06 (CI_{90%} = .05 to .08). The full three factor model fit the data significantly better than a single-factor solution ($\chi^2(3) = 315.81, p < .001$), or a three-factor solution that did not allow covariances among the three latent factors ($\chi^2(3) = 395.34, p < .001$). As expected, the indicators all showed significant positive factor loadings, with standardized coefficients ranging from .68 to .81 (table 1.2). There were also significant correlations among the three latent factors (table 1.3), indicating that people who were high in one minimalist dimension were more likely to be high on the other dimensions of minimalism.

TABLE 1.2: FACTOR LOADINGS FOR EFA (STUDY 2A) AND CFA (STUDY 2B)

Items	Exploratory Factor Analysis			Confirmatory Factor Analysis		
	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3
Number of Possessions ($\alpha = .88$)						
<i>I desire to own as few things as possible.</i>	0.86			0.80		
<i>I regularly seek to reduce the amount of stuff I own.</i>	0.66			0.71		
<i>It's better to own too few things than too many things.</i>	0.70			0.80		
<i>"Less is more" when it comes to owning things.</i>	0.82			0.80		
<i>I try to limit the number of things I purchase.</i>	0.58			0.70		
Sparse Aesthetics ($\alpha = .90$)						
<i>I prefer things that look clean and simple.</i>		0.81			0.73	
<i>I prefer simplicity in design.</i>		0.90			0.78	
<i>I like to keep the decoration in my home simple.</i>		0.76			0.81	
<i>I believe that "less is more" when it comes to design.</i>		0.74			0.77	
<i>I prefer sparse designs.</i>		0.62			0.77	
Mindful Consumption ($\alpha = .87$)						
<i>I like to be intentional about what I purchase.</i>			0.58			0.68
<i>I am mindful of what I own.</i>			0.83			0.77
<i>I am aware of the things/objects I bring into my life.</i>			0.81			0.78
<i>I am conscious of all of the things I possess.</i>			0.77			0.72
<i>I try to be thoughtful about what I consume.</i>			0.62			0.68
All items: $\alpha = .92$						

Discriminant Validity. To assess discriminant validity, we conducted an exploratory factor analysis including all items from the Minimalist Consumer Scale and the additional three

scales. We used a maximum likelihood extraction with no restriction on the number of the number of dimensions to be extracted. Results indicated that the items from the Minimalist Consumer Scale loaded onto the same factor with all factor loadings exceeding .53 and without any cross-loadings, while the items from the other scales loaded onto two separate factors with multiple cross-loadings. See table A1.2 in appendix for factor loadings from all four scales.

TABLE 1.3: LATENT VARIABLES CORRELATIONS (STUDY 2B)

	Amount of Stuff	Sparse Aesthetic	Mindful Consumption
Amount of Stuff	1	0.84***	0.64***
Sparse Aesthetic	0.84***	1	0.71***
Mindful Consumption	0.64***	0.71***	1
*** $p < .001$; ** $p < .01$; * $p < .05$			

A correlation analysis also showed that overall scores for the Minimalist Consumer Scale weakly correlated with those for the Product Retention Tendency Scale ($r = .19, p = .001$) and Voluntary Simplicity Scale ($r = .26, p < .001$), and did not correlate with the Hoarding Rating Scale ($r = .05, p = .40$). Importantly, the other scales correlated more strongly with each other than with the Minimalist Consumer Scale. Specifically, the Hoarding Rating Scale strongly correlated with the Product Retention Tendency Scale ($r = .65, p < .001$) and the Voluntary Simplicity Scale ($r = .72, p < .001$), and the Voluntary Simplicity Scale and Product Retention Scale were strongly correlated with one another ($r = .66, p < .001$). See table A1.3 in appendix for overall scales correlation matrix.

Study 2c: Known-Groups Validity

Known-groups validity of the scale was assessed by investigating whether the measure could distinguish between groups of people who would be expected to score higher or lower on the trait. We conducted a field survey in the streets of New York City, in which two research assistants, blind to the hypotheses, recruited patrons of six stores in Manhattan ($N = 60$; 76.7% Female, $M_{\text{Age}} = 29.42$). The stores were selected such that three of the stores were minimalist and three were non-minimalist stores, each set of three stores included a low, moderate, and high-priced store, and two of the stores in each set were clothing stores while one was both clothing and home goods/décor. The final set of minimalist stores included Dover Street Market, Everlane, and MUJI, while the set of non-minimalist stores included Saks 5th Avenue, Anthropology, and Urban Outfitters. For images of store fronts and interiors, see appendix.

Research assistants, blind to the hypotheses, were instructed to approach patrons of the stores and say, “Hello, I’m a research assistant at [Business School name]. We are looking for participants to complete a very short survey on their opinions. I will give you a \$5 Amazon gift card upon completion. Would you like to participate?” People who agreed to participate then completed the survey using pen and paper. The survey included the Minimalist Consumer Scale and basic demographic information.

Results. The Minimalist Consumer Scale showed high internal reliability ($\alpha = .87$). Moreover, in support of known-groups validity, patrons of the minimalist stores scored significantly higher on the Minimalist Consumer Scale ($M = 5.23$, $SD = .77$) compared to patrons of the non-minimalist stores ($M = 4.93$, $SD = .98$; $t(58) = 2.62$, $p = .011$, $d = .34$). The results of this study show that people who are more likely to be minimalists (i.e., patrons of minimalist stores) score higher on our Minimalist Consumer Scale compared to people who are

less likely to be minimalists (i.e., patrons of non-minimalist stores). Thus, the results of this study demonstrate known-groups validity, showing our scale can effectively discern between groups of people who should score differently on the scale.

In an addition to this known-groups validity assessment, in a separate study ($N = 151$), we also tested—and validated—the predictive validity of our scale, showing that scores on the Minimalist Consumer Scale predict preferences for minimalist (vs. non-minimalist) options too. In particular, participants who scored higher on the Minimalist Consumer Scale exhibited a stronger preference for living in a minimalist apartment over a non-minimalist apartment ($B = 1.10$, $t(149) = 9.39$, $p < .001$). See appendix for detailed description of this study and results.

Study 2d: Inferences of Minimalism

In study 2d, we test the validity of the dimensions that comprise our definition of consumer minimalism (i.e., number of possessions, sparse aesthetic, and mindful consumption) and assess whether each significantly contributes to inferences of minimalism. If our theorizing is correct, we should observe that each of the dimensions independently contributes to inferences of minimalism, even when controlling for the other two. To test this, participants read an interior design blog describing a consumer as high or low on each of the three dimensions, and rated the extent to which they thought the person seems minimalist.

Method

We recruited 799 respondents (43.6% Female, $M_{Age} = 36.44$) from MTurk for an online study in exchange for \$0.60. Participants read a fictional interior design blog post called “Inside Out Design.” We employed a 2 (Number of Possessions: few vs. many) x 2 (Aesthetic: sparse vs. ornate) x 2 (Mindfulness of Consumption: mindful vs. mindless) between-subjects design wherein participants read about a consumer who was described as high or low in each of the three dimensions of minimalism. Specifically, respondents read,

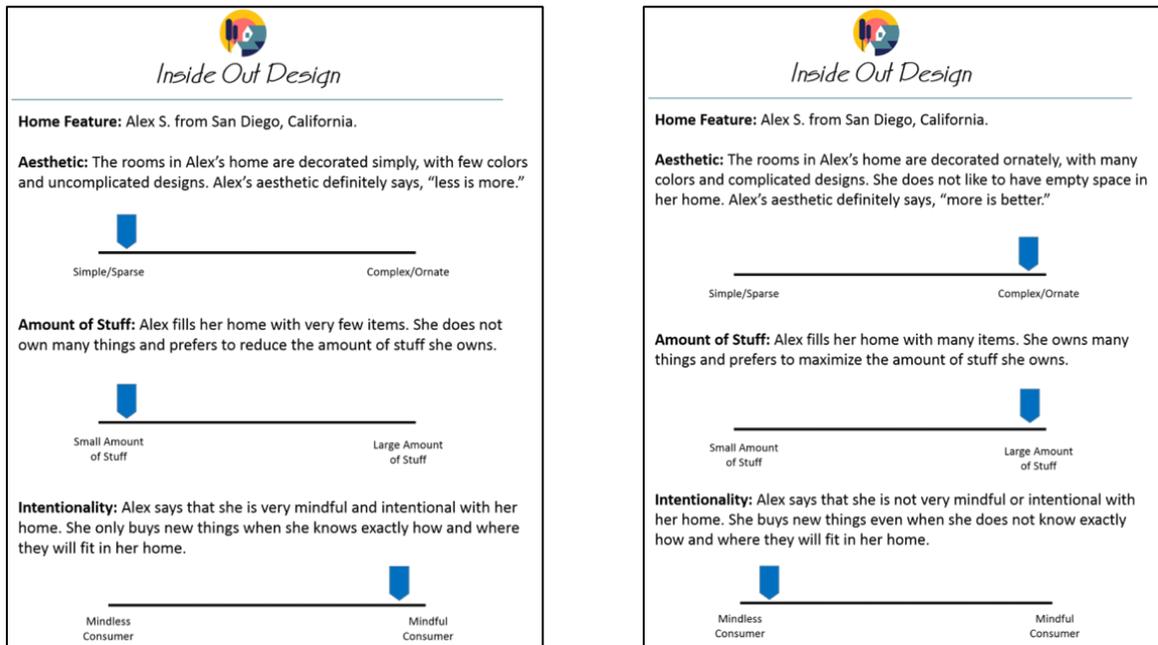
“Imagine that you are online reading a blog by an interior designer who interviews home-owners and then evaluates and writes about their homes. The name of the blog is “Inside Out Design.” In each of their posts, the design blogger rates homes in terms of aesthetics (or how the rooms in the home look design-wise), the amount of stuff the homeowner possesses, and the extent to which the homeowner is a mindful consumer.”

This scenario allowed us to orthogonally manipulate whether the consumer whose home was featured is described as minimalist or non-minimalist on all three Minimalist Consumer Scale dimensions. The blog post first had a logo at the top of the page for “Inside Out Design” followed by a description that read, “Home Feature: Alex S. from San Diego, California.” The blog post then described the person’s home in terms of aesthetic. The *sparse aesthetic* condition read, “The rooms in Alex’s home are decorated simply, with few colors and uncomplicated designs. Alex’s aesthetic definitely says, ‘less is more.’” The *ornate aesthetic* condition read, “The rooms in Alex’s home are decorated ornately, with many colors and complicated designs. She does not like to have empty space in her home. Alex’s aesthetic definitely says, ‘more is better.’” In terms of number of possessions, those in the *few possessions* condition read, “Alex fills her home with few items. She does not own many things and prefers to reduce the amount of stuff she owns;” while those in the *many possessions* condition read, “Alex fills her home with

many items. She owns many things and prefers to maximize the amount of stuff she owns.” In terms of mindfulness of consumption, the description of the *mindful* condition was, “Alex says that she is very mindful and intentional with her home. She only buys new things when she knows exactly how and where they will fit in her home.” Meanwhile, the *mindless* condition said, “Alex says that she is not very mindful or intentional with her home. She buys new things even when she does not know exactly how and where they will fit in her home.” Below the description of each dimension was also an illustration of a rating scale that the blogger ostensibly used to rate the home on each dimension. This was included to provide a visual illustration of how the person’s home could be characterized on each dimension. Figure 1.1 displays the stimuli used in two conditions out of eight (see appendix for visuals of all 8 conditions).

FIGURE 1.1: EXAMPLE STIMULI FOR STUDY 2d

Conditions with consumer displaying all three dimensions of minimalism (left) and no dimensions of minimalism (right):

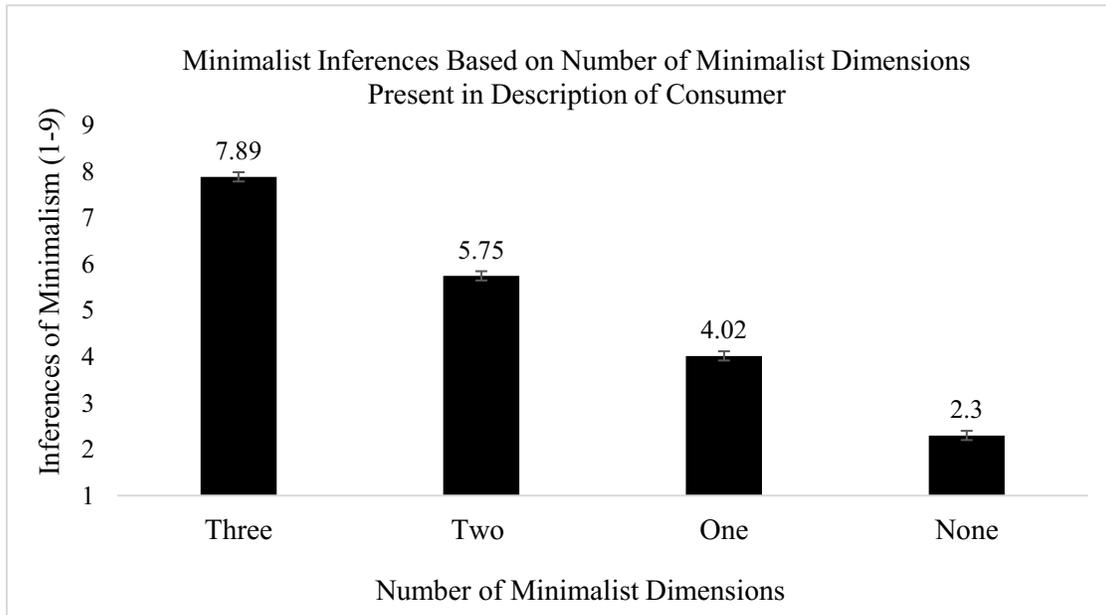


After reading the blog post, participants answered the question, “To what extent would you characterize Alex as a minimalist?” (1 = Definitely Not Minimalist, 9 = Definitely a Minimalist). We also asked about a series of additional inferences of the consumer for exploratory purposes and to obscure the purposes of the research (e.g., how nice, attractive, honest, independent, and competitive the home owner seems).

Results

For ease of analysis and exposition, we separately collapsed across conditions wherein any one dimension of minimalism was present or two were present. This allowed us to more simply compare conditions wherein the consumer is high on all three dimensions of minimalism against conditions wherein the consumer is high on one dimension, two dimensions, or none of the dimensions of minimalism (for detailed description of results for all eight conditions individually, see appendix). As predicted, a one-way ANOVA using the number of dimensions of minimalism present as the between-subjects factor indicated that the consumer is seen as most minimalist when they demonstrate all three dimensions of minimalism ($M = 7.89$, $SD = 1.53$) compared to when the consumer demonstrates any two dimensions ($M = 5.75$, $SD = 2.37$), any one dimension ($M = 4.02$, $SD = 2.70$), or no dimensions of minimalism ($M = 2.30$, $SD = 2.24$; $F(3, 795) = 117.14$, $p < .001$, $\eta_p^2 = .31$; figure 1.2). Post-hoc tests confirm that each condition is significantly different from every other condition (all $ps < .001$).

FIGURE 1.2: INFERENCES OF MINIMALISM DEPEND ON THREE KEY DIMENSIONS OF CONSUMER MINIMALISM



Note. Error bars represent standard errors.

Next, we conducted a regression analysis to assess the relative importance of each of the dimensions of minimalism in contributing to inferences of minimalism. The results indicated that all three dimensions of minimalism significantly contribute to inferences of minimalism even when controlling for the other two (Number of Possessions: $\beta = 3.58$, $t(795) = 24.11$, $p < .001$; Aesthetic: $\beta = 1.54$, $t(795) = 10.37$, $p < .001$; Mindfulness of Consumption: $\beta = .35$, $t(795) = 2.36$, $p = .018$). Notably, consistent with the results from the individual conditions, the regression analysis showed that number of possessions is the strongest determinant of inferences of minimalism, followed by sparse aesthetic, and mindfulness of consumption. However, all three dimensions make significant additive contributions to perceptions of minimalism independently, signifying the unique importance of each.

Discussion of Scale and Construct Validation Results

The results from studies 2a-d confirm the reliability and validity of the Minimalist Consumer Scale, including the three dimensions derived from the grounded theory work and the specific items created to reflect these dimensions. Study 2a shows the scale has high reliability and internal validity; an exploratory factor analysis revealed that the scale has three separate underlying factors consistent with the specified dimensions. Study 2b further validates the scale items and sub-dimensions; a confirmatory factor analysis again yielded three separate factors consistent with the dimensions, and an exploratory factor analysis demonstrated discriminant validity from related constructs. Study 2c shows that the scale distinguishes between groups of people who should differ in minimalism: patrons of minimalist stores in New York City scored higher on the Minimalist Consumer Scale compared to patrons of non-minimalist stores. Finally, study 2d provides evidence for the validity of the whole construct and each sub-dimension. Overall, these results support our theorizing and provide evidence validating the overarching construct of consumer minimalism, its key dimensions, and the scale created to measure minimalist tendencies.

STUDY 3: MINIMALISM, SELF-CONCEPT CLARITY, AND STATUS

We next examine the other core aspect of our conceptual account: that perceived minimalism engenders perceptions of high status by observers. Specifically, in these studies, we test our primary hypotheses that being a minimalist (vs. non-minimalist) confers higher social

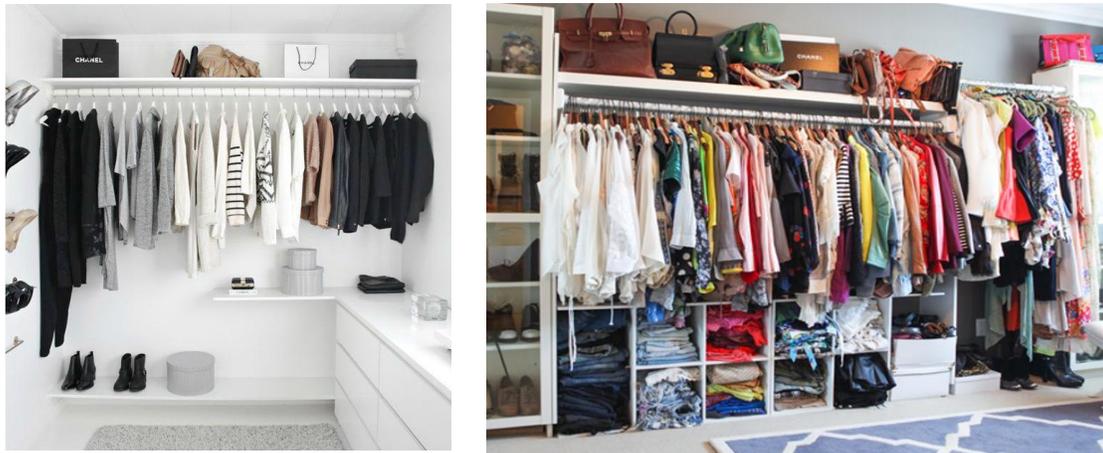
status in the eyes of others, as well as our proposed mechanism: that the effect is driven by the perception that minimalist consumers have a clearer sense of self. We test this proposed process using two methodologies: participants either viewed wardrobe photos (study 3a) or read descriptions (study 3b) manipulating the extent to which a consumer appeared to be minimalist, and then evaluated the consumer's social status and self-concept clarity.

Method (study 3a)

We recruited 200 participants (42% Female, $M_{\text{Age}} = 34.99$) from MTurk for an online study in exchange for \$0.20. Participants were shown a photo of a minimalist or non-minimalist wardrobe (between subjects) and told to imagine this was a picture of a specific consumer's (Sarah's) closet, figure 1.3. The wardrobe images were pre-tested with a separate group of respondents ($N = 101$) to ensure that the minimalist wardrobe was seen as higher in all three minimalist dimensions: number of possessions ($M_{\text{Min}} = 4.67$, $SD = 1.38$, $M_{\text{Non-Min}} = 1.40$, $SD = .93$; $t(99) = 13.94$, $p < .001$), sparse aesthetic ($M_{\text{Min}} = 6.04$, $SD = .98$, $M_{\text{Non-Min}} = 3.26$, $SD = 1.64$; $t(99) = 10.37$, $p < .001$), and mindful consumption ($M_{\text{Min}} = 5.94$, $SD = .90$, $M_{\text{Non-Min}} = 3.26$, $SD = 1.65$; $t(99) = 10.15$, $p < .001$). The minimalist wardrobe also scored higher on general impressions of minimalism ($M_{\text{Min}} = 5.67$, $SD = 1.40$, $M_{\text{Non-Min}} = 1.72$, $SD = 1.23$; $t(99) = 15.07$, $p < .001$). Moreover, pre-tests ensured that the rooms appeared comparably expensive ($M_{\text{Min}} = 5.34$, $SD = 1.26$, $M_{\text{Non-Min}} = 5.22$, $SD = 1.04$; $t(99) = .521$, $p = .603$). Importantly, controlling for perceived expensiveness of the wardrobe ensures that results cannot be attributable to economic

inferences, such as presumed financial wealth or apparent frugality. See appendix for full description of pre-test and all images pretested (e.g., offices, apartments).

FIGURE 1.3: IMAGES OF MINIMALIST (LEFT) AND NON-MINIMALIST (RIGHT) WARDROBES (STUDY 3)



After viewing the wardrobe, we assessed perceived status using three items based on previous literature on status inferences. First, following Bellezza, Paharia, and Keinan (2017), participants rated the consumer's social status by responding to the question, "On a scale from 1 to 7, how would you rank the social status of Sarah?" (1 = Low Social Status, 7 = High Social Status). Second, following Dubois and colleagues (2012), participants were asked to judge Sarah on two dimensions reflective of social status (this person is admired, this person is respected; 1 = Not at All, 7 = Very Much So). These three items were averaged to create an index of perceived social status ($\alpha = .88$). We use this index as our measure of status in all subsequent studies.

Next, participants provided their perception of the consumer's self-concept clarity. To measure impressions of self-concept clarity, we adapted the 12-item self-concept clarity scale previously validated by Campbell (1996) so that the items reflected impressions of another

person rather than one's self (e.g., the item that read, "In general, I have a clear sense of who I am and what I am" was re-worded as, "In general, she has a clear sense of who she is and what she is"). See appendix for all 12 items. We counterbalanced the order in which participants rated perceived status and self-concept clarity. Finally, participants provided demographic information (e.g., age, gender, income), and any comments for the researchers.

Results (study 3a)

As predicted, participants viewed the minimalist wardrobe owner as being of higher social status ($M_{\text{Min}} = 5.46$, $SD = .95$, $M_{\text{Non-Min}} = 4.87$, $SD = 1.11$; $t(198) = 4.04$, $p < .001$, $d = .57$; figure 1.4) and as having a clearer sense of self ($M_{\text{Min}} = 5.19$, $SD = 1.28$, $M_{\text{Non-Min}} = 4.02$, $SD = 1.20$; $t(198) = 6.64$, $p < .001$, $d = .94$; figure 1.5). A mediation analysis (PROCESS model 4; Hayes 2013) indicated that the effect of minimalism on inferred social status was significantly mediated by self-concept clarity inferences. Specifically, the effect of minimalism on self-concept clarity inferences was positive and significant ($B = 1.17$, $t(198) = 6.64$, $p < .001$), the effect of self-concept clarity on perceived social status was positive and significant ($B = .14$, $t(197) = 2.32$, $p = .021$), and the indirect effect was also positive and significant (indirect effect = .16; $CI_{95\%} = .01$ to .33).

Of note, order of appearance had no significant main effect on either evaluations of self-concept clarity or status. There was also no significant interaction of condition and order on status evaluations. However, there was an interaction between order and condition on self-concept clarity inferences ($B = .71$, $t(196) = 2.02$, $p = .044$), such that when participants

answered the self-concept clarity inferences first, the positive effect of minimalism on self-concept clarity was stronger ($B = 1.55$, $t(198) = 6.03$, $p < .001$) compared to when self-concept clarity inferences were solicited after status ($B = .84$, $t(198) = 3.50$, $p < .001$), but the effect was positive and significant in both cases.

Method (study 3b)

Study 3b aims to replicate the previous study using text-based stimuli to test whether the effects of being minimalist (vs. non-minimalist) on perceived self-concept clarity and subsequent social status hold when stimuli are non-visual, and include only descriptions of consumers as being minimalist or not. This method allows us to control for any potential confounds unintentionally introduced by the different images in the stimuli in study 3a. We recruited participants from Qualtrics ($N = 101$; 63.4% Female, $M_{\text{Age}} = 56.13$) to take part in this study as part of a panel of unrelated studies. Participants were randomly assigned to one of two between-subjects conditions: *minimalist* or *non-minimalist* condition. Participants in the *minimalist* condition read the description of a consumer who is high in the three established dimensions of minimalism,

“Tom tries to limit the amount of stuff he buys and consumes, and enjoys owning very few things. Tom is also very mindful when he shops and only buys new things when he knows exactly how/when he will use them. In his home, Tom strives to create an aesthetic that is simple and sparse. Tom likes to leave a lot of open or blank space in his home.”

Meanwhile, participants in the *non-minimalist* condition read a description of a consumer who is low in the three established dimensions of minimalism,

“Tom tries to maximize the amount of stuff he buys and consumes, and enjoys owning many things. Tom is also not very mindful when he shops and buys new things on a whim, even when he is not sure exactly how/when he will use them. In his home, Tom strives to create an aesthetic that is complex and ornate. Tom does not like to leave any open or blank spaces in his home.”

Next, participants indicated their beliefs about the person’s social status using the same items from study 3a (3 items, $\alpha = .90$). In this study, we used a one-item measure of self-concept clarity instead of the full scale to determine whether the effects would replicate with a different, simpler measure that had high face validity for the inference of interest; participants indicated the extent to which they thought the person described in the text seemed to have a ‘clear sense of self’ (1 = Not at All, 7 = Definitely). Of note, for exploratory purposes, we also asked participants the extent to which they thought the person seemed disciplined and ‘in control’ (1 = Not at All, 7 = Definitely). Participants thought the person described in the *minimalist* condition was significantly more disciplined ($M_{\text{Min}} = 6.25$, $SD = .92$, $M_{\text{Non-Min}} = 2.23$, $SD = 1.59$; $t(99) = 15.35$, $p < .001$, $d = 3.09$) and in control ($M_{\text{Min}} = 6.06$, $SD = 1.03$, $M_{\text{Non-Min}} = 2.87$, $SD = 1.66$; $t(99) = 11.45$, $p < .001$, $d = 2.31$). As in study 3a, participants provided some demographic information and potential comments.

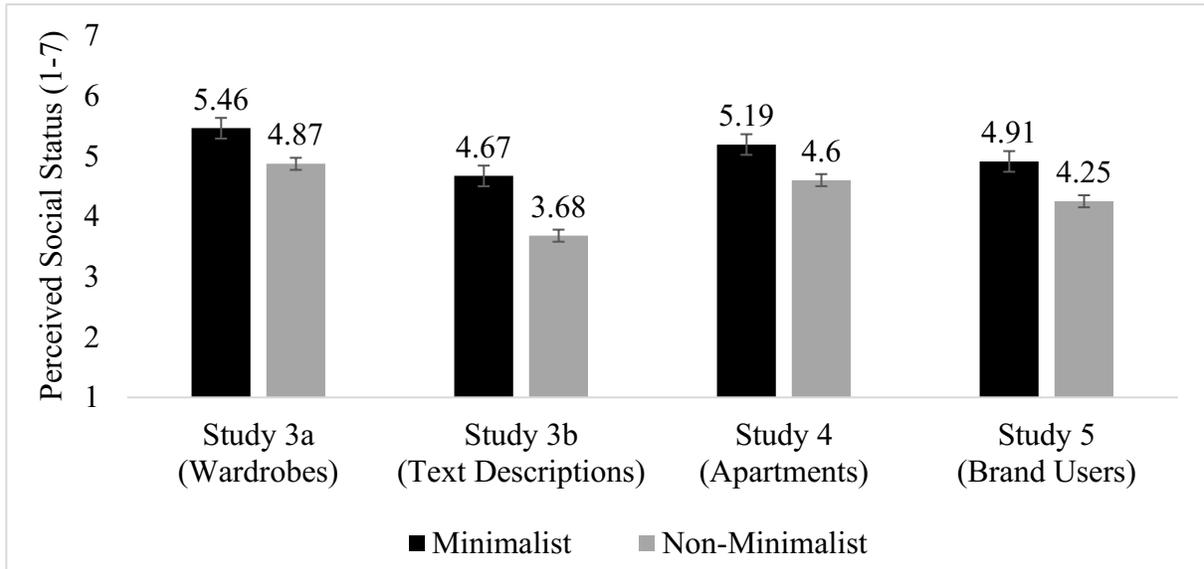
Results (study 3b)

Replicating study 3a, participants rated the consumer described as a minimalist as having significantly higher social status ($M_{\text{Min}} = 4.67$, $SD = 1.19$, $M_{\text{Non-Min}} = 3.68$, $SD = 1.28$; $t(99) = 4.00$, $p < .001$, $d = .80$; figure 1.4) and greater self-concept clarity ($M_{\text{Min}} = 5.87$, $SD = 1.19$, $M_{\text{Non-Min}} = 2.85$, $SD = 1.65$; $t(99) = 10.59$, $p < .001$, $d = 2.10$; figure 1.5). A mediation analysis (PROCESS model 4, Hayes 2013) indicated that the effect of minimalism on social status was mediated by perceived self-concept clarity: the effect of minimalism on self-concept clarity inferences was positive and significant ($B = 3.01$, $t(99) = 10.59$, $B = 1.70$; $p < .001$), the effect of self-concept clarity on perceived social status was positive and significant ($B = .56$, $t(98) = 8.47$, $p < .001$), and the indirect effect was positive and significant (indirect effect = 1.70, $CI_{95\%} = 1.27$ to 2.06). Importantly, while there are significant positive effects of minimalism on perceived discipline and being in control, a simultaneous mediation analysis including inferences of self-concept clarity, discipline, and being in control, showed that the indirect effect of self-concept clarity (1.11, $CI_{95\%} = .39$ to 1.60) is significant when controlling for the other two variables, but the indirect effects for discipline (.44, $CI_{95\%} = -.59$ to 1.40) and being in control (.57, $CI_{95\%} = -.23$ to 1.45) are not significant in this model.

Discussion

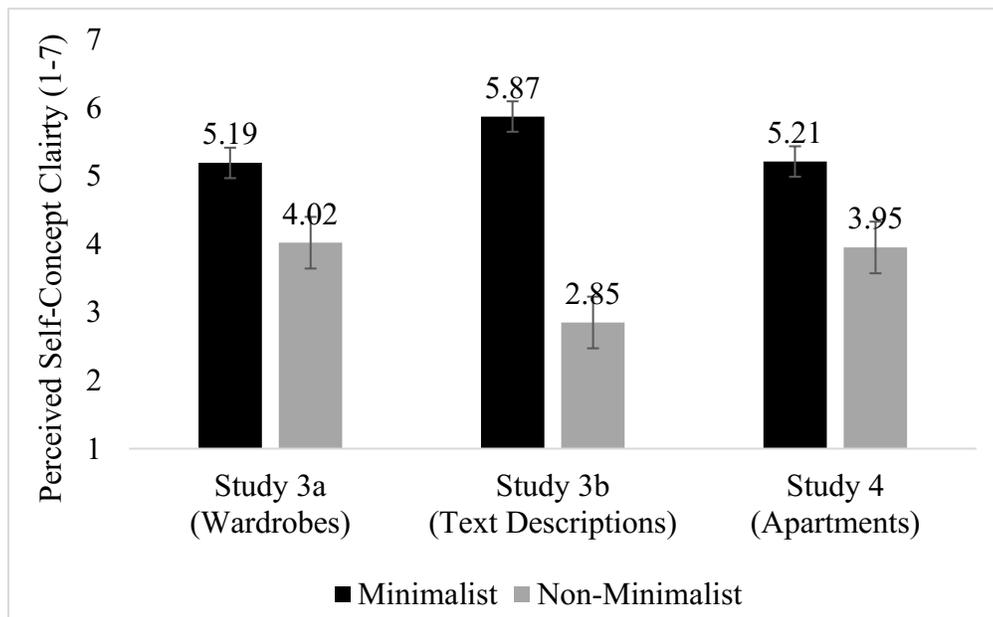
The results of studies 3a and 3b provide evidence for our prediction that minimalism serves as a particular form of conspicuous non-consumption that affords greater social status. Consistent with our hypotheses, minimalism increases attributions of social status because it conveys a positively-viewed clearer sense of self.

FIGURE 1.4: DIFFERENCES IN PERCEIVED SOCIAL STATUS FOR MINIMALIST VS. NON-MINIMALIST CONSUMER (STUDIES 3-5)



Note. Error bars represent standard errors.

FIGURE 1.5: DIFFERENCES IN PERCEIVED SELF-CONCEPT CLARITY FOR MINIMALIST VS. NON-MINIMALIST CONSUMERS (STUDIES 3 AND 4)



Note. Error bars represent standard errors.

STUDY 4: THE MODERATING ROLE OF OBSERVERS' MINIMALIST TENDENCIES ON STATUS INFERENCES

Studies 3a and 3b demonstrate main effects of social status inferences of minimalism and the underlying process; study 4 explores a moderator of these overall effects. Specifically, we test whether observers' own minimalist tendencies influence the inferences they make about other minimalist and non-minimalist consumers. We expect that differences in perceived self-concept clarity and subsequent social status for minimalists versus non-minimalists will be greater for those who score higher on the Minimalist Consumer Scale. In addition, whereas the paradigms used in Studies 3a and 3b were between-subjects, study 4 tests whether the effects of being a minimalist consumer on perceived self-concept clarity and subsequent social status emerged when using a within-subjects design.

Method

We recruited 202 participants (39.3% Female, $M_{Age} = 34.48$) from MTurk for an online study in exchange for \$0.25. We used a within-subjects design wherein participants were provided with images of two home offices, one being a minimalist home office and the other being non-minimalist (figure 1.6). To control for potential confounds regarding inferences of income, location, or gender, participants were told that the two rooms are one-bedroom apartments in the same building and women live in both apartments. Pre-tests ($N = 101$) ensured that the minimalist home office was rated as significantly more minimalist ($M_{Min} = 6.12$, $SD =$

1.37, $M_{\text{Non-Min}} = 2.90$, $SD = 1.60$; $t(99) = 10.85$, $p < .001$), but that the home offices were viewed as comparably expensive ($M_{\text{Min}} = 4.84$, $SD = 1.49$, $M_{\text{Non-Min}} = 4.76$ $SD = 1.37$ $t(99) = .27$, $p = .79$). As in study 3a, ensuring that the rooms are seen as comparably expensive was important to control for alternative explanations such as perceived wealth or frugality of minimalists versus non-minimalists. See appendix for pre-test and all images pretested (e.g., bedrooms, kitchens).

While viewing both images side-by-side, participants provided their inferences of the social status (3 items, $\alpha = .83$) and self-concept clarity (12 items, $\alpha = .92$) of both consumers using the same measures as in study 3a. Participants also completed our Minimalist Consumer Scale, which was randomly assigned to appear before or after evaluating the apartment images. Finally, participants provided some demographics and potential comments.

FIGURE 1.6: IMAGES OF MINIMALIST (LEFT) AND NON-MINIMALIST (RIGHT) HOME OFFICES (STUDY 4)



Results

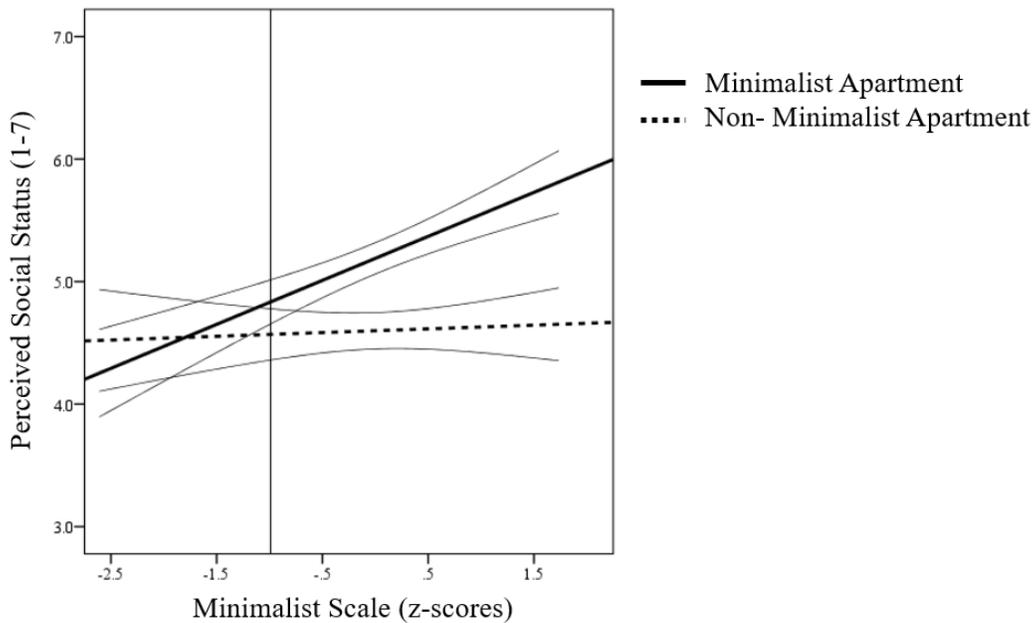
A paired t-test indicated that participants viewed the minimalist consumer as higher in social status ($M_{\text{Min}} = 5.19$, $SD = .99$, $M_{\text{Non-Min}} = 4.60$, $SD = 1.07$; $t(201) = 6.09$, $p < .001$, $d = .426$, figure 1.4) and self-concept clarity ($M_{\text{Min}} = 5.21$, $SD = 1.30$, $M_{\text{Non-Min}} = 3.95$, $SD = 1.15$; $t(201) = 9.50$, $p < .001$, $d = .667$, figure 1.5). A within-subjects mediation analysis (MEMORE model 1, Montoya 2019) indicated that the effect of minimalism on status inferences was mediated by perceived self-concept clarity (indirect effect = .34, $CI_{95\%} = .15$ to .57).

Furthermore, a within-subjects moderation analysis (MEMORE model 2, Montoya 2019) indicated that the differences in perceived social status ($B_{\text{interaction}} = .33$, $t(200) = 3.47$, $p = .001$; see figure 1.7) and self-concept clarity ($B_{\text{interaction}} = .29$, $t(200) = 2.21$, $p = .028$) were moderated by participants' own minimalist consumer tendencies. As expected, the relationship between the Minimalist Consumer Scale and status attributions was positive and significant in the case of the minimalist apartment ($r = .37$, $p < .001$), suggesting that the higher people score on the scale, the more status they attribute to the target consumer; whereas in the case of the non-minimalist apartment this relationship was not significant ($r = .03$, $p = .69$). Moreover, we applied the Johnson-Neyman technique to identify the range of scores on the Minimalist Consumer Scale for which there is a significant difference in judgments of social status and self-concept clarity (Spiller et al. 2013). For social status (figure 1.7), the minimalist apartment owner is viewed as significantly higher than the owner of the non-minimalist apartment for any z-score of $-.99$ on the Minimalist Consumer Scale ($B = .26$, $t(200) = 1.97$, $p = .05$) or higher.

To assess the moderating effect of the Minimalist Consumer Scale on the mediating effect of self-concept clarity, we conducted two separate within-subjects mediation analyses using the procedure recommended by Montoya (2019; MEMORE model 1). Specifically, we separately tested the indirect effect of self-concept clarity for those below and above the median

(5.23) on the Minimalist Consumer Scale. Consistent with our predictions, the indirect effect for those below the median on the Minimalist Consumer Scale was not significant (indirect effect = .21, $CI_{95\%} = -.03$ to .46), while the indirect effect for those above the median was positive and significant (indirect effect = .41, $CI_{95\%} = .15$ to .80).

FIGURE 1.7: MODERATING EFFECTS OF MINIMALIST CONSUMER SCALE ON DIFFERENCES OF PERCEIVED STATUS (STUDY 4)



Note. Lines around means denote 95% confidence intervals. Vertical line fixed at Johnson–Neyman point (-.99).

Of note, there was no significant main effect of order in which the apartments were presented in the side-by-side images on self-concept clarity or status inferences. There was also no significant effect of order in which participants responded to the scale or evaluated the images on status inferences. However, there was a significant effect of order in which participants responded to the scale and evaluated the images on self-concept clarity inferences ($B = -.77$, $t(200) = -2.95$, $p = .004$) such that the positive effect of the minimalist apartment on self-concept

clarity was stronger when participants completed the scale before evaluating the images ($B = 1.63, t(200) = 9.02, p < .001$) compared to after ($B = .86, t(200) = 4.59, p < .001$), but the effect was positive and significant in both cases. There were no significant interactions between order of apartment images and order in which participants completed the scale and minimalist tendencies on either social status or self-concept clarity inferences.

Discussion

The results of this study provide further evidence that minimalism serves as a particular form of conspicuous non-consumption. Specifically, in a within-subjects design, participants viewed minimalists as higher in social status due to perceptions of greater self-concept clarity. Consistent with the notion that consumers who are higher in minimalism should see greater social value in being a minimalist, this study also supports the prediction that differences in perceived self-concept clarity and subsequent status are greater for those who score higher (vs. lower) on our Minimalist Consumer Scale. Moreover, the effect of minimalism on social status attributions was significantly mediated by perceived self-concept clarity for those who scored high on the Minimalist Consumer Scale.

STUDY 5: MINIMALIST BRANDING

In study 5, we assess implications of the effects of minimalism on social status for brands. Extending previous research indicating that consumers can express and reinforce their self-concept by associating with brands that promote certain values or identities (Belk 1988; Ferraro, Escalas, and Bettman 2011; Kleine, Kleine, and Kernan 1993), we examine branding implications of the effects of minimalism on status inferences. Specifically, we explore whether users of brands that are positioned as minimalist (vs. non-minimalist) are perceived as higher in social status. Likewise, people infer aspects about others and their social groups based on the products and brands they use in public (Berger and Heath 2007; Ratner and Kahn 2002). Building on this idea, we predict that users of brands that embody, embrace, or advocate dimensions of minimalism will also be viewed as higher in social status compared to users of brands that do not position themselves as minimalist. Consistent with study 4, we predict that the positive effects of minimalist (vs. non-minimalist) brand positioning on status inferences of users will be stronger for observers who are higher in consumer minimalism.

Method

We recruited 401 U.S. participants (49.5% Female, $M_{Age} = 31.18$) using Prolific for an online study in exchange for \$0.35. We told participants to imagine a brand called “Juniper” that was described, between subjects, as a minimalist or a non-minimalist brand. Participants in the *minimalist brand* condition read, “Juniper is a brand that offers only a small set of items in selected collections. The items Juniper sells are often sparse in terms of their aesthetic. Juniper also encourages consumers to be mindful purchasers, and to focus on minimizing the number of things they own.” Meanwhile, those in the *non-minimalist brand* condition read, “Juniper is a

brand that offers many items in several different collections. The items Juniper sells are often ornate in terms of their aesthetic. Juniper also encourages consumers to be frequent purchasers, and to focus on maximizing the number of things they own.”

After reading the brand description, participants provided their beliefs about the social status of people who buy the Juniper brand, based on the same measures of social status used in the prior studies (3 items, $\alpha = .81$). In addition to the brand evaluation, we also asked participants to complete the Minimalist Consumer Scale ($\alpha = .88$). We randomized whether participants completed the scale before or after being presented with and evaluating the brand description stimuli. Order of appearance did not significantly influence results so will not be discussed further. Finally, participants provided some demographic information.

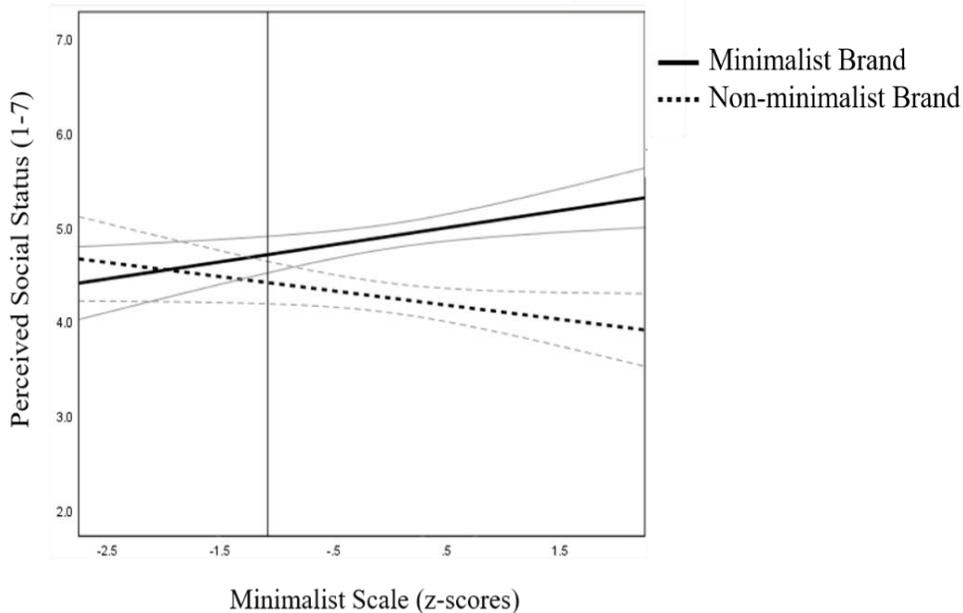
Results

Collapsing at all levels of the Minimalist Consumer Scale, participants on average thought brand users were of significantly higher social status in the *minimalist brand* condition ($M_{\text{Min}} = 4.91$, $SD = .94$) compared to the *non-minimalist brand* condition ($M_{\text{Non-Min}} = 4.25$, $SD = 1.13$; $t(399) = 6.33$, $p < .001$, $d = .64$).

To examine the moderating role of the Minimalist Consumer Scale, we ran a moderated regression analysis with status as the dependent variable and the following independent variables: a variable for brand (coded as 1 for *minimalist* and -1 for *non-minimalist*), the Minimalist Consumer Scale (z-scores), and their interaction. As expected, the analysis revealed a significant effect of brand condition ($B = .33$, $t(397) = 6.38$, $p < .001$), a non-significant effect of

Minimalist Consumer Scale ($B = .02, t(397) = .29, p = .769$), and the predicted significant interaction ($B = .17, t(397) = 3.23, p = .001$), depicted in figure 1.8. As expected, the relationship between the Minimalist Consumer Scale and status attributions was positive and significant in the *minimalist brand* condition ($r = .19, p = .007$), suggesting that the higher people score on the scale, the more status they attribute to the target consumer; whereas in the *non-minimalist brand* condition this relationship was negative and only marginally significant ($r = -.14, p = .056$). Moreover, we applied the Johnson-Neyman procedure to identify regions of significance of the effect of condition across different levels of minimalism (Spiller et al. 2013). Consistent with the pattern of results in study 4, we find a significant effect of condition on status attributions at and above -1.08 of the Minimalist Consumer Scale ($B = .15, t(397) = 1.97, p = .05$).

FIGURE 1.8: MODERATING EFFECTS OF MINIMALIST CONSUMER SCALE ON DIFFERENCES OF PERCEIVED STATUS OF BRAND USERS (STUDY 5)



Note. Lines around means denote 95% confidence intervals. Vertical line fixed at Johnson–Neyman point (-1.08).

Discussion

The results of this study provide evidence for marketing and branding implications for the effects of being a minimalist (vs. non-minimalist) consumer on perceptions of social status. In particular, this study shows that users of brands that embrace dimensions of minimalism are seen as higher in social status; however, consistent with study 4, this positive effect of minimalist (vs. non-minimalist) brand positioning is greater for consumers who score higher on the Minimalist Consumer Scale. Accordingly, these results suggest that marketers can benefit generally from adopting or endorsing minimalist tendencies, but may reap even greater benefits by targeting minimalist consumers with such positioning or messaging.

GENERAL DISCUSSION

While the conspicuous displays of opulence and abundance have long served as a means of signaling status, minimalism has recently risen to the forefront of consumer culture, with people embracing notions of decluttering and reduced consumerism. In the current work, we establish the construct of consumer minimalism and validate a scale for measuring consumer minimalist tendencies. Using grounded theory methods, exploratory factor analyses, reliability assessments, and scale construct validation, we identify three key dimensions of consumer minimalism (i.e., number of possessions, sparse aesthetic, and mindful consumption) and create a fifteen-item scale for measuring consumer minimalist tendencies.

We then show that minimalism can operate as a particular form of conspicuous non-consumption, which engenders heightened inferences of social status in the eyes of others. Across a series of five studies, we explore observers' reactions to minimalist versus non-minimalist consumers, and find that observers confer higher social status to minimalists compared to non-minimalists. At a process level, our investigation reveals that the positive effect of minimalism on social status is driven perceived self-concept clarity and moderated by observers' own minimalist tendencies. Moreover, we provide evidence for brand implications of these effects, showing that users of brands positioned as minimalist and embracing the three key dimensions of consumer minimalism are seen as higher in social status compared to users of non-minimalist brands, and this positive effect is also stronger for observers who identify more strongly as minimalists themselves.

The current work provides a foundational step in understanding the psychology of minimalism and the consequences of being a minimalist consumer on inferences of status. Further, this research makes several specific theoretical contributions. First, this work adds to our understanding of consumer behaviors broadly by establishing the construct of consumer minimalism and creating a scale for measuring it. Defining the construct of consumer minimalism also contributes to the growing body of research on minimalism (Liu et al. 2019; Mathras and Hayes 2019) and helps facilitate future work.

This work also adds to literature demonstrating alternative ways of gaining status (Bellezza et al. 2014, 2017; Berger and Ward 2010; Dubois et al. 2012) by investigating a different consumption strategy for attaining status; namely, conspicuous non-consumption. Moreover, our work provides novel insights into self-concept clarity, the psychological processes underlying inferences of higher social status for minimalist consumers versus non-minimalist

consumers. In particular, this research contributes to literature on self-concept clarity (Campbell 1990; Campbell et al. 1996; Lee et al. 2010; Savary and Dhar 2019) by being the first work that we know of to examine inferences of other peoples' self-concept clarity, as opposed to only focusing on one's own subjective self-concept clarity. Moreover, we demonstrate consequences of such inferences as they pertain to social status.

Directions for Future Research

The current work provides the groundwork for future investigations of consumer minimalism. In particular, while work in progress explores the process of becoming a minimalist (Mathras and Hayes 2019), greater understanding is needed of the factors or experiences that lead a person to choose to become minimalist, and whether minimalism can be instantiated as a state or mindset. For example, it would be interesting to investigate whether minimalist tendencies are necessarily inculcated by a desire for catharsis from over-consumption, be that due to personal experience or a response to societal trends (Rodriguez 2018). For example, it is possible that experience with non-minimalist behaviors in one's childhood home may predict later minimalist consumption. Understanding the precursors to consumer minimalism would also be useful for identifying potential moderators of the effects of being minimalist on inferences of status. For instance, it is possible that knowledge regarding the reasons for which a person is a minimalist might influence whether it signals greater self-concept clarity or not, and subsequent social status perceptions.

Of note, future research could explore the potential additional mechanisms that contribute to the effect of being a minimalist (vs. non-minimalist) on elevated social status depending on

the various instantiations of minimalism. We contend that all conspicuous non-consumers, regardless of how minimalism is expressed, convey a firmer and more consistent sense of self, or a clearer understanding of who they are, what they value, and a commitment to not deviate from that self relative to non-minimalists. Nevertheless, it is also possible that there are additional drivers more specific to each type of minimalism. For example, tiny home owners and consumers who generally eschew consumerism may appear to have more self-control or be more frugal, minimalist fashionistas or monochromatic apartment dwellers may seem to have more sophisticated taste, and the CEO who wears the same black t-shirt everyday may seem to be showing autonomy in deviating from professional norms; all of which could reasonably contribute to heightened social status perceptions. Future work could delve more deeply into how these unique additional inferences among the different types of minimalist might contribute to social status (or not) in conjunction with self-concept clarity. Furthermore, it would be interesting to explore whether minimalists are happier consumers in general. Given that the proliferation of choice in the market place is contributing to decreased satisfaction, consumer malaise, and lower social welfare (Botti and Hsee 2010; Botti and Iyengar 2006), it is possible that minimalist consumers are more satisfied with their lives.

The link between the increase in interest in minimalism and the emergence of the “sharing economy,” which relates to notions of de-emphasizing ownership of material goods (Morewedge et al. 2019; Zervas, Proserpio, and Byers 2017), also warrants further exploration. For example, minimalists may be more likely to use these services because they offer an opportunity to consume without owning possessions; in contrast, minimalists may wish to reduce consumerism generally, such that they are less likely to use such services. In addition, while it is possible that minimalists treat shared goods in a similar way as owned goods, preferring to use

fewer things, approach such services mindfully, and favoring a sparse aesthetic, it is also possible that minimalists may only care about these dimensions of consumption when it pertains to owned goods, and may actually prefer maximalist options when sharing or renting as an outlet for indulgence. Investigating these questions would add to the understanding of minimalism and be of practical use to marketers hoping to effectively engage minimalist consumers in sharing and rental economies.

Exploring additional behavioral consequences of minimalism would also be a fruitful avenue for future work. For instance, how do minimalists navigate decisions which necessitate tradeoffs between economic or functional utility against minimalist values, such as when offered free things, or when products are bundled so that it is cheaper to acquire more of a particular item? It is possible that a minimalist will be more likely to forgo economic and functional utility in order to avoid owning many things in order to preserve their sparse aesthetic and feeling of mindful consumption. On the other hand, being economically prudent or having a focus on long-term consumption utilities might seem more mindful and aligned with minimalist values.

Finally, we contend that minimalism now serves as a social status symbol in part due to the increase in the relative ease of consumption and acquisition of goods enjoyed by many people in developed economies. Following this logic, minimalism may not serve as a status symbol for people or places wherein acquiring many goods remains difficult or prohibitively costly. At the same time, the social status benefits of minimalism may be augmented for people who experience consumption as being particularly easy. In fact, in a separate study, we collected preliminary evidence suggesting that people who seem to view consumption as especially easy in today's world relative to the past attribute greater social status to minimalists. We provided participants ($N = 401$ MTurk participants) with a description of a hypothetical consumer who

was high or low on all three dimensions of minimalism accompanied by an image of their minimalist or non-minimalist bedroom, respectively. Participants rated the consumer on a number of dimensions including the extent to which they seem high-status, admirable, and competent ($\alpha = .72$). After, participants rated how easy or difficult it is to consume in today's world relative to the past (e.g., "it is easy to acquire many things," "people were bombarded with advertisements for things they could buy"). Analyses indicated that the effect of minimalist versus non-minimalist condition on social status was significant ($B = .88, t(399) = 7.47, p < .001$) and there was an interaction between minimalist condition and perceived relative ease of consumption ($B = .19, t(399) = 2.52, p = .012$) such that the easier participants perceive consumption to be today relative to the past, the stronger the effect of minimalism on social status inferences. Clearly, more work is needed to thoroughly investigate the relationship between perceived ease of consumption and the perception of minimalism as a signal of social status, but this preliminary evidence is consistent with our theorizing that increased ease of consumption contributes to the emergence of conspicuous non-consumption as a status symbol.

Managerial Implications

Our findings offer actionable insights for brands and marketers. Specifically, the results of study 5 show that users of brands that position themselves as minimalist are seen as higher in social status compared to users of non-minimalist brands, and this is particularly pronounced for consumers who self-identify more strongly as minimalist. Marketers may generally benefit from positioning brands around the key dimensions of minimalism and can accrue even greater benefits from targeting such messaging to minimalist consumers.

Of note, minimalist brands often emphasize one of the different elements of minimalism more than the other elements. For example, brands like Muji and Everlane epitomize functional and aesthetic simplicity, retailers such as Patagonia and REI actively encourage limited and mindful consumption, and many subscription, rental, and sharing services market themselves as a means of owning fewer possessions. Thus, it would be interesting for future work to delve more deeply into how positioning a brand around single dimensions of minimalism versus combinations of two dimensions, or all three (akin to our study 2d) might engender varying impressions of the brand and its users. In a similar vein, some minimalist brands like Acne and Dover Street Market have positioned themselves as high-end or aspirational, while others like Everlane and Patagonia have positioned themselves as everyday, functional brands. It would be useful to more deeply explore whether positioning a minimalist brand as either high- or low-end influences perceptions of status.

Our research is also useful for managers who wish to better understand minimalist consumers for segmenting, targeting, or positioning purposes. Having a concrete and clear understanding of the conceptual underpinnings of minimalism and a tool for assessing minimalism, our Minimalist Consumer Scale, is useful for better engaging minimalist consumers and creating effective strategies for appealing to such consumers. Understanding the meaningful and necessary sub-dimensions of consumer minimalism can help managers better tap into each dimension in order to attract consumers who are minimalist or interested in becoming more minimalist.

In conclusion, although conspicuous consumption, and more recently, inconspicuous consumption, have historically served as reliable markers of status, the current work demonstrates that a particular form of conspicuous non-consumption—minimalism—can lead to

inferences of higher social status through perceived self-concept clarity. For consumers seeking to signal via (non)consumption in the 21st century, less can be more.

Binge is the New Black: Perceptions of Accelerated Consumption

ANNE V. WILSON

ANAT KEINAN

Abstract

Bingeing is commonly associated with negative qualities and is often a poor strategy for maximizing utility from consumption. Nevertheless, bingeing behaviors are ubiquitous, with both consumers and brands embracing a bingeing culture. Across nine studies, we investigate the effects of bingeing (vs. not bingeing) on self and other perceptions of the consumption experience as well as the relationship between the consumer and the good. The current work shows that consumers view bingeing as less effective for maximizing utility, but as a stronger and more authentic signal of liking and passion for the consumed good. The effect of bingeing on signals of liking and passion is mediated by inferences of lower self-control during consumption. The effect of bingeing on inferences of liking and passion is moderated by the consumer's general level of self-control, and by the normative rate of consumption. This research also provides evidence for downstream consequences of the signaling effects of bingeing, showing that bingeing enhances perceived quality of a good for observers.

“Everyone’s doing it. She’s bingeing, they’re bingeing, and so is he. So, put on your headphones, turn on Audible and binge better.” -Audible advertisement

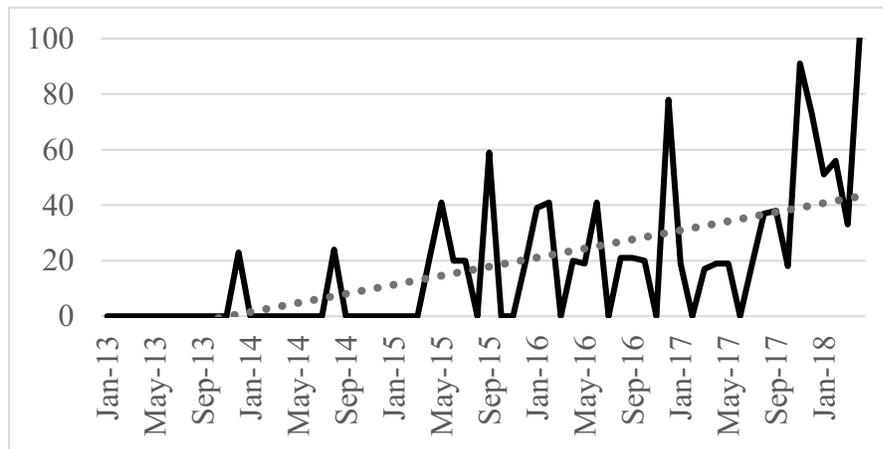
Bingeing behaviors are often associated with negative traits and stigmatized pathologies. For example, “bingeing” is commonly linked to eating disorders (Heatherton and Bauemeister 1991), addiction (Chassin, Pitts, and Prost 2002; Johnson, Boles, Vaughan, and Kleber 2000), and compulsive buying disorder (Billieux, Rochat, Rebetz, and Van der Linden 2008; Faber, Christenson, De Zwaan, and Mitchell 1995). Moreover, an abundance of research demonstrates that consuming in ways characteristic of bingeing, such as engaging in rapid and/or uninterrupted consumption, is not utility maximizing (Galak, Kruger, and Loewenstein 2013), instead, slowing the rate of consumption often increases the enjoyment derived from a good. Prospect theory similarly suggests that to maximize positive utility or enjoyment, consumers should segregate gains and spread out the consumption of hedonic goods (Thaler 1985). Nevertheless, bingeing behaviors are ubiquitous and brands today often encourage bingeing.

In the current work, we posit that consumers are aware that bingeing (vs. not bingeing) hinders utility maximization in terms of the marginal value derived during the time of consumption. However, consumers also perceive bingeing (vs. not bingeing) as a stronger and more authentic signal of liking and passion for the consumed good, an effect explained by inferences of lower self-control during consumption. Put differently, bingeing is seen as an indication that a consumer cannot or could not control themselves around the consumed good. As a result, consumers infer that the binger, be that themselves or another consumer, must be passionate about and have a strong liking for the consumed good. Therefore, while consumers are aware that bingeing is not the optimal strategy for maximizing utility during consumption, and carries negative inferences (i.e. low self-control), it can be a useful strategy for conveying or creating seemingly passionate consumption experiences, and signaling one’s liking of the good

or service. Further, we argue that the effect of bingeing (vs. not bingeing) on signals of liking and passion has positive downstream consequences for the perceived quality of goods that are binged versus not binged.

Understanding how bingeing is perceived is valuable as it is a popular consumption practice that has garnered an increasing amount of attention in recent years, and both consumers and brands seem to be embracing a bingeing culture. Most notably, binge-watching television shows and movies has emerged as a celebrated phenomenon, with over 61% of people admitting to regular binge-watching (West 2013). Moreover, sites like bingeclck.com now exist to tell you how many hours it will take to watch an entire television series so that you can plan your binges accordingly. Google Trends also confirms there has been a sharp increase in web searches for “binge-worthy” in the last few years, as shown in figure 2.1.

FIGURE 2.1: GOOGLE 2013-2018 SEARCH TRENDS FOR “BINGE-WORTHY”



Meanwhile, bingeing is often featured and glamorized by brands in advertisements. T-Mobile recently released their “*Binge On*” data plan (Spangler 2015), Three UK’s new campaign urges people to “*go binge*” (Rogerson 2018), AT&T has advertised that customers can “*binge to their heart’s content*” (AT&T 2018), Audible claims that their service will enable consumers to

“*binge better*” (Audible 2018), a Forbes article emboldens readers to “*binge away*” (Granados 2017), and Campbell’s has advertised their soup as a binge-watching complement (Campbell’s Soup 2018). Netflix has even sought to romanticize bingeing by advertising the notion that “you never forget your first” (Netflix 2018) and creating a website in 2015 that allowed consumers to make custom “Binge Announcements” to brag to others about their binges (O’Keefe 2015).

With the advent of streaming content and increased accessibility of goods generally, it is easier to binge than ever before, making it no wonder that people commonly binge today. What is puzzling, though, is why people would not only admit to bingeing, but brag about it, and why marketers proudly associate their brands with bingeing. Accordingly, in the current work, we investigate how bingeing (vs. not bingeing) is perceived by consumers and explore downstream consequences of these perceptions.

The remainder of this article is organized as follows: We first provide an overview of existing research supporting the idea that consumers are aware that bingeing hinders the ability to maximize utility derived directly from a good during consumption, and is associated with lower self-control. After, we briefly outline research on inferred preferences and passion to suggest that consumption that entails lower self-control is perceived as more reflective of the consumer’s liking and passion for the good. Based on these literatures, we posit that consumers are aware that bingeing (vs. not bingeing) undermines the utility directly derived during consumption, but due to inferences of low self-control, perceive bingeing as a stronger, more authentic signal of passion for and liking of a good. Based on this, we further posit that the effect of bingeing (vs. not bingeing) on inferences of passion and liking should be moderated by the consumers’ general level of self-control and by the perceived normative rate of consumption.

We report nine experiments that employ varying experimental methods including a linguistic analysis of 2,000 Tweets scraped from Twitter, a consequential lab design, online surveys, and an experiment in the field with standup comedy fans and theater experts. We examine both self- and other-perceptions, and test for our proposed effects across several consumption contexts and product categories including food, television, books, in-class and online courses, and shopping. Finally, we conclude with a discussion of the theoretical and managerial implications of this work and suggestions for further research.

THEORETICAL FOUNDATIONS

Defining ‘Bingeing’ in the Current Work

In the current work, we use the word ‘bingeing’ to specifically refer to ‘temporal bingeing.’ Temporal bingeing involves consuming a certain amount of a good over a more condensed period of time or over fewer consumption incidences (Lu, Bradlow, and Hutchinson 2017). For example, a person could be said to be engaging in temporal bingeing if they watch twelve episodes of a show in three days as opposed to watching the same twelve episodes over two weeks. Temporal bingeing is distinct from other forms of bingeing such as content bingeing, which involves consuming qualitatively similar goods in succession (Lu et al., working paper). For example, consuming five episodes of the same show before watching five episodes of a different show rather than alternating between shows would qualify as content bingeing. As such, in the current research, we conceptualize bingeing as specifically referring to temporal

bingeing, or the consumption of a set amount of a good over a more condensed period of time, or over fewer consumption incidences.

Consumption Utility

A large volume of literature examines the phenomenon of hedonic adaptation, or the decreased liking of a good or experience over time or repeated use. Extant research provides evidence for hedonic adaptation across many domains including music (Ratner, Kahn, and Kahneman 1999), food (Redden and Haws 2013), video games (Galak et al. 2013), television (Nelson, Meyvis, and Galak 2009), and more. Accordingly, a considerable amount of work has been devoted to identifying strategies for avoiding or decreasing the rate or occurrence of adaptation. Of most relevance to the current investigation, prior work suggests that consumers can slow adaptation by increasing the time it takes to consume a fixed amount of a good (Galak et al. 2013) and inserting breaks or interruptions throughout consumption (Nelson and Meyvis 2008; Nelson et al. 2009). In short, spreading consumption out over time, either via introducing breaks or slowing down, reduces the rate at which people adapt to a good or stimuli, staving off satiation and prolonging enjoyment and maximizing utility derived during consumption.

Relatedly, prospect theory posits that the value or utility function is generally concave for gains and convex for losses (Kahneman and Tversky 1979). Therefore, in order to derive the most positive utility from repeated consumption, consumers are advised to segregate gains and aggregate losses (Thaler 1985). For example, a consumer watching a television series would be expected to derive the most utility from the show if she segregated consumption and watched each episode on separate occasions, rather than if she aggregated the episodes by watching them all in one sitting.

Nevertheless, consumers frequently behave in a contradictory fashion, consuming too rapidly and without adequate breaks. Some work indicates that this failure of consumers to appropriately pace out consumption is due to a lack of appreciation for the benefits of slowing down on enjoyment (Galak et al. 2012; Nelson and Meyvis 2008). Other work, however, shows that consumers *are* generally aware adaptation will occur, but simply fail to apply this principle into their own decision making (Snell, Gibbs, Vary 1995; Wang, Novemsky, and Dhar 2009). In line with this notion, we posit that consumers are aware of diminishing returns, and do understand that bingeing (vs. not bingeing) is less effective for maximizing consumption utility, or the direct enjoyment or value derived during consumption of a good. Put formally,

H1: Consumers view bingeing (vs. not bingeing) as less effective for maximizing utility derived from a good during consumption.

By testing this hypothesis, we add to existing literature on hedonic adaptation. Validating this hypothesis also suggests that bingeing behaviors cannot simply be attributable to consumers' lack of awareness of adaptation and satiation.

Most prior work on hedonic adaptation and rate of consumption has focused primarily on how people should consume quantities of goods in order to maximize the utility derived directly during the consumption of a good. In this research, we shift the focus of analysis to the signaling or diagnostic utility derived from different rates of consumption. Specifically, we examine how people perceive bingeing behaviors in terms of what bingeing signals about the consumer's relationship with the good and also the quality of the consumed good, and the overall experience. That is, rather than investigating individuals' decision or motivation to consume goods slowly or rapidly, we examine the signaling consequences of bingeing (vs. not bingeing) in the eyes of the binger herself and external observers. We propose that bingeing can serve as a stronger and more

authentic signal a consumers' passion and liking for a good as well as signal that the consumed good is of high quality. This perspective is valuable as a substantial amount of research on signaling and experiential consumption suggests that people often make judgments about their own and other peoples' feelings toward goods (e.g. their liking, passion, or identity) based on their consumption choices (Bem and McConnell 1970; Markus and Kitayama 2003; Weiss and Johar 2013; 2016), and this can influence perceptions of the consumed good (Sela, Berger, and Kim 2017). We contribute to this literature by investigating how rate of consumption specifically influences perceptions of the consumers' feelings toward the good, the quality of the good, and the consumption experience.

Signaling Utility

Prior research demonstrates that the products and services consumers buy can serve as signals to others of their preferences and identity (Berger and Heath 2007; Chernev, Hamilton, and Gal 2011; Ordabayeva and Fernandes 2018; White and Dahl 2007). Further, consumers often learn their own preferences, attitudes, and other internal states by observing their own choices and behavior (Bem and McConnell 1970; Savary, Goldsmith, and Dhar 2015; Weiss and Johar 2013; 2016). Indeed, consumption choices serve as an important and ubiquitous means for communicating one's values and partialities both to other outside observers and to the consumer herself. As a result, people often choose options and behave in ways that reflect desirable qualities about themselves to themselves and others, even if it undermines the utility derived directly from the consumed good (Berger and Heath 2007; Bodner and Prelec 2003).

However, not all consumption is perceived as equally diagnostic of a person's preferences or identity. For instance, less varied choice is interpreted as a stronger signal of one's preferences (Sela and Maimaren 2013), and consistent preferences tend to be seen as more extreme, self-relevant, and reflective of greater knowledge or interest (Krosnick 1988; Osgood and Tannenbaum 1995). Likewise, experiences that lead to object cathexis, or the investment of mental or emotional energy, facilitates the integration of the object into a person's sense of self (Belk 1989), and peak experiences strengthen consumers' ties to activities (Dodson 1996). Moreover, experiences are seen as more representative of a person's identity and preferences than material purchases (Carter and Gilovich 2012).

This last example is especially relevant because the rate at which people consume influences their experience of the good. Reading a book particularly fast or slow affects one's overall reading experience, just as eating a cake all at once versus over the course of several sittings influences one's overall eating experience. Accordingly, it is reasonable to presume that not only what a person owns or purchases, but also how they use that purchase (in this case, the rate at which they consume) matters in terms of the signals it sends about themselves and their consumption experience. This is consistent with prior work showing that using or displaying a product in a non-conforming way, such as wearing red sneakers in a professional setting, can signal status and competence (Bellezza et al. 2014). It is not simply the ownership of the red sneakers that matters, but how or when the consumer chooses to wear them that is perceived as a meaningful signal to others. Nevertheless, the bulk of prior work has evaluated the idea that what a consumer chooses to buy can signal their identity or preferences, while much less work has considered the notion that how a consumer uses owned products might influence the nature and strength of signaling. Therefore, we contribute to the literature on signaling by keeping the

product consumed constant and examining how rate of consumption influences perceptions of the consumers' liking of and passion for the good. We argue that bingeing (vs. not bingeing) is perceived as a stronger and more authentic signal of one's passion for and liking of the good.

To start, consistent with the notion that consumers perceive bingeing as less in-the-moment utility maximizing than not bingeing, we argue that bingeing, or consuming at an excessively fast rate, will be perceived as reflecting lower self-control during consumption. This is important because prior work demonstrates that, when choosing between options, consumers are less likely to infer that choice is reflective of one's true preferences when notions of self-control are evoked (Sela et al. 2017). Moreover, perceptions of passion, defined as "a strong and barely controllable emotion" (Merriam-Webster.com), goes hand-in-hand with self-control failure. In fact, self-control has even been described as a battle between passion and willpower (Elster 1979). Therefore, we predict that because consuming something excessively fast (i.e. bingeing) is perceived to be indicative of low self-control during consumption, consumers infer that bingeing (vs. not bingeing) also reflects a stronger, more genuine liking of and passion for the consumed good. Thus, we hypothesize:

H2: Consumers perceive bingeing (vs. not bingeing) as a stronger and more authentic signal of one's liking and passion.

H3: The effect of bingeing vs. not bingeing on perceptions of liking and passion is mediated by inferences of self-control during consumption.

Importantly, our theorizing suggests that if perceptions of liking and passion are driven by inferences of lack of self-control, then the effect should be even stronger when the bingeing consumer generally has a high level of self-control. Put differently, if consumers are known as typically having lower self-control, the act of bingeing (vs. not bingeing) a certain good may not

be particularly diagnostic in terms of their liking of or passion for the good. However, if a consumer typically has high self-control, but exhibits low self-control by bingeing (vs. not bingeing) a certain good, the rate of consumption serves as a much stronger signal of their feelings toward that good. Therefore, the effect of bingeing (vs. not bingeing) on inferences of liking and passion should be stronger for people who typically have high self-control.

H4: The effect of rate of consumption on inferences of liking and passion will be stronger for bingeing consumers who typically have high (vs. low) self-control.

Testing this hypothesis is important as it involves assessing the influence of a theoretically relevant moderator of our proposed psychological mechanism. A moderating effect of general self-control level would support our proposed explanation for the effect of bingeing (vs. not bingeing) on inferences of liking and passion as resulting from perceptions of low self-control during consumption. Moreover, this hypothesis is consistent with prior work suggesting that, while consumers can differ in their domain-specific self-control tendencies, general self-control correlates with domain-specific self-control and influences sensitivity to cues that threaten goal obtainment generally (Haws, Davis, and Dholakia 2016; Haws and Redden 2013).

The effect of rate of consumption on inferences of liking and passion also suggests an important downstream consequence such that bingeing (vs. not bingeing) will enhance the perceived quality of the consumed good. If bingeing (vs. not bingeing) is a stronger and more authentic signal of a consumers' passion for and liking of a good, then it is tenable to hypothesize that learning that another consumer binged (vs. did not binge) a good also serves as a cue that the consumed good is of higher quality. This hypothesis is consistent with the idea that brands seem to seek to positively associate their goods with bingeing.

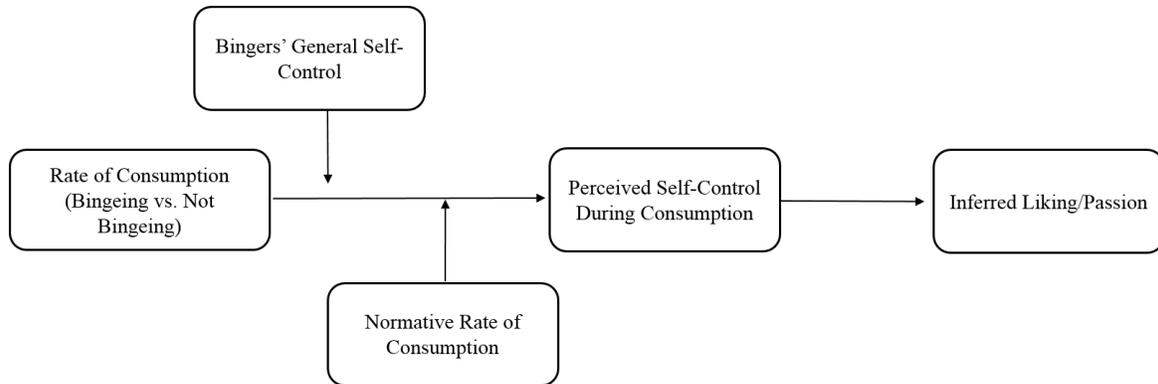
H5: The positive effect of bingeing (vs. not bingeing) on inferences of liking and passion will have positive downstream consequences for perceptions of the binged (vs. not binged) product.

Finally, our operationalization of bingeing as referring to ‘temporal bingeing’ (Lu et al. working paper) suggests that the same rate of consumption could be perceived as bingeing or not depending on one’s reference point. For instance, consuming something at a slower rate could be made to appear relatively fast if the normative rate of consumption is sufficiently slow. As an example, reading a book in three weeks may not be perceived as temporal bingeing per se if the normative rate of consumption is faster (e.g. most consumers read the book in four days), but could be thought of as bingeing if the normative rate of consumption is slower (e.g. most consumers read the book in four weeks). This is important to our theorizing because it implies an important boundary condition to our proposed effects: if the normative rate of consumption is sufficiently slow, such that both a faster and slower rate of consumption exceed the normative rate, then the positive effect of a faster rate of consumption on inferences of liking and passion should disappear. Returning to our reading example, if the normative rate of consuming a book is fast, e.g. four days, consumers will infer that consumption more strongly reflects liking and passion when the consumer reads the book in three days (i.e. binges) compared to if they read the book in three weeks (i.e. did not binge). However, if the normative rate of consuming the book is slow, e.g. four weeks, then the differences in inferred liking and passion between consumers who binge-read the book in three days versus consumers who read the book over three weeks will be mitigated, as both exceed the normative consumption rate and will be perceived as bingeing in both cases. Thus, the effect of rate of consumption on perceptions of liking and passion will

disappear when both the faster and slower rates of consumption are faster than the normative rate of consumption. Put formally,

H6: The effect of bingeing (vs. not bingeing) on inferences of liking and passion will be attenuated when the normative rate of consumption is sufficiently slow.

FIGURE 2.2: CONCEPTUAL MODEL OF CONSUMER PERCEPTIONS OF BINGEING



By testing these hypotheses, this work provides a foundational step in understanding the psychology of bingeing and contributes to several streams of literature. First, this article adds to extant work on hedonic adaptation by examining consumers' awareness of how rate of consumption influences perceptions of both the direct experienced utility and the signaling utility derived from consumption. Second, this research contributes to work on identity signaling by showing that not only what people buy, but also how they consume it, matters in terms of what it signals to themselves and others. Third, this article contributes to our understanding of how inferences of self-control during consumption can engender positive perceptions, such as those relating to liking and passion as well as inferences of quality of goods. Finally, this work adds to literature on experiential consumption, showing how rate of consumption can influence perceptions of the consumption experience. Testing these hypotheses offers practical implications for brands trying to enhance the perceived quality of their goods and attract

consumers, and for consumers seeking to signal their preferences and identity to others and create more passionate experiences.

OVERVIEW OF EXPERIMENTS

We present nine studies that test our hypotheses across a variety of products testing both self- and other-perceptions. First, in study 1, we examine whether and how people talk about their bingeing behaviors in a public forum. To do this, we scraped and analyzed 2,000 posts that referred to bingeing from the social media platform Twitter, and conducted a linguistic analysis on the collected tweets. In study 2, we assess the effects of ten different rates of consumption on self-signaling, showing that consumers' expectations of the utility or enjoyment derived during consumption of a good decreases (H1), but their expectation that consumption will more strongly reflect their liking and passion for the good increases (H2) as they imagine consuming in a more and more condensed timeframe. We also explore the mediating effect of self-control inferences on the relationship between rate of consumption on perceived liking and passion (H3). In studies 3a and 3b, we show that people perceive others' bingeing as less utility maximizing during consumption (H1), but as a stronger signal of liking and passion (H2) as a result of inferences of low self-control during consumption (H3). Moreover, in study 3b we test for the downstream consequences of bingeing (vs. not bingeing) on inferences of product quality (H5). Study 4 provides evidence for the robustness of the effect by showing that rate of consumption can be a stronger signal of liking and passion than quantity consumed. In study 5, we use an experiment in the field to provide evidence for the effects of bingeing (vs. not bingeing) on perceptions of passion, liking, and quality of the good in the more naturalistic context of consumer reviews.

Next, we use a consequential lab experiment in study 6 to show that learning that others binge (vs. do not binge) a good heightens inferences of passion (H3) and quality (H5), which influences choice preferences. In study 7, we provide further evidence for the role of self-control inferences by showing that the effects of bingeing versus not bingeing on inferences of liking and passion are moderated by whether the consumer typically has low or high self-control (H4). Finally, we test for a boundary condition in study 8, demonstrating the effect of bingeing (vs. not bingeing) on perceived liking and passion are attenuated when the normative rate of consumption is sufficiently slow (H6).

STUDY 1: BRAGGING ABOUT BINGEING

In study 1, we use netnography, the observational study and analysis of consumer behavior in an online community (Kozinets 2002), to examine whether and how consumers talk about bingeing in a public forum. We scraped 2,000 posts from the social media platform Twitter that refer to bingeing. Specifically, we collected the most recent set of 1000 public tweets that contained the word “binge” and the most recent set of 1000 public tweets that contained the word “bingeing” as of February 11, 2018. We conducted a Linguistic Inquiry and Word Count (LIWC, Pennebaker and Francis 2007) analysis to assess the general affective valence (based on the presence of positive versus negative emotion words) of the tweets. We also had a research assistant, who was unaware of the purpose of the work, code the tweets based on whether they indicated that the user had planned on bingeing or plans to binge in the future, and whether the user is asking for recommendations for content to binge.

Planning on Bingeing. Prior research demonstrates that consumers do often plan to binge (Lu, Karmarkar, and Venkatraman 2017). This is important to the current work because publicly discussing one's plans to binge implies, to some degree, that consumers derive some positive signaling utility from the consumption experience. Telling others in a public forum about past or future plans to binge also suggests that consumers do not conceptualize bingeing as strictly shameful or stigmatized. Consistent with this, a substantial number of public tweets (20.4%) included references to planning. For example, users tweeted messages such as:

“Legit plan on playing Xbox & Netflix bingeing alone for the next 24 hours” -
@kaiwacassell

“...My plan for Singles Awareness Day: binge on Chinese takeout and play videogames while hanging out with my cats,” -@ConfusedSalmon

“I can't wait to binge watch cute ass Romance movies on cable for Valentine's Day.” -@DestineyDinges6

“Let the binge reading begin!” @ChelseaBrowne

“Happy lazy Sunday! :D It's pouring rain, so I'm planning on doing a major Friends binge on Netflix!” @sincerelysara22

Looking for 'Binge-Worthy' Content. In addition to seeking evidence that consumers plan in advance to binge, we were also interested in whether consumers seek out binge-worthy content. Seeking out content for bingeing would suggest, again, that consumers derive some positive utility from bingeing, or do not see it as a solely negative practice that should be avoided. Thus, we coded for this in the set of tweets and found that seventy (3.5%) consisted of requests for recommendations of binge-worthy media. Examples include:

“...I need a new show to binge watch,” -@MiaNicoleXO

“I finished Orange is the New Black last night. Need suggestions for my next binge...” -
@SoulaEdeh

“...In the mood to just binge watch YouTube videos today lol. What’s you guys channels?” - @TheKMKCreations

Negative Inferences of Bingeing. Our theorization posits that bingeing is perceived as negative in terms of being able to maximize utility and signalling lower self-control. Thus, we explored our twitter data set and, indeed, found that consumers do express negative feelings toward bingeing in their tweets. For instance, users posted messages such as,

“I regret bingeing #theRunaways in one day cause now I’m out of episodes...smh when’s season 2?!?!?!?!?” @TechLewis

“my coping mechanism now is bingeing something on the internet for the whole day. great. i feel bad AND unproductive.” @muliajarie

Positive Inferences of Bingeing. Core to our theorization is the notion that bingeing also carries positive connotations and identity signals that have been heretofore unrecognized and undocumented. In line with this, many of the tweets in our sample contained positive language about bingeing. For example, consumers tweeted:

“Day three of my roommate and I bingeing #FairyTail on #Toonami and we have no regrets” @TwoQuartRhi

“I can’t front being comfortable in bed and bingeing shows might be better than a night out” @NoCutz

Results from the LIWC analysis of all 2000 tweets (totaling 41744 words) indicated that the tweets contained a higher proportion of positive words (2.39%) than negative words (1.30%). A one sample t-test between proportions indicated that this difference is significant ($t(41743) = 11.62, p < .01$). Thus, not only do people seem to openly discuss their bingeing experiences on social media, but they seem to do so in a more positive than negative way too.

Overall, this netnographic study provides evidence that consumers publicly talk about bingeing behaviors. Further, while the tweets included both negative and positive sentiments, they were, overall, more positively valenced according to our linguistic analysis. We also find

that consumers openly plan to binge and seek out bingeing experiences, implying that bingeing is not solely associated with negative traits or strictly a vice to be avoided. These findings imply that bingeing has a positive signaling value. Next, we more explicitly examine how consumers perceive the signaling value of their own behaviors across different rates of consumption.

STUDY 2: PERCEPTIONS OF BINGEING AND THE MEDIATING ROLE OF SELF-CONTROL INFERENCES

The purpose of study 2 is to examine whether consumers expect the utility or enjoyment they directly derive from consuming a good to decrease as they consume it at a faster rate (H1), but the extent to which consumption signals liking and passion to increase as they consume the good at a faster rate (H2). We also assess whether the relationship between rate of consumption and self-signals of liking and passion are mediated by inferences of self-control (H3). In this study, each participant provided evaluations for ten different rates of consumption.

Method

Participants ($N = 101$ MTurkers, 37.6% female, $M_{age} = 36.71$ years, $SD = 11.71$) imagined that they decided to watch the first season of the show UnReal, which consists of ten hour-long episodes. Participants then rated their expected experience of watching the show across ten different rates of consumption (within subjects). In particular, in random order, all participants were asked to evaluate their anticipated experiences of watching all ten episodes over the course of ten different timeframes: 3 months, 2 months, 1 month, 3 weeks, 2 weeks, 1

week, 5 days, 3 days, 2 days, and 1 day. For each timeframe, participants indicated the extent to which watching the show at that rate would allow them to enjoy each individual episode and would allow them to get the most out of each episode (ten-point scales anchored by “not at all” and “extremely”). These questions were intended to assess expectations that watching the show at the given rate would maximize the direct utility derived from consumption or not. For each timeframe, participants also indicated the extent to which, after the viewing experience, they would feel passionate about and like a true fan of the show as measures of passion and liking, as well as the extent to which they thought the experience would make them feel as though they have low self-control (ten-point scales anchored by “not at all” and “extremely”). As such, each participant provided evaluations for all ten consumption rates. This design allows us to assess whether, within subjects, people expect that consuming a good at a faster rate will undermine utility maximization, but will increase perceptions of passion and liking; and whether these latter inferences are driven by perceptions of self-control during consumption.

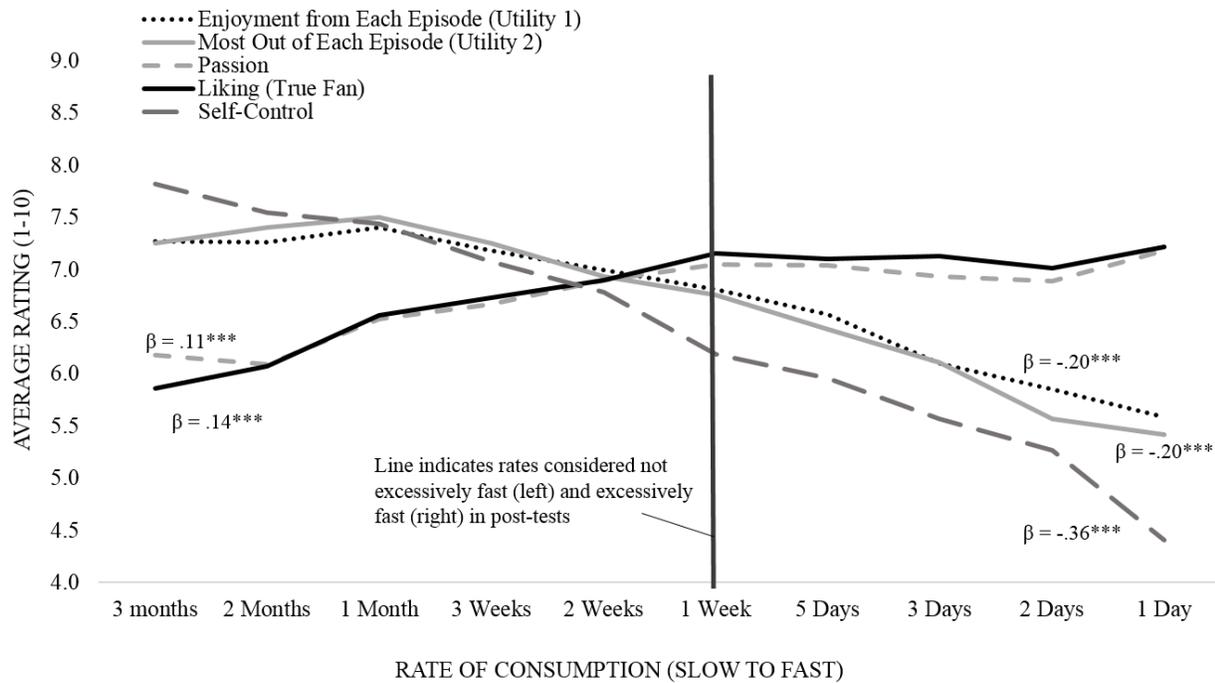
Results and Discussion

As seen in figure 2.3, the effect of rate of consumption on the belief that watching the show at that speed would allow consumers to get the most enjoyment out of each episode was negative and significant ($\beta = -.20, p < .01$). Similarly, the effect of rate of consumption on the belief that watching the show at the speed would allow consumers to get the most out of each episode was negative and significant ($\beta = -.24, p < .01$). The faster the rate of consumption, the less direct, in-the-moment enjoyment/utility consumers expected to derive from each episode.

On the other hand, the effects of rate of consumption on the belief that watching the show at that speed would self-signal passion ($\beta = .11, p < .01$) and liking for the show were positive and significant ($\beta = .14, p < .01$). The faster consumers imagined watching the show, the more strongly they thought it would signal passion and liking for the show to themselves.

Ratings of low self-control were reverse scored so that higher values indicate higher self-control. The effect of rate of consumption on the belief that watching the show at that rate would make consumers feel like they had self-control was negative and significant ($\beta = -.36, p < .01$). The faster consumers imagined watching the show, the lower their feelings of self-control.

FIGURE 2.3: THE EFFECT OF RATE OF CONSUMPTION ON PERCEIVED ANTICIPATED UTILITY, LIKING/PASSION, AND SELF-CONTROL (STUDY 2)



A mediation analysis using PROCESS following model 4 (Hayes 2017) to assess the mediating role of self-control inferences on the relationship between rate of consumption and self-signals of passion indicated a positive and significant indirect effect (indirect effect = .05,

95% confidence intervals did not include zero). The effect of rate of consumption on perceptions of low self-control was negative and significant ($B = .36, p < .01$), and the effect of inferences of low self-control on perceived passion was positive and significant ($B = .14, p < .01$). The same mediation model with liking as the dependent variable also indicated a positive and significant indirect effect (indirect effect = .05, 95% confidence intervals did not include zero). The effect of rate of consumption on perceptions of low self-control was negative and significant ($B = .36, p < .01$), and the effect of inferences of low self-control on perceived liking was positive and significant ($B = .13, p < .01$). The effects of rate of consumption on self-signals of passion and liking are both mediated by perceptions of self-control.

This study shows that consumers predict that consuming a good at a faster rate will be less directly utility maximizing, but will more strongly signal feelings of passion and liking, and these effects of rate of consumption on perceptions of passion and liking are mediated by inferences of self-control during consumption.

Post-tests. As a reminder, we operationalize bingeing in a way consistent with established definitions of temporal bingeing (Lu et al. working paper). Given this, we conducted a post-test to determine which rates of consumption used in study 2 are considered ‘excessive’ or not to determine whether perceptions of rates of consumption that are perceived as meaningfully faster (and thus more reflective of temporal bingeing) would differ from rates of consumption not deemed ‘excessively’ fast (and therefore less reflective of temporal bingeing).

We asked 100 people from MTurk to indicate the extent to which they would consider watching the show at the ten rates used in study 2 are excessively slow or excessively fast (seven-point Likert scale). The results indicated that the averages for consumption rates that were one week or faster were significantly above the midpoint, and thus deemed ‘excessively fast,’

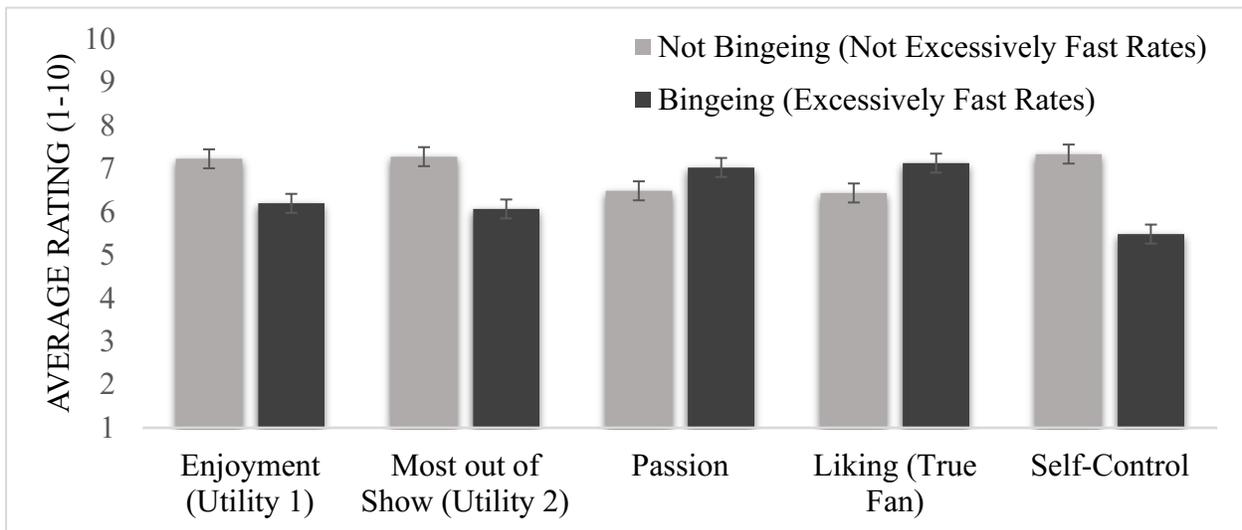
while averages for consumption rates slower than one week were all significantly below the midpoint, and thus deemed as not excessively fast. Therefore, we classified rates of consumption that were one week or faster as ‘bingeing’ and rates of consumption slower than one week as ‘not bingeing.’ Using this information, we conducted an additional set of analyses comparing perceptions of rates of consumption considered ‘bingeing’ versus ‘not bingeing.’ Of note, these empirically derived perceptions of excessiveness of the varying rates of consumption are also in line with a definition Netflix has provided for binge-watching as “completing at least one season of a show within seven days of starting” (Netflix 2018).

Participants thought bingeing the show would lead to stronger inferences of passion ($M_{Bingeing} = 7.02$, $SD = 2.46$, $M_{NotBingeing} = 6.48$, $SD = 2.47$, $t(99) = 3.50$, $p < .01$) and liking ($M_{Bingeing} = 7.12$, $SD = 2.35$, $M_{NotBingeing} = 6.43$, $SD = 2.47$, $t(99) = 4.59$, $p < .01$), but would lead to lower anticipated utility, both in terms of enjoyment ($M_{Bingeing} = 6.19$, $SD = 2.74$, $M_{NotBingeing} = 7.22$, $SD = 2.32$, $t(99) = 6.48$, $p < .01$) and getting the ‘most’ out of each episode ($M_{Bingeing} = 6.06$, $SD = 2.82$, $M_{NotBingeing} = 7.27$, $SD = 2.34$, $t(99) = 7.41$, $p < .01$). Rates of consumption considered to be bingeing were also perceived as reflecting lower self-control ($M_{Bingeing} = 5.48$, $SD = 3.06$, $M_{NotBingeing} = 7.33$, $SD = 2.83$, $t(99) = 9.99$, $p < .01$). Consistent with the linear analysis using all ten rates of consumption, the effect of rate of consumption (bingeing vs. not bingeing) on inferences of passion and liking are also mediated by inferences of self-control.

The results from this post-test help validate our definition of bingeing, demonstrating a meaningful difference between rates of consumption categorized as bingeing (or deemed ‘excessively fast’) and not bingeing. In the remainder of the studies, we will only test two rates of consumption which we categorize as bingeing and not bingeing. We will also combine

measures of liking and passion into a single index for the remaining studies for ease of exposition.

FIGURE 2.4: THE EFFECT OF EXCESSIVE VS. NON-EXCESSIVE RATES OF CONSUMPTION ON PERCEPTIONS OF CONSUMER AND EXPERIENCE (STUDY 2)



STUDY 3: PERCEPTIONS OF OTHERS' BINGEING BEHAVIORS

Study 3a: Binge-Spending

The goal of study 3a is to examine other-signaling effects of bingeing behaviors. In particular, while we examined self-signaling in study 2, in this study, we investigate whether the same perceptions of bingeing (vs. not bingeing) emerge when evaluating other peoples' consumption and in a different consumption domain. Participants provided their impressions of a consumer who decided to spend a gift card by bingeing it or not bingeing it. Participants indicated their perception of the extent to which bingeing (vs. not bingeing) seems utility

maximizing during consumption (H1) and signals passion and liking (H2). We also test whether the effects of bingeing (vs. not bingeing) on perceptions of liking and passion are again mediated by inferences of self-control during consumption (H3).

Method. Participants (N = 430 Qualtrics panel participants, 76.5% female, $M_{\text{age}} = 38$ years, $SD = 14.85$) were given a description of a consumer, Alex, who won a gift card worth \$500 to the retail store Target. Participants read, “Alex is deciding whether to go on a shopping spree and spend the entire amount in one trip or to spread it out and spend a little at a time over the course of a few months.” Participants were then randomly assigned to the ‘binged’ or ‘not binged’ condition and either told that “Alex decides to go on a shopping spree and spend the entire \$500 gift card in one trip” or “Alex decides to spread out the \$500 gift card and spend a little at a time over the course of a few month,” respectively. In random order, participants indicated the extent to which they thought Alex seems passionate, impulsive, and low in self-control (seven-point Likert scales anchored by 1 = “not at all” and 7 = “very”). Participants also rated the extent to which Alex seems to like the retailer (seven-point Likert scales anchored by 1 = “not at all” and 7 = “extremely”). Further, participants rated the extent to which this shopping decision allows Alex to get the most value out of the gift card as a measure of utility maximization (seven-point Likert scale anchored by 1 = “not at all” and 7 = “definitely”). As a manipulation check, participants also indicated how excessive Alex’s shopping experience seems (seven-point Likert scale anchored by 1 = “not at all” and 7 = “very”). Unless otherwise noted, sample sizes in this and subsequent studies were pre-set to include fifty to one-hundred participants per cell and results for items combined into single indices do not change in nature or significance when considered individually.

Results and Discussion. The manipulation check confirms that participants thought the binged condition was more excessive ($M_{Binged} = 4.39$, $SD = 2.13$, $M_{NotBinged} = 3.07$, $SD = 2.03$, $t(428) = 6.56$, $p < .01$). Consistent with H1, participants thought bingeing the gift card would be less utility maximizing than not bingeing ($M_{Binged} = 4.45$, $SD = 1.93$, $M_{NotBinged} = 5.23$, $SD = 1.77$, $t(428) = 4.39$, $p < .01$). We combined ratings of liking and passion to create a single index ($\alpha = .52$), and consistent with H2, observe that participants thought Alex had a stronger passion and liking for the retailer when he binged the gift card ($M_{Binged} = 4.85$, $SD = 1.44$, $M_{NotBinged} = 4.39$, $SD = 1.56$, $t(428) = 3.12$, $p < .01$). Ratings of low self-control and impulsivity were reverse scored and averaged to create a single index of self-control perceptions ($\alpha = .85$). Participants inferred the consumer had lower self-control when he binged the gift card ($M_{Binged} = 3.69$, $SD = 1.87$, $M_{NotBinged} = 5.32$, $SD = 1.89$, $t(428) = 9.02$, $p < .01$).

Mediating Role of Self-Control. We conducted a mediation model using PROCESS following model 4 (Hayes 2017) to assess the role of self-control inferences for the relationship between rate of consumption (bingeing vs. not bingeing) and perceptions of liking and passion. The indirect effect was negative and significant (indirect effect = $-.34$, 95% confidence intervals did not include zero). The effect of rate of consumption on perceptions of self-control was positive and significant ($B = 1.63$, $p < .01$), and the effect of perceptions of self-control on perceptions of liking and passion was negative and significant ($B = -.21$, $p < .01$). Further, the direct effect of rate of consumption on inferences of liking and passion was no longer significant when controlling for the indirect effect, suggesting that perceived self-control fully mediates the relationship between rate of consumption and inferences of liking and passion.

The results of study 3a further support our theorization that bingeing is perceived to be less utility maximizing than not bingeing (H1). Specifically, participants thought that bingeing

(vs. not bingeing) would be an inferior strategy for getting the most value out of the gift card (H1). Nevertheless, there were upsides to bingeing. As predicted, participants thought the consumer who binged (vs. did not binge) had greater passion and liking for the retailer (H2). Consistent with our conceptual model, the effects of rate of consumption on perceptions of liking and passion are mediated by the perceived self-control during consumption (H3).

Study 3b: Binge-Eating

In study 3b, we examine perceptions of bingeing (vs. not bingeing) in a new consumption domain and assess the downstream consequences of bingeing (vs. not bingeing) on product quality inferences (H5). Participants read about a consumer who either binged or did not binge a snack food, and then indicated the extent to which they thought the consumer genuinely liked the food and had low self-control while eating the snack. After, participants indicated the extent to which they thought the snack food probably tastes good.

Method. One hundred and seventy six undergraduate students participating in a student subject pool read about a consumer, Molly, who bought a package of crispy chickpeas. Participants were shown a picture of the snack food and were told each bag contains about six servings. Participants were then told that Molly ate the entire bag in either two days (binged condition) or two weeks (not binged condition). Participants rated the extent to which they thought Molly genuinely liked the snack food (seven-point Likert scale anchored by 1 = “Not at All” and 7 = “A Great Deal”), had low self-control while eating the snack (seven-point Likert scale anchored by 1 = “Not at All” and 7 = “Definitely”), and the extent to which the snack food probably tastes good, as a measure of perceived quality (nine-point Likert scale anchored by 1 =

“Definitely Tastes Bad” and 9 = “Definitely Tastes Good”). Participants then indicated whether they have ever tried the chickpeas snack and the extent to which they like them (seven-point Likert scale anchored by 1 = “Not at All,” 4 = “A moderate amount,” 7 = “A lot”).

Results and Discussion. Participants thought Molly more genuinely liked the chickpeas when she binged ($M_{Binged} = 5.82$, $SD = 1.08$, $M_{NotBinged} = 4.46$, $SD = 1.33$, $t(174) = 7.36$, $p < .01$). We reverse-scored ratings of low self-control so that higher scores indicate higher self-control. Participants thought Molly had lower self-control during consumption when she binged ($M_{Binged} = 2.83$, $SD = 1.86$, $M_{NotBinged} = 4.10$, $SD = 1.65$, $t(174) = 4.77$, $p < .01$). Participants also thought the snack was probably higher quality when they read Molly binged ($M_{Binged} = 7.00$, $SD = 1.77$, $M_{NotBinged} = 4.99$, $SD = 1.98$, $t(174) = 7.08$, $p < .01$).

Mediation by Self-control. We ran a mediation model using PROCESS following model 4 (Hayes 2017) to test for the mediating effect of self-control inferences on the relationship between rate of consumption and inferences of genuine liking of the snack food. The indirect effect of rate of consumption on perceptions of genuine liking was positive and significant (indirect effect = .23, 95% confidence intervals did not include zero). The effect of rate of consumption on perceptions of self-control was negative and significant ($B = -1.27$, $p < .01$), and the effect of perceptions of self-control on perceptions of genuine liking was negative and significant ($B = -.18$, $p < .01$). These results show that inferences of self-control mediate the relationship between rate of consumption and inferences of genuine liking of the good.

Downstream Effects on Quality Inferences: Serial Mediation. We ran a serial mediation model using PROCESS following model 6 (Hayes 2017) to test for our full conceptual model. Specifically, we tested whether rate of consumption influences inferences of self-control during consumption which affects perceived liking/passion for the consumed good, subsequently

influencing inferences of quality of the good. The indirect effect of the full serial mediation pathway was positive and significant (indirect effect = .17, 95% confidence intervals do not cross zero). The effect of rate of consumption on inferences of self-control was negative and significant ($B = -1.27, p < .01$), the effect of self-control on perception of genuine liking was negative and significant ($B = -.18, p < .01$), and the effect of genuine liking on inferences of quality was positive and significant ($B = .74, p < .01$). The direct effect of rate of consumption on inferences of quality was no longer significant when controlling for the indirect effect, suggesting full serial mediation.

The results of study 3b provide additional evidence for the full conceptual model in a new domain, and show downstream consequences of bingeing on inferences of quality of the consumed good. In particular, this study demonstrates that, even in the domain of a healthy snack, bingeing (vs. not bingeing) leads to perceptions of low self-control which increases inferences of genuine liking of the good. As a result, consumers infer that the binged (vs. not binged) good is of higher quality or, in this case, tastes better. Overall, studies 2 and 3 support our prediction and proposed psychological mechanism in both within- (study 2) and between-subjects (studies 3a and 3b) designs and using evaluations of both self (study 2) and other (studies 3a and 3b) evaluations with different consumption domains including binge-watching (study 2), binge-shopping (study 3a), and binge-eating (study 3b). In these studies, we kept the overall consumption quantity constant and only evaluated the influence of rate of consumption on inferences of passion and liking. In study 4, we examine whether temporal bingeing can even serve as a stronger signal of passion and liking compared to consuming a higher quantity or greater volume of a good or service.

STUDY 4: WHEN BINGEING IS A STRONGER SIGNAL THAN TOTAL CONSUMPTION VOLUME

Study 4 is designed to test the robustness of rate of consumption as a signal of one's liking and passion by assessing whether consumers perceive temporal bingeing as a stronger signal of liking and passion compared to consuming a larger quantity of a good or service. To test this, participants read about two consumers: one who consumed a lower quantity of a good, but at a faster rate (i.e. binged, but consumed less overall) and another who consumed a higher quantity of a good, but at a slower rate (i.e. did not binge, but consumed more overall). We are interested in whether consumers use rate of consumption (i.e. bingeing vs. not bingeing) as a stronger signal of liking/passion than quantity consumed.

Method

Participants from an undergraduate subject pool ($N = 86$) read about two consumers, Liz and Mary, who both bought passes for photography classes that can be used any time within the next year. Mary bought 12 class passes and Liz purchased 18 class passes. However, Mary used her 12 passes by going three times a week for four weeks, while Liz went once every three weeks for the year. Neither Mary nor Liz went to any additional photography classes. As such, Mary binged her passes, redeeming them at a much faster rate, but attended fewer classes overall, while Liz did not binge her passes, but attended a greater number of classes in total. Participants rated the extent to which both consumers seem passionate about photography

(seven-point Likert scale anchored by 1 = “not at all” and 7 = “very much so”), and seemed to like the classes (seven-point Likert scale anchored by 1 = “not at all” and 7 = “a great deal”).

A pre-test (N = 176 MTurkers) confirmed that participants perceived the bingeing condition as significantly more excessive in terms of rate of consumption compared to the non-bingeing condition ($M_{Binged} = 3.32$, $SD = 1.90$, $M_{NotBinged} = 2.36$, $SD = 1.66$, $t(174) = 6.72$, $p < .01$). The pre-test also showed that participants thought the consumer who binged was less strategic, which we used as a proxy for utility maximizing ($M_{Binged} = 4.43$, $SD = 1.74$, $M_{NotBinged} = 4.93$, $SD = 1.74$, $t(174) = 2.60$, $p = .01$).

Results and Discussion

The consumer who temporally binged the photography classes was perceived as more passionate about photography compared to the consumer who did not binge, but consumed a greater number of classes ($M_{Binged} = 6.17$, $SD = .87$, $M_{NotBinged} = 4.79$, $SD = 1.14$, $t(84) = 9.59$, $p < .01$). Likewise, the consumer who binged was perceived as having liked the photography classes significantly more than the consumer who took more classes, but at a slower rate ($M_{Binged} = 6.21$, $SD = 1.09$, $M_{NotBinged} = 4.95$, $SD = 1.20$, $t(84) = 7.17$, $p < .01$). The results of this study demonstrate the robustness of the effect, showing that rate of consumption can serve as a stronger signal of liking and passion than quantity consumed in a direct comparison. In study 5, we examine the influence of learning another consumer binged (vs. did not binge) on inferences of passion, liking, and quality of the product using a sample of consumers in the field and with a more natural consumer context of online reviews.

STUDY 5: REFERENCING BINGEING IN ONLINE REVIEWS

Study 5 examines whether learning that another consumer binged (vs. did not binge) a product in an online review influences perceptions of the reviewer's passion and liking for the good as well as the perceived quality of the good. We examined responses to a review of a comedy and acting masterclass by Steve Martin. To sample a relevant target audience for this course we conducted this study at a standup comedy club (during the 2018 World Series of Comedy annual event) and at a professional theater conference (both events took place at the same hotel at the same time). Participants' provided their impressions based on a review by someone who took an online comedy course and either binged it or not.

Method

The study was conducted at Laugh Boston comedy club during a national standup comedy competition and at the Association for Theatre in Higher Education annual conference. There was no difference in the pattern of results across these two samples, so we merged the data, for a total of 109 respondents (54% female, $M_{age} = 38.50$, $SD = 13.09$).

Participants who agreed to take part in the experiment were given an iPad with a pre-loaded Qualtrics survey. Participants were provided with a brief overview of the online service MasterClass which read, "MasterClass is an online course platform that offers tutorials and lectures by experts in various fields. For example, Gordon Ramsay teaches a masterclass on cooking, Annie Liebovitz has a photography course, and Serena Williams has a course on tennis. The classes involve a video lecture series as well as interactive coursework. Each course costs

about \$90.” Next, participants were told that they would be presented with a screenshot of the homepage for Steve Martin’s MasterClass on comedy, which includes 25 lessons that total about 20 hours of video lectures. They were also told that they would see a review by a consumer, who is a creative director and standup comedian, who recently took the course.

Next, participants saw the screenshot of Steve Martin’s comedy MasterClass homepage and below that, a short review by a consumer named Andrew. The review either indicated that the consumer completed the course over three weeks (binged condition) or over three months (not binged condition). Specifically, the review said, “This is an excellent class, taught by one of the greats. I watched the entire 20 hour video lecture series over three weeks (months)!” Pre-tests indicated that participants thought that watching the MasterClass in three weeks was seen as significantly faster compared to watching it in three months ($M_{Binged} = 4.41$, $SD = 1.50$; $M_{NotBinged} = 3.13$, $SD = 1.44$, $t(200) = 4.44$, $p = .003$).

After reading the review, participants rated the extent to which Andrew seems passionate about comedy, seems to genuinely like Steve Martin’s Masterclass, and seems like a true Steve Martin fan (nine-point Likert scales anchored by “Not at All” and “Definitely”). These three items were summed to create a single index of liking and passion ($\alpha = .86$). Participants then indicated the perceived quality of the comedy class (nine-point Likert scale anchored by “Very Low Quality” and “Very High Quality”).

Results and Discussion

Consistent with H2, participants thought the consumption signaled stronger passion and liking when the reviewer binged versus did not binge the online course ($M_{Binged} = 7.14$, $SD =$

1.54; $M_{NotBinged} = 6.20$, $SD = 1.76$, $t(107) = 2.96$, $p < .01$). In line with H5, participants also thought the online class was probably of significantly higher quality when the consumer binged the course ($M_{Binged} = 7.29$, $SD = 1.54$; $M_{NotBinged} = 6.21$, $SD = 1.69$, $t(107) = 3.47$, $p < .01$).

Downstream Effects on Quality Inferences: Mediation. We ran a mediation model following model 4 of PROCESS (Hayes 2017) to assess the mediating effect of inferences of liking and passion on the relationship between rate of consumption and inferences of quality of the online class. The indirect effect was positive and significant (indirect effect = .71, 95% confidence intervals do not include zero). The effect of rate of consumption on inferences of liking and passion was positive and significant ($B = -.94$, $p < .01$), and the effect of perceived liking and passion on inferences of quality of the online class was positive and significant ($B = .75$, $p < .01$). The direct effect of rate of consumption on inferences of quality was no longer significant when considering the indirect effect, indicating full mediation.

The results of study 5 provide evidence for our proposed effects in a more naturalistic consumer setting. Participants thought the reviewer was more passionate and liked the course more when they binged (vs. did not binge), and thought that the course was probably of higher quality when it was binged (vs. not binged). In the next study, we use a consequential lab experiment to assess whether learning that others generally binge (vs. do not binge) a particular good can influence perceptions of passion during consumption and quality of a good.

STUDY 6: PROVIDING CONSUMERS INFORMATION ON THE AVERAGE CONSUMPTION RATE FOR THE PRODUCT

In study 6, we examine how information about the average consumption rate for the product impacts consumers' choice. Since many product offerings are now digitally consumed, companies like Amazon, Netflix, Hulu, and Audible, can easily provide consumers with this information. Thus, marketers can not only inform consumers on the sales and rankings of products (e.g. whether a product is a best-seller or what percentage of consumers rated it five stars), but can also offer information on the average consumption time for these media items. Even for products not digitally consumed, retailers can explicitly ask consumers who complete online reviews to indicate how long it took to complete the consumption of a good.

Accordingly, in this study, we use a consequential choice task to examine whether learning that about the average consumption rate of a good influences consumers' interest in the good. Specifically, we were interested in whether telling consumers that, on average, people tend to binge (vs. not binge) a television show would lead consumers to believe watching the show is a more passionate experience (H2) and would increase their interest in learning more about the show, which we use as a proxy for perceived quality (H5).

Methods

Undergraduate participants (N = 103) were told that they are deciding which television show to watch on Netflix over the weekend. We told participants they had narrowed it down to two options, and provided participants with information about two television shows available for streaming: Ozark and Mindhunter, which we will refer to as Show A and Show B, respectively. For both shows, participants saw a thumbnail image and were provided information on how many episodes the first season contains, the approximate length of each episode, and the average

amount of time it takes viewers to finish the first season. For both shows, we told participants that the first season consists of ten episodes that are approximately one hour long. For one of the shows (randomly assigned), we told participants that the average time it takes consumers to finish the season is about eight days (binged option), while for the other show, it takes consumers an average of twenty-one days (not binged option) to finish the season. A pre-test (N = 401 MTurkers) confirmed that people believe to a greater degree that most people probably watched the show at an excessively fast rate when the average time to finish the season was eight versus twenty-one days ($p < .01$).

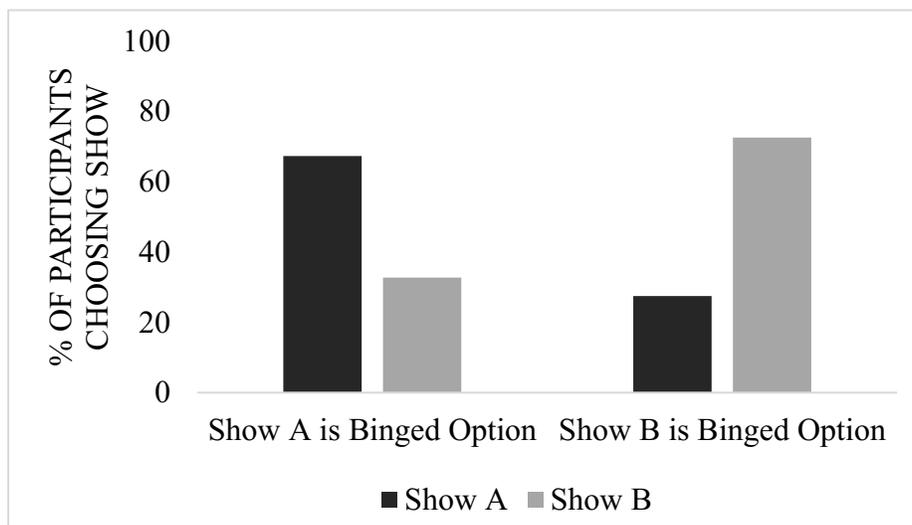
After seeing the information about the shows, participants indicated how passionate of an experience it would be to watch the shows (seven-point Likert scales anchored by 1 = “not at all passionate” and 7 = “very passionate”). We then told participants that, on the next page, they will watch a trailer for one of the two shows, and to indicate which trailer they would prefer to watch. Participants picked one of the shows and then spent about three minutes of their time in the lab watching the trailer for whichever show they selected.

Results and Discussion

Participants thought it would be a more passionate experience to watch the television show that, on average, consumers tend to binge versus not binge ($M_{Binge} = 5.26$, $SD = 1.31$; $M_{NotBinge} = 3.72$, $SD = 1.37$, $t(101) = 8.28$, $p < .01$). Moreover, participants were significantly more likely to choose to watch the trailer for the show that was generally binged versus not binged. Specifically, as shown in figure 2.5, when Show A was the binged show, 67.3% chose Show A and 32.7% chose Show B, but when Show B was the binged option, only 27.5% of

people chose Show A and 72.5% chose Show B ($\chi^2 = 16.40, p < .01$). Collapsing across conditions, 69.9% of participants chose to watch the trailer for the television show that was generally binged versus not binged. The results from this study provide evidence that just learning that other consumers binge a good influences inferences about the experience of consuming the good as well as the perceived quality of the good, as indicated by consumers' preference for learning more about the good in a consequential choice. As such, in studies 2-6, we have provided evidence for the effect of bingeing (vs. not bingeing) on perceptions of passion and liking as well as quality inferences and the mediating effect of self-control (studies 2, 3a, and 3b). In the next study, we test for further process evidence through moderation.

FIGURE 2.5: LEARNING OTHERS BINGE VS. DO NOT BINGE ALTERNATIVES AFFECTS CHOICE PREFERENCES (STUDY 6)



STUDY 7: PERCEPTIONS OF BINGEING DEPENDS ON GENERAL SELF-CONTROL

Study 7 was designed to test for the effects of a theoretically relevant moderator related to our psychological mechanism of self-control. In particular, we examine whether the effect of

bingeing (vs. not bingeing) on inferences of passion and liking are moderated by the consumers' general level of self-control. If, as we propose, inferences of passion and liking from bingeing are driven by perceptions of low self-control during consumption, then the effect of rate of consumption on inferences of passion and liking should be greater (smaller) when the observed consumer typically has high (low) levels of self-control (H4). Put differently, if consumers have high self-control generally, demonstrating low self-control during consumption (e.g. bingeing) will seem like an even stronger signal of their passion for and liking of the good. To examine this, participants read about a consumer who typically has either high or low self-control and binged or did not binge a television show.

Method

Participants (N = 405 MTurk participants; 61.6% female, Mage= 39.97, SD = 12.38) read about a consumer, Alex, who recently watched the first season of a television show that consists of ten episodes in total. Alex either watches all ten episodes in one day (binged condition) or watches all ten episodes in two months (not binged condition). Participants are then told that Alex is usually someone with “low self-control and no ability to practice restraint (low self-control condition) or “high self-control and a strong ability to practice restraint” (high self-control condition). Thus, this study used a 2 (rate: binged vs. not binged) x 2 (general self-control: low vs. high) between-subjects design.

After reading the scenario, participants indicated the extent to which they thought Alex genuinely liked the show, is a true fan of the show, and is passionate about the show (seven-point Likert scales anchored by 1 = “Definitely Not” and 7 = “Definitely”). These three items were

summed to create a single index of liking and passion ($\alpha = .94$). Participants also rated the perceived quality of the show (nine-point Likert scale anchored by 1 = “Definitely Low Quality” and 9 = “Definitely High Quality”). After, participants reported whether they have seen the show before (binary: yes/no) and whether they consider themselves a fan of the show (seven-point Likert scale anchored by 1 = “Not at all,” 4 = “Moderate fan,” 7 = “A huge fan”).

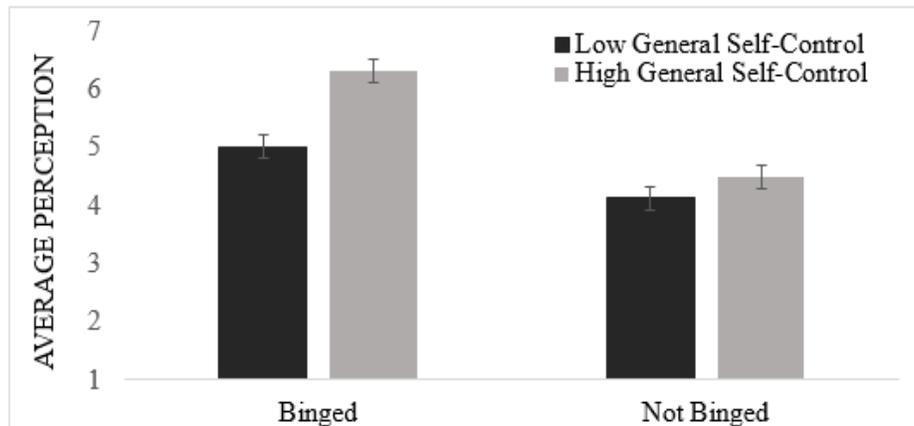
Results and Discussion

A 2 x 2 ANOVA indicated a main effect of rate of consumption on inferences of liking and passion ($M_{Binged} = 5.61$, $SD = 1.35$; $M_{NotBinged} = 4.39$, $SD = 1.63$, $F(1, 403) = 74.04$, $p < .01$), and a main effect of general self-control on inferences of liking and passion ($M_{LowSelf-Control} = 4.60$, $SD = 1.65$; $M_{HighSelf-Control} = 5.39$, $SD = 1.48$, $F(1, 403) = 32.71$, $p < .01$). There was also an interaction of rate of consumption and general self-control ($F(1, 403) = 6.71$, $p = .01$). Contrasts showed that while the effect of rate of consumption on inferences of liking and passion was significant for both the low and high self-control conditions, the effect was significantly larger when the consumer generally had high ($F(1, 403) = 63.13$, $p < .01$) versus low self-control ($F(1, 403) = 17.95$, $p < .01$). See figure 2.6.

A 2 x 2 ANOVA also showed a similar pattern of results for perceived quality; specifically, a main effect of rate of consumption on perceived quality of the show, consistent with H5 ($M_{Binged} = 6.31$, $SD = 1.68$; $M_{NotBinged} = 5.73$, $SD = 1.82$, $F(1, 403) = 11.52$, $p < .01$) and a main effect of general self-control on inferences of liking and passion ($M_{LowSelf-Control} = 5.81$, $SD = 1.80$; $M_{HighSelf-Control} = 6.23$, $SD = 1.73$, $F(1, 403) = 6.29$, $p < .01$), which was driven by the binged condition. The interaction effect of rate and general self-control on inferences of quality

was weaker ($F(1, 403) = 1.87, p = .17$), possibly due to variance in prior knowledge about the specific television show.

FIGURE 2.6: THE EFFECT OF RATE OF CONSUMPTION ON PERCEIVED LIKING/PASSION DEPENDS ON GENERAL SELF-CONTROL (STUDY 6)



To control for effects of prior familiarity with the show and the intended audience on perceptions of quality, we conducted an additional analysis excluding participants who indicated that they have seen the show and controlling for age and gender. When doing this, the results hold and are even stronger for inferences of quality. Specifically, there is a main effect of consumption rate ($M_{Binged} = 6.14, SD = 1.84; M_{NotBinged} = 5.43, SD = 1.76, F(1, 279) = 14.12, p < .01$), a main effect of general self-control on perceived quality ($M_{LowSelf-Control} = 5.33, SD = 1.81; M_{HighSelf-Control} = 6.17, SD = 1.76, F(1, 279) = 10.92, p < .01$), and the interaction is stronger ($F(1, 279) = 3.48, p = .06$). Overall, study 7 suggests that bingeing is a stronger signal of passion, liking, and quality when the binger generally has high self-control.

STUDY 8: SHIFTING THE NORMATIVE RATE TO MAKE SLOWER CONSUMPTION FEEL LIKE BINGEING

Our operationalization of bingeing as being consistent with temporal bingeing suggests that the same rate of consumption could be perceived as bingeing or not depending on one's reference point, which should influence the effects of rate of consumption on inferences of liking and passion. For example, if the normative rate of consuming a book is fast, e.g. four days, observers will infer that consumption more strongly reflects liking and passion when a consumer reads the book in three days (i.e. binges) compared to if they read the book in three weeks (i.e. did not binge). However, if the normative rate of consuming the book is slow, e.g. four weeks, then the differences in inferred liking and passion between consumers who binge-read the book in three days versus read the book over three weeks will be mitigated, as both exceed the normative consumption rate and will be perceived as more reflective of bingeing in both cases. Accordingly, study 8 was designed to test this idea and, specifically, whether the effect of bingeing (vs. not bingeing) on inferences of liking and passion disappears when the normative rate of consumption is sufficiently slow (H5). To do this, we use a 2 (rate of consumption: binged vs. not binged) x 2 (normative rate: slow vs. fast) between-subjects design.

Method

Participants (N = 401 MTurkers, 56.1% female, $M_{age} = 37$ years) read about a consumer, Sam, who read the book *A Tale for the Time Being*, which is 432 pages long. Between subjects, we manipulated whether Sam read the book in three days (binged condition) or three weeks (not binged condition). We also independently manipulated the normative rate of consumption by telling participants that most people read the book in about 4 days (fast normative rate) or 4 weeks (slow normative rate). Participants rated the extent to which they thought Sam seemed

like a true fan of the book and would feel passionate after finishing the book (seven-point Likert scales anchored by 1 = “not at all” to 7 = “very”). These items were combined to create an index of liking and passion ($\alpha = .84$).

Results and Discussion

There was a main effect of rate of consumption condition on perceptions of passion and liking ($M_{Binged} = 5.72$, $SD = 1.11$, $M_{NotBinged} = 4.66$, $SD = 1.70$, $F(1, 399) = 66.56$, $p < .01$), a main effect of normative rate condition ($M_{Fast} = 4.69$, $SD = 1.75$, $M_{Slow} = 5.67$, $SD = 1.10$, $F(1, 399) = 53.33$, $p < .01$), and a two-way interaction of the independent variables on perceived passion and liking ($F(1, 399) = 26.81$, $p < .01$). Contrasts indicate that, in the binged condition, inferences of passion and liking were similar regardless of the normative rate of consumption ($M_{Fast} = 5.58$, $SD = 1.18$ vs. $M_{Slow} = 5.86$, $SD = 1.02$, $F(1, 399) = 2.23$, $p = .14$). However, in the not binged condition, participants thought the consumer signaled stronger liking and passion when the normative rate of consumption was slow versus fast ($M_{Fast} = 3.83$, $SD = 1.79$ vs. $M_{Slow} = 5.47$, $SD = 1.15$, $F(1, 399) = 78.90$, $p < .01$).

Consistent with H6, study 8 demonstrates that the effect of rate of consumption on perceived liking and passion depends on the normative rate of consumption. When the normative rate of consumption is fast (e.g. four days), bingeing a book in three days is a much stronger signal of liking and passion compared to reading it over three weeks. However, when the normative rate of consumption is slower (e.g. four weeks), signals of liking and passion for the book are comparably strong regardless of whether the consumer reads the book in three days versus three weeks as they both exceed the normative rate and thus both are relatively reflective

of bingeing. Overall, this study shows that the experience of bingeing (vs. not bingeing) can be created either by changing one's rate of consumption or by shifting the reference point of the normative rate of consumption. This finding is important for marketers seeking to create a feeling of liking and passion for consumers without being able to actually influence the rate at which people consume. Simply making consumers feel as though they are consuming faster than some normative rate can heighten inferences of liking and passion.

GENERAL DISCUSSION

The current work contributes to our understanding of how rate of consumption influences perceptions of the consumer, the consumption experience, and the consumed good. We show that consumers believe bingeing (vs. not bingeing) is less utility maximizing in terms of the direct in-the-moment enjoyment or value derived during consumption, and is a stronger signal of low self-control during consumption. However, due to inferences of lower self-control during consumption, people also perceive bingeing (vs. not bingeing) as a stronger and more authentic indicator of liking and passion for the consumed good. Subsequently, the positive effect of bingeing (vs. not bingeing) on perceptions of liking and passion increase the perceived quality of goods that are binged (vs. not binged). We demonstrate support for these effects across nine studies using different methodologies including a linguistic content analysis of 2,000 posts scraped from Twitter, a study conducted in the field with comedy fans and theatre experts, a consequential choice study, and online surveys. We also elicited evaluations of real products and brands across a variety of consumer domains including television, retail gift cards, in-person

classes, online classes, foods, and books and by sampling populations of undergraduate students, online respondents, and consumers in the field.

In doing so, the current research makes several theoretical contributions. First, we add to the literature on hedonic adaptation by showing that consumers perceive faster rates of consumption as less utility maximizing in terms of the enjoyment or value derived during consumption, but as a stronger signal of liking and passion. While most prior work on rate of consumption and hedonic adaptation has focused on how people should consume quantities of goods to maximize consumption utility, we shift the focus of analysis to elucidate how consumers perceive different rates of consumption in terms of in-the-moment utility as well as the signaling utility relating to what consumption says about the consumer's relationship with the good and the good itself. Our findings corroborate and build on prior work showing that consumers are generally aware hedonic adaptation occurs in consumption but often behave in contradictory ways (Snell et al. 1995; Wang et al. 2009).

Second, this research contributes to research on self- and other-signaling. While a substantial amount of past work has evaluated the idea that what a consumer chooses to buy can serve as a signal of identity or preference (Berger and Heath 2007; Gal 2015), less work has considered the notion that how a consumer uses owned products or services might also influence the nature and strength of signaling. Here, we keep the product or service constant and identify rate of consumption as a novel factor that influences the self- and other- signaling in consumption. In explicating this effect, this work contributes to our understanding of how inferences of self-control during consumption can engender positive perceptions of consumers and goods, such as those relating to liking, passion, and inferred quality of consumed goods.

This research also adds to literature on experiential consumption by showing that consumers can meaningfully alter the perceived experience of consumption without changing what or how much they consume, but by simply changing the rate at which they consume. Likewise, this work adds to knowledge on extreme consumer behaviors more broadly. Existing literature explores the consumption of painful (Scott, Cayla, and Cova 2017), extraordinary (Bhattacharjee and Mogilner 2013), and collectible experiences (Keinan and Kivetz 2010). Meanwhile, other work identifies antecedents to extreme practices like hoarding (Haws, Naylor, Coulter, and Bearden 2012), brand fanaticism (Redden and Steiner 2000), and extreme altruism (Rand and Epstein 2014). Nevertheless, extremeness in everyday consumption is still relatively understudied, which is surprising given the popularity of extreme behaviors such as marathons and other intense athletic pursuits, minimalism, hoarding, diets that involve fasting and gorging, thrill seeking, and of course, bingeing.

Importantly, one might argue that the effects of bingeing on inferences of passion and liking could result, not from the accelerated rate of consumption, but from the novelty or immediate gratification arising from completing consumption first, or before other consumers. For example, someone who binges a television show the day it is released will finish the show before a consumer who begins not bingeing a show the day it is released, which may drive our effects. This is unlikely to explain the results from all of our studies that examine consumption of goods like gift cards (study 3a), snack foods (study 3b), however, we explored this idea in an additional experiment to be sure. We surveyed consumers (N = 283, see appendix for all details) regarding their actual plans for watching the second season of the television show *The Handmaid's Tale* the day before it was released. Participants indicated whether they planned to binge the show or not, when they planned to begin watching, and the extent to which they think

their viewing experience will be seen as passionate and reflective of their liking of the show. Consistent with our findings, participants who planned to binge anticipated that their viewing experience would more strongly signal passion for and liking of the show ($M_{Binge} = 5.52$; $M_{NotBinge} = 4.42$, $t(281) = 6.63$, $p < .01$). Further, these results do not change when controlling for when people plan to start watching, and when only considering respondents who plan to start the show more than one week after its release ($N = 121$, 47.1% of whom plan to binge, 52.9% of whom plan to not binge). As such, these findings provide evidence that effects of bingeing (vs. not bingeing) on signals of passion and liking are likely not explained by completing consumption before others, but are attributable to rate of consumption specifically.

Theoretical Implications and Future Directions

Despite the robustness of the results presented in this article, this research has limitations that offer fruitful opportunities for future research. First, this research does not consider long-term signaling effects of bingeing (vs. not bingeing). It is possible that the negative associations related to bingeing (i.e. undermining utility maximization and low self-control) may be more or less salient than the positive associations (i.e. liking, passion, and quality of good) after sufficient time has elapsed following consumption. Knowing whether one set of inferences is more salient over time compared to the other may be important for understanding whether bingeing (vs. not bingeing) results in long-term positive or negative signaling and perceptions.

Similarly, future research should explore how bingeing (vs. not bingeing) affects future consumption decisions. For instance, it is possible that consumers' positive perceptions of bingeing (vs. not bingeing) drive them to repeat consumption out of a belief that they have a

stronger liking and passion for the good or activity. However, it is also possible that the belief that bingeing (vs. not bingeing) undermines consumption utility and signals low self-control might lead to decreased interest in the good or activity in the future. Likewise, consumers might infer that their need to signal their identification with or passion for the particular good or activity has been met via bingeing, and may therefore reduce future consumption.

In this work, we consider bingeing only in terms of ‘temporal bingeing,’ or rate of consumption. This is important because other conceptualizations of bingeing also sometimes include quantity of a good or resource. While we show that rate of consumption can be a stronger signal of liking and passion than volume consumed (study 4), a more in-depth exploration of the role of rate and quantity could yield important findings. For example, determining how rate and quantity of consumption interact with one another in terms of both positive and negative perceptions would be an interesting avenue for further work.

The current work offers insight into the popularity of condensed consumption offerings and the types of experiences consumers seek. For example, rather than taking courses over a long period of time, many organizations now offer ‘bingeable’ options - such as computer coding ‘boot camps,’ yoga and fitness retreats, or immersive language programs - that condense months of material and work into shorter timeframes to create more intense, faster consumption of the same amount of information or benefits. Relatedly, recent research shows that consumers prefer to consume media that is perceived to be sequential over a more condensed timeframe (Lu et al. 2017). However, what remains unstudied is how the ability to binge influences the way consumers learn or grow from consumption; an open question for future exploration.

Although we demonstrate evidence for the proposed effects across a wide variety of domains, future researchers may wish to examine whether the effects differ in domains that are

more or less naturally identity-relevant or likely to confer inferences of liking and passion. For example, past work by Berger and Heath (2007) suggests that products vary in the extent to which consumers believe they signal their identity to other consumers. Therefore, it is possible that the differences in inferences made about consumers who binge (vs. do not binge) may be stronger in domains wherein identity expression is more natural, such as media, versus when people consume less naturally expressive goods, like toothpaste. Additionally, it would be interesting to examine the role of perceived scarcity of the product or resource being binged (Inman, Peter, and Raghurir 1997; Roux ,Goldsmith, and Bonezzi 2015). The scarcity of the product may impact the normative consumption rate, inferences of self-control, and the perceived legitimacy or recklessness of bingeing.

Existing work also notes that ‘binge’ implies excessive consumption of a substance that is acceptable or even necessary in moderation, while addiction is more commonly applied to stigmatized or illegal substances (Pierce-Grove 2017). Relatedly, Pierce-Grove (2017) contends that bingeing is distinguishable from addictions in part because binges are finite. In other words, unlike addiction, binges are characterized by the fact that they come to a discernable end, either voluntarily or involuntarily (e.g. when supply is exhausted). Thus, it would be interesting for future work to consider how rate of consumption might differently influence perceptions of self-control, and subsequent liking and passion when they involve more stigmatized substances and behaviors or when excessively fast consumption appears unending or has not yet ended.

Our findings that bingeing creates a stronger self- and other-signal of passion could also have potential social implications that warrant further examination. It is possible that the collective sense of lower self-control when bingeing with others might amplify or validate feelings of passion and fanaticism compared to consuming alone. Further, bingeing with others

could enhance shared consumption experiences by fostering mutual feelings of passion and liking, which could be socially bonding. Prior work shows that sharing media with romantic partners can be beneficial because it helps create shared parasocial relationships with media characters (Gomillion, Gabriel, Kawakami, and Young 2016). However, this work does not consider how rate of shared media consumption (e.g. bingeing versus not bingeing with romantic or non-romantic others) might influence relationship quality too. As such, future work should more specifically examine the effect of shared bingeing on inferences of passion, liking, quality of the good, and social connection or relationship quality. Further, future research might consider how shared versus unshared bingeing experiences influence the perception of the direct utility derived from consumption too.

In addition to comparing bingeing alone to bingeing with others, future research can also explore planned versus unplanned bingeing. It is typically assumed that bingeing is unplanned and an impulsive behavior, but prior work (Lu et al. 2017), and evidence from study 1 here, suggests that binges can be planned or spontaneous. Initial findings from additional studies we conducted suggest that, while both spontaneous and planned bingeing can signal passion and liking, unplanned bingeing can serve as a more powerful signal of passion and liking. As such, it would be interesting to explicitly examine perceptions of consumers who engage in planned versus unplanned bingeing, and perceptions of products that are intentionally versus unintentionally binged.

Practical Implications

This work offers several practical implications for brands trying to enhance the perceived quality of their goods and attract consumers, and for consumers seeking to create passionate experiences and convey their preferences to others. First, our findings suggest that simply providing the average consumption rate of each product offering is valuable to consumers and can inform their preference and choice. This is an important insight as the digitization of goods and advent of streaming services means that many online retailers and content providers already have this information available. If marketers want to provide consumers with useful data, they could add information about the average time it took consumers to complete the consumption of the product (e.g., read an e-book, or watch an entire TV show season), to complement existing online reviews or product descriptions.

Marketers and retailers who do not have this data or cannot observe the consumption rate could explicitly ask reviewers to provide this information in their online reviews. Just as providing information about products' popularity (e.g. in terms of sales) and rankings, (e.g. percent of "5 star" ratings), has become a standard consumers have learned to expect and use in their buying decisions, providing information about consumption rate may over time become a norm too, and an important source of information consumers rely on when making purchase decisions. Currently, many consumers provide this information in reviews without being solicited. As such, it would be interesting to examine whether reviews that mention consumption rate are more valued or rated as more useful by consumers.

Consistent with our findings, some brands have already begun adopting the terms "binge-worthy" and "unputdownable" in their marketing communications. Providing information about consumers' average consumption rate can help marketers bolster these claims. Similarly, to support the binge-worthy nature of their product offerings brands might have celebrities or social

media influencers share when they have consumed a good or service at a particularly fast rate; this will signal the digital influencers' liking and passion for the brand or good, and will positively affect perceived quality of the product.

The current work can also inform when and why consumers decide to binge. In an additional experiment ($N = 299$, see appendix for all details), we had participants imagine that the next season of one of their favorite television shows was released on a streaming service, and they are deciding whether or not to binge or not binge the show. We told participants that their goal was to: 1) maximize utility (i.e. "get the most enjoyment out of each episode") or 2) maximize signaling utility (i.e. "create the most intense and passionate experience of watching the show"). We also included a control condition with no explicit goal stated for comparison. Results indicated that participants were significantly more likely to choose to binge-watch the show when they had the goal of creating an intense and passionate experience (63.9%) compared to when their goal was to maximize utility (49.5%) or no goal was provided (43.6%, $\chi^2 = 8.65$, $p = .01$). Thus, brands can motivate (or de-motivate) bingeing behaviors by making experiential and signaling goals more (or less) salient.

Finally, consumers may use the findings presented here to create experiences that serve as stronger signals of their preferences and passion to other consumers. For example, a consumer wishing to signal that she is more of a yogi might choose to attend a set of yoga classes in a more condensed timeframe rather than purchasing a greater quantity of classes. This is important because sending clear signals through consumption, both to one's self and to others, is arguably becoming more difficult in contemporary society. The presence of social media and online communities allows people to constantly send signals to others about who they are and what they like to consume. As a result, our worlds are saturated with signals from others who inundate our

social media timelines with information about their preferences and passions. Similarly, consuming and accessing goods has never been easier than it is today. The average person can now easily and cheaply buy infinite goods online, and media streaming services give us inexpensive access to more content than ever before. Consequently, there is also a lot of noise in the signals we send ourselves through our consumption behaviors. Thus, the signals that we send through our consumption need to be stronger than ever in order to cut through the clutter and be heard. Here, we suggest that bingeing, or accelerating one's consumption to an excessively fast rate, is a way in which consumers can send stronger and more genuine-seeming signals about their preferences and passion to themselves and others.

In conclusion, the current work demonstrates that bingeing behavior in everyday consumption is an important and intriguing cultural phenomenon that marketers and policy-makers need to recognize and understand. With the advent of streaming services and the increased accessibility of goods, it is clear that bingeing behaviors are here to stay. Moreover, as we see in study 1, bingeing is not only common, but it is also socially acceptable and offers positive signals. Consumers are aware that bingeing is not utility maximizing, and yet, bingeing prevails as a celebrated phenomenon. Given this, attempting to reduce bingeing behaviors or educate consumers on the value of slowing down or segregating gains may be challenging. To increase consumers' welfare and wellbeing, policy makers and marketers might instead try to leverage the phenomenon of bingeing and the positive signals it can provide to encourage consumers to binge on virtues rather than vices. For example, orienting consumers' desire to signal passion and brag about bingeing toward bingeing behaviors that are beneficial for the self and society, such as volunteering, pro-social activities, completing educational online courses, physical exercise, and other healthy behaviors.

Disconnected in a Digital World: How Receiving Digital versus Physical Goods Affects

Interpersonal Closeness

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Abstract

Consumers can now give and receive many items in digital form that could once only be shared in physical form (e.g. money, books, music, and photos). While digital exchanges have numerous advantages, such as speed and convenience, we demonstrate that sharing goods in digital (vs. physical) form also comes at a cost, particularly in regards to interpersonal closeness. Across four experiments, we demonstrate that receiving digital (vs. physical) money and goods results in lower feelings of interpersonal closeness between the receiver and giver, and this occurs for both monetary and non-monetary exchanges. We show that this effect is mediated by the recipient's perception of the giver's psychological ownership over physical versus digital goods. We provide further evidence for this account by demonstrating that the effect of form of good received on interpersonal closeness is moderated by whether the giver actually owns the good or not (e.g. it is rented), a known moderator of psychological ownership (Atasoy and Morewedge 2017). These findings contribute to research on digitization and interpersonal exchanges, showing how consumers can, ironically, feel disconnected in a digital world.

People can now give and receive many goods in digital form that could once only be shared in physical form (e.g. money, books, music, and photos). Digital exchanges have numerous advantages over physical exchanges. For example, digital transactions tend to be easier, more convenient, reduce concern that goods will be damaged or lost, and can be completed even when parties are physically distant. Digital peer-to-peer payment platforms are also often designed to foster greater social connection, allowing users to “friend” others, and supplement transactions with emojis, inside jokes, or expressions of gratitude (Urken 2012). However, despite the benefits of digital platforms, we predict that receiving goods or money in digital (vs. physical) form also comes at a cost, particularly in regards to feelings of interpersonal closeness. We base this counter-intuitive prediction on existing literatures on social exchange theory (e.g. Mitchell, Cropanzo, and Quisenberry 2012), gift-giving and sharing (e.g. Belk 1988; 2010; Aknin and Human 2015), and psychological ownership (e.g. Atasoy and Morewedge 2017).

Social Exchanges and Interpersonal Closeness

Consumers regularly give, share, borrow, lend, and exchange goods and resources with one another (Belk 2010; Mitchell et al. 2012; Sherry 1983). While these transactions are of obvious practical import, they also serve relational purposes. Indeed, social exchange theory posits that mutual exchanges of valued resources strengthen relationships between people (Belk 2010; Blau 1964; Mitchell et al. 2012). For instance, gift-giving and sharing of mundane goods are communal acts that bring people closer by communicating one’s investment in a relationship (Belk 2010; Belk and Coon 1993) and encouraging reciprocity (Mitchell et al. 2012). As such,

the exchange of goods between consumers is a common means for building and reaffirming relationships.

Of course, not all exchanges of goods are equal in their ability to tighten social bonds. Research on gift-giving indicates that giver-centric gifts promote greater interpersonal closeness for both givers and receivers (Aknin and Human 2015). In line with this, Belk (1988; 2010) conjectured that both gift-giving and the everyday sharing of mundane goods (e.g. borrowing a tool or sharing clothes) links receivers to givers because goods remain part of the giver's figurative extended self. In essence, giving and sharing goods with another person allows extended selves to merge, creating an aggregated extended self that includes both people (Belk 2010). In commercial transactions, consumers also display a preference for goods more closely associated with desired others in part because they offer greater feelings of closeness to that person (Argo, Dahl, and Morales 2008; Smith et al. 2015). Based on these findings, we posit that obtaining goods that are perceived as more clearly integrated with the source's extended self (i.e. of the gift-giver, lender, creator, or owner) should make receivers feel closer to that source.

Psychological Ownership

While there are many reasons why something might feel more or less a part of a person's extended self, one key driver is the extent to which a person feels psychological ownership over a good; or the feeling that an object is 'mine' (Pierce, Kostova, and Dirks 2003). Indeed, psychological ownership reflects the relationship between an individual and an object, in which the object is seen as part of the individual's extended self (Pierce et al. 2003). Prior work shows that people can experience psychological ownership for concrete objects, immaterial goods (e.g.

songs; Isaacs 1933), and even abstract concepts (e.g. brands or ideas; Baer and Brown 2012). Importantly, feelings of psychological ownership can vary based on a number of factors including the degree to which goods feel self-relevant or simply as a result of just physically interacting with or exerting more control over a good (Peck and Shu 2009).

Consistent with this, form (digital vs. physical) is a known feature of goods that influences psychological ownership. Atasoy and Morewedge (2017) demonstrate that the tangibility of physical (vs. digital) goods makes them easier to establish control over, thereby increasing feelings of psychological ownership and allowing consumers to more readily incorporate them into their self-concept and extended selves. As a result, consumers value physical goods more than digital goods. However, what remains unexamined is: (i) whether people make analogous psychological ownership inferences for other people and their goods or money, and (ii) whether perceptions of others' psychological ownership are consequential, particularly when goods are exchanged between people.

Form of Goods Exchanged and Interpersonal Closeness

We integrate and build on existing research to predict that receiving goods in physical versus digital form will influence feelings of interpersonal closeness. First, we predict that inferences of psychological ownership over digital versus physical goods will extend to judgments of others. That is, consumers will intuit that other individuals have greater psychological ownership over physical versus digital goods just as consumers do for their own goods. As a result, bridging prior work suggesting that giving goods links givers and receivers by merging extended selves (Belk 2010) with research showing that consumers feel closer to others

when they obtain goods more closely associated with them (Aknin and Human 2015; Argo et al., 2008; Smith et al., 2015), we predict that receivers will feel closer to givers after receiving goods in physical (vs. digital) form. In other words, receivers will feel closer to givers after receiving physical (vs. digital) goods because they perceive the giver as having greater psychological ownership over physical (vs. digital) goods.

Importantly, we predict that these effects will also extend to exchanges of money between consumers. Prior work indicates that money can be considered a part of one's extended self just as much as other non-commoditized goods (Belk 1988). Therefore, different forms of money (i.e. physical versus digital) should also produce discrepant feelings of psychological ownership in the same way as other more inherently symbolic objects. In terms of transferring money between people, while money often operates as a perfect commodity, social exchange theorists note that money is more complex than just a simple medium of economic exchange (Belk 2010; Mitchell et al. 2012). Namely, the distinction between commodities and symbolic exchanges can depend more on the social context of the exchange rather than the relationship between people or between people and objects (Gell 1992). As such, the exchange of concrete resources like money can influence relational outcomes if exchanged with symbolic meaning (Belk & Wallendorf 1990; Gell 1992). Therefore, we predict that the effect of receiving digital versus physical goods on feelings of closeness as a result of psychological ownership inferences should apply both to exchanges of goods and money between consumers, particularly when exchanges occur in communal situations.

However, we do not predict that receiving physical (vs. digital) goods or money will always result in stronger feelings of interpersonal closeness. Prior work suggests that when consumers do not actually own goods (e.g. they are rented or borrowed from others), the effect

of form of a good on psychological ownership is attenuated (Atasoy and Morewedge 2017). Given this, we predict that when givers do not actually own goods, the difference in the receiver's perception of the giver's psychological ownership over physical versus digital goods will be similarly attenuated. Thus, when givers do not actually own the goods they share, the positive interpersonal value of receiving a physical good over a digital good on interpersonal closeness should be mitigated too.

By testing these hypotheses, this research contributes to several streams of literature. First, prior work on psychological ownership focuses on the effects of people's own feelings over their own goods. Thus, this article extends existing research by showing that inferences of psychological ownership also vary for judgments of other consumers and their goods. Moreover, this work contributes to social exchange theory literatures by demonstrating that perceptions of others' psychological ownership over their goods can be socially consequential.

EXPERIMENT 1: RECALLED PAYMENTS

In experiment 1, we tested our hypothesis that receiving digital versus physical items affects interpersonal closeness using a between-subjects paradigm that solicited recollections of actual experiences.

Method

We recruited 163 undergraduates (35.8% Female, $M_{\text{age}} = 21.33$) to take part in this study in exchange for course credit. Participants were randomly assigned to recall a time when they

were given money in either physical or digital form by a friend, and to describe the experience. Next, to measure feelings of subsequent interpersonal closeness, participants indicated the extent to which they felt more or less close to and more or less comfortable with their friend after being paid (1 = “Definitely Less Close/Comfortable” – 7 = “Definitely More Close/Comfortable”; $\alpha = .80$). In all experiments, participants provided their age and gender.

Results and Discussion

Participants felt closer to their friend after receiving physical money versus digital money ($M_{Physical} = 4.87$, $SD = .92$; $M_{Digital} = 4.59$, $SD = .83$; $t(161) = 2.04$, $p = .04$, $d = .32$). This result provides initial evidence for the effect of form of a good received on interpersonal closeness using actual experiences recalled by consumers.

EXPERIMENT 2: THE MEDIATING EFFECT OF PSYCHOLOGICAL OWNERSHIP

In Experiment 2, we assessed whether receiving digital (vs. physical) money influences feelings of closeness using a manipulated paradigm. This design allows us to control for why participants are paid by someone and control for the timing of repayments. We also tested for the proposed mediator of perception of the givers’ psychological ownership over the resource.

Method

Participants from Amazon Mechanical Turk ($N = 298$; 56% Female; $M_{Age} = 35.49$) participated in this study in exchange for \$0.10. Participants were randomly assigned to one of two between-subjects conditions and read the following:

Imagine that you recently went out to dinner with a colleague after work. At the end of the dinner, you both decide that you will pay for the whole bill and your colleague will pay you back for her portion. Your colleague's portion of the bill will cost \$35. The next day at work, you see your colleague, and she pays you back in cash (using a digital payment application).

In random order, participants indicated how close they would feel to their colleague after this interaction and their perception of their colleague's psychological ownership over the money exchanged. To measure interpersonal closeness, participants indicated the extent to which they would feel close to and comfortable with their colleague after the interaction (1 = "Not at All Close/Comfortable" – 7 = "Very Close/Comfortable;" $\alpha = .77$). Inferences of psychological ownership were based on two measures: "To what extent does the money your colleague paid you back with feel like 'theirs,'" and "To what extent is it clear that the money your colleague paid you back with is money they personally possessed" (1 = "Not at All" – 7 = "Definitely"; $\alpha = .68$). For exploratory purposes, participants also rated the extent to which being paid back using cash/digital payment application made their colleague seem generous (1 = "Not at All" - 7 = "Very"), and the extent to which they were paid back the appropriate amount (1 = "I was definitely underpaid" – 4 = "I was paid and appropriate amount" – 7 = "I was definitely overpaid"). We included a manipulation check at the end of the study. Of note, we use all participants in the analyses, but the results are the same when excluding those who failed the manipulation check.

Results and Discussion

There are no significant effects of order in which measures were solicited. Participants felt closer to their colleague when paid with physical versus digital money ($M_{\text{Physical}} = 5.49$, $SD = .99$, $M_{\text{Digital}} = 5.17$, $SD = 1.13$, $t(297) = 2.62$, $p = .009$, $d = .30$), and felt their colleague had higher psychological ownership over the physical money ($M_{\text{Physical}} = 5.84$, $SD = 1.23$, $M_{\text{Digital}} = 5.49$, $SD = 1.40$, $t(297) = 2.23$, $p = .03$, $d = .27$). Moreover, the relationship between payment form and feelings of closeness was significantly mediated by the receiver's perception of their colleague's psychological ownership over the money (indirect effect = $-.10$; LLCI: $-.211$, ULCI: $-.014$).

There were no differences between payment forms for perceptions of generosity ($M_{\text{Physical}} = 3.48$, $SD = 1.64$, $M_{\text{Digital}} = 3.33$, $SD = 1.40$, $t(297) = .85$, $p = .40$, $d = .10$). There was a marginal difference in the extent to which they thought they were paid back the appropriate amount ($M_{\text{Physical}} = 4.32$, $SD = .86$, $M_{\text{Digital}} = 4.17$, $SD = .62$, $t(297) = 1.78$, $p = .08$, $d = .20$), consistent with the notion that people tend to value physical goods more (Atasoy and Morewedge 2017). Due to this marginal effect, we conducted a subsequent mediation test including both psychological ownership and beliefs that one was paid back the appropriate amount. Importantly, the feeling as though one was paid back the appropriate amount does not significantly mediate the effect (indirect effect = $-.02$, LLCI: $-.06$, ULCI: $.003$), while the indirect effect of psychological ownership remains significant when including both mediators (indirect effect = $-.10$, LLCI: $-.20$, ULCI: $-.01$).

The results of this experiment show that receiving physical versus digital goods results in greater interpersonal closeness, and this effect is mediated by perceptions of the giver's psychological ownership over the resource. Of note, we replicated these effects in the context of

being paid by a friend rather than a colleague in two within-subjects and one between-subjects experiment. These experiments also provide further evidence for the mediating role of psychological ownership and offer evidence against competing process explanations such as pain, ease, and convenience of payments. For a detailed description of these experiments, see appendix.

EXPERIMENT 3: RECEIVING A DIGITAL VS. PHYSICAL BOOK

In this experiment, we build on the first two experiments by testing for the effects of receiving a physical versus digital good in a non-monetary domain. In particular, we assessed whether borrowing a physical versus digital book from a friend also engenders greater interpersonal closeness as a result of perceptions of the givers' psychological ownership over the book. We also tested for the role of affect and sensitivity to physical contagion as alternative explanations for our effects. For example, it is possible that receiving a physical versus digital book may lead to greater closeness due to feelings of contagion such that in being able to touch the physical good, the person is leaving some of their essence on the object, which engenders greater closeness for the receiver. Likewise, it is possible that receiving a physical versus digital book may lead to affective responses unrelated to perceptions of psychological ownership that could be influencing the observed effects. Thus, we tested for these alternative explanations in this experiment.

Method

Participants ($N = 198$ MTurkers, 50% female, $M_{\text{age}} = 37.21$; $SD = 12.12$) completed this study in exchange for \$0.05. Participants were randomly assigned to one of two conditions—digital or physical condition—in a between-subjects design, and read the following scenario (digital condition in parentheses):

“Imagine you are talking to your friend and mention that you are interested in reading a book that came out recently. Your friend says that they own the hardcover (electronic) version of the book and already read it. They offer to lend it to you if you would like. You say yes and your friend says they will bring (send) it to you tomorrow. The next day, your friend gives you the book (sends you the e-book electronically). You spend the next few weeks reading the book before returning it to your friend.”

After, participants completed two items measuring perceived psychological ownership: 1) “When lending me the book, it felt like my friend was giving me something of theirs,” and 2) “When lending me the book, it felt like my friend was giving me a little piece of themselves” (seven-point Likert scales anchored by “Not At All” and “Very Much So”). These two items were averaged to form a single index of psychological ownership ($\alpha = .52$ —of note, while this Cronbach’s alpha value is low, the results do not change in nature or significance when the items are analyzed separately). Next, participants indicated how interpersonally close they felt to their friend across four items: 1) “To what extent do you feel close to your friend?” 2) “To what extent do you feel comfortable with your friend?” 3) “To what extent do you feel connected with your friend?” 4) “Lending me this book is an expression of how close my friend and I are” (seven-point Likert scales, $\alpha = .87$). Participants then rated the extent to which they felt twelve different emotions at the present moment (e.g. proud, guilty, thankful, disgusted; five-point Likert scales anchored by “very slightly or not at all” and “extremely”). Participants responded to three items assessing sensitivity to negative physical contagion (Newman et. al., 2011), and three items

assessing individual differences in sensitivity to positive physical contagion. See appendix for a description of measures.

Results and Discussion

Interpersonal Closeness. Participants felt closer to their friend when their friend lent them a physical versus digital book ($M_{\text{Physical}} = 5.80$, $SD = .93$, $M_{\text{Digital}} = 5.49$, $SD = .98$, $t(196) = 2.25$, $p = .025$, $d = .32$).

Psychological Ownership. Participants perceived that their friend had greater ownership over the physical versus digital book ($M_{\text{Physical}} = 5.06$, $SD = 1.21$, $M_{\text{Digital}} = 4.31$, $SD = 1.38$, $t(196) = 4.04$, $p < .001$, $d = .58$).

Affect. The effect of form of the book was not significant for any of the affective measures. See appendix for detailed table of these results.

Sensitivity to Physical Contagion. Moderation analyses using PROCESS (Hayes, 2015) following model 1 indicate that there is no significant interaction between either sensitivity to positive contagion and form of the book exchanged ($p = .88$) or sensitivity to negative contagion and the form of the book exchanged ($p = .66$).

Mediation. The mediation analysis indicates full mediation of perceived psychological ownership for the relationship between form of the book and feelings of interpersonal closeness (indirect effect = $-.26$, LLCI: $-.431$, ULCI: $-.132$).

The results of this experiment demonstrate that the effect of form of a good or resource received on feelings of interpersonal closeness extend to non-monetary domains. Participants who borrowed a physical (vs. digital) book from a friend reported lower feelings of interpersonal

closeness, and as in the domain of money, this effect was mediated by perceptions of the givers' psychological ownership over the physical versus digital book. The results of experiment 3 also show that there are no affective differences depending on form of the book borrowed nor are the effects influenced by differences in sensitivity to contagion, helping to rule out affect or contagion as alternative explanations of the effects.

Moreover, prior findings might suggest that it is possible that increased feelings of closeness depending on the form of money or goods received may be attributable to increased valuation of physical versus digital goods as a result of the *receivers'* feelings of psychological ownership of the book they are about to receive (Atasoy and Morewedge 2017). However, if this is the case, that same work would predict that differences should not emerge when receivers do not expect to own the book, but we see that they do in this experiment in which they are told they only borrowed the book, bolstering the notion that the effect is driven by perceptions of the *givers'* ownership over the good received.

EXPERIMENT 4: RECEIVING A DIGITAL VS. PHYSICAL BOOK AND MODERATION BY OWNERSHIP

In experiment 4, we tested our predictions using a non-monetary good and assessed the influence of a process-relevant moderator drawn from prior work. Specifically, existing research indicates that when people do not actually own (e.g. they are rented or borrowed), the difference in psychological ownership over physical versus digital goods is attenuated (Atasoy and Morewedge 2017). Thus, we predict the same will be true for inferences of others' ownership

over goods; and as a result, the effect of form of a good received on interpersonal closeness will also be moderated by whether goods are actually owned by the giver or not.

Method

Participants from Amazon Mechanical Turk ($N = 500$; 55.2% female; $M_{Age} = 36.3$) participated in this study in exchange for \$0.10. We used a 2 (form of book: physical vs. digital) x 2 (actual ownership: owned vs. rented) design wherein participants imagined mentioning a specific book they would like to read to a friend. In the owned condition, participants read: *“Your friend says that they actually own the hardcover copy (digital Kindle version) of the book. They say they would be happy to give (send) you their book. The next day, your friend gives (sends) you the hardcover copy of the book (digital copy of the book over Kindle).”* In the rented condition, participants read: *“Your friend says that they actually have the hardcover copy (digital Kindle version) of the book that they rented from the library. They say they would be happy to give (send) you the library book. The next day, your friend gives (sends) you the hardcover copy of the book (digital Kindle version) of the book.”*

In random order, participants indicated the extent to which they felt close to their friend based on the same measures used in experiment 2 ($a = .86$), and indicated their perceptions of their friend’s psychological ownership over the book based on two items: “The book my friend gave me is ‘theirs’” and “The book my friend gave me is something they have a high degree of personal ownership over” (1 = “Not at All” – 7 = “Definitely”; $a = .90$). Additionally, participants indicated the extent to which they thought giving them the book was generous of their friend on the same scale. We also included an attention check in the beginning of the survey. While we

include all participants in the analyses, the results are the same when excluding participants who failed the attention check.

Results and Discussion

There were no significant effects of the order in which measures were solicited on any measures. There was a main effect of form of the book received on feelings of interpersonal closeness ($M_{\text{Physical}} = 5.63$, $SD = 1.02$, $M_{\text{Digital}} = 5.40$, $SD = 1.03$, $F(1, 499) = 8.58$, $p = .004$, $\eta_p^2 = .02$), a main effect of whether the book was owned by their friend or rented on closeness ($M_{\text{Owned}} = 5.63$, $SD = 1.01$, $M_{\text{Rented}} = 5.40$, $SD = 1.04$, $F(1, 499) = 8.43$, $p = .004$, $\eta_p^2 = .02$), and an interaction between form of the book and whether it was owned or rented ($F(1, 499) = 5.53$, $p = .02$, $\eta_p^2 = .01$). Participants felt closer to their friend when they received a physical (vs. digital) copy of the book when their friend owned the book ($M_{\text{Physical}} = 5.90$, $SD = .87$, $M_{\text{Digital}} = 5.42$, $SD = 1.07$, $F(201) = 13.99$, $p < .001$, $\eta_p^2 = .03$), but there was no difference in feelings of closeness after receiving the book when it was rented ($M_{\text{Physical}} = 5.42$, $SD = 1.04$, $M_{\text{Digital}} = 5.37$, $SD = .97$, $F(201) = .166$, $p = .69$, $\eta_p^2 = .000$).

Similarly, there was a main effect of form of the book received on psychological ownership ($M_{\text{Physical}} = 4.52$, $SD = 2.18$, $M_{\text{Digital}} = 4.28$, $SD = 1.87$, $F(1, 499) = 9.38$, $p = .002$, $\eta_p^2 = .02$), a main effect of whether the book was owned or rented by their friend on psychological ownership ($M_{\text{Owned}} = 5.37$, $SD = 1.52$, $M_{\text{Rented}} = 3.42$, $SD = 2.01$, $F(1, 499) = 164.36$, $p < .001$, $\eta_p^2 = .25$), and an interaction of form of the book and whether it was rented or owned ($F(1, 499) = 20.27$, $p < .001$, $\eta_p^2 = .04$). When the book was actually owned by their friend, receivers thought their friend had greater psychological ownership over the physical versus digital book

($M_{\text{Physical}} = 6.03$, $SD = 1.18$, $M_{\text{Digital}} = 4.85$, $SD = 1.57$, $F(1, 499) = 28.71$, $p < .001$, $\eta_p^2 = .06$), but no differences emerged between forms of the book when it was rented ($M_{\text{Physical}} = 3.32$, $SD = 2.04$, $M_{\text{Digital}} = 3.55$, $SD = 1.986$, $F(1, 499) = 1.03$, $p = .31$, $\eta_p^2 = .002$).

FIGURE 3.2: INTERPERSONAL CLOSURE AFTER RECEIVING PHYSICAL VS. DIGITAL BOOK DEPENDS ON GIVERS' OWNERSHIP OVER BOOK (EXPERIMENT 4)

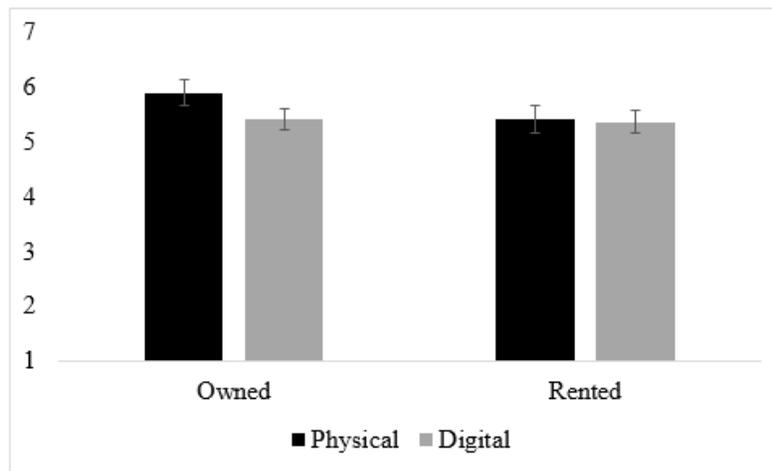
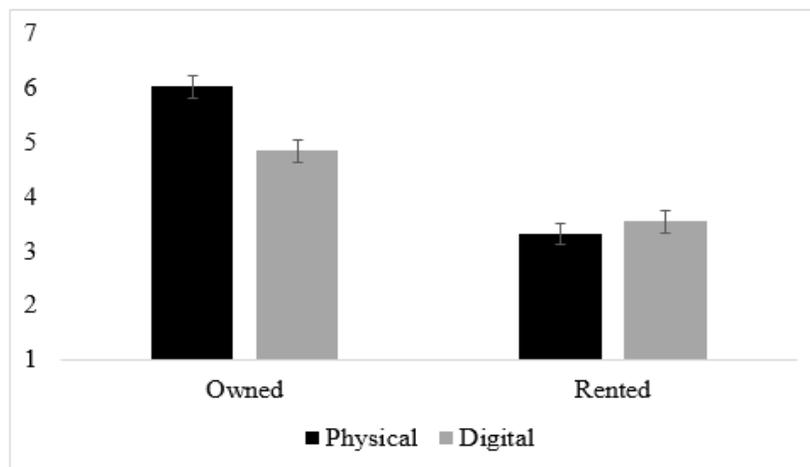


FIGURE 3.3: PSYCHOLOGICAL OWNERSHIP OVER PHYSICAL VS. DIGITAL BOOK DEPENDS ON WHETHER BOOK IS OWNED OR RENTED BY GIVER (EXPERIMENT 4)



A moderated mediation analysis following Hayes (2014) Model 7 was also significant such that when the giver owns the book, the effect of form of the book on feelings of closeness is significantly mediated by perceived psychological ownership (Indirect effect = $-.19$; 95%

confidence intervals do not include zero), but this indirect effect was not significant when the friend rented the book from the library (indirect effect = $-.002$; 95% confidence intervals do include zero).

Importantly, while we did not observe an effect of form of money on perceived generosity in experiment 2, in this experiment, we did observe a significant main effect of form of book received on generosity ($M_{\text{Physical}} = 5.75$, $SD = 1.46$, $M_{\text{Digital}} = 5.60$, $SD = 1.34$, $F(1, 499) = 4.13$, $p = .04$, $\eta_p^2 = .008$), a main effect of whether the book was owned or rented on generosity ($M_{\text{Owned}} = 6.06$, $SD = 1.20$, $M_{\text{Rented}} = 5.29$, $SD = 1.49$, $F(1, 499) = 44.77$, $p < .001$, $\eta_p^2 = .08$), and an interaction effect ($F(1, 499) = 3.93$, $p = .05$, $\eta_p^2 = .008$). Moreover, when generosity and psychological ownership are tested as simultaneous mediators in the moderated mediation model (following model 7 of PROCESS; Hayes 2017), the moderated mediation model is significant for both perceived generosity (index of moderated mediation: $.16$, LLCI: $.005$, ULCI: $.33$) and psychological ownership inferences (index of moderated mediation: $.12$; LLCI: $.04$, ULCI: $.23$). These results suggest that, with non-monetary goods, receiving physical versus digital goods may increase feelings of closeness as a result of the impact on psychological ownership and perceived generosity. Nevertheless, the significance of both mediators when controlling for the other—and the results from experiment 2—suggests that psychological ownership alone independently contributes as a mediator of the effect of form of good received on feelings of interpersonal closeness.

Of note, the results of experiment 4 suggest that the effect of receiving digital versus physical goods on interpersonal closeness is driven by a positive effect of physical goods. In a separate experiment, we explicitly tested for directionality against a control condition in the domain of money. The results confirmed that receiving physical goods increases interpersonal

closeness to receiving digital goods and a control condition. See appendix for a full description of experiment.

GENERAL DISCUSSION

We show that receiving physical (vs. digital) goods affects interpersonal closeness as a result of perceptions of the givers' psychological ownership over goods. This research adds to prior work on psychological ownership, showing that such inferences extend to judgments of other consumers and their goods. Moreover, this research contributes to the social exchange theory literature by demonstrating that perceptions of others' psychological ownership over goods can be socially consequential when these goods are shared or exchanged.

Practically, this work has implications for marketers and consumers. For example, organizations seeking to foster feelings of connectedness in order to encourage affiliation or generosity (e.g. universities sending acceptance letters with the hopes of matriculation or charitable organizations soliciting donations) could opt to send physical materials. At the same time, consumers can strategically choose to share physical or digital goods or money with other consumers or service providers depending on their interpersonal objectives.

The limitations of the current work present fruitful opportunities for further investigation. First, the experiments herein focus on exchanges in communal relationships. Future work should examine the effects of form of goods transacted in exchange relationships or relationships along the continuum of communal to exchange (e.g. one-time marketplace exchanges versus repeated interactions in service settings or sharing economies). It is possible that the effects herein only apply in certain types of exchanges or in interactions where there is a desire for social closeness.

Future work should delve more deeply into potential boundaries of the effects depending on different types of relationships and relational goals.

Relatedly, this article focuses on the perspective of the receiver. At present, it is unclear whether the effects would be the same from the givers' perspective, and/or as a result of the same mechanism of psychological ownership. It is possible that givers' feelings of closeness with the receiver are unaffected by their psychological ownership over the goods they give or are influenced by other aspects or consequences of form of goods exchanged. Likewise, the effects for givers compared to receivers may be more nuanced depending on the type of exchange (e.g. givers may be affected uniformly across exchange relationships because they are always giving up something that is part of their self-concept, while receivers may only be affected in communal exchanges wherein the linkage of the good to the giver is more valued or salient). As such, future research should explicitly examine the effects of giving goods in different forms on interpersonal closeness from the perspective of the giver, and how the effects compare to those from the perspective of the receiver.

In summary, we demonstrate that receiving digital versus physical goods influences interpersonal closeness as a result of perceptions of the givers' psychological ownership over goods. We show that this effect occurs for money and non-monetary items. Thus, while transferring items in digital form offers many advantages, we demonstrate the unintended consequence of increased feelings of disconnection in a digitized world.

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APPENDICES

1. Essay 1 Appendix (p. 143)
2. Essay 2 Appendix (p. 172)
3. Essay 4 Appendix (p. 178)

ESSAY 1 APPENDIX

Introduction: “Minimalism Maximalism” 2019 Exhibition, Fashion Institute of Technology

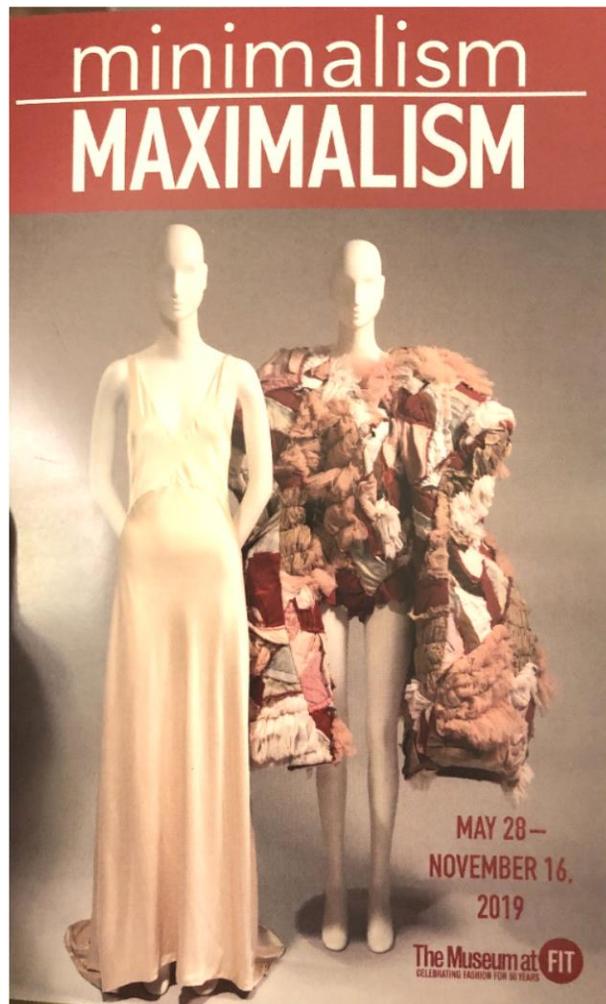
The museum of the Fashion Institute of Technology held the “Minimalism Maximalism” exhibition in New York City from May to November, 2019 (<https://tinyurl.com/vf3krht>; see brochure below). The exhibition included dresses and accessories particularly representative of Minimalism and Maximalism and also offered a historical perspective on the two styles.

To test the notion of sparse aesthetic, we photographed the 60 dresses¹ of the exhibition (30 minimalist and 30 maximalist models). We subsequently coded these dresses on the following dimensions: number of colors, patterns (1 = plain color, 2 = simple pattern, 3 = extremely ornate pattern), and volume (1 = lean and light, 2 = medium; 3 = voluminous and heavy). In general, minimalist models tended to have a limited number of colors ($M_{\text{Min}} = 1.7$, $SD = .98$), they exhibited very simple patterns ($M_{\text{Min}} = 1.33$, $SD = .55$), with the majority of the models being monochromatic (70%), and these dresses also had a lean and light structure ($M_{\text{Min}} = 1.6$, $SD = .72$). Moreover, the minimalist dresses had significantly fewer colors than the maximalist dresses ($M_{\text{Max}} = 4.13$, $SD = 2.53$; $t(58) = 4.91$, $p < .001$), fewer patterns than the maximalist dresses ($M_{\text{Max}} = 2.63$, $SD = .67$; $t(58) = 8.24$, $p < .001$), and less volume than the maximalist dresses ($M_{\text{Max}} = 2.8$, $SD = .48$; $t(58) = 7.55$, $p < .001$). Interestingly, 4 minimalist models (i.e., 13%) had holes in unusual places, such as the torso or the sternum, suggesting that empty space, or the conspicuous absence of material, is a relevant motif in minimalist fashion.

In sum, this data provides some preliminary evidence on the importance of the second dimension of minimalism, sparse aesthetic, in the domain of fashion.

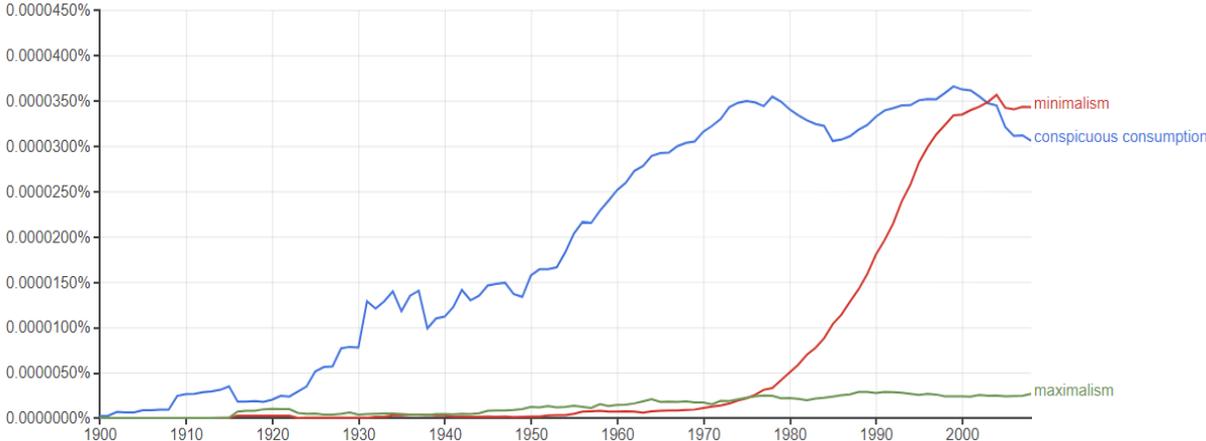
¹ The exhibition also included a dozen of dresses from 1700s and 1800's, but we focused on the modern models.

FIGURE A1.1: “MINIMALISM MAXIMALISM” EXHIBITION BY THE FASHION INSTITUTE OF TECHNOLOGY



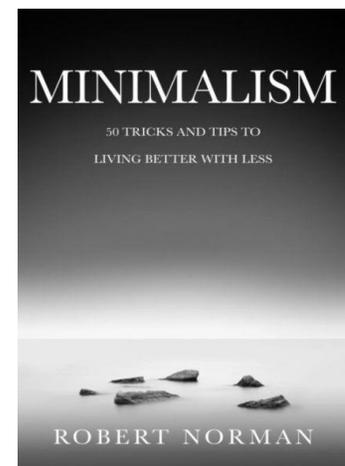
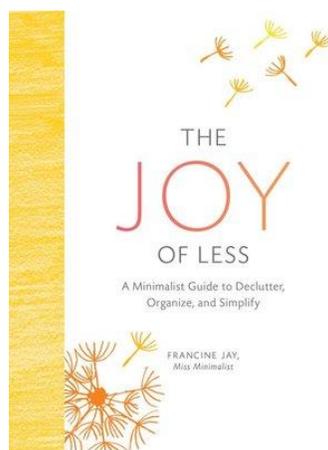
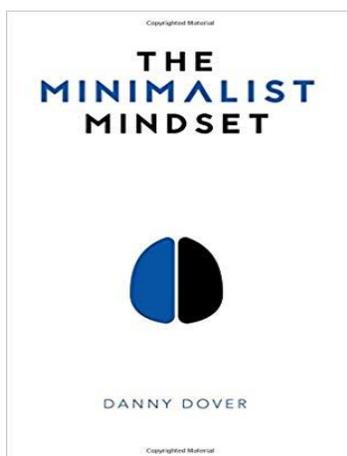
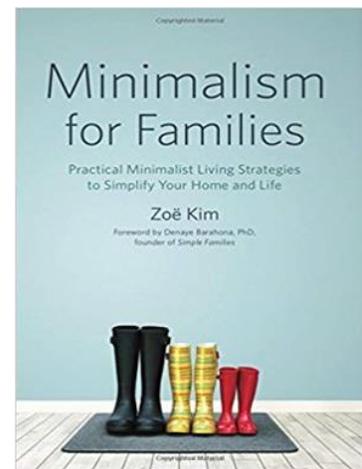
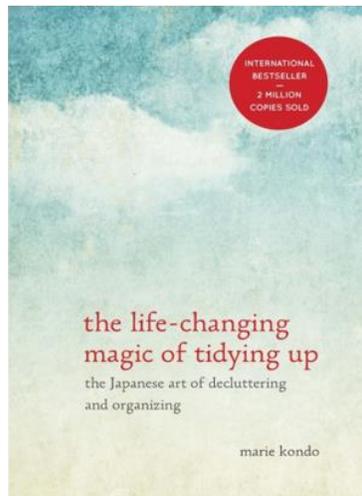
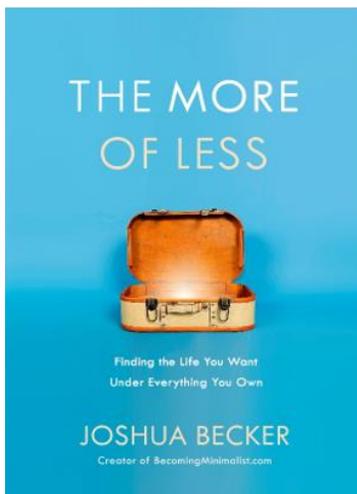
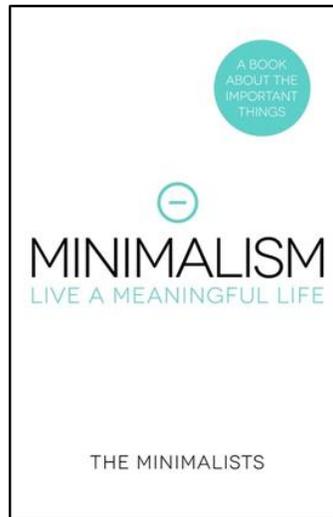
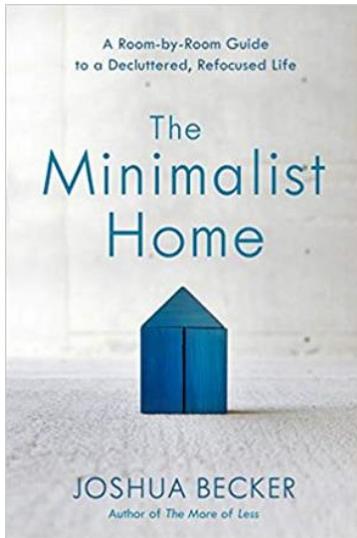
Introduction: Google Ngram Viewer Result

FIGURE A1.2: RELATIVE FREQUENCY OF ‘MINIMALISM,’ ‘MAXIMALISM,’ AND ‘CONSPICUOUS CONSUMPTION’ IN BOOKS FROM 1900 TO 2008

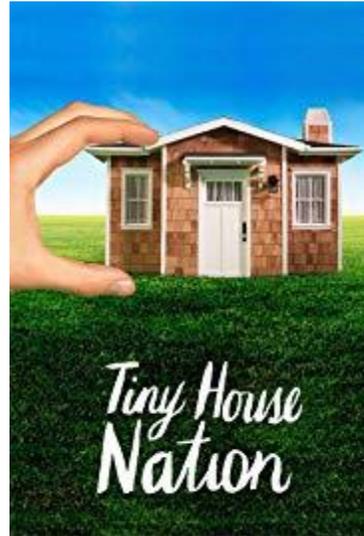


Study 1: Examples of Books, Movies, Television Shows, and Blogs on Minimalism

- Examples of Books on Minimalism:



- Examples of Movies and Television Shows on Minimalism:



- Examples of Blogs on Minimalism:

the minimalists

ABOUT BLOG PODCAST FILMS BOOKS MEDIA TOUR SERVICES DONATE

Listen to our most popular audiobook: Everything That Remains

Joshua Fields Millburn & Ryan Nicodemus help over 20 million people live meaningful lives with less through their website, books, podcast, and documentary. The Minimalists have been featured in the New York Times, Wall Street Journal, Boston Globe, Forbes, TIME, ABC, CBS, NBC, FOX, BBC, and NPR.

Email Newsletter

f t i y Q

GETTING STARTED DECLUTTER YOUR HOME KIDS FINANCES

the minimalist mom

A RICH LIFE WITH LESS STUFF

SIMPLE YEAR 2019 ABOUT BOOKS PRIVACY POLICY

SEARCH ...

HOLIDAYS

A Minimalist Easter

Easter is coming at us this weekend. If you celebrate secular Easter, the kind that involves bunnies and chocolate and Easter egg hunts, you may have noticed that this holiday has

Author: Olyn clutter City

becomingminimalist

Pursuing a Richer, Fuller Level of Happiness

WRITTEN by JOSHUA BECKER · 17 COMMENTS



THE TINY LIFE

HOME TINY HOUSES MINIMALISM HOMESTEADING STORE

PRACTICAL TOOLS

For Everyday Simple Living

USES MINIMALISM HOMESTEADING

ROADMAP BOOKS E-COURSE MENTORING BLOG ABOUT CONTACT

15TH APRIL - 2018

HOW TO SPRING CLEAN LIKE A MINIMALIST

SIMPLE AND MINIMAL

MAKE SPACE FOR THE GOOD AND THE EXTRAORDINARY

FOLLOW

SUBSCRIBE YOUR E-MAIL

ARCHIVES SELECT MONTH

CATEGORIES SELECT

Q SEARCH ...

Study 1: List of Minimalist Groups Joined on Facebook

1. A Minimalist Life
2. Practical Minimalism
3. Efficient Minimalism Living
4. Minimalist Living
5. Minimalist Life
6. Minimalist.org: Boston
7. Miminimalist.org: St. Louis
8. Minimalist.org: Chicago
9. Minimalist.org: San Fransisco
10. Minimalist – Let’s Share
11. The Minimalist Life
12. Minimalist UK
13. Minimalist Design
14. Minimalism without Rules
15. Conscious, Mindful Minimalism
16. Cozy Minimalist Living
17. Minimalist Zero-waste Living
18. Minimalist for the Sane
19. Minimalist/Frugal Living
20. Less is more life #minimalist
21. Practical Minimalism
22. Advanced Minimalism
23. Becoming Minimalist
24. Modern Minimalism
25. Abundant Life With Less

Study 1: Minimalism Facebook Qualitative Survey Items

Which of the following do you think are important elements of minimalism (check all that apply):

- The number of things someone owns, being intentional when acquiring new things, valuing empty space, sparse designs, uncluttered living spaces, being environmentally friendly, reducing waste, being thrifty, simplicity in design, not holding onto things, limiting how much stuff one acquires, being mindful of one’s consumption, being conscious of all the items one possesses, focusing only on what is essential, and an open-ended ‘other’ item.

To what extent do you think minimalism is a reaction to someone realizing...

- They spend too much money?
- They have too much stuff?
- That we, as a society, consume too much?

Responses measured on seven-point Likert scales (1 = Not All, 7 = A Great Deal)

In as much detail as possible, how would you define “minimalism”? What are the important components of “minimalism”?

Open-ended response

Do you consider yourself a minimalist?

Binary response measure: Yes/No

Why or why not?

Open-ended response

If yes, what led you to become a minimalist, if anything?

Open-ended response

Compared to the average consumer, to what extent do you think minimalists are:

- High status
- Intentional
- Mindful
- Thrifty
- Wasteful
- Value of empty space
- Value owning things
- Wealthy

Responses measured on seven-point Likert scales (1 = Much Less so, 4 = About the Same, 7 = Much More So)

FIGURE A1.3: DESCRIPTIVE STATISTICS FOR SELF-ASCRIED MINIMALISTS (FACEBOOK GROUPS SAMPLE), STUDY 1

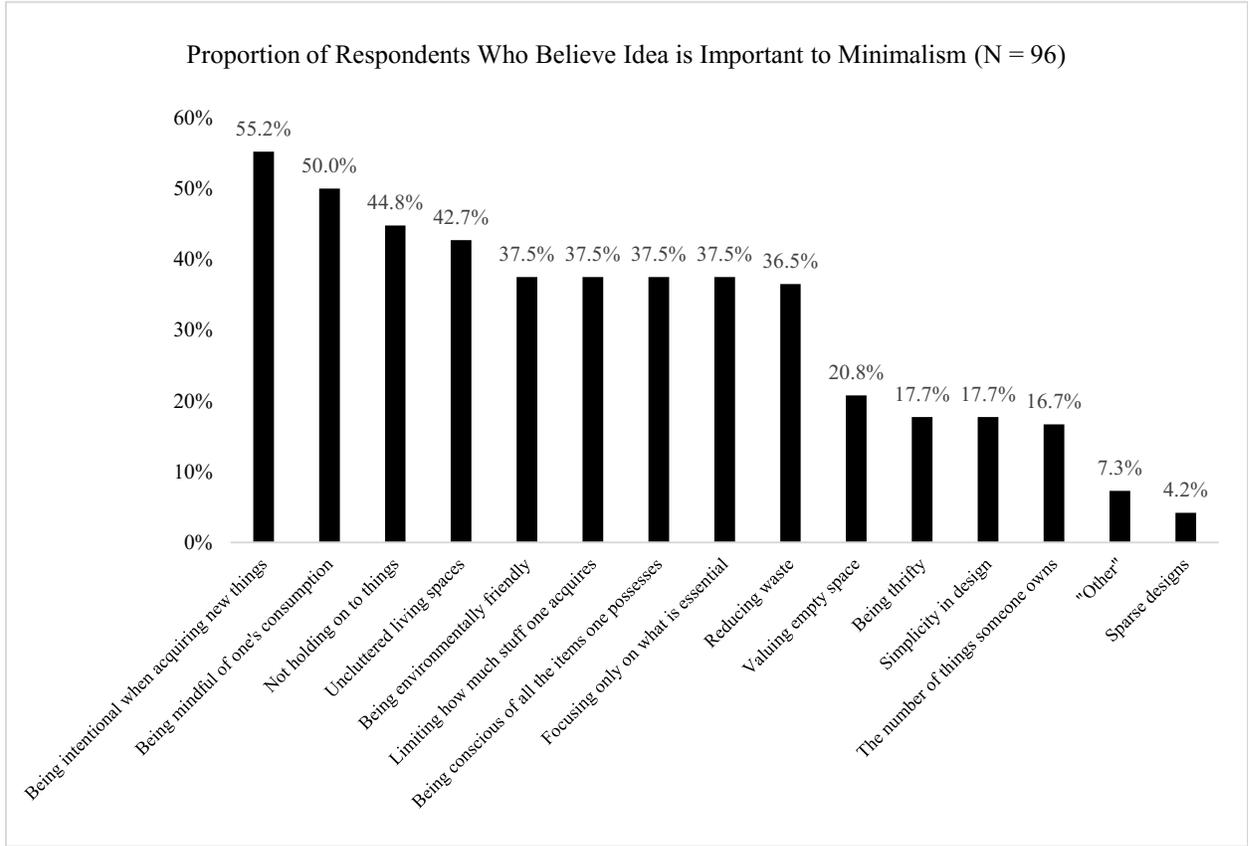


TABLE A1.1: SUMMARY OF DESCRIPTIVE STATISTICS FOR SELF-ASCRIED MINIMALISTS (FACEBOOK GROUPS SAMPLE) CONTINUED, STUDY 1

“Minimalism is...”	A reaction to someone realizing they have too much stuff	A reaction to realizing that we, as a society, consume too much	A reaction to someone realizing they spend too much money
Mean Responses to Items	6.15	5.88	4.22

Study 1: Amazon Mechanical Turk Qualitative Survey Items

Please indicate how much you think the following things contribute to determining the extent to which someone can be considered a minimalist:

- The number of things that someone owns
- The extent to which a person focuses on only owning what is essential to functioning.
- The extent to which a person focuses on getting rid of excess stuff.
- The extent to which a person values experiences over material things.
- The amount of waste a person produces.
- The extent to which a person is environmentally friendly.
- How much stuff a person has on display in their home.
- The extent to which a person's home is simply designed.
- The extent to which a person cares about spending less money.
- The extent to which a person has a specific taste for the appearance of certain objects.
- The extent to which a person is thrifty.
- The extent to which a person values quality over quantity.
- How a person's stuff appears visually (i.e. how it looks in terms of design and color).
- The extent to which a person enjoys getting rid of things.
- The extent to which a person has a taste for objects that look simple and clean.

Responses measured on seven-point Likert scales (1 = Not at All, 7 = A Great Deal)

To what extent do you think of minimalism as...

- A reaction to someone realizing they have too much stuff.
- A reaction to someone realizing they spend too much money.
- A way of living that is environmentally friendly.
- A way of being more conscious about how much money someone spends.
- An artistic way of living.
- A way of living that focuses only on what is essential to own.
- Only owning stuff that appears simple in design.
- A way of living that values quality over quantity.
- A way of living that emphasizes the importance of design.
- A way of living that minimizes how many decisions a person needs to make in a given day.
- A way of living that values experiences over things.
- A preference for objects that look simple and clean.

Responses measured on seven-point Likert scales (1 = Not at All, 7 = A Great Deal)

Compared to the average consumer, to what extent do you think minimalists are:

- Wealthy, tightwad (difficulty spending money), spendthrift (difficulty controlling spending), snobbish, high status, warm, competent, artistic, thrifty, environmentally conscious, wasteful, concerned with how things look

Responses measured on seven-point Likert scales (1 = Much Less so, 4 = About the Same, 7 = Much More)

Consider the two homes pictured below. Which of these homes do you think more accurately reflects minimalist living?



Responses measured on seven-point Likert scales (1 = Definitely Home on the Left, 4 = About the Same, 7 = Definitely the Home on the Right)

How would you define “minimalism”?

Open-ended response

Do you consider yourself a minimalist?

Binary Response Measure: Yes/No

Why or why not?

Open-ended response

FIGURE A1.4: SUMMARY OF DESCRIPTIVE STATISTICS FOR LAY CONSUMERS (AMAZON MTURK SAMPLE), STUDY 1

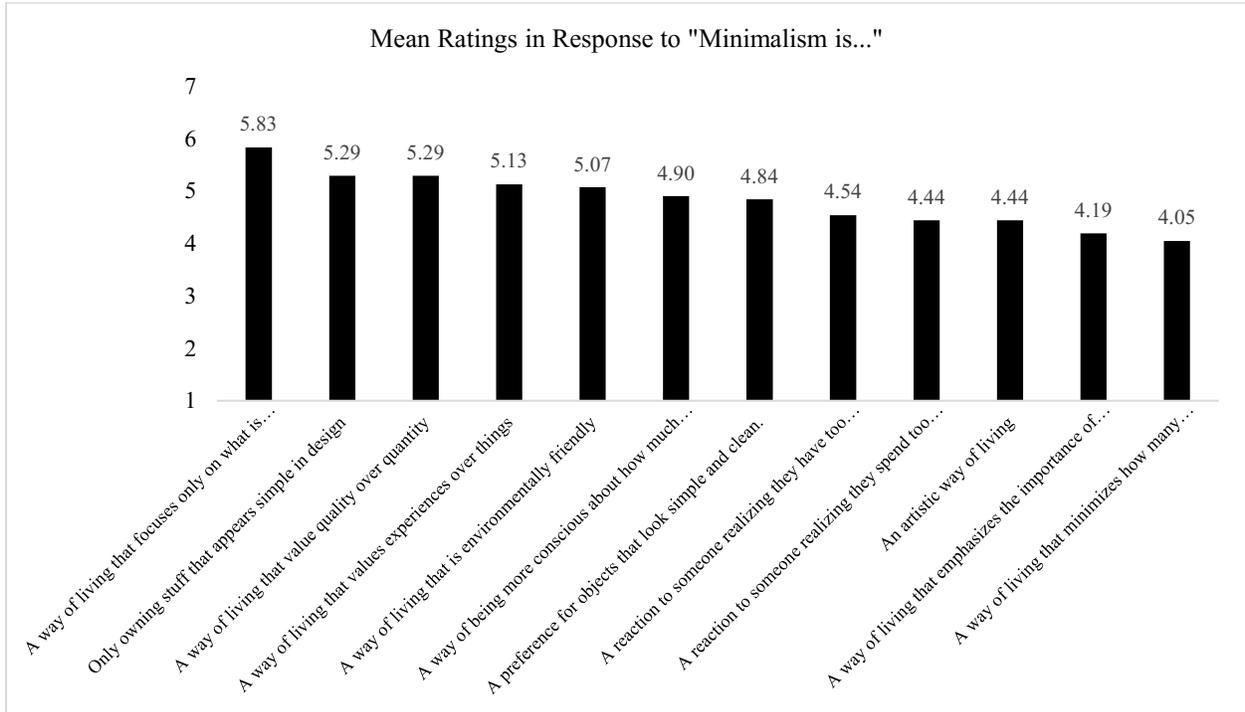


FIGURE A1.5: SUMMARY OF DESCRIPTIVE STATISTICS FOR LAY CONSUMERS (AMAZON MTURK SAMPLE), STUDY 1

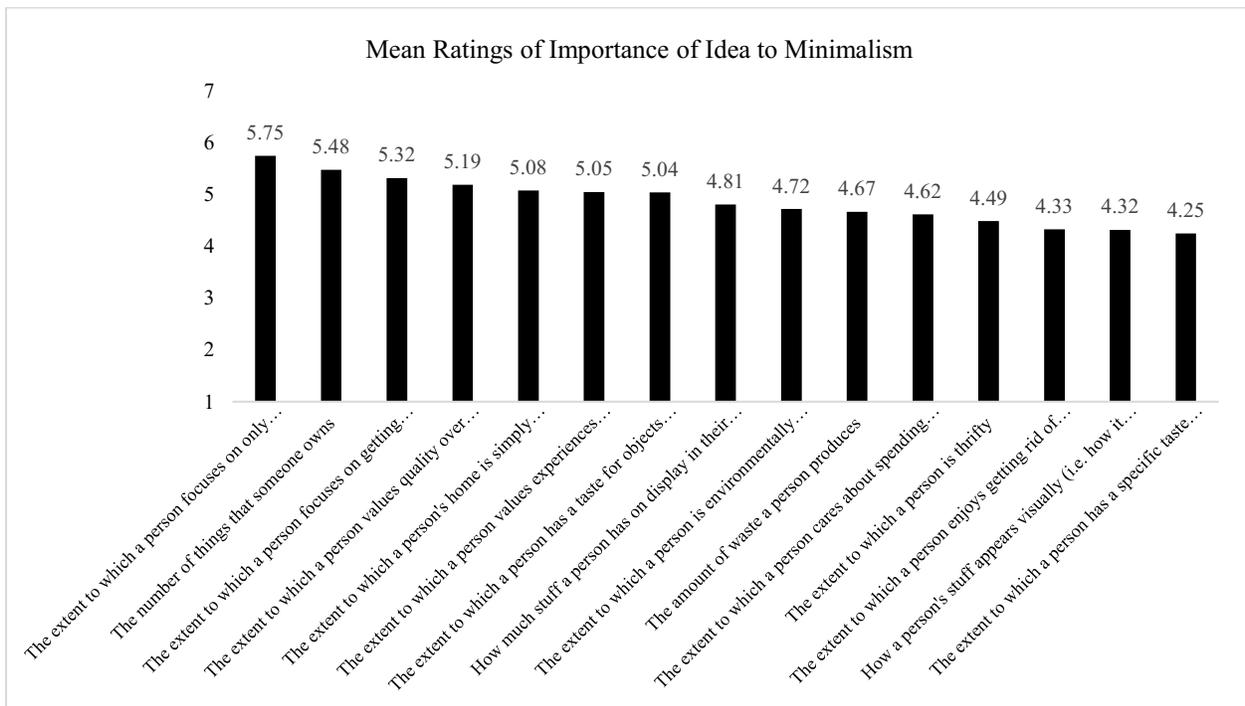


TABLE A1.2: DISCRIMINANT VALIDITY, FACTOR LOADINGS

Scales & Items	Factor 1	Factor 2	Factor 3	Factor 4
Minimalist Consumer Scale				
<i>Indicate the extent to which you agree with the following for yourself:</i>				
<i>I desire to own as few things as possible.</i>		0.68		
<i>I regularly seek to reduce the amount of stuff I own.</i>		0.64		
<i>It's better to own too few things than too many things.</i>		0.72		
<i>"Less is more" when it comes to owning things.</i>		0.74		
<i>I try to limit the number of things I purchase.</i>		0.69		
<i>I prefer things that look clean and simple.</i>		0.72		
<i>I prefer simplicity in design.</i>		0.75		
<i>I like to keep the decoration in my home simple.</i>		0.78		
<i>I believe that "less is more" when it comes to design.</i>		0.74		
<i>I prefer sparse designs.</i>		0.74		
<i>I like to be intentional about what I purchase.</i>		0.54		
<i>I am mindful of what I own.</i>		0.61		
<i>I am aware of the things/objects I bring into my life.</i>		0.59		
<i>I am conscious of all of the things I possess.</i>		0.53		
<i>I try to be thoughtful about what I consume.</i>		0.57		
Voluntary Simplicity Scale				
<i>How often do you engage in the following practices:</i>				
<i>Recycle cans used at home</i>				0.79
<i>Have gotten instruction in skills to increase self-reliance, for example, in carpentry, car tune-up, and repair, or plumbing</i>	0.69			
<i>Buy clothing at a second-hand store</i>	0.61			
<i>Make furniture or clothing for the family</i>	0.81			
<i>Contribute to ecologically-oriented organizations (such as Greenpeace, Sierra Club, etc.)</i>	0.78			
<i>Ride a bicycle on errands within two miles of home</i>	0.75			
<i>Make gifts instead of buying.</i>	0.79			
<i>Ride a bicycle for exercise or recreation.</i>	0.71			
<i>Recycle newspapers used at home.</i>				0.79
<i>Recycle glass jars/bottles used at home.</i>				0.80
<i>Family members or friends change the oil in the family car.</i>	0.63			
<i>Intentionally eat meatless main meals.</i>	0.67			
<i>Buy major items of furniture or clothing at a garage sale (over \$15).</i>	0.73			

TABLE A1.2 (CONTINUED)

<i>Have exchanged goods or services with others in lieu of payment with money, e.g., repairing equipment in exchange for other skilled work.</i>	0.67	
<i>Have a compost pile.</i>	0.57	
<i>Belong to a cooperative.</i>	0.62	
<i>Grow the vegetables the family consumes during the summer season.</i>	0.77	
<i>Ride a bicycle for transportation to work.</i>	0.83	
Product Retention Tendency Index		
<i>What is your likelihood of keeping...</i>		
<i>An old clock radio</i>	0.67	
<i>A suitcase that has a broken zipper</i>	0.73	
<i>A 4-slice toaster for which only 2-slices are working</i>	0.66	
<i>A 14-inch computer monitor</i>	0.56	
<i>Your child's first shoes</i>		0.58
<i>A pair of old shoes/boots</i>	0.62	
<i>An old VCR player</i>	0.66	
<i>Your father's old tools</i>		0.55
<i>Your old driver's license</i>		
<i>A lamp that needs a new electrical cord</i>	0.82	
<i>Your mother's wedding dress</i>		0.73
<i>An old 35mm camera that is in good working condition</i>		0.52
<i>A lumpy old couch</i>	0.78	
<i>Your report card(s) from grade school</i>		0.57
<i>An old stereo system</i>	0.66	
<i>A vacuum cleaner that doesn't seem to pick up dirt at all</i>	0.87	
<i>An old coffee maker that still makes a good cup of coffee</i>		
<i>An overcoat from high school</i>	0.64	
<i>An old computer keyboard</i>	0.62	
<i>Your grandmother's china</i>		0.66
<i>Children's toys that are no longer used on a regular basis</i>	0.69	
<i>Books that you have finished reading</i>		
Hoarding Rating Scale		
<i>Indicate the extent to which the following are problems for you:</i>		
<i>Because of the clutter or number of possessions, how difficult is it for you to use the rooms in your home?</i>	0.81	
<i>To what extent do you have difficulty discarding (or recycling, selling, giving away) ordinary things that other people would get rid of?</i>	0.79	

TABLE A1.2 (CONTINUED)

<i>To what extent do you currently have a problem with collecting free things or buying more things than you need or can use or can afford?</i>	0.83
<i>To what extent do you experience emotional distress because of clutter, difficulty discarding or problems with buying or acquiring things?</i>	0.79
<i>To what extent do you experience impairment in your life (daily routine, job/school, social activities, family activities, financial difficulties) because of clutter, difficulty discarding, or problems with buying or acquiring things?</i>	0.85

TABLE A1.3: DISCRIMINANT VALIDITY, SCALES CORRELATION TABLE

	Minimalist Consumer Scale	Product Retention Tendency Index	Hoarding Rating Scale	Voluntary Simplicity Scale
Minimalist Consumer Scale	1	.19**	0.05	.26***
Product Retention Tendency Index	.19**	1	.65***	.66***
Hoarding Rating Scale	0.05	.65***	1	.72**
Voluntary Simplicity Scale	.26***	.66***	.72***	1

*** $p < .001$; ** $p < .01$; * $p < .05$

Study 2c: Images of Minimalist and Non-Minimalist Storefronts and Store Interiors

- Minimalist Stores:

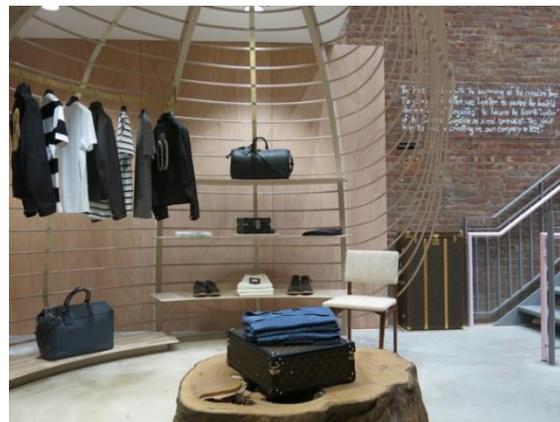
Everlane (28 Prince St, New York, NY 10012)



MUJI (475 5th Ave, New York, NY 10017)



Dover Street Market (160 Lexington Ave, New York, NY 10016)



- Non-Minimalist Stores:

Saks 5th Avenue (611 5th Ave, New York, NY 10022)



Urban Outfitters (521 5th Ave, New York, NY 10175)



Anthropologie (85 5th Ave, New York, NY 10003)



Study 2c: Predicting Minimalist Preferences with the Minimalist Consumer Scale

The goal of this study is to further validate our scale by testing whether scores on the Minimalist Consumer Scale predict preferences for minimalist (vs. non-minimalist) options. Accordingly, we recruited 151 participants from MTurk (41.1% Female, $M_{Age} = 35.01$) to complete this study. In random order, participants completed our scale as well as evaluated images of minimalist and non-minimalist apartments and indicated in which apartment they would prefer to live (see figure A1.6 for apartment images). More specifically, before or after completing the Minimalist Consumer Scale, participants were told, “Below, are pictures of rooms in two different apartments,” and shown images of a non-minimalist apartment (shown on the left) and a minimalist apartment (shown on the right). Participants responded to the question, “Which apartment would you rather live in?” (1 = Definitely the one on the Left, 4 = Equal Preference, 7 = Definitely the one on the Right). As such, higher scores indicate a greater preference for the minimalist apartment.

Importantly, the apartment images were pre-tested with a separate group of respondents ($N = 100$ MTurk participants) to ensure that the minimalist apartment was seen as higher in all three minimalist dimensions: number of possession ($M_{Min} = 5.10$, $SD = 1.43$, $M_{Non-Min} = 1.22$, $SD = .55$; $t(98) = 17.90$, $p < .001$), sparse aesthetic ($M_{Min} = 5.82$, $SD = 1.02$, $M_{Non-Min} = 2.74$, $SD = 1.70$; $t(98) = 10.97$, $p < .001$), and mindful consumption ($M_{Min} = 5.30$, $SD = 1.27$, $M_{Non-Min} = 4.26$, $SD = 1.74$; $t(98) = 3.42$, $p < .001$). The minimalist apartment also scored higher on general impressions of minimalism ($M_{Min} = 5.24$, $SD = 1.32$, $M_{Non-Min} = 1.56$, $SD = 1.07$; $t(98) = 15.32$, $p < .001$).

Results. Regressing participants' average score on the Minimalist Consumer Scale onto apartment preference indicates that the higher participants scored on the scale, the stronger their preference for the minimalist apartment ($B = 1.10, t(149) = 9.39, p < .001$).

Of note, there was a significant main effect of order such that those who completed the scale after evaluating the apartments expressed a stronger preference for the non-minimalist apartment ($B = -3.82, t(147) = -3.19, p = .002$). There was also a significant interaction effect of order and minimalist tendencies such that the relationship between scores on the Minimalist Consumer Scale and preference for the minimalist apartment were stronger when participants rated the apartment images before completing the scale ($B = 1.36, t(147) = 9.23, p < .001$), but were still positive and significant when participants completed the scale first ($B = .69, t(147) = 3.89, p < .001$). While order of presentation did influence the results, the relationship between scores on the scale and preferences for the minimalist apartment was positive and significant in both cases. The results of this study thus show that scores on the Minimalist Consumer Scale are consistent with stated minimalist preferences.

FIGURE A1.6: IMAGES OF APARTMENTS, STUDY 2C



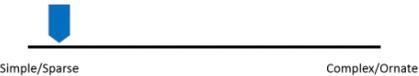
FIGURE A1.7: STIMULI (CONDITION LISTED ABOVE EACH IMAGE), STUDY 3

Few possessions/Sparse Aesthetic/Mindful
(All Minimalism Condition)

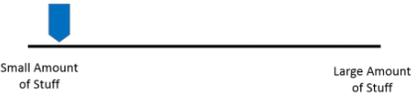

Inside Out Design

Home Feature: Alex S. from San Diego, California.

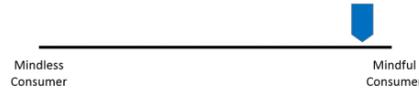
Aesthetic: The rooms in Alex’s home are decorated simply, with few colors and uncomplicated designs. Alex’s aesthetic definitely says, “less is more.”



Amount of Stuff: Alex fills her home with very few items. She does not own many things and prefers to reduce the amount of stuff she owns.



Intentionality: Alex says that she is very mindful and intentional with her home. She only buys new things when she knows exactly how and where they will fit in her home.

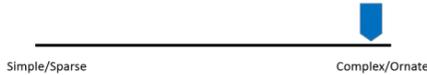


Many possessions/Ornate Aesthetic/Mindless
(All Non-Minimalism Condition)

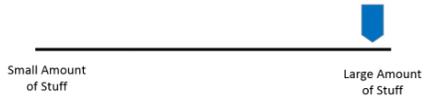

Inside Out Design

Home Feature: Alex S. from San Diego, California.

Aesthetic: The rooms in Alex’s home are decorated ornately, with many colors and complicated designs. She does not like to have empty space in her home. Alex’s aesthetic definitely says, “more is better.”



Amount of Stuff: Alex fills her home with many items. She owns many things and prefers to maximize the amount of stuff she owns.



Intentionality: Alex says that she is not very mindful or intentional with her home. She buys new things even when she does not know exactly how and where they will fit in her home.

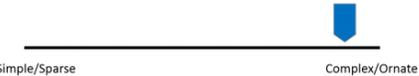


Few possessions/Ornate Aesthetic/Mindful
(Two Minimalism Dimensions Present)

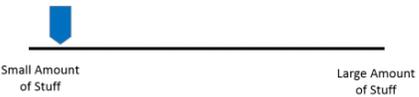

Inside Out Design

Home Feature: Alex S. from San Diego, California.

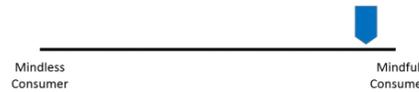
Aesthetic: The rooms in Alex’s home are decorated ornately, with many colors and complicated designs. She does not like to have empty space in her home. Alex’s aesthetic definitely says, “more is better.”



Amount of Stuff: Alex fills her home with very few items. She does not own many things and prefers to reduce the amount of stuff she owns.



Intentionality: Alex says that she is very mindful and intentional with her home. She only buys new things when she knows exactly how and where they will fit in her home.

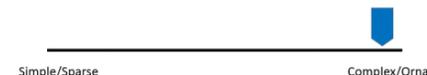


Many possessions/Ornate Aesthetic/Mindful
(One Minimalism Dimension Present)

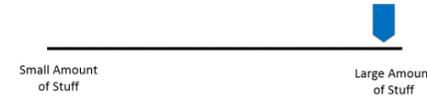

Inside Out Design

Home Feature: Alex S. from San Diego, California.

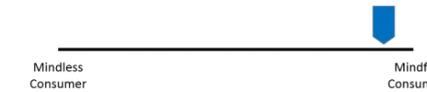
Aesthetic: The rooms in Alex’s home are decorated ornately, with many colors and complicated designs. She does not like to have empty space in her home. Alex’s aesthetic definitely says, “more is better.”



Amount of Stuff: Alex fills her home with many items. She owns many things and prefers to maximize the amount of stuff she owns.



Intentionality: Alex says that she is very mindful and intentional with her home. She only buys new things when she knows exactly how and where they will fit in her home.

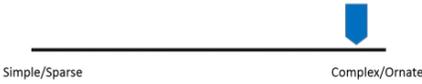


Few possessions/Ornate Aesthetic/Mindless
(One Minimalism Dimension Present)


Inside Out Design

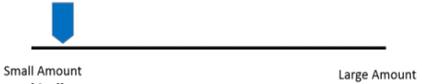
Home Feature: Alex S. from San Diego, California.

Aesthetic: Alex's aesthetic is complex. The rooms in Alex's home were ornate with very elaborate, complicated designs and textures. Alex's aesthetic definitely says, "more is better."



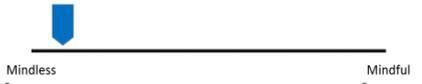
Simple/Sparse Complex/Ornate

Amount of Stuff: Alex fills her home with very few items. She does not own many things and prefers to reduce the amount of stuff she owns.



Small Amount of Stuff Large Amount of Stuff

Intentionality: Alex says that she is not very intentional with her home. She is not very mindful when she shops and buys new things even when she is not exactly sure how/when she will use them.



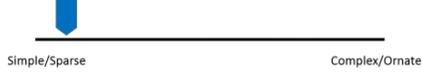
Mindless Consumer Mindful Consumer

Many possessions/Sparse Aesthetic/Mindless
(One Minimalism Dimension Present)


Inside Out Design

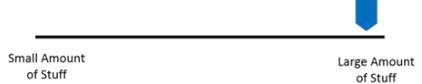
Home Feature: Alex S. from San Diego, California.

Aesthetic: The rooms in Alex's home are decorated simply, with few colors and uncomplicated designs. Alex's aesthetic definitely says, "less is more."



Simple/Sparse Complex/Ornate

Amount of Stuff: Alex fills her home with many items. She owns many things and prefers to maximize the amount of stuff she owns.



Small Amount of Stuff Large Amount of Stuff

Intentionality: Alex says that she is not very mindful or intentional with her home. She buys new things even when she does not know exactly how and where they will fit in her home.



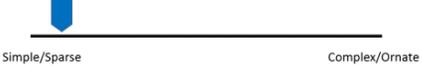
Mindless Consumer Mindful Consumer

Few possessions/Sparse Aesthetic/Mindless
(Two Minimalism Dimensions Present)


Inside Out Design

Home Feature: Alex S. from San Diego, California.

Aesthetic: The rooms in Alex's home are decorated simply, with few colors and uncomplicated designs. Alex's aesthetic definitely says, "less is more."



Simple/Sparse Complex/Ornate

Amount of Stuff: Alex fills her home with very few items. She does not own many things and prefers to reduce the amount of stuff she owns.



Small Amount of Stuff Large Amount of Stuff

Intentionality: Alex says that she is not very mindful or intentional with her home. She buys new things even when she does not know exactly how and where they will fit in her home.



Mindless Consumer Mindful Consumer

Many possessions/Sparse Aesthetic/Mindful
(Two Minimalism Dimensions Present)


Inside Out Design

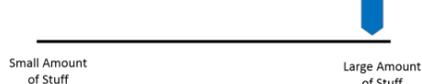
Home Feature: Alex S. from San Diego, California.

Aesthetic: The rooms in Alex's home are decorated simply, with few colors and uncomplicated designs. Alex's aesthetic definitely says, "less is more."



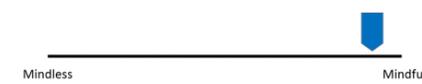
Simple/Sparse Complex/Ornate

Amount of Stuff: Alex fills her home with many items. She owns many things and prefers to maximize the amount of stuff she owns.



Small Amount of Stuff Large Amount of Stuff

Intentionality: Alex says that she is very mindful and intentional with her home. She only buys new things when she knows exactly how and where they will fit in her home.



Mindless Consumer Mindful Consumer

Study 3: Detailed Results for All Eight Conditions

A multiple ANOVA indicates a significant effect of condition on participants' inference that the consumer described in the blog is a minimalist ($F(7, 791) = 100.32, p < .001$; see figure A1.7). The consumer was considered least minimalist when no dimensions of minimalism were present ($M = 2.30, SD = 2.24$) and most minimalist when all dimensions of minimalism were present ($M = 7.89, SD = 1.53$). Post-hoc comparisons indicate that when only one dimension of minimalism was present, the consumer who was described only as a mindful consumer (but otherwise had a complex aesthetic and many things; $M = 2.49, SD = 2.42$) was seen as comparably minimalist as someone conveying no dimensions of minimalism ($p = 1.00$). However, displaying only a sparse aesthetic (and otherwise possessing many possessions and not being mindful) led to stronger inferences of minimalism ($M = 3.62, SD = 2.32$) compared to someone who is only mindful ($p = .05$), and having few possessions only (and otherwise having a complex aesthetic and not being mindful; $M = 5.94, SD = 2.10$) was seen as significantly more minimalist than sparse aesthetic alone and mindfulness alone ($p < .001$). Put simply, when only one dimension of minimalism is present, having few possessions leads to the highest inferences of minimalism, followed by sparse aesthetic, and then mindful consumption.

When two dimensions of minimalism are present, post-hoc comparisons indicate that a sparse aesthetic and few possessions ($M = 7.15, SD = 1.58$) leads to significantly higher inferences of minimalism compared to having few possessions and being mindful ($M = 5.90, SD = 2.00, p < .001$) and having a sparse aesthetic and being mindful ($M = 4.13, SD = 2.42, p = .013$), but is comparable to showing all dimensions of minimalism ($M = 7.89, SD = 1.53, p = .50$). Meanwhile, having few possessions and being mindful leads to higher minimalist inferences compared to the combination of a sparse aesthetic and being mindful ($p < .001$). In

other words, when two dimensions of minimalist are present, minimalist inferences are strongest when those dimensions are sparse aesthetic and few possessions, followed by few possessions and mindful consumption, followed by sparse aesthetic and mindful consumption.

FIGURE A1.8: INFERENCES OF MINIMALISM DEPEND ON THREE KEY DIMENSIONS OF CONSUMER MINIMALISM

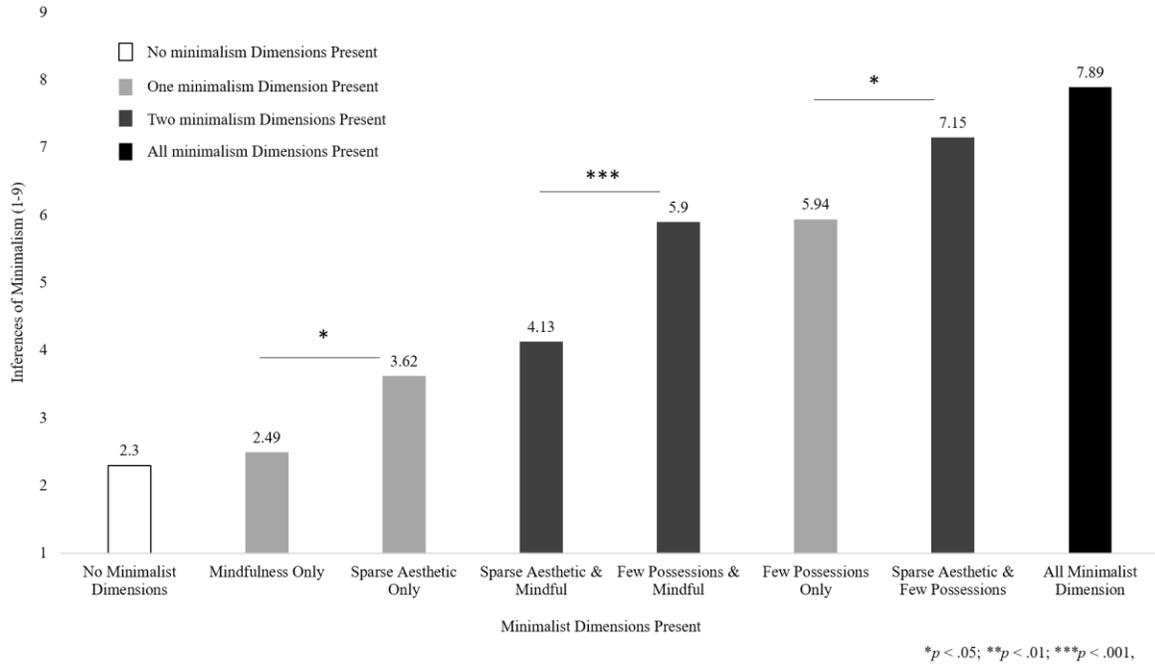


FIGURE A1.9: PRETEST OF NON-MINIMALIST (LEFT) AND MINIMALIST (RIGHT) STIMULI, IMAGES PRETESTED, STUDY 4

Home Offices:



Apartments:



Wardrobes:



Study 3a: Inferences Solicited in Pretest

1. This is a minimalist (room type).
2. This (room type) contains very few things.
3. This (room type) has a simple design/aesthetic.
4. The things in this (room type) look as though they were acquired very mindfully.
5. The person who owns this (room type) is probably wealthy.
6. This is a maximalist (room type).

Responses based on seven-point Likert scales (1 = Strongly Disagree, 7 = Strongly Agree)

Study 3a and Study 4: Self-Concept Clarity Inference Items

Please indicate your agreement with the following statements in reference to _____:

1. Her beliefs about herself often conflict with one another.
2. On one day she might have one opinion of herself and on another day she might have a different opinion.
3. She spends a lot of time wondering about what kind of person she really is.
4. Sometimes she feels that she is not really the person she appears to be.
5. When she thinks about the kind of person she has been in the past, she is not sure what she was really like.
6. She seldom experiences conflict between the different aspects of her personality.
7. She sometimes thinks she knows other people better than herself.
8. Her beliefs about herself seem to change very frequently.
9. If she were asked to describe her personality, her description might end up being different from one day to another day.
10. Even if she wanted to, she probably couldn't tell someone what she is really like.
11. In general, she has a clear sense of who she is and what she is.
12. It is often hard for her to make up her mind about things because she doesn't really know what she wants.

Responses measured on seven-point Likert scales (1 = Not at All, 7 = Definitely)

FIGURE A1.10: ALL IMAGES PRETESTED FOR NON-MINIMALIST (LEFT) AND MINIMALIST (RIGHT) STIMULI, STUDY 4

Bedroom:



Wardrobes:





Home offices/Apartments:



Bookshelf:



Kitchen:



Study 4: Inferences Solicited in Pretest of Non-Minimalist and Minimalist Stimuli

1. This is a minimalist (room type).
2. This (room type) contains very few things.
3. This (room type) has a simple design/aesthetic.
4. This (room type) looks as though it was put together very intentionally.
5. This (room type) looks expensive.
6. This is a maximalist (room type).

Responses based on seven-point Likert scales (1 = Strongly Disagree, 7 = Strongly Agree)

How much do you think this whole (room type) costs (in US Dollars)? \$ _____

ESSAY 2 APPENDIX

General Discussion: Additional Experiment 1

This experiment was designed to address the notion that the positive effects of bingeing (vs. not bingeing) might be the result of consumers completing consumption first or before other consumers.

Method

The second season of the award-winning television show *The Handmaid's Tale* was released on the streaming service Hulu on April 25, 2018. Thus, the day before its release, we surveyed 402 people (MTurkers, 59.7% female, $M_{Age} = 34$ years) who planned to watch the second season about their viewing plans. In order to obtain a sample of participants who planned to watch the show, we posted a HIT to MTurk that was titled as “An Academic Survey about *The Handmaid's Tale*.” Upon accepting the HIT, participants were asked whether or not they watched the first season of the show, the extent to which they perceive themselves to be a fan of the show, and whether or they plan to watch the second season or not (Yes/No/Not Sure). All three questions were asked to obscure the qualifying criteria. We then only allowed participants who indicated that they do plan to watch the show to take the main survey.

The main survey first asks participants whether or not they plan on binge-watching the show (multiple choice: yes/no/not sure yet) and when they plan on starting the second season (multiple choice ranging from “immediately upon its release,” and “within a few days of its release” to “within the next year,” and “more than a year from now.” We also included “not sure yet” as an option). Participants also estimated approximately how many days they think they will

take to watch the entire season. After, we asked participants about their expectations of their viewing experience, including how passionate they expect it will be and the extent to which it will signal their interest in the show to others. We also asked participants the extent to which it would allow them to get the most out of each episode of the next season, as well as the extent to which they predict their viewing experience will be memorable. All responses were based on seven-point Likert scales anchored by “strongly disagree” and “strongly agree.” Finally, we asked participants to explain why they are planning on bingeing or not bingeing the show.

Results and Discussion

Of people who plan to watch the second season of *The Handmaid’s Tale*, 45.5% plan to binge-watch, 25.9% plan on watching but not bingeing, and 28.6% said they plan to watch, but are not sure yet how they will watch it. For the purposes of analysis, we exclude outliers who said they would take 86 days or more to watch the show (which is more than 3 standard deviations above the mean of 10.93 days), and removed the subset of people who indicated they are not sure whether or not they will binge the show. Thus, we are left with 283 people in our sample (63.6% [$n = 180$] who plan to binge watch and 36.4% [$n = 103$] who plan to not binge). As a manipulation check, we confirmed that participants who planned to binge predicted taking significantly fewer days to watch the show compared to those who did not plan to binge ($M_{Bingeing} = 5.3$ days; $M_{NotBingeing} = 13$ days, $t(281) = 7.70, p < .01$).

Participants who plan to binge *The Handmaid’s Tale* expected their experience to be more passionate ($M_{Bingeing} = 5.52$; $M_{NotBingeing} = 4.42, t(281) = 6.63, p < .01$), and binge-watchers believed that watching the show in this way is a stronger signal of their interest in it ($M_{Bingeing} =$

5.31; $M_{NotBingeing} = 4.01$, $t(281) = 6.85$, $p < .01$). Participants who plan to binge also thought their viewing experience would be more memorable compared to those who do not plan to binge ($M_{Bingeing} = 5.62$; $M_{NotBingeing} = 4.41$, $t(281) = 7.82$, $p < .01$).

Contrary to what we would expect, participants do report that bingeing is more likely to allow them to get the most out of each episode ($M_{Bingeing} = 5.65$; $M_{NotBingeing} = 4.87$, $t(281) = 4.71$, $p < .01$). We suspect that this is the result of ambiguous wording of this item (i.e. participants may have been considering experience utility and not necessarily causal utility).

Of note, participants who said they would binge the show reported being more likely to watch the show sooner compared to those who do not plan to binge ($M_{Bingeing} = 2.47$; $M_{NotBingeing} = 3.66$, $t(281) = 4.63$, $p < .01$; lower numbers indicated plans to watch sooner). However, the results do not change for any of the dependent variables when controlling for when people plan to begin watching, and when only considering respondents who plan to watch the show more than one week after its release (i.e. not immediately or within a few days [N = 121, 47.1% of whom plan to binge, 52.9% of whom plan not to binge]). The results also do not change when controlling for the extent to which participants consider themselves fans of the show, suggesting the effects can also not simply be attributable to self-selection explanation wherein consumers who are bigger fans of the television show are more likely to binge versus not binge the show.

This study provides corroborating evidence that people who plan to binge (vs. not binge), predict their experience will be more passionate and a stronger signal of their interests. Further, the fact that the results hold even when controlling for when people plan to watch and when excluding those who plan to watch immediately following the show's release, suggests that these effects are not simply attributable to immediate gratification, self-selection, or novelty from watching the show before others.

General Discussion: Additional Experiment 2

The goal of this experiment is to demonstrate that manipulating consumers' consumption goals can encourage bingeing versus not bingeing depending on whether people are prompted to consider maximizing utility derived directly from consumption or maximize the signaling value of consumption.

Method

Participants ($N = 299$ MTurkers, 53.5% female, $M_{Age} = 36.5$ years) imagined that the next season of one of their favorite television shows was recently released on a streaming service. There are 14 episodes in the series, and they are deciding whether they want to watch the entire season in one weekend or not binge by spreading it out and watching the series over the course of the next two weeks. Participants were randomly assigned to one of three conditions wherein they were told to imagine their goal is to “get the most enjoyment out of each episode in the series” (maximizing consumption utility goal), “create the most intense and passionate experience of watching the series” (signaling value goal), or no explicit goal was provided (control condition).

We then asked participants whether they would choose to binge by watching the show in one weekend or not binge and watch the show over two weeks. After, participants rated the extent to which they felt like bingeing and not bingeing would signal their interest in the show to others. As a manipulation check, we also asked the extent to which participants that thought the bingeing and not bingeing options seemed excessive. All responses were based on seven-point Likert scales anchored by “strongly disagree” and “strongly agree.”

Results and Discussion

There was a significant effect of goal condition on the choice to binge the television show or not; 43.6% of participants in the control condition chose to binge-watch the show, while 49.5% of participants chose to binge in the causal utility goal condition, and 63.9% chose to binge in the signaling value goal condition ($\chi^2(2, 297) = 8.65, p = .01$).

Participants also believed that bingeing the show would be more likely to signal their interest in the show to others ($M_{Binge} = 5.23$) compared to not bingeing ($M_{Not\ Binge} = 2.69, t(297) = 20.29, p < .01$). The manipulation check confirms that participants thought the bingeing options seemed more excessive ($M_{Binge} = 5.12; M_{Not\ Binge} = 2.69, t(297) = 18.11, p < .01$).

The results of this study support our predictions that consumers view bingeing (vs. not bingeing) as less likely to maximize consumption utility, but as better able to signal liking and passion. Consumers who were motivated to create a more passionate experience were more likely to choose to binge compared to those who were motivated to maximize the utility of a good or who were not provided with an explicit goal.

ESSAY 3 APPENDIX

Experiment 2: First Additional Cash vs. Digital Payment Within-Subjects Experiment

Using a within-subjects design and money as the focal item, this experiment tests our hypothesis that receiving digital versus physical items affects feelings of interpersonal closeness. We also assessed whether the proposed effect is mediated by perceived psychological ownership and/or competing process explanations including perceived pain, ease, and convenience of payments. As a conservative test, we ran this experiment using a sample of people from Singapore, a market with high digital payment penetration (nearly half of Singaporeans use peer-to-peer payment systems compared to 14.7% of Americans; Statista, 2018).

Method

We recruited Singaporean residents from a paid Qualtrics panel to participate in this study ($N = 252$, 53.2% female, $M_{Age} = 38.28$, $SD = 13.39$). All participants read:

“Imagine that you go out to dinner with two friends. When the bill comes, you decide that you will pay the whole bill on your credit card and your friends will pay you back for their portion. Both of your friends owe you \$25 for their meal/drinks. One of your friends (Friend A) gives you \$25 in cash, while your other friend (Friend B) sends you \$25 over an electronic smartphone application.”

After reading the scenario, participants rated the extent to which they felt personally close to Friend A and to Friend B after receiving the money from them (nine-point Likert scale anchored by “Very Distant” and “Very Close”). Participants also indicated their perceptions of Friend A and Friend B’s psychological ownership over the money by indicating their agreement with the statement, “When paying me back, it felt like Friend A/B was giving me something of

theirs” (seven-point Likert scales anchored by “Strongly Disagree” and “Strongly Agree”). Further, participants rated the extent to which they felt being paid back was easy, and seemed painful for Friend A and Friend B (seven-point Likert scales anchored by “Strongly Disagree” and “Strongly Agree”). We also asked participants whether they have ever used an electronic payment application (binary: yes/no) and how often they use electronic payment applications (seven-point Likert scale anchored by “Never” and “All the Time”). Of note, for this and all subsequent measures, the nature and significance of results do not change when controlling for whether participants have heard of electronic payment applications and how often they use them. Finally, in this and all subsequent experiments, participants provided their age, gender, and any comments for the researchers. Unless otherwise noted, sample sizes in all studies were pre-set to at least 100 participants per cell. For a full description of stimuli see below.

Results and Discussion

Interpersonal Closeness. Participants felt personally closer to the friend who paid them back in physical cash ($M_{\text{Physical}} = 6.10$, $SD = 1.47$, $M_{\text{Digital}} = 5.79$, $SD = 1.61$, $t(251) = 3.45$, $p = .001$, $d = .20$).

Psychological Ownership. Participants perceived that their friend who paid them in physical cash had greater psychological ownership over the money ($M_{\text{Physical}} = 3.56$, $SD = 1.81$, $M_{\text{Digital}} = 3.02$, $SD = 1.64$, $t(251) = 5.77$, $p < .001$, $d = .31$).

Pain of Payment. Participants thought it was marginally more painful for the friend who paid them back in cash compared to the friend who paid them back in digital money ($M_{\text{Physical}} = 2.62$, $SD = 1.46$, $M_{\text{Digital}} = 2.33$, $SD = 1.31$, $t(251) = 3.83$, $p < .001$, $d = .21$).

Ease of Payment. Participants thought it was easier for the friend who paid them back digitally ($M_{\text{Physical}} = 5.43$, $SD = 1.32$, $M_{\text{Digital}} = 5.70$, $SD = 1.23$, $t(251) = 3.26$, $p = .001$, $d = .21$).

Convenience of Payment. Participants thought it was less convenient for the friend who paid them back in cash ($M_{\text{Physical}} = 5.38$, $SD = 1.37$, $M_{\text{Digital}} = 5.73$, $SD = 1.23$, $t(251) = 4.23$, $p = .000$, $d = .27$).

Mediation Analysis. In a single model, we ran a within-subjects mediation analysis following MEMORE (Montoya & Hayes, 2015) comparing the indirect effects of psychological ownership, pain of payment, ease, and convenience of payment on the relationship between payment form and perceived interpersonal closeness. Perceived psychological ownership was the only significant mediator of the relationship between the friends' payment forms and perceived interpersonal closeness (indirect effect = .10, LLCI: .004, ULCI: .212). The indirect effects of pain of payment (LLCI: -.133, ULCI: .134), ease of payment (LLCI: -.096, ULCI: .077), and convenience of payment (LLCI: -.187, ULCI: .034) were not significant.

Description of Stimuli for First Additional Cash vs. Digital Payment Within-Subjects Experiment

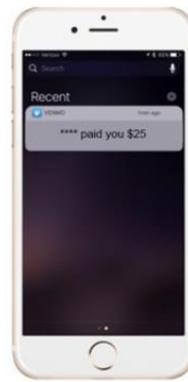
Imagine that you go out to dinner with two friends.

When the bill comes, you decide that you will pay the whole bill on your credit card and your friends will pay you back for their portion. Both of your friends owe you \$25 for their meal/drinks.

One of your friends (Friend A) gives you \$25 in cash, while your other friend (Friend B) sends you \$25 over an electronic smartphone payment application.



Friend A



Friend B

All participants were then asked the following (in random order) in reference to Friend A and Friend B:

In reference to Friend A/B, please indicate the extent to which you agree with the following statements (1 – Strongly Disagree to 7 – Strongly Agree):

1. When paying me back, it felt like Friend A/B was giving me something of theirs.
2. Paying me back this way was convenient for Friend A/B.
3. Paying me back this way was easy for Friend A/B.
4. Paying me this way was painful for Friend A/B.

Next, participants were asked in reference to both Friend A and Friend B: Upon being paid, to what extent do you feel personally close to Friend A/B? (1 - Very Distant to 7 – Very Close).

All participants then indicated whether they have used an electronic mobile payment app before (binary: yes/no), and how often they use electronic mobile payment apps (1- never to 7 – all the time).

Finally, all participants were asked for their age, gender, and any additional comments.

Experiment 2: Second Additional Cash vs. Digital Payment Within-Subjects Experiment

We tested whether the effects found in the within-subjects design using a sample of Singaporean residents replicates using a sample of people from the United States, wherein a smaller proportion of the population relies on digital peer-to-peer payment systems. Further, we assessed whether controlling for whether participants have heard of electronic payment systems and how often they use such platforms influences the results.

Method

Two hundred people from Amazon Mechanical Turk (52% female, $M_{\text{age}} = 34.2$, $SD = 10.286$) participated in this survey in exchange for \$0.05. We used the same design as in Experiment 1a. However, at the end of the study, participants indicated whether they have ever used an electronic mobile payment application before (binary: yes/no), and how often they use electronic mobile payment applications (seven-point Likert scales anchored by “Never” and “All the time”).

Results and Discussion

Interpersonal Closeness. Participants reported that they would feel personally closer to the friend who paid them back in physical cash compared to the friend who paid them in digital money ($M_{\text{Physical}} = 6.96$, $SD = 1.642$, $M_{\text{Digital}} = 6.45$, $SD = 1.853$, $t(199) = 4.335$, $p < .001$, $\eta_p^2 = .312$). Of note, for this and all subsequent measures, the nature and significance of results do not

change when controlling for whether participants have heard of electronic payment applications and how often they use them.

Psychological Ownership. Participants reported that their friend who paid them in physical cash had greater psychological ownership over the money compared to the friend who paid them digitally ($M_{\text{Physical}} = 5.09$, $SD = 1.88$, $M_{\text{Digital}} = 4.03$, $SD = 1.99$, $t(199) = 6.372$, $p = .000$, $\eta_p^2 = .553$).

Pain of Payment. Participants thought it was marginally more painful for the friend who paid them back in cash compared to the friend who paid them back in digital money ($M_{\text{Physical}} = 2.77$, $SD = 1.979$, $M_{\text{Digital}} = 2.57$, $SD = 1.932$, $t(199) = 1.814$, $p = .071$, $\eta_p^2 = .128$).

Ease of Payment. Participants thought it was easier for the friend who paid them back digitally compared to the friend who paid them back in cash ($M_{\text{Physical}} = 5.84$, $SD = 1.459$, $M_{\text{Digital}} = 6.08$, $SD = 1.280$, $t(199) = 2.115$, $p = .036$, $\eta_p^2 = .150$).

Convenience of Payment. Participants thought it was less convenient for the friend who paid them back in cash compared to the friend who paid them back with digital money ($M_{\text{Physical}} = 5.81$, $SD = 1.476$, $M_{\text{Digital}} = 6.16$, $SD = 1.238$, $t(199) = 3.354$, $p = .001$, $\eta_p^2 = .236$).

Mediation Analysis. In a single model, we ran a within-subjects mediation analysis following MEMORE (Montoya & Hayes, 2015) comparing the indirect effects of psychological ownership, pain of payment, ease, and convenience of payment on the relationship between payment form and perceived interpersonal closeness. Perceived psychological ownership was the only significant mediator of the relationship between the friends' payment forms and perceived interpersonal closeness (indirect effect = .24, LLCI: .097, ULCI: .402). The indirect effects of pain of payment (LLCI: -.007, ULCI: .176), ease of payment (LLCI: -.180, ULCI: .006), and convenience of payment (LLCI: -.182, ULCI: .052) were not significant.

Description of Stimuli for Second Additional Cash vs. Digital Payment Within-Subjects Experiment

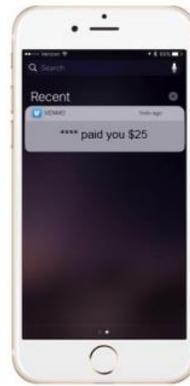
Imagine that you go out to dinner with two friends.

When the bill comes, you decide that you will pay the whole bill on your credit card and your friends will pay you back for their portion. Both of your friends owe you \$25 for their meal/drinks.

One of your friends (Friend A) gives you \$25 in cash, while your other friend (Friend B) sends you \$25 over an electronic smartphone payment application.



Friend A



Friend B

All participants were then asked the following (in random order) in reference to Friend A and Friend B:

In reference to Friend A/B, please indicate the extent to which you agree with the following statements (1 – Strongly Disagree to 7 – Strongly Agree):

1. When paying me back, it felt like Friend A/B was giving me something of theirs.
2. Paying me back this way was convenient for Friend A/B.
3. Paying me back this way was easy for Friend A/B.
4. Paying me this way was painful for Friend A/B.

Next, participants were asked in reference to both Friend A and Friend B: Upon being paid, to what extent do you feel personally close to Friend A/B? (1 - Very Distant to 7 – Very Close).

All participants then indicated whether they have used an electronic mobile payment app before (binary: yes/no), and how often they use electronic mobile payment apps (1- never to 7 – all the time).

Finally, all participants were asked for their age, gender, and any additional comments.

Experiment 2: Additional Cash vs. Digital Payment Between-Subjects Experiment

We assessed whether receiving digital (vs. physical) money leads to lower feelings of interpersonal closeness when being paid by a friend in a between-subjects design. This time we expanded the definition of closeness to include feelings of comfort as an additional metric of closeness. We also controlled for perceived differences of when repayment occurs and tested for further evidence of our process explanation.

Method

Participants from Amazon Mechanical Turk ($N = 203$ 47.8% female; $M_{age} = 35.5$; $SD = 10.61$) took this survey in exchange for \$0.10. Participants were randomly assigned to one of two between-subjects conditions and imagined the following scenario:

Imagine that you recently went out to dinner with a friend. At the end of dinner, you decide that you will pay the whole bill and your friend will pay you back for their portion. Your friend's portion of the bill costs \$35.

Your friend can pay you in cash or they can use their phone to pay you electronically. They decide to pay you back in cash (over an electronic payment app).

As you are leaving dinner, your friend pulls out their wallet, gets out \$35, and hands it to you to pay you back (pulls out their phone and sends you \$35 over a digital payment application).

Participants indicated the extent to which they would feel close to and comfortable with their friend after being paid back (seven-point Likert scale anchored by “Not at All Close” – “Very Close,” and “Not at all Comfortable” – “Very Comfortable,” respectively). We averaged these two items to create a single index of perceived interpersonal closeness ($\alpha = .86$). The nature of the results nor significance do not change when considering these items separately. As in

Experiment 1, participants rated their friend's perceived psychological ownership over the money they received from them by indicating the extent to which, when being paid back, it felt like their friend was giving them something of theirs (seven-point Likert scale anchored by "Not at All" and "Definitely"). Participants then answered the same pain of payment, ease, and convenience questions from the first additional experiment in this appendix. Next, participants indicated whether they have ever used an electronic mobile payment application before (binary: yes/no), and how often they use electronic mobile payment applications (seven-point Likert scales anchored by "Never" and "All the time"). For a full description of stimuli see below.

Results and Discussion

Interpersonal Closeness. Participants indicated they would feel closer to their friend after being paid back in physical versus digital money ($M_{\text{Physical}} = 5.91$, $SD = .98$, $M_{\text{Digital}} = 5.53$, $SD = 1.06$, $t(201) = 2.63$, $p = .009$, $d = .36$).

Psychological Ownership. Participants believed their friend had greater psychological ownership over the physical money ($M_{\text{Physical}} = 6.18$, $SD = 1.26$, $M_{\text{Digital}} = 5.33$, $SD = 1.73$, $t(201) = 4.006$, $p < .001$, $d = .56$).

Pain of Payment. Participants thought that it was more painful for their friend to pay them back via physical cash ($M_{\text{Physical}} = 2.62$, $SD = 1.77$, $M_{\text{Digital}} = 2.08$, $SD = 1.49$, $t(201) = 2.35$, $p = .020$, $d = .33$).

Ease of Payment. Participants did not perceive a difference in ease of payment between forms ($M_{\text{Physical}} = 5.95$, $SD = 1.26$, $M_{\text{Digital}} = 6.08$, $SD = 1.32$, $t(201) = .71$, $p = .48$, $d = .10$).

Convenience of Payment. Participants thought it was more convenient for their friend to pay them digitally versus physically ($M_{\text{Physical}} = 5.75$, $SD = 1.45$, $M_{\text{Digital}} = 6.26$, $SD = 1.21$, $t(201) = 2.68$, $p = .008$, $d = .25$).

Mediation. We conducted a mediation model using PROCESS (Hayes, 2015) model 4. We included method of payment as our independent variable and perceived interpersonal closeness as our dependent variable. We included perceived psychological ownership, pain of payment, and convenience of payment as potential mediators in the same model. The mediation analysis indicates that the effect of form of money on perceived interpersonal closeness is fully, significantly, and singularly mediated by perceived psychological ownership over the money (indirect effect = $-.24$, LLCI: $-.405$, ULCI: $-.125$). The indirect effects for perceived pain of payment (indirect effect = $.01$, LLCI: $-.029$, ULCI: $.062$), ease of payment (indirect effect = $.02$, LLCI: $-.021$, ULCI: $.124$), and convenience of payment (indirect effect = $-.02$, LLCI: $-.148$, ULCI: $.066$) were all non-significant with confidence intervals including zero.

Description of Stimuli for Additional Cash vs. Digital Payment Between-Subjects Experiment

Imagine that you recently went out to dinner with a friend. At the end of dinner, you decide that you will pay the whole bill and your friend will pay you back for their portion. Your friend's portion of the bill costs \$35.

Your friend can pay you in cash or they can use their phone to pay you electronically. They decide to pay you back in cash (over an electronic payment application).

As you are leaving dinner, your friend pulls out their wallet, gets out \$35, and hands it to you to pay you back (pulls out their phone and sends you \$35 over a digital payment application).

In the physical condition, participants saw the following image:



In the digital condition, participants saw the following image:



All participants were asked the following:

1. To what extent do you feel close to your friend? (1 – Not At All Close to 7 – Very Close)
2. To what extent do you feel comfortable with your friend? (1 – Not At All Comfortable to 7 – Very Comfortable)
3. To what extent is it clear that the money your friend paid you back with money they physically possessed? (1 – Not at all to 7 – Definitely)
4. It felt like the money my friend gave me came directly from them. (1 – Not at all to 7 – Definitely)
5. It felt like the money my friend gave me was money they handled. (1 – Not at all to 7 – Definitely)
6. When paying me back, it felt like my friend was giving me something of theirs? (1 – Not at all to 7 – Definitely)
7. To what extent do you think it was painful for your friend to pay you back using cash/an electronic payment application? (1 – Not painful at all to 7 – Very painful)
8. To what extent do you think it was easy for your friend to pay you back using cash/an electronic payment application? (1 – Very Difficult to 7 – Very Easy)
9. To what extent do you think it was convenient for your friend to pay you back using cash/an electronic payment application? (1 – Very Inconvenient to 7 – Very Convenient)
10. Have you ever used an electronic mobile payment app before? Yes/No
11. How often do you use electronic mobile payment apps? (1 – Never to 7 – All the time)

Experiment 3: Description of Stimuli

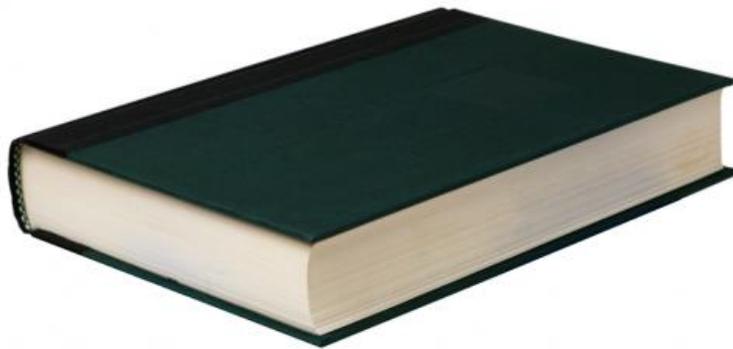
Imagine that you are talking to your friend and mention that you are interested in reading a book that came out recently.

Your friend says that they own the hardcover/electronic version of the book and already read it.

They offer to lend it to you if you would like. You say yes and your friend says they will bring you the book/electronically loan you the e-book tomorrow.

The next day, your friend gives you the book/sends you the e-book electronically.

People in the physical condition saw the following image:



People in the physical condition saw the following image:



You spend the next few weeks reading the book before returning it back to your friend.

All participants then responded to the following:

1. To what extent is it clear that the book your friend lent you is a book they physically possessed? (1 – Not at all to 7 – Definitely)
2. It felt like the book my friend lent me came directly from them. (1 – Not at all to 7 – Definitely)
3. It felt like the book my friend lent me was one that they handled. (1 – Not at all to 7 – Definitely)
4. It felt like the book my friend lent me was one they physically touched. (1 – Not at all to 7 – Definitely)
5. When lending me the book, it felt like my friend was giving me a little piece of themselves. (1 – Not at all to 7 – Definitely)
6. When lending me the book, it felt like my friend was giving me something of theirs. (1 – Not at all to 7 – Definitely)
7. To what extent do you feel close to your friend? (1 – Not At All Close to 7 – Very Close)
8. To what extent do you feel comfortable with your friend? (1 – Not At All Comfortable to 7 – Very Comfortable)
9. To what extent do you feel connected with your friend? (1 – Not At All Connected to 7 – Very Connected)
10. Lending me this book is an expression of how close my friend and I are. (1 – Strongly Disagree to 7 – Strongly Agree)

Affective Response Measure: Participants then indicated the extent to which they feel the following emotions (1- Very slightly or not at all to 5 – Extremely): proud, guilty, jealous, envious, embarrassed, empathetic, ashamed, loved, confident, thankful, joyful, disgusted.

Individual Differences in Contagion Sensitivity: Participants then indicated their agreement with the following statements assessing negative contagion sensitivity (Newman et al., 2011; 1 – Strongly Disagree to 7 – Strongly Agree)

1. Even if I were hungry, I would not drink a bowl of my favorite soup if it had been stirred by a used but thoroughly washed flyswatter
2. It would bother me to sleep in a nice hotel room if I knew that a man had died of a heart attack in that room the night before
3. If a friend offered me a piece of novelty chocolate shaped like dog-doo, I would not eat a bite.

Participants then indicated their agreement with the following statements assessing positive contagion sensitivity (1 – Strongly Disagree to 7 – Strongly Agree)

1. I would pay more for an item touched by a celebrity I like.
2. Washing a sweatshirt previously worn by a loved one makes it less special.
3. It would make me happy to buy a refurbished phone previously owned by someone who I think is physically attractive.

TABLE A3.1: DETAILED RESULTS FOR AFFECTIVE MEASURES FOR EXPERIMENT FROM APPENDIX

Emotion	Form	Mean (SD)	<i>t</i>	<i>p-value</i>
Proud	Physical	2.66 (1.30)	0.44	0.66
	Digital	2.75 (1.45)		
Guilty	Physical	1.23 (.70)	0.05	0.96
	Digital	1.24 (.71)		
Jealous	Physical	1.16 (.71)	0.84	0.4
	Digital	1.24 (.67)		
Envious	Physical	1.35 (.88)	0.31	0.76
	Digital	1.31 (.81)		
Embarrassed	Physical	1.10 (.44)	1.57	0.12
	Digital	1.24 (.75)		
Empathetic	Physical	2.40 (1.22)	0.29	0.77
	Digital	2.45 (1.32)		
Ashamed	Physical	1.18 (.66)	0.49	0.63
	Digital	1.23 (.68)		
Loved	Physical	3.36 (1.36)	0.77	0.44
	Digital	3.21 (1.34)		
Confident	Physical	3.22 (1.17)	0.26	0.79
	Digital	3.27 (1.25)		
Thankful	Physical	3.45 (1.25)	0.54	0.59
	Digital	3.35 (1.25)		
Joyful	Physical	2.83 (1.30)	0.45	0.66
	Digital	2.91 (1.33)		
Disgusted	Physical	1.15 (.56)	0.66	0.51
	Digital	1.21 (.66)		

Experiment 4: Additional Experiment Testing for Directionality of Effects

In this experiment, we assessed whether receiving digital (vs. physical) money influences feelings of interpersonal closeness using a hypothetical scenario. This allows us to control for why participants are paid and the timing of repayments. We also included a control condition to test for the directionality of the effects.

Method

Participants from Amazon Mechanical Turk ($N = 301$, 53.5% Female; $M_{Age} = 38.70$, $SD = 11.53$) participated in this study in exchange for \$0.10. Participants were randomly assigned to one of three between-subjects conditions: digital, physical, or control. In all conditions, participants imagined they went to dinner with a colleague. In the control condition, participants were told that, at the end of dinner, they split the bill with their colleague and each paid half of it. In the experimental conditions, participants were told that they decided to pay the entire bill, and their colleague paid them back the next day either in cash (physical condition) or using a digital payment application (digital condition). After, participants indicated the extent to which they felt close to and comfortable with their colleague (1 = “Not at All Close/Comfortable,” 7 = “Very Close/Comfortable”; $\alpha = .79$).

Results and Discussion

A one-way ANOVA indicates a significant effect of condition on interpersonal closeness ($M_{\text{Physical}} = 5.68$, $SD = .97$; $M_{\text{Digital}} = 5.24$, $SD = 1.21$; $M_{\text{Control}} = 5.26$, $SD = .95$; $F(298) = 5.75$, $p = .004$; $\eta_p^2 = .02$). A post-hoc Scheffe's test indicates that participants felt closer to their colleague after receiving physical money relative to digital money ($p = .01$) and the control condition ($p = .02$), but the digital and control conditions did not differ from one another ($p = 1.00$). These results suggest that the effect of form of goods received on interpersonal closeness is driven by a positive effect of receiving physical (vs. digital) goods.