Essays on Consumer Wastefulness

by

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ABSTRACT

Consumer wastefulness continues to be one of the most pressing issues in achieving sustainable development. While research on wasteful consumer behavior garners increasing attention, most of it is significantly limited by how we conceptualize waste, and consequently how we identify and reduce wasteful consumer behavior. In the first essay of my dissertation, I develop a new conceptualization of consumer wastefulness and provide a framework to study wasteful consumer behavior. I argue that the current consumer-centric definition of waste, based on how it is created, at the sole discretion of the consumers when they discard goods that they do not want or find useful, is inadequate and ineffective in reducing wasteful consumer behavior. In response, I take a societal perspective on waste by arguing that waste is the failure to responsibly use all the product's utilities by its owner or someone else in society. This shift in perspective has significant implications for future research because it changes the way we identify, study, and reduce wasteful consumer behavior.

My second essay provides an empirical test of one of my propositions about how consumers can be nudged to reduce the waste from the abandonment of possessions (e.g., a usable toaster that has been in storage for over a year) by disposing of such possessions to potential users in society (e.g., by selling or donating). Specifically, I theorize and demonstrate that, counter to what prior literature may suggest, anthropomorphizing abandoned products increases consumers' willingness to find those products a new home by disposing of them to other users. Basically, when consumers anthropomorphize abandoned possessions, they tend to perceive possessions experience human-like social rejection, which makes them empathize with those possessions. This in turn increases consumers' willingness to find those possessions a new

home by disposing of them to others who are more likely to use (i.e., interact with) those

products.

PREFACE

This thesis is an original work by Saurabh Rawal. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, Project Name "Studying Product Disposition (Pro00070350)," January 9, 2017.

This thesis is an original work by Saurabh Rawal. No part of this thesis has been previously published.

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Essay 1

Rediscovering Consumer Wastefulness

ABSTRACT

Consumer wastefulness continues to be one of the biggest challenges in sustainable development. Despite prioritizing waste reduction in policy, consumers continue to be wasteful. I argue that one of the foundational reasons we are so wasteful and largely unsuccessful in reducing it is because of how we have conceptualized and thus studied wasteful consumer behavior. Specifically, waste has been defined based on how consumers perceive it is created – at their sole discretion, if and when they discard their possessions they do not want or find useful (e.g., throwing away unwanted clothes or electronics into the garbage bin). Further, I argue that the consumer-centric view of waste is inadequate and ineffective in reducing wasteful consumer behavior. Therefore, in the current research, I propose a novel conceptualization of waste from the frame of reference of society. Specifically, I define waste as the failure to responsibly use the entire utility of an acquired product either by its owner or someone else in society. The implications of the definitional change are significant as it changes the way wasteful consumer behavior is understood, identified, and reduced. Furthermore, building on the focal elements of the proposed definition, I identify key theoretical challenges in reducing wastefulness and offer propositions to propel future research in the area.

Keywords: Consumer wastefulness, sustainability, disposal behaviors, second-hand goods

Consumer wastefulness continues to be one of the biggest challenges in sustainable development. Despite governments prioritizing the reduction of waste in policy (United Nation 2015), we have been largely unsuccessful in reducing it (United Nations 2020). I argue that the dominant consumer-centric view of consumption is much to be blamed for our inadequate understanding of waste and, subsequently, our ineffectiveness in reducing it. The consumer-centric view of consumption posits that the primary goal of a consumption-driven economy is to identify and serve consumer needs and wants (Fennell 1978; Kohli and Jaworski 1990; Kotler 1984; Levitt 1960; Narver and Slater 1990). The traditional consumer behavior model suggests that consumers, too, are focused on satisfying their own needs and wants (Solomon, White and Dahl 2017). Consequently, practitioners and researchers commonly measure and maximize key consumption outcomes (e.g., satisfaction, happiness) from the perspective of consumers. Waste, as an outcome of consumption, is also identified and measured by how consumers perceive it is created – at their sole discretion, if and when they discard possessions they do not want or find useful. I refer to this conceptualization as the consumer-centric view of waste and find that it dominates both academia and policymaking.

More importantly, I argue that a consumer-centric perspective on waste provides an inadequate understanding of wasteful consumer behavior. Specifically, defining waste at the level of individual consumers assumes that an individual's wastefulness does not affect others. However, as we live in a society with finite resources, the effects of all consumption and disposition are also felt by others in society (Kilbourne, McDonagh, and Prothero 1997). Furthermore, I argue that a consumer-centric understanding of the problem leads to consumer-centric solutions that are largely ineffective. For instance, attempts to reduce externalities of waste, such as plastic pollution, focus on the imposition of fines or providing incentives (e.g.,

recycling fees). Unfortunately, this implies that consumers who can afford to be wasteful can do so at their discretion. Finally, a consumer-centric conceptualization is built on the assumption that people can and will throw away goods, and subsequently, the goal of governments is to simply manage waste that is created to reduce the harm caused to public health and the environment (Pongracz and Pohjola 2004). As a consequence, the traditional definition puts undue emphasis on waste management practices (e.g., recycling), which, as growing evidence indicates, are unsustainable in the long term (Catlin and Wang 2013; Sun and Trudel 2017). In sum, the consumer-centric view of waste not only provides an inadequate understanding of waste but also leads to ineffective (and often counter-productive) solutions to the problem of waste.

In this research, I offer a new conceptual framework to define and reduce wasteful consumer behavior. I define waste as *the failure to responsibly use the entire utility of an acquired product either by its owner or someone else in society*. Hence, the proposed definition takes a societal-centric view of waste. A reconceptualization creates the need to identify the unique insights and benefits that emerge from the revision (MacInnis 2011). As a result, in this paper, I discuss how the shift from a consumer-centric viewpoint (based on the preferences of individual owners as revealed through their act of discarding) to a societal-centric viewpoint (based on the extent to which consumers within a society can fully consume the utility of all the goods that it acquires) affects how we understand, identify, and reduce consumer wastefulness.

The societal-centric view of waste implies that the extent of unused product *utility* and product *access* provided to others are the two key dimensions in understanding wasteful consumer behavior. I argue that wastefulness can be minimized only if consumers are aware of and responsibly use (i.e., using only what is required and without impairing product

performance) all the utility in a product, especially before it is lost through obsolescence or becomes permanently inaccessible after being discarded. I further argue that consumers must be responsible for ensuring that other consumers can access unused product utility, which can occur through loaning, sharing, renting, selling, or donating products they no longer want or use. A societal view of waste also leads researchers to identify new instances of wasteful consumer behavior. While the consumer-centric view of waste tends to rely on discarding behavior as the source of waste, the societal-centric view of waste implies that waste can also occur during consumption because of irresponsible use (e.g., using more hand sanitizer than is necessary) or when consumers neither use nor allow others to use possessions (e.g., putting away a bread-maker in indefinite storage).

As the foregoing suggests, consumer wastefulness can take many forms. In this essay, I focus on specific product categories and forms of wasteful consumer behavior. Specifically, I study consumer wastefulness related to utilitarian goods (e.g., furniture, kitchen appliances, clothes, electronics, etc.) that are devoid of any sentimental meanings or associations for consumers. De-commodified goods, such as cherished or identity-linked possessions are differentially valued by their owners (Kleine and Baker 2004). Hence they fall outside of the scope of the current research. Additionally, I focus my dissertation on products that are typically consumed over long periods of time (i.e., consumer durables) and thus have the potential to be stored indefinitely or discarded prematurely. The waste associated with food and other consumable products, which are often consumed immediately or within a short time, is outside of the scope of the current research. Also, I limit my discussion to non-food items because a framework for studying food waste has been offered in the past (Block et al. 2016). Finally, although waste can occur during consumption (e.g., using more than is required), I focus my

discussion on the important and often overlooked forms of waste, particularly, waste in storage and waste in disposal.

This research makes several contributions to the nascent literature on consumer wastefulness. Foremost, at a broader level, my reconceptualization of consumer wastefulness significantly advances how we understand, study, and reduce wasteful consumer behavior. While past research has proposed frameworks that can allow for expanding research in consumer wastefulness, they have either focused on the broader issue of sustainable consumption (e.g., buying of eco-friendly products) with little mention of consumer waste (Kilbourne et al. 1997; Phipps et al. 2013; White, Habib, and Hardisty 2019) or focused on the waste of specific product categories, particularly food waste (Block et al. 2016). I diverge from these streams of literature to providing specific theoretical insights into wasteful consumer behavior related to the large but understudied domain of consumer durables.

More specifically, I challenge the dominant paradigm of waste, highlighting its inadequacies, and offering a new conceptual framework for studying and reducing waste. My reconceptualization leads to the identification of novel sources of waste, such as waste from the abandonment of possessions (e.g., retaining without using a possession), which are becoming pervasive but remain unaccounted for in the traditional paradigm. On the contrary, consumers retain unwanted and unneeded products to avoid appearing wasteful (Arkes 1996; Haws et al. 2012). Further, the identification of new sources of waste also provides much-needed attention to a wide variety of waste reduction behaviors, such as repurposing, disposing of possessions to others (e.g., selling, donating), and responsible use, something that has been arguably lacking in consumer behavior research (Trudel 2018). Furthermore, such waste reduction practices go

beyond the conventional emphasis on waste management (e.g., recycling, treatment, incineration), that researchers and policymakers desire to steer away from but remain tethered to because of the consumer-centric definition of waste that identifies waste only after goods are discarded (Pongracz and Pohjola 2004).

Last but not the least, based on the identified dimensions of waste in my proposed definition (i.e., unused utility and access), I articulate six primary goals in reducing wasteful consumer behavior: (i) increasing consumer awareness of unused utility in a possession post-purchase, (ii) increasing consumer awareness of additional purposes for which a product can be used, (iii) ensuring consumers a product entire utility is responsibly used for intended or additional purposes, (iv) considering how others could use one's possessions, (v) consider providing temporary access to others for use, (vi) consider permanently transferring (e.g., through selling, donating) to interested users. Within these goals, I further highlight the key theoretical challenges and offer propositions that provide an impetus for future research.

The remainder of the essay is organized as follows: I begin by describing the current state of wastefulness in society and then argue that much of the blame for the status quo can be traced to the consumer-centric view of consumption and the resultant consumer-centric definition of waste. Thereafter, I argue for a need to reconceptualize waste by identifying the inadequacies and ineffectiveness of the consumer-centric definition. After that, I propose to redefine waste from the frame of reference of the society based on the extent to which societal members responsibly use what they have acquired or provide others access to the leftover utility in the possession. More importantly, I compare the proposed conceptualization with the extant definition in terms of when consumers are considered wasteful, how to measure wastefulness,

the consequences associated with being wasteful, and ways to reduce wasteful consumer behavior. Then, based on my redefinition, I develop and discuss a framework to reduce wasteful consumer behavior, while proposing theoretical directions for future research in the area. Finally, I summarize and discuss the implications of this research.

CONCEPTUAL BACKGROUND

Wastefulness is one of the most problematic outcomes of modern consumerist society (Vance 1960). While we struggle to address the issue, the repercussions associated with wasteful consumer behavior are becoming widespread. Increasing waste continues to exacerbate the climate crisis (US EPA 2009; Hanson, Lipinski, and Friedrich 2015), threaten human health (Giusti 2009; Schwarzenbach et al. 2010), overfill landfills and oceans (Hoonwerg, Bhada-Tata, and Kennedy 2013; Kaza et al. 2018), increase over-exploitation of natural resources, and distress entire ecosystems (Newsome and van Eeden 2017). Despite prioritizing waste reduction goals for developing a sustainable world, governments continue to make little progress (United Nations 2020). Clearly, our current approach in addressing the problem of waste is inadequate.

Consumer-centric view of consumption

In this research, I propose that much of our failure in addressing the problem of waste can be attributed to the predominantly consumer-centric approach to consumption, and in turn how it has influenced the way we conceptualize and study consumer wastefulness. The consumer-

centric approach to consumption posits that the consumer is the focal point of the consumption-driven economy and thus marketers are primarily focused on understanding and satisfying the needs and wants of consumers (Kohli and Jaworski 1990; Kotler 1984; Levitt 1960; Narver and Slater 1990). When the primary goal is to serve consumers, it is reasonable to expect that consumption outcomes are evaluated from the frame of reference of consumers. Consequently, the consumer-centric approach to consumption determines its success by measuring key consumption outcomes, such as satisfaction and happiness among many others, based on how consumers perceive and construct those outcomes (Cronin and Taylor 1992; Fournier and Mick 1999). In sum, the consumer-centric approach to consumption principally functions from the frame of reference of consumers. But how does that influence our understanding of waste?

Consumer-centric view of waste

I argue that waste, as one of the outcomes of consumption, has been conceptualized from the frame of reference of the consumer. Specifically, waste has been defined at the sole discretion of the consumer, if and when they discard goods and materials they do not want or find useful. I refer to this as the *consumer-centric view of waste* (or the traditional conceptualization) as it is based on consumer interests and preferences. As consumer willingness to acquire and retain goods reveals the extent to which they value them (Ferraro, Escalas, and Bettman 2011; McGraw, Tetlock, and Kristel 2003; Price, Arnould, and Curasi 2000), the act of discarding a material product by its owner reveals how unwanted or useless a product is perceived by its owner. Extant literature is replete with cases that conceptualize waste from this consumer-centric viewpoint. For instance, consumers believe that throwing away goods is

wasteful (Harrell and McConocha 1992), primarily because throwing away a product is equivalent to throwing away (i.e., wasting) money (Arkes 1996; Coulter and Ligas 2003), and retaining a product will avoid waste (i.e., implying that discarding a possession is wasteful; Haws, Naylor, Coulter and Bearden 2012). Scholars outside of consumer research also employ the consumer-centric perspective in identifying waste. For example, most scholars identify waste as an output that is unwanted by its owner (Cheyne and Purdue 1995), has zero and possibly negative economic value for consumers (Lox 1994), and an output that is not useful to its owner or one without an owner (Pongracz and Pohjola 2004). Finally, policymakers have also developed directives defining waste as objects that are discarded, intended to be discarded, or must be discarded by law (European Council 2008). Thus, the consumer-centric view of waste that focuses on discarding as a necessary condition for appraising a behavior as wasteful is pervasive across academia as well as policymaking.

Need for reconceptualization

Although the consumer-centric view of waste may be widely accepted, I argue that it provides an inadequate and ineffective understanding of wasteful consumer behavior. Foremost, the defining waste from the viewpoint of individual consumers implicitly assumes that the waste of an individual does not affect others. A consumer-centric appraisal means that the fate of acquired products is at the sole discretion of their owners, who are more likely to pursue their interests and preferences and less likely to think about how their consumption or disposition choices affect others in the larger social and ecological system (Connolly and Prothero 2003). This is problematic because living on an isolated planet with finite resources and in a complex

interdependent ecosystem means that choices made by consumers today are likely to affect others in the present as well as the future (Kilbourne, McDonagh, and Prothero 1997). Therefore, defining waste from the viewpoint of consumers tacitly assumes that waste does not affect others in society.

Second, the traditional definition implicitly assumes that waste can be simply reduced using consumer-centric solutions. However, I argue that such an approach is neither effective nor sustainable in the long term. For instance, one might argue that under the consumer-centric approach, externalities of consumer disposition (e.g., discarded product packaging) are being minimized by providing monetary incentives to consumers (e.g., getting back recycling deposits on plastic containers) to reduce discarding of packaging materials. But the use of monetary incentives or penalties implies that consumers who can afford to be wasteful can be wasteful. Perhaps this explains why affluent countries are found to be highly wasteful despite having multiple policies and directives to reduce waste (Myers and Kent 2003; Wiedmann, Lenzen, Keyber and Steinberger 2020).

Also, the consumer-centric approach puts undue emphasis on waste management, over waste prevention strategies. Consumers have the broader freedom to discard or even destroy the goods that they don't want (McCaffery 2000; Strahilevitz 2005). So the consumer-centric view of waste simply assumes that people can and will throw things away and the goal of legislative bodies is to be concerned about what to do with what is discarded (Pongracz and Pohjola 2004). Consequently, most research, as well as policy programs, are actively focused on developing better ways to either control the impact of discarded materials on public health and the environment (e.g., via waste treatment or incineration) or encourage consumers to consider

diverting at least part of their discard materials into recycling bins. The fascination for waste management can also be observed among policy influencers, who despite prioritizing waste prevention as a goal, continue to use recycling rate (or tons of materials recycled) to evaluate the success of their waste reduction programs (United Nations 2015). Last but not the least, consistent with this policy focus, a growing body of waste research in consumer behavior and marketing journals has primarily studied the ways to increase consumer recycling behaviors (Kidwell, Farmer and Hardetsy 2013; Sun and Trudel 2017; Trudel and Argo 2013; Trudel, Argo and Meng 2016; Winterich, Nenkov and Gonzales 2019).

Growing evidence indicates that although recycling is a part of addressing worldwide waste, relying on it and researching recycling behavior is not useful. If consumers do not proactively buy recyclable products (Meng and Leary 2021) and businesses do not find it profitable to procure recycled materials to manufacture products (Ferrer and Whybark 2000), recycling efforts are less likely to yield desired results. Moreover, developing economies like China, which were buying the majority of the recyclable waste from their more developed counterparts, has now refused to accept recyclable materials (World Trade Organization 2017), further diminishing the effectiveness of recycling efforts worldwide (Katz 2019). Finally, consumer research has revealed that recycling can increase overconsumption; when given the opportunity to recycle after use, consumers used more resources (Catlin and Wang 2013; Sun and Trudel 2017). Thus, the consumer-centric view of waste is ineffective in reducing wasteful consumer behavior because tends to prioritize waste management (over waste prevention) practices, which are not sustainable in the long term.

To summarize, the consumer-centric perspective of waste and its resultant emphasis on evaluating wastefulness by observing the extent of discarded goods and materials is inadequate

and ineffective in understanding and reducing wasteful consumer behavior. Specifically, it implicitly assumes that externalities associated with waste, created by individuals, does not affect others in society, and that waste can be reduced by offering consumer-centric solutions (e.g., penalties) or waste management initiatives (e.g., recycling), none of which are sustainable in the long term. In the next section, I offer a new conceptualization of consumer wastefulness and highlight its unique insights by comparing it with the traditional definition.

Proposed Conceptualization: A Societal-Centric View of Waste

In this research, I propose to define waste as *the failure to responsibly use the entire utility of an acquired product either by its owner or someone else in society* and refer to it as the societal-centric view of waste (or the proposed view). Although consumers enjoy the larger democratic freedom to do what they want with their possessions, it is essential to evaluate waste from a more collective rather than an individual lens. Basically, waste is a human concept as it does not exist in nature, wherein an unwanted or useless output for one entity is a usable or useful supply for another. Similarly, it is reasonable to assume that consumers may perceive their possessions to be unwanted or useless, as their needs, wants, or preferences evolve. However, others may still find them useful or usable. This suggests that even though waste can arise from an individual's choices, it needs to be understood at the level of the society, specifically the extent to which societal members consume the full extent of what they have acquired. Therefore, consumers need to evaluate their wastefulness by considering how their decisions (or a lack thereof) contribute to not just the self but also the societal consumption of resources.

The societal-centric view highlights two important dimensions in identifying and reducing waste. First, waste can be understood by examining the extent to which a material possession, specifically its utilities, are used or not. While prior research has offered models identifying different types of utilities in a product (Sheth 1976), for the context of this research, I offer to segregate product utility into primary and secondary utility. A primary utility refers to the intended purpose of the product (e.g., a shirt's primary purpose is related to wearing it). In contrast, a secondary utility is an additional use that can be derived from a product by making use of its different properties, such as structural (i.e., using an old shirt to make cloth bags) or material properties (i.e., using a torn shirt to absorb and wash spills). Therefore, the *utility* dimension suggests that to be less wasteful consumers need to be aware of the unused utility as well as the additional utilities that can be derived from a product and then ensure that these utilities are used especially before they are lost after being discarded (e.g., sent to a landfill or ocean), by natural degradation (e.g., dying batteries; Keynes 1964, p. 225), by planned obsolescence (e.g., software updates that reduce product life; Maycroft 2009; Spence 2017), or perceived obsolescence (e.g., clothes going out of fashion; Bhardwaj and Fairhurst 2009). Second, the societal-centric view of waste implies that waste can be understood based on the degree to which a possession is accessed or not for use by its owner and someone else in society - from temporary access to complete access or full ownership (Bardhi and Eckhardt 2012; 2017). The *access* dimension suggests that to be less wasteful an owner can consider using an identified utility to fulfill his/her needs and wants (i.e., responsible use), provide temporary access of a product to someone else (e.g., lending tools to neighbors), who can use the product to fulfill his/her requirements, or permanently transfer ownership (e.g., selling it in the second-hand goods market or donating it to a charity) to someone likely to use it or ensure it is used. In this section, I

discuss the distinct insights generated from my proposed conceptualization by comparing them

with the traditional view (summarized in Table 1).

	Consumer-centric view of waste	Societal-centric view of waste
Conceptualization	Waste occurs at the sole discretion of consumers, if and when they discard goods they do not want or find useful.	Waste is the failure to responsibly use the entire utility of an acquired product either by its owner or someone else in society.
What is the frame of reference?	Predominantly understood from the perspective of the consumer – their interests and preferences.	Understood from the frame of reference of the society – the extent to which society consumes what it acquires.
When are consumers wasteful?	Stage-dependent - Waste occurs at the last stage of the consumption process (i.e., during disposition); action-focused (i.e., the act of discarding).	Stage independent - Waste can occur during (non)usage (e.g., abandoning of possessions) as well as disposition; action (i.e., the act of discarding) and inaction focused (i.e., the act of indefinitely storing).
How to measure wastefulness?	Willingness to discard; the amount of discarded material; preference between discarding and recycling.	Willingness to repurpose an existing possession instead of buying a new product; willingness to dispose of possessions to others (e.g., selling, donating, giving it to family and friends) instead of retaining possessions.
What are the consequences of waste?	The popular narrative focuses on downstream pollution, and resulting risks to animal and human health, that is created from discarded materials.	Loss of potential or unused utility and natural resource depletion.
How to be less wasteful?	Emphasis on waste management (e.g., recycling); repurposing as a disposition (i.e., discard avoidance) strategy.	Emphasis on waste prevention over waste management (e.g., disposing of goods before they are discarded); repurposing as a disposition and an acquisition strategy (to reduce acquisition of new products).

Table 1: Comparison of the consumer-centric and societal-centric views of waste

Instances of wasteful consumer behavior: When are consumers wasteful?

Changing the lens through which wastefulness is perceived will also change the way it is identified. As noted earlier, in the consumer-centric view, the act of discarding is seen as the source of waste because the discarded item is no longer wanted by its owner. However, discarding is identified as the source of waste in the societal-centric view because the shirt has other unused utilities (e.g., like a mop, for dusting, for making art) that can no longer be used.

Apart from rethinking why discarding is wasteful, the societal-centric view also identifies other instances of wasteful consumer behavior not accounted for by the consumer-centric view. In particular, the societal-centric view suggests that consumer behavior during the (non)usage stage of consumption can also be wasteful. The societal-centric view's emphasis on tapping the potential of usable but unused possessions means that not considering the potential of existing goods and materials to be repurposed to fulfill one's needs and choosing to buy new products instead is wasteful. For instance, consumers should consider repurposing old clothes as washing rags, an egg carton as a painting palette, or empty wine bottles as planters to be less wasteful. In comparison, the consumer-centric view only identifies waste when goods are discarded or about to be discarded. At that point, consumers may perceive categorize goods "to be more like garbage" and thus less likely to give it for recycling, let alone repurpose (Trudel and Argo 2013; Trudel, Argo, and Meng 2016).

Another significant but overlooked source of waste is the abandonment of possessions that occurs when consumers stop using their possessions by either putting them away in a public space (e.g., furniture kept by the street) or in storage (e.g., appliances stored away in the garage indefinitely). Although consumers acquire many goods not everything that is acquired gets

completely used. An increasing number of possessions are abandoned, that is, either never used or stop getting used after some time (Arnold, Graesch, Ragazinni and Ochs 2012; Business Wire 2007; Hamilton et al. 2005; Smithers 2012; Wansink, Brasel, and Amjad 2000). Consumers often purchase upgraded versions of existing possessions (e.g., the new version of a mobile phone; Okada 2006), while the replaced product, which though usable, is neither used nor discarded but simply stored without any definite plans for use. On other occasions, people receive gifts that they find no use for and eventually these gifts become a "deadweight" (Adams, Flynn, and Norton 2012). Consumers also stop using products because of a change in their interest, preferences, or situation (e.g., a functioning bread-maker that has not been used for over a year as the owner lost interest in cooking). Under the consumer-centric view, such practices are not identified as a source of waste because no disposal has occurred. Rather extant literature has found that retaining such products is perceived to be a prudent and a less wasteful choice (Arkes 1996; Haws et al. 2012; Haws, Winterich, and Naylor 2014).

However, when observed from viewpoint of the society, the abandonment of goods is wasteful because it deprives potential users of the good's utility and necessitates the extraction of additional resources from the environment to make new products. In other words, the abandonment of goods creates an inefficient society that ends up acquiring more resources, to manufacture goods for both the owner (i.e., the individual abandoning the product) as well as the potential user, than what it consumes. Moreover, when products are not being used, they will still undergo natural degradation (e.g., a decaying battery; Keynes 1964), planned obsolescence (e.g., software updates that reduce product life; Maycroft 2009; Spence 2017), or perceived obsolescence (e.g., out of fashion clothes; Bhardwaj and Fairhurst 2010) over time, decreasing a

consumer's overall desirability for these products. Once consumers lose complete interest, these products will eventually end up in a landfill or ocean.

It is important to note that the choice of temporarily postponing product use is not always wasteful, such as putting winter boots or clothing into seasonal storage. Storing can be wasteful when consumers do not make plans for – (i) resuming use, or (ii) reviewing storage. First, storing can be wasteful when consumers do not have any clear plans to resume the use of stored stuff. Research in hoarding behaviors indicates that consumers frequently choose between what to retain and what to let go of, for stuff they are not using (Frost and Gross 1993). Being loss aversive or sometimes indecisive, consumers may choose to continue to own goods by putting them into storage without any defined plans for when they will start using their stored stuff. But when storing decisions are not made alongside plans for resuming the use of possessions then storing can be considered wasteful. Second, storing is wasteful when consumers fail to review their decisions to store at a predefined time in the future. As consumers are bad at accurately predicting future product usage (Tully and Meyvis 2017), it is reasonable to store possessions. However, at the time of storing possessions, if owners do not commit to reviewing their storage decision at a certain point in the future (e.g., *"I will sell this if I do not start using it before the next spring-cleaning season"*) then storing is wasteful.

The identification of storage-based wastefulness implies that waste can occur as a result of consumer inaction, or the absence of any form of consumer interaction with a product. Typically, the study of wasteful consumer behavior has studied specific consumer action, such as tossing stuff into the garbage bin, as the source of waste. However, when it comes to waste arising from (non)usage, consumers may not necessarily make a conscious decision to stop using

their possessions. Rather, prior work indicates that possessions can simply move into a non-consumption phase without any form of consumer deliberation (Brien, O'Connor, and Russell-Carroll 2018). My reconceptualization allows for the identification and, thus, the study of such inaction-driven sources of waste.

How to measure wastefulness?

The identification of new instances of consumer wastefulness also has important implications for how it is measured. Specifically, my reconceptualization indicates that wastefulness can be measured in more ways than has been done in the past. Consumer literature is replete with studies that measure wastefulness by studying consumer willingness to trash, amount of material trashed, or consumer preferences between trashing and recycling (for a review see Trudel 2019). The societal-centric view expands the way we have traditionally measured consumer wastefulness. For example, waste from possession abandonment implies that wastefulness can be measured in terms of consumer preferences between retaining and disposing of abandoned possessions to others (including selling, donating, sharing, etc.). Similarly, wastefulness can also be measured based on consumer preferences between buying new products and using or repurposing an existing possession (e.g., buying a new toaster versus using a saucepan for toasting bread). Therefore, the identification of new sources of wastefulness also provides new dependent measures for future investigations.

Scope of the problem: What are the consequences of waste?

The negative consequences people associate with a problem defines the scope of the problem. Because of the consumer-centric view's focus on discarded output, it is reasonable to expect that waste is understood as problematic to the extent that discarded goods and materials pollute the environment and in turn harm wildlife and human health. A case in point is the dumping of plastic materials, the largest source of non-organic waste (EPA 2018), into landfills and oceans (Kaza et al. 2018). Most policies and interventions for reducing plastic consumption describe the extent of pollution and subsequent harm caused by it (e.g., dying marine life, increasing greenhouse emissions from landfills, failing human health) to motivate consumer action (European Council 2008; Haward 2018). Consumers are also motivated to reduce their waste when they learn about the victims of plastic pollution (Septianto and Lee 2020). Perhaps it is the conflation of waste with pollution that explains why consumers tend to perceive plastic packaging as a *vice* and paper packaging as a *virtue* even though paper has a larger upstream ecological footprint than plastic (Doering, Krishna, Sokolova 2021).

While the downstream pollution from discarded consumer goods is a matter of concern, conceptually waste and pollution are different concepts, for instance, waste need not always be hazardous (Donev et al. 2019). Therefore, the scope of the problem of waste cannot be simply defined in terms of downstream pollution. Rather the concern about waste is more holistically characterized in terms of downstream consequences, such as landfill or ocean pollution, as well as upstream consequences, such as resource depletion or conservation (Zimmer, Stafford, and Stafford 1994). Under the societal-centric view, the scope of the problem of waste is larger as it can be understood based on consequences created upstream in the consumption process, in particular, those related to resource depletion. Specifically, the societal-centric view considers the product as a resource, and collectively using it to the fullest extent possible reduces the need

to manufacture new products, in turn reducing the extent to which virgin natural resources are depleted. The collective usage of a product does not refer to using private goods as public entities. Rather it means that resources need to be distributed to potential users for the system (or society) to be less wasteful.

Solution focus: How to be less wasteful?

When it is not the creation of waste per se but the polluting nature of waste that is perceived to be the primary problem associated with waste, the solutions also tend to focus on mitigating the pollution instead of preventing waste from occurring. The consumer-centric view's emphasis on pollution implies that policymakers and consumers focus on encouraging the use of biodegradable, paper, or other recyclable materials (Ren 2003; Marazzi et al. 2020). Although doing so may reduce pollution, it essentially replaces discarding of one alternative with another. In comparison, the societal-centric view suggests that regardless of the nature of the acquired resource it needs to be utilized to the fullest extent possible. Such an approach is more in line with recent research that plastic packaging (e.g., plastic bag) can be a better alternative when continuously reused, to paper because plastic manufacturing is less resource-intensive and can be reused several more times than a piece of paper (Gaudreault 2020).

To recollect, the consumer-centric view tends to focus on waste management over waste prevention solutions, which I argued are not sustainable in the long term. In contrast, I posit that the societal-centric view prioritizes waste prevention over waste management and this orientation can be traced to its stage-independent conceptualization. The societal-centric view

does not focus on identifying waste based on any of the stages of the consumption process. Rather, my proposed conceptualization suggests that waste can occur even during product ownership. For instance, when people abandon possessions or use them irresponsibly. As access to the product has not been lost in these circumstances, consumers can take corrective action to be less wasteful (e.g., disposing of the product to others, or using it responsibly). Therefore, as waste can be identified even before permanently losing access to the product, it becomes possible to prevent it or minimize it considerably. In the next section, I outline some challenges in reducing wasteful consumer behavior and theoretical proposition for future research.

Theoretical Implications and Directions for Future Research

In the previous section, I offered a new definition that identified two dimensions in conceptualizing wasteful consumer behavior. Moreover, by comparing my proposed conceptualization with the traditional consumer-centric definition, I explained how the societal-centric view of waste serves to address upstream and downstream repercussions of waste, offers a more nuanced way to evaluate wastefulness, focuses on waste prevention over waste management strategies, identifies new and lesser discussed sources of waste, and thus offers new dependent measures for studying wasteful consumer behavior. In this section, I will go further by identifying the key challenges in reducing consumer wastefulness that emerges in storage and disposal. Moreover, based on the analysis of these challenges, I advance theoretical propositions that identify different avenues to provide the needed impetus for future research.

(Unused) Utility

Access

1. **Being aware of the extent of unused utility in a product**

   Challenge 1 – Consumers stop estimating unused utility in a product post-purchase

2. **Being aware of the different forms of unused utility in a product**

   Challenge 2 – Certain product appraisals reduce attention to additional uses

3. **Beyond awareness, using a product for intended and additional purposes**

   Challenge 3 – Consumers are concerned about the impression they create from repurposing their possessions (e.g., appearing frugal)

1. **Consider whether others could use one's possessions**

   Challenge 4 – Consumers tend to be self-focused, particularly with regards to their possessions

2. **Consider providing temporary access to others for use (e.g., loaning, sharing)**

   Challenge 5 – Consumers may be concerned about the appropriateness of use (e.g., damage) when products are loaned to others

3. **Consider permanently transferring (e.g., selling, donating) to interested users**

   Challenge 6 – Consumers do not think or care about possessions they are not using

Figure 1: Framework for reducing wasteful consumer behavior

(Unused) Utility – Challenges and theoretical propositions

The first challenge in reducing wasteful consumer behavior is that increasing consumer awareness for unused utility for their possessions. Past research has shown that when the potential for leftover utility is made salient before purchasing a product, consumers are more likely to buy what they need rather than maximizing utility for money (Arkes 1996; Bolton and

Alba 2012). For example, if four sandwiches are needed, then consumers are more likely to buy four sandwiches individually for a total of $32, instead of buying a cheaper bundle of six sandwiches for $30 because the latter entails the creation of leftover utility (Bolton and Alba 2012). While this may be true for acquisition decisions, we do not know if consumers show the same aversion for waste of unused utility post-acquisition. For instance, when the unused potential of an abandoned possession (e.g., a juicer that has been sitting in storage for over a year) is made salient, are consumers likely to dispose of the possession to other users (e.g., selling it online), given they clearly do not have any need for it.

On the one hand, it makes sense that the same aversion to unused utility may apply to products post-acquisition and nudges consumers to transfer the product to a potential user. On the other hand, the endowment effect literature would suggest that listing the value of one's possession can decrease consumer willingness to part with it (Johnson, Haubl, and Kenian 2007). A potential way to resolve this issue is by prompting consumers to not just think about the unused potential of the product but specifically think about how the product *could have been used by someone else*. Thinking about how the remaining utility can be useful to others in society, might increase consumers' guilt for owning and not using the product. As guilt has been considered influential in engaging people in eco-friendly and prosocial behaviors (Ahn, Kim, and Aggarwal 2014; Luchs and Mooradian 2012; Mallett, Melchiori, and Strickroth 2013; Muralidharan and Sheehan 2018; Onwezen, Antonides, and Bartels 2013), it will likely increase consumer willingness to transfer the product to others who could use it.

P1: Highlighting how an abandoned product could have been used by someone else, can increase consumer willingness to dispose of the product to an interested user. Moreover, this effect is likely to be mediated by perceived guilt.

While guilt can be an influential factor to reduce consumer wastefulness, it is also important to motivate consumers through guilt-free means. To that end, decluttering consultants and policymakers may consider a two-pronged approach to increase consumer willingness to dispose of abandoned possessions to others. In this case, simply highlighting the remaining utility in abandoned possessions (e.g., this juicer is usable but has not been used for over a year) needs to be accompanied by the activation of an interdependent self-construal. As discussed earlier, given consumers tend to be self-centric simply making the remaining utility salient may not be helpful. However, the self-centricity can be reduced by expanding the self-concept of the consumers, for instance, by activating the interdependent self (Markus and Kitayama 1992). Several scholars have found that activating the interdependent self-construal has been associated with helping and prosocial behaviors (Allen, Eilert, and Peloza 2018; Duclos and Barasch 2014; Simpson, White, and Laran 2017; Winterich and Barone 2011; White and Simpson 2013). As disposing of unused but usable possessions to others, especially by donating, tends to help the needy, activating the consumer's interdependent self can increase disposal of possessions, with leftover utility, to others.

P2: Highlighting the unused utility in a possession (e.g., usable but not being used), while activating an interdependent self-construal can increase consumer willingness to dispose of a product, especially by donation, to an interested user.

The other challenge with regards to the utility dimension is qualitative in nature. The societal-centric view of waste suggests that apart from being generally aware of the unused utility in a product, consumers also need to be cognizant of the other purposes for which the product can be used. As noted earlier, a product may possess primary utility (i.e., intended purpose of the product) as well as secondary utilities (i.e., additional purposes the product can fulfill). To the extent consumers are aware of all the diverse and potential purposes of the product, they are more likely to repurpose them (Scott and Weaver 2018). However, increasing discarding of goods and materials suggests that consumers might have a difficult time identifying additional uses for their possessions.

One way to increase consumer awareness of additional uses of their possessions is by prompting consumers to see their possessions driving their attention to material, rather than experiential, of the product. As marketplace offerings continue to blur the line between the emphasis on the physical product or the experience, consumers can appraise the same product in different ways (e.g., a BBQ grill can be perceived as an object to own or an experience to have; Bastos and Brucks 2017). Such differences in appraisal can have consequences for the extent to which consumers can reduce their wastefulness by repurposing their possessions. Research shows that experiential possessions are less comparative among themselves than material possessions as experiences tend to be more abstract than material possession (Carter and Gilovich 2010). If so then, can be difficult to imagine other uses as a result of an experiential appraisal of an object. Alternatively, material appraisal of the same object is more likely to drive attention to the physical characteristics of the product (e.g., its structure, constituents, etc.) rather

than the benefit it provides, which in turn is likely to make it easier to conceive other diverse

uses of the product (i.e., repurpose the product).

P3: Compared to an experiential appraisal, a material appraisal increases the likelihood

of a product being repurposed.

Moreover, experiential vs. material appraisal of products might also affect recycling

intentions. Winterich, Nenkov, and Gonzales (2019) show that when consumers are made aware

of how a possession can be transformed into a completely different and new product, they are

inspired to recycle more. This means that increasing recycling intentions also entails being aware

of other uses, based on the structural and constitutional properties, of the product. Given

repurposing and recycling are conceptually similar behaviors (Scott and Weaver 2018), it is

reasonable to expect that an experiential appraisal of products might reduce consumers'

recycling intentions while a material appraisal might increase recycling intentions.

P4: Compared to an experiential appraisal, a material appraisal increases the likelihood

of a product being recycled.

Finally, even if consumers are aware of diverse uses of a product, there can be other

hurdles that prohibit consumers from putting the product to a different use. One explanation can

be traced to the issue of social desirability. Repurposing multiple yogurt containers to store food

(e.g., lentils, beans) or buying repurposed products from a thrift store may give the impression of

being frugal or thrifty (Evers et al. 2018). While frugal consumers themselves are less concerned about impression management (Philip and Nepomuceno 2020), the average (non-frugal) consumers may not want to give the impression of being a tightwad. To overcome the undesirable image, consumers should consider using feel-good or image-enhancing tactics to explicitly communicate their engagement in repurposing behaviors. For example, Kamleitner, Thurridl, and Martin (2019) demonstrate that making the past identity (backstory) of a repurposed product salient increased consumers' willingness to buy such products because using products with a story made consumers feel special. In the same way, when the repurposing of existing possessions is accompanied by social sharing of one's motivation for repurposing (e.g., care for the environment, marine life) might also negate any undesirable image associated with repurposing.

> P5: Communicating the image-enhancing aspects of repurposing behaviors (e.g., "I repurpose plastic containers to reduce my impact on marine life") can reduce the undesirability associated with repurposing.

Access – Challenges and theoretical propositions

The rise in consumerism is mostly characterized by the growth of the 'throwaway culture' (Packard 1960). Consumers are lured to buy new products while often ignoring the fate of older but usable products, which eventually get discarded because they either become useless or go out of fashion. At the same time, the surge in disposable incomes accompanied by ease of buying facilitates the accumulation of possessions that end up cluttering our living spaces. As a

result, we start seeing our possessions as a nuisance to our happiness and well-being, as evident from the recent growth of the minimalism movement (Meissner 2019; Millburn and Nicodemus 2015). So, although our fascination for acquiring new products is on the rise, several other factors are collectively and gradually leading to the denigration of existing possessions.

Under these circumstances, it is important to motivate consumers to see their relationship with products with a sense of respect for the product – a practice that has been discussed in the domain of consumption. For example, past research has discussed cases of people expressing their reverence for religious objects (Belk, Wallendorf and Sherry 1989) or objects of historical significance (Merryman 1986) and cherished heirlooms (Ture and Ger 2016). In other instances, researchers have captured how indigenous cultures revere and honor natural objects as extensions of the living ecosystem (Harvey 2005). Such respect for products can be instilled by recognizing the effort that went into making products (Cherrier and Ponnor 2010) or keeping products in clean and tidy spaces (Kondo 2014). A potential but unexplored avenue to inculcating respect for possessions among consumers is a potential way to increase consumer care and concern for possessions and that in turn could affect a variety of behaviors, such as repairing a product instead of discarding it when it gets damaged or ensuring that it is not consumed mindlessly. In case these products have to be given away, having respect for them can even result in ensuring it goes to people who would use them.

P6: Inculcating respect for possessions is likely to increase responsible use and disposal of the possession.

The dimension of access has two important implications for consumers to be less wasteful with what they own. Consumers need to consider, where applicable, either providing temporary access (e.g., loaning) or permanently transfer goods (e.g., selling) to other users. A key hurdle in the former pertains to a lack of trust in allowing others to handle and use one's possessions responsibly (Eckhardt et al. 2019). However, consumers may be more willing to share or rent out their possessions. One potential way to increase trust or reduce concerns related to sharing is by priming an expanded self-concept, in particular the interdependent self-construal. Indeed, Belk (2010) reports a greater incidence of sharing among Asian (or interdependent) cultures. Therefore, expanding the potential sharer's self-concept, by activating an interdependent construal, might reduce trust-related concerns and increase consumer willingness to share possessions with others.

   P7: Activating an interdependent self-construal can increase trust and consequently, increase willingness to temporarily provide access to others for use.

The challenge in motivating consumers to permanently dispose of their abandoned possessions is slightly different. An important reason consumers continue to own products over long periods without ever using them is that they think they might use them in the future (Frost and Gross 1993; Furby 1978). These perceptions of future use can be largely based on their past usage history, such that if consumers used a product in the distant past (e.g., three years ago), then they are less likely to dispose of the product to someone else, even though they stopped using it for a long time now. One possible route to overcome such temporal field-dependency involves changing a consumer's thinking style.

Recent research of analytic and holistic cognitive styles could be helpful in that regard (Bhargave and Montgomery 2013; Hossain 2018; Monga and John 2007; 2010). Analytic thinking involves treating events or entities as distinct and separate whereas holistic thinking involves treating them as overlapping and interconnected (Choi et al. 2007; Nisbett et al. 2001). As the time that has elapsed, tends to serve as a context or a field on which subsequent events unfold, the past also serves as the context for predicting future events. Therefore, activating analytic (vs. holistic) might decreases (vs. increases) the diagnosticity of distant past events in predicting future use. In the context of abandoned possessions, this suggests that for possessions that were used in the distant past, priming analytic (vs. holistic) thinking might decrease (vs. increase) predictions of future use, which in turn could increase (vs. decrease) willingness to dispose of that possession in the present.

> *P8: Priming analytic (vs. holistic) thinking can increase consumer willingness to dispose of possessions to others by decreasing (vs. increasing) perceptions of future use.*

Consumers can also abandon goods without using them because they do not care about possessions that they are not using. After all, products are inanimate objects without rights, agency, or feelings, and owners are unlikely to think about or take care of their possessions beyond reasons tied to their self-interests (e.g., to extend product life when they are using the product; Ackermann, Mugge, and Schoormans 2018). However, a growing stream of research has found that consumers can temporarily anthropomorphize inanimate objects and show a greater degree of care and concern for them (for a review see Yang, Aggarwal, and McGill 2019). Therefore, anthropomorphizing abandoned possessions might increase consumer care and

concern for possessions by empathizing with them. Particularly, consumers may perceive abandon products, when anthropomorphized, as feeling socially rejected. Further, as observing others experience social rejection increases empathy for them (Wesselmann, Bagg, and Williams 2009), consumers might even feel empathy for abandoned products, which are anthropomorphized, and in turn, consider finding them a new home to renew its social connection.

> *P9: Anthropomorphizing products, which are abandoned, can increase consumer empathy for them, which in turn can increase consumer willingness to find them a new home by disposing of the product to other users in society.*

GENERAL DISCUSSION

In this paper, I challenge the existing paradigm of consumer wastefulness that has long dominated how we define, and thus, identify and reduce wasteful consumer behavior. My main assertion is that researchers and policymakers have defined waste from the sole perspective of the consumers based on the goods they discard that they do not want or find useful. Such a consumer-centric view of waste finds wide acceptance in framing policies and studying waste. However, I argue that such a consumer-centric view of waste is neither adequate nor effective in understanding or reducing consumer wastefulness. Particularly, examining waste solely from the viewpoint of consumers tends to disregard how consumption and waste can affect others, especially in a closed system with finite resources. Moreover, a consumer-centric understanding of waste results in consumer-centric solutions to reduce waste, such as motivating consumers

with the use of monetary incentives and penalties. However, such an approach further reinforces that when consumers can afford to be wasteful, then they can be wasteful. Finally, the consumer-centric view's emphasis on discarding behavior as the source of waste emphasizes waste management practices (e.g., recycling) which are unsustainable in the long term (Catlin and Wang 2013; Sun and Trudel 2017).

To overcome the shortcomings of the consumer-centric view of waste, I propose to redefine waste from the frame of reference of the society, and the extent to which society responsibly uses what it acquires. Specifically, in the societal-centric view, waste is defined as failure to responsibly use the entire utility of an acquired product either by its owner or someone else in society. More importantly, the shift from a consumer-centric view (i.e., defining waste based on consumer's disinterest in the product manifested through the act of disposal) to a societal-centric view of waste (i.e., defining waste based on the extent to which a product's utilities are used by its owner or someone else in society) is significant. Based on this new conceptualization, I identify new sources of consumer wastefulness, including ones even before a product is even discarded. For instance, continuing to own products over long periods without using them is a choice that owners make to avoid discarding and being wasteful (Haws et al. 2012). But when the same behavior is observed at the level of the society it is wasteful because it deprives the society of the utility of the product, creating an inefficient marketplace that acquires more than what it consumes.

Further, the identification of new sources of wastefulness reveals new ways to study and reduce them. While the traditional approach has been focused on studying recycling intentions (Trudel 2018), my reconceptualization indicates the need to expand how we measure

wastefulness using other measures, such as willingness to dispose of abandoned products to others. Relatedly, this implies that to be less wasteful consumers need to ensure the leftover utility in such possessions is disposed of to interested users by means of sharing, donating, selling, or renting. Based on my reconceptualization I identify two key drivers of reducing consumer wastefulness – (i) increasing awareness and responsible use of unused utility in one's possessions and (ii) increasing temporary access as well as permanent disposal of one's abandoned possessions to others in society. Moreover, I outline some challenges for future research to reduce wasteful consumer behavior and also forward theoretical propositions for the same.

Theoretical Contribution

This research significantly advances our understanding of what it means to be wasteful and offers a theoretical framework to expand future research in reducing consumer wastefulness. While past conceptual research has discussed some elements of consumer waste, they tend to focus more on a wide range of sustainable consumer choices (Phipps et al. 2013; White, et al. 2019), and often focusing on the larger macro-marketing challenge in promoting sustainable consumption (Kilbourne et al. 1997). The present research moves away from broader macro-marketing goals to focus on wasteful consumer behavior. More specifically, I offer to redefine the dominant conceptual understanding of waste and use the proposed definition to identify not only the key determinants of wastefulness but also new instances of wasteful consumer behavior. In doing so, I also address concerns raised by Trudel (2018) over the dominant focus on recycling behaviors in the study of consumer wastefulness. Finally, I use my conceptualization to

highlight key theoretical challenges in reducing wasteful consumer behavior while offering propositions for future research.

Limitations

In this research, the central aspect of redefining waste is to understand it from the societal or collective lens. As a consequence, this redefinition is limited to an understanding of the product, more importantly, its utilities, that is common to the mass. However, de-commodified goods, such as cherished or identity-linked possessions, can take different meanings and associations which are only understood and valued by specific people, often just by their owners (Kleine and Baker 2004), and thus fall outside of the scope of this research. Future conceptual models should consider integrating such possessions into developing a more common understanding of waste. Moreover, consumer waste is a complex problem (Rittel and Webber 1973) and although this research focuses on viewing the issue from a specific lens, it is important to acknowledge that there can be other perspectives, from the viewpoint of different stakeholders (e.g., businesses) or methodologies (e.g., carbon footprint), to examine the issue. Therefore, developing a deeper understanding of waste requires further examination of the issue from a more inter-disciplinary lens.

Implications for policymakers

Policy interventions in combating the issue of waste are crucial. However, policies rest on how policymakers define the issue at hand. After all, defining a problem is the first step in

solving the problem. My reconceptualization suggests that policymakers begin with educating consumers that waste does not just occur when goods are discarded, rather waste is the loss of utility that results from not using products. This means that consumers need to be educated to proactively appraise their possessions in terms of their different utilities and ensure that those utilities are used before they got lost. Although education for the need to recycle, ways to recycle, and what is recyclable is pervasive in developed countries (Lakhan 2014), my reconceptualization suggests the need to expand consumer education with regards to other sources of waste. Further, to increase consumer-to-consumer exchange of possessions, policymakers should also promote second-hand marketplaces that are an important platform for buying, selling, donating, and trading of goods among consumers. Additionally, policymakers should also consider legislating in favor of transferable warranties because warranties mitigate risks associated with product failure (Boulding and Kirmani 1993). Since such risks are high in a consumer-to-consumer marketplace (Chang, Lu, and Lin 2019), transferable warranties can potentially alleviate some part of it. Unfortunately, a wide variety of products (e.g., tires) come with warranties that lapse when those products are sold in the second-hand market. If these warranties are made transferable (even at a nominal fee) then that could boost buyer's interest in those products, which otherwise may end up unwanted and discarded. As discussed earlier, there can be other barriers, such as the creation of an undesirable image of being frugal as a result of repurposing one's possessions. Policymakers may consider designing public service announcements (PSAs) to highlight the positives of repurposing and thereby help enhance the image of the consumers who engage in repurposing behaviors.

Essay 2

Caring Enough to Let Go: How Anthropomorphism Increases Consumers' Willingness to Find Abandoned Possessions a New Home

ABSTRACT

Abandonment of possessions occurs when consumers stop using their possessions by either putting them away in a public space (e.g., furniture kept on the sidewalk) or in storage (e.g., appliances stored away in the garage indefinitely). Regardless of the means, possession abandonment is a significant and overlooked source of waste because it deprives society of unused product utility. One potential way of reducing this waste entails motivating consumers to find the possession a new home. Across three experiments, I predict and find that when abandoned possessions are anthropomorphized (i.e., perceived to have unique human-like mental states, such as thinking and feeling) consumers' willingness to dispose of such possessions to potential users in society (e.g., by selling, donating) increases. Moreover, I find that this effect is mediated by empathy felt for the possession. I argue that when abandoned possessions are anthropomorphized, consumers perceive them as human-like entities that are feeling socially rejected. As a result, consumers empathize with these possessions and become motivated to help renew its social connection by finding it potential users in society. As the anthropomorphism literature has consistently shown a positive effect of anthropomorphism on willingness to retain possessions as means of caring for them, the empathy-helping account provides a new perspective because it reveals that consumers can also care for certain anthropomorphized possessions by disposing of them to others. Finally, the present research also provides practical

insights to consumers, marketers, and decluttering experts to effectively use anthropomorphism to increase responsible disposal of goods.

Consumerism has been characterized by an unprecedented rise in the acquisition of goods, but not everything that is acquired is fully used. A rising number of acquired consumer possessions are either never used or stop getting used after some time. I refer to such goods as abandoned possessions and find increasing evidence that a lot of the goods owned by consumers are being abandoned (Arnold, Graesch, Ragazinni and Ochs 2012; Brosius, Fernandez, and Cherrier 2013; Business Wire 2007; Hamilton, Denniss, and Baker 2005; Smithers 2012) either in storage spaces (e.g., a usable kitchen appliance kept away in a garage) or public spaces (e.g., furniture left by the dumpster). For instance, Arnold et al. (2012) found that an average American garage contains over 200 boxes of items that house members no longer use but continue to own. As noted in the previous essay, widespread product abandonment is a significant source of waste in society because it creates an efficient society – one that collectively acquires more than what it consumes. Therefore, finding ways to ensure that these goods are used by someone in society is an important way to reduce such waste.

One potential reason why product abandonment occurs might be because products are seen as inanimate objects. As a result, the fate of a product remains at the sole discretion of its owner without much care and concern shown for the product itself (Schor 1999). If this is true, then changing the way consumers view their products could alter the way they treat products that they no longer use. Of particular interest in this research is the growing anthropomorphism of consumer products. Today marketers strategically activate consumers' natural tendency to imbue products with human attributes by making a wide range of product characteristics (e.g., using names, gendered pronouns) momentarily salient (Forbes 2016; Kleinman 2021). If consumers are becoming more familiar with the anthropomorphizing of inanimate consumer products, then can it also affect how we treat abandoned products? In this research, I examine how

anthropomorphism of abandoned products affects consumer willingness to find those products a new home. As goods with sentimental meanings are differently valued by consumers, I limit the scope of my investigation to utilitarian products that are devoid of sentimental meanings.

Past research has consistently found a strong and positive association between anthropomorphism and relational attachment to possessions (Chandler and Schwarz 2010; Neave et al. 2015, 2016; Timpano and Shaw 2013; Wan and Chen 2021). Stated differently, when consumers anthropomorphize possessions, they forge relationships that mimic human-like bonds and this, in turn, increases their overall willingness to hold onto their possessions (Chandler and Schwarz 2010). In the context of abandoned products, I argue that anthropomorphism can produce the opposite effect, that is, increase consumer willingness to dispose of possessions to others. Across three studies, I hypothesize and find that when an abandoned possession (i.e., one which is no longer being used) is anthropomorphized, consumers perceive it as being socially rejected. As observing a target experience social rejection leads the observer to empathize with the target (Wesselmann, Bagg, and Williams 2009), I argue that perceiving an anthropomorphized possession in such a state elicits an empathic response that prompts consumers to help ensure that the product is returned to a state of social connection and interaction (i.e., use). As owners have already disengaged from using their possession, which is why the possession was abandoned in the first place, they are less likely to see themselves as being the source of social reconnection. Instead, the increased empathy felt for abandoned anthropomorphized products increases consumers' willingness to dispose of the possession to others (e.g., a local charity, a potential buyer in the marketplace, or a friend in need), who would be more likely to create a social relationship with the possession (i.e., ensuring that it is used).

The present research makes several important contributions to theory and practice. Foremost, counter to prior work that finds that consumers hold onto anthropomorphized goods (Chandler and Schwarz 2010; Neave et al. 2015; 2016; Timpano and Shaw 2013; Wan and Chen 2021), I demonstrate that anthropomorphism can also lead consumers to dispose of a possession that is no longer being used by its owner to someone who may use it. Additionally, while past research has shown that people can feel empathy for other people (Bagozzi and Moore 1994; Fisher and Ma 2014), animals (Loughnan, Bastian, and Haslam 2014; Taylor and Signal 2005), and nature (Clayton and Opotow 2004; Schultz 2000), the present research demonstrates that not only can we feel empathy for inanimate objects but also be motivated to help them. Overall, this research illustrates that while people express increased attachment and retention tendency for anthropomorphized possessions with "a desire to protect and care for" them (p. 2, Yang, Aggarwal, and McGill 2019), the empathy-helping account reveals that consumers can also care for certain anthropomorphized possessions by disposing of them to others.

Outside of its primary contribution to the anthropomorphism and empathy literature, the present research also advances the emerging literature on consumer disposal behaviors. Although the study of disposal behaviors has gained significant attention, most of this research has been limited to possessions, which are sentimentally linked to their owners (Dommer and Winterich 2021), by means of identity (Brough and Isaac 2012; Price et al. 2000; Trudel, Argo, and Meng 2016), meanings (Lastovicka and Fernandez 2005) and memory (Winterich, Reczek, and Irwin 2017). However, many possessions we own are devoid of sentimental value as they are primarily acquired and retained for utilitarian purposes (Frost and Gross 1993). As such we do not know much about consumers' disposal decisions for these products. The present fills this void in the disposal literature by studying utilitarian possessions that do not have sentimental value.

Finally, from a managerial standpoint, the current research stands to aid in the practice of decluttering (Chae and Zhu 2014) as well as donation seeking by non-profits. If anthropomorphism can increase people's willingness to dispose of possessions, then decluttering experts may consider nudging their clients to humanize their clutter to increase responsible disposal of goods to potential users in society. Similarly, non-profits seeking donations of usable goods can design advertisements to prompt consumers to anthropomorphize their possessions to increase the donation of goods for the use of others.

The remainder of the essay is organized as follows: I begin by explicating the concept of possession abandonment and how it reflects consumers' indifference for objects outside of their purpose to their owners. Then I discuss the potential for product anthropomorphism to change the way consumers treat their abandoned possessions. To that end, I review the product anthropomorphism literature and discuss how prior research has consistently argued and found that anthropomorphism forges consumer relationships with products, potentially decreasing consumer willingness to dispose of them. In contrast, I articulate an empathy-helping theory for consumer products to explain why and how abandoned possessions, when anthropomorphized, are more likely to be disposed of to others in society. I offer empirical support for my hypotheses in the form of three studies, each using a different product and manipulation of anthropomorphism, and therefore, provide converging evidence for my theory.

CONCEPTUAL BACKGROUND

Possession Abandonment

The concept of object abandonment has been discussed from different perspectives and situations, including the abandonment of shopping carts (Kukar-Kinney and Close 2010), product lines by firms (Hamelman and Mazze 1972), automobiles (Suarez et al. 2012), and product preferences (Berger and Heath 2008). Although the context may vary, the underlying idea of abandonment is the same – there is a disengagement from previously expressed preferences or associations. In the current research, I define abandoned possession as goods that consumers acquire (e.g., purchase) or receive (e.g., a gift) but stop using them after a while or do not use them in the first place. Possession abandonment can manifest in two ways – (i) via dis-ownership (e.g., a piece of furniture left on the street), or (ii) during ownership (e.g., a usable toaster that is no longer used and put away in the attic). Increasing evidence suggests that consumer abandonment of possessions, particularly those in storage, is rapidly growing across the world. For instance, Hamilton et al. (2005) found that on average an Australian owns unused goods worth $1226. British consumers reportedly own 1.7 billion clothing items that they have not worn for at least a year (Smithers 2012). Similarly, a survey by eBay and Nielsen found that the average American has 50 unused products in their home that they have not used for over a year (Business Wire 2007). When houses started becoming cluttered, consumers often move to store their stuff in rented self-storage units, creating the $20 billion self-storage industry which holds 1.7 billion square feet of storage space in the US alone (Harris 2020).

As noted in the previous essay, the abandonment of possessions is a source of waste because it deprives society of unused product utility and thus creates an inefficient society that acquires more than what it consumes. The primary way to reduce this waste is to find these goods a new home where they will be used. Prior research has shown that consumers tend to avoid wastage of unused utility at the time of acquisition (Bolton and Alba 2012). However, it

seems consumers disregard or forget about the leftover utility in abandoned possessions. Clearly, abandonment of possession signifies that despite having an affinity for material objects, there is also a growing lack of care or concern for what we own (Schor 1999), especially utilitarian possessions that hold no sentimental value for their owners. Further, I posit that a significant reason for the growing lack of care and concern for a lot of possessions can be traced to consumers' focus on their own needs and wants with relatively little importance given to objects per se. After all, products are inanimate objects without thoughts or feelings. Based on this reasoning, I examine the potential for anthropomorphism to change the way we treat our possessions. Specifically, can anthropomorphizing abandoned possessions increase consumer willingness to find them a new home (i.e., dispose of the product by either selling or giving it away to others)? In the next section, I discuss how anthropomorphism affects how consumers treat products.

Anthropomorphism of Possessions

Anthropomorphism is the tendency to attribute unique human-like mental states, particularly the ability to think and feel, to non-human entities (Epley 2018; Epley, Waytz, and Cacioppo 2007). Indeed, when researchers surveyed people, they found that the ability to *experience* mental states, such as hunger, fear, or pain among others, accounted for roughly 88% of what it meant to have a human-like mind (Gray, Gray, and Wegner 2007). As a result, the effect of anthropomorphism of non-human agents is principally driven by the naïve theories of human behavior people associate with those agents and linked experiences (Yang, Aggarwal, and McGill 2020).

For consumer products, extant literature has shown that object anthropomorphism can result in the formation of consumer-product relationships that mimic human-like bonds. For example, Chandler and Schwarz (2010) revealed that priming students to anthropomorphize their cars reduced their willingness to replace those cars. The authors argue that seeing what one owns through the anthropomorphic lens renews one's association with their possessions from that of mere ownership to an interpersonal relationship. Consequently, features typical of interpersonal relationships, such as growing a sense of attachment to relational partners, become salient and reduces consumers' willingness to replace anthropomorphized possessions. Similarly, hoarding researchers have found that people with high trait tendencies to anthropomorphize inanimate objects are more likely to hold onto their possessions (Neave et al. 2015; Neave et al. 2016; Timpano and Shaw 2013). Extending this line of work, consumer researchers found that, when introduced to anthropomorphized products, consumers are likely to acquire them to compensate for a lack of social relationships (Chen, Wan, and Levy 2017) and, relatedly, become less likely to engage in social interaction with real people (Mourey, Olson, and Yoon 2017). In sum, prior research has consistently demonstrated that product anthropomorphism forms a consumer-product bond, which tends to mimic the relationship one has with real people. More relevant to the present research, the formation of this bond reduces consumer willingness to dispose of or even replace anthropomorphized possessions.

Although possession anthropomorphism forges an interpersonal bond between consumers and their possessions, I argue that anthropomorphism may lead consumers to dispose of abandoned possessions to others instead of continuing to own them. Previous experimental studies on possession anthropomorphism focused on possessions that consumers were using (Chandler and Schwarz 2010). Accounting for product use in deciphering the effect of

anthropomorphism is important because regular product use has been found to create a utilitarian association with products (Fournier 1998) and it is reasonable to expect that perceiving the product to be human-like renews this utilitarian association as an interpersonal relationship. In fact, frequent interaction between two people is argued to be an essential ingredient of a healthy relationship (Baumeister and Leary 1995).

In contrast, abandoned possessions, by definition, are products which are not being used. Based on the absence of regular use, I predict that attributing human-like mental states of thinking and feeling to abandoned possessions can lead people to imagine that the possessions are feeling socially rejected and longing to connect with others with whom it could interact (Baumeister and Leary 1995). Similar to how observing others experiencing social rejection has been argued to automatically trigger an empathic response (Wesselmann et al. 2009), I propose that perceiving an anthropomorphized possession as socially rejected and experiencing distress, prompts people to empathize with that possession and become more willing to help it.

Empathy for Abandoned Anthropomorphized Possessions

Empathy is defined as an "other oriented emotional response congruent with the perceived welfare of another" (Batson 1990). Empathy helping theory specifies that observing others in pain or distress elicits empathic emotions (e.g., sympathy and compassion for them) and this in turn motivates the observer to help others relieve their distress (Batson et al. 1988; Cialdini et al. 1987). The idea that consumers will empathize and help someone in distress is not new. Empathy research has found that people empathize with and help those that they perceive are in distress, including children (Bagozzi and Moore 1994; Fisher and Ma 2014), animals (Loughnan et al. 2014; Taylor and Signal 2005), and nature (Clayton and Opotow 2004; Schultz

2000). Advancing the empathy helping literature, I propose when people empathize with abandoned consumer products which are anthropomorphized, they might also seek to help the product. A natural tendency for alleviating social rejection is to find means of fulfilling belongingness needs (Baumeister and Leary 1995; Chen et al. 2017; Mead et al. 2011). Therefore, I argue that consumers will seek out a new social connection for their possession. Because owners themselves are the source of abandonment, they retrospectively find no need or association with an abandoned possession (Dholakia, Jung, and Chowdhry 2018) and thus become more willing to dispose of the possession to other people who are likely to use it. This can occur by means of selling it in a marketplace, donating it to a charity, or simply giving it to family or friends. The conceptual model is represented in Figure 1. To formally hypothesize:

H1: *Consumers will be more willing to dispose an abandoned possession to potential users in society when the product has been anthropomorphized (vs. not anthropomorphized).*

H2: *The above effect will be mediated by empathy for the possession.*
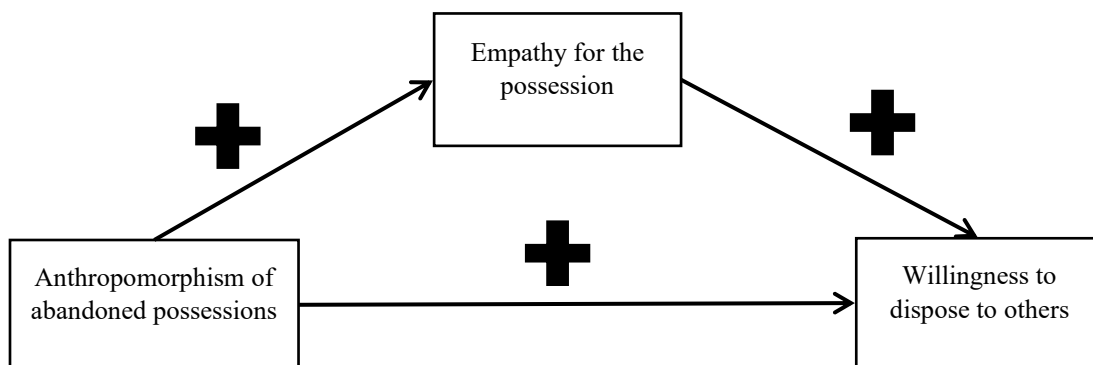

Figure 2: Conceptual Model

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OVERVIEW OF STUDIES

In three studies I provide converging evidence for the positive effect of anthropomorphism on willingness to dispose of abandoned products to others in society. The three studies employ different operationalizations of anthropomorphism and a variety of product categories (i.e., toasters, jackets, and lamps) to provide evidence for the generalizability of the effect. In all of the studies, participants imagine either owning an abandoned possession that they have not used for at least over a year (study 1 and study 2; abandonment in ownership) or finding a product that someone else has abandoned (study 3; abandonment in dis-ownership). For the former, I use the benchmark of not using a product for more than one year as a reasonable operationalization of product abandonment because of two key reasons. First, a period of more than a year is long enough a time to allow an owner the opportunity to resume using a stored possession. If the owner has not used it for over a year it is likely that the owner does not have a need for the product. In that case, owners should consider disposing of the possessions to others to be less wasteful. Second, a year of non-use is also long enough to eliminate the probability that the stored item is a seasonal product (e.g., ice skates) and thus likely to be used only once a year. Finally, all manipulations are followed by measuring participants' willingness to find the possession a new home by means of selling, donating or giving it to their family or friends. Across all studies, only participants who provided a response to all questions were included in the analysis.

Study 1

The focus of this study is to provide an internally valid test for the effect of anthropomorphism on the willingness to dispose of abandoned possessions to others. In line with my theorizing, I expect participants who anthropomorphize an abandoned possession will be more likely to find the product a new home (instead of retaining it) by giving it to others. I test this hypothesis using a toaster, which is a functional and commonly owned kitchen appliance.

Method

This study was administered using Cloud Research and participants were recruited from the Amazon's Mechanical Turk (MTurk) platform. Data was collected from 187 MTurkers (53.5% females; M_{age}= 39.42 years; SD_{age}=13.5 years), who completed this study as part of a bundle of studies and in lieu of a small compensation. The study began with the collection of demographic information (age and gender) to serve as a break between studies. Then participants were shown the picture of a toaster and asked to imagine a scenario in which they owned the toaster but had not used it for over a year. At this point, participants were randomly assigned to either the anthropomorphism or the control condition. Adapting the writing task of Aggarwal and McGill (2012) and following the definition of anthropomorphism (i.e., imbuing objects with the ability to think and feel), participants in the anthropomorphism condition were asked to describe the toaster as if it were a person while specifying what the toaster would think and feel for not being used for over a year. In the control condition, participants were asked to describe the toaster without reference to how it would think and feel. Details of the scenario and manipulation instructions are presented in Appendix A. After completing the writing task, participants reported their willingness to dispose of the toaster using a randomly presented four item scale (α= 0.90), measuring how likely would they be to: (i) sell this toaster?, (ii) donate this toaster?, (iii) give

away this toaster to a relative?, (iv) give away this toaster to a friend?. All items were measured

on a 7-point scale (1=I am most likely to keep it, 7=I am likely to dispose of it [referring to

specific disposal method as per the item; e.g., I am most likely to sell it]). Finally, to assess the

success of the anthropomorphism manipulation, participants reported the extent to which the

toaster felt like a human and the extent to which the toaster felt like an object on 7-point scales (1

= Not at all, 7 = A lot). The latter was reverse-coded and then both items were used to compute

an average to measure the perceived anthropomorphism of the toaster (r=.82).

Results

The manipulation of anthropomorphism worked as expected. An independent sample *t*-

test revealed that participants in the anthropomorphism condition reported that the toaster was

perceived to be significantly more anthropomorphic (M=2.80; SD=2.04) than those in the control

condition (M=1.21; SD=0.59), $t(185) = -7.12, p < .001$). More importantly, to test H1, an

independent samples *t*-test was conducted to examine the effect of anthropomorphism on

willingness to dispose of the toaster to others. Results indicated that participants who were asked

to describe the toaster anthropomorphically were more likely to dispose of their toaster to others

(M=4.70; SD=1.69) than those who simply described the toaster (M=4.18; SD=1.81), $t(185) = -1.96, p = .05$). Therefore, study 1 provides evidence for the positive effect of anthropomorphism

on willingness to find an abandoned possession a new home by disposing of it to others in

society. In next study, I further examine the generalizability of this result.

Study 2

The purpose of study 2 was three-fold. First, to test the generalizability of the effect of anthropomorphism, a different but commonly owned product – a winter jacket was used. As research suggests that people only wear 20% of the clothes they own on a regular basis (Cladwell 2021), a large portion of the remaining articles of clothing owned is not used for long periods of time or at all since purchase, making clothes an important category to investigate in this research. Second, to gather converging evidence for the basic effect, study 2 uses a different manipulation of anthropomorphism. Following previous research, I manipulate anthropomorphism by giving the jacket a name (Aggarwal and Mcgill 2007; Hur, Koo, and Hofmann 2015; Wan 2018). Finally, to determine whether anthropomorphizing the abandoned product motivates consumers to dispose of the product in a way to alleviate its distress (i.e., finding it a new social connection), rather than simply to get rid of (e.g., by throwing it in the garbage), I include a measure to assess consumers' willingness throw the jacket away.

Method

Data was collected from 127 undergraduate students (48% females; M_{age}= 21.51 years; SD_{age}=2.27 years), who completed this study, as part of a multi-study bundle, for partial course credit. After providing their consent, participants were shown an image of a unisex jacket and asked to read its description and imagine themselves in the scenario (detailed scenario is presented in Appendix B). In the anthropomorphism condition, participants read – *This is Victor. He is a light winter jacket. You found Victor at a GAP store and bought him to use as an extra jacket. However, you haven't used him at all in the last two years and he lies at the back of the wardrobe. Victor is in usable condition right now*. Participants in the control condition read - *This is a light winter jacket. You found it at a GAP store and bought it to use as an extra jacket.*

However, you haven't used it at all in the last two years and it lies at the back of the wardrobe. The jacket is in usable condition right now. After reading the jacket description, all participants reported their willingness to dispose of the jacket using a three-item scale (α= 0.75), measuring how willing are they to: (i) sell this jacket?, (ii) donate this jacket to a charity?, (iii) give this jacket to a family or friend for free?. Additionally, participants' willingness to throw away the jacket in the garbage was also measured. Similar to study 1, all items were measured on a 7-point scale (1=I am most likely to keep it, 7=I am likely to dispose of it [referring to specific disposal method as per the item]).

Results

An independent samples *t*-test revealed that the willingness to dispose of the jacket to others was significantly higher when participants read an anthropomorphized description of the jacket (M=5.20; SD=1.28) than when they read a normal description of the jacket (i.e., control condition) (M=4.31; SD=1.89), $t(125) = -3.09$, $p=.002$. However, no such differences were observed in the participant's reported willingness to throw away the jacket [$M_{anthro}=1.90$; $SD_{anthro}=1.46$ and $M_{control}=1.79$; $SD_{control}=1.14$; $t(125) = -.46$, $p=.644$]. Thus, the absence of significant difference in willingness to throw away the jacket, across the two conditions, ruled-out the alternative explanation that anthropomorphizing a possession, which has been abandoned by its owner, does not simply increase people's willingness to get rid of the possession. Rather it increases people's willingness to help the possession form a new social connection by giving it someone else who is going to use it.

Study 3

Study 3 further tests the effect of anthropomorphism in a different context of abandonment. As noted earlier, possessions are not only considered abandoned when owned (e.g., placed in storage, back of the closet) but also when they are disowned (e.g., left ownerless on the streets or by the lawn; Brosius et al. 2013). In this study, I examine whether anthropomorphizing a usable desk lamp that has been left (i.e., abandoned) by someone else on the street could stir empathic feelings. Based on my theorizing, I expect that asking participants to imagine coming across an abandoned and anthropomorphized (vs. non-anthropomorphized) lamp would increase their empathy for the lamp and that in turn would increase their willingness to find the lamp a new home who would be likely to use it. Furthermore, I test and rule out the possibility that the effect of anthropomorphism on willingness to dispose of is driven by increased perceptions of product competence. Previous studies have shown that anthropomorphizing an entity increases consumer perceptions of competence in that entity (Chen, Sengupta, and Adaval 2018; Zhang et al. 2020; Zhou, Kim, and Wang 2018). This suggests participants could be more willing to dispose of an anthropomorphized (vs. non-anthropomorphized) product to others because they perceive it to have greater utility, as a result of increased perceptions of competence. To rule out this possibility, I measured product competence in two different ways, using perceived usefulness and the extent of remaining life left in the product.

Method

Data was collected from 128 undergraduate students (48.5% females; Median age = 21 years) who completed this study as part of a multi-study bundle for partial course credit. The

study used a single factor two-conditions (High vs. low anthropomorphism) between-subject design. After providing their consent, participants were informed that the study will begin with a short video about a lamp. Because of concerns that participants might not pay attention to a short video and miss relevant information, an attention check question, which asked participants to identify where the lamp was placed in the video (house, library, street, car, or swimming pool), was included at the end of the study. Two participants were removed from the analysis because they failed this attention check. The results did not change if the participants were included in the analysis. Anthropomorphism was manipulated using a short video which was a slightly modified version of the classic Ikea ad in which a lamp is abandoned on the street by its owner. In the high anthropomorphism condition, we expected that the overall story, screenplay, and music will make participants perceive the lamp to be anthropomorphic (i.e., have human-like qualities). In the low anthropomorphism condition, participants see the full ad in which at the end the camera pans from the lamp to a person who says, "*Many of you feel bad for this lamp. That is because you are crazy. It has no feelings. And the new one is much better*". I expect that calling out the viewer's anthropomorphizing of an inanimate object reduces the extent to which the participants attribute human-like mental states to the lamp.

After seeing the video, participants in all conditions are asked to imagine that they come across this lamp and that it is in working condition. Participant willingness to find the lamp a new home was measured using the following items ($\alpha= 0.85$): How likely are you to do the following (i) Take this lamp home with you to use, (ii) Take this lamp to a local charity, (iii) Take this lamp to a used-goods donation center (e.g. Goodwill, Value Village, etc.), and (iv) Take this lamp and ask a few friends if they need a lamp. All items were measured on a 7-point scale (1=Very unlikely, 7=Very likely). All items appeared in random order. To provide

evidence for the mediational effect of empathy I measured empathy for the lamp by asking participants to what extent they felt the following for the lamp (α= 0.97): (i) sympathy, (ii) compassion, (iii) soft-heartedness, (iv) warmth, (v) tenderness, and (vi) moved (Batson 1990; Batson et al. 1997; Coke, Batson, and McDavis 1978). Items were measured on a 7-point scale (1=Not at all, 7=A lot). Thereafter, I measured the success of my anthropomorphism manipulation by asking participants to what extent they perceived the lamp (α= 0.97): (i) as if it had a mind of its own, (ii) as if it can think, and (iii) as if it can feel emotions. Items were randomly presented and measured on a 7-point scale (1=Not at all, 7=A lot). Finally, to rule out product competence as an alternative explanation, I also asked participants to estimate how many years of useful service was left in the lamp (How many more years do you think this lamp can be used before it stops working?) and to rate the lamp on a 7-point bipolar scale (1=Not useful, 7=Useful).

Overall, I expect that participants in the high anthropomorphism condition were more likely to find the lamp a new home than those in the low anthropomorphism condition. Moreover, I expect that this effect is mediated by increased empathy for the lamp in the high anthropomorphism condition, while no significant difference is observed for perceived leftover utility or perceived usefulness across the two experimental conditions.

Results

The manipulation of anthropomorphism worked as expected. An independent sample *t*-test revealed that participants in the high anthropomorphism condition reported that the lamp was perceived to be significantly more anthropomorphic (M=4.47; SD=2.10) than those in the low anthropomorphism condition (M=3.27; SD=2.15), $t(124) = -3.16$, $p = .002$. Moreover, as

hypothesized, an independent samples *t*-test revealed that the participant willingness to find the lamp a new home was significantly higher for participants in the high anthropomorphism condition (M=4.23; SD=1.58) than those in the low anthropomorphism condition (M=3.3; SD=1.80), $t(124) = -2.89$, *p*=.004. However, as expected, no significant differences were observed in either perceived leftover life left in the lamp [$M_{high-anthro}$=5.10 years; SD=5.56 and $M_{low-anthro}$=6.02 years; SD=7.27; $t(124) = .78$, *p*=.434] or perceived usefulness of the lamp [$M_{high-anthro}$=5.37; SD=1.33 and $M_{low-anthro}$=5.38; SD=1.32; $t(124) = .04$, *p*=.967].

Subsequently, a mediation analysis was performed using Model 4 in PROCESS macro for SPSS (Hayes 2015), with anthropomorphism as the independent variable, empathy for the lamp as the mediator and willingness to find the lamp a new home as the dependent measure (Figure 2). Based on a 5000-bootstrap sample, the results indicated that empathy for the lamp was significantly predicted by the extent of the lamp's anthropomorphism (β = .9602; SE = .3687, *p*=.01). Further, the empathy for the lamp significantly predicted the participant's willingness to dispose of the lamp to others (β = .4811; SE = .0670, *p*<.001), with a 95% confidence interval that does not include 0 [.3485 to .6138] (Hayes 2015). While the direct effect of anthropomorphism on willingness to dispose of the lamp was only marginally significant (β = .5165; SE = .2805, *p*=.068).
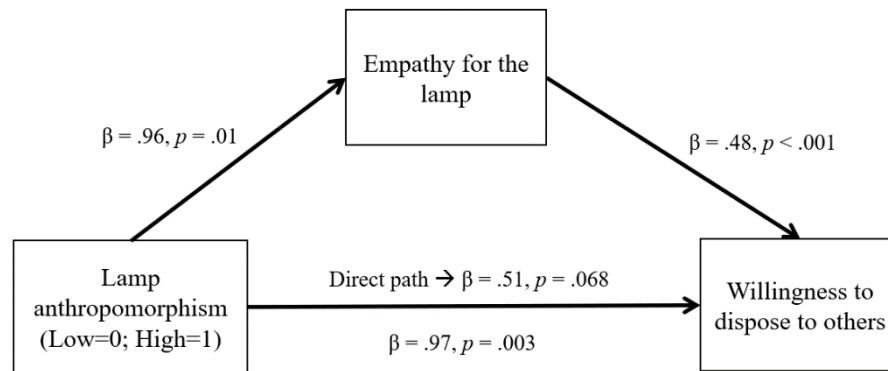
Empathy for the
lamp

β = .96, p = .01

β = .48, p < .001

Lamp
anthropomorphism
(Low=0; High=1)

Direct path → β = .51, p = .068

β = .97, p = .003

Willingness to
dispose to others

Figure 3: Mediation model examining the role of empathy

GENERAL DISCUSSION

Today consumers in the developed world own more goods on average than ever before
(Johnson 2015). Unfortunately, not everything that is acquired gets completely utilized and thus
a rising number of possessions with leftover utility are neither being used by their owners nor
anyone else. Although consumers who abandon their possessions, particularly in storage, may
not see themselves as wasteful (Haws et al. 2012; 2014), from the referential frame of society,
abandoning goods is a significant source of waste in society. Such behavior is wasteful because it
creates an inefficient society that collectively acquires more than what it consumes. The primary
way to reduce such waste entails giving an abandoned possession to someone (e.g., through
selling, donating, etc.), who is likely to use it. Past research indicates that consumers not only
predict but also avoid the waste of unused utility at the time of purchase (Bolton and Alba 2012).
However, the growing abandonment of acquired products highlights the general lack of care and
concern for possessions after consumers stop using them. To motivate consumers to find a new

home for their abandoned possessions, I examine the effect of anthropomorphism on willingness to dispose of an abandoned possession to others.

Across three studies, using different manipulations and product categories, I provide converging evidence for a positive effect of anthropomorphism on willingness to dispose of an abandoned possession to others. In study 1, I provide an internally valid test to show that when people are asked to describe the thoughts and feelings of (i.e., anthropomorphize) a toaster which is usable and has not been used for more than a year then people become more willing to dispose of the toaster to someone else. Similarly, in study 2, when a jacket, which has not been used at all for two years, is described as a person (using a name and gendered pronouns) then people are more likely to dispose of the jacket to others. Finally, in study 3, I expose all participants to anthropomorphic stimuli using the classic Ikea lamp advertisement. Whereas in the low anthropomorphism condition participants see the full ad that ended with a man calling out the viewer's absurdity in perceiving the lamp to have human-like feelings, the ad in the high anthropomorphism condition did not include that part. Consistent with previous studies, I found that participants in the high anthropomorphism condition reported a greater willingness to find the abandoned lamp a new home than those in the low anthropomorphism condition. Further, I ruled out the possibility that this effect was driven by perceptions of greater utility in the lamp (for others) in the high anthropomorphism condition. More importantly, I demonstrate an empathy-based helping mechanism to explain how anthropomorphism increases disposal intentions. Based on my theorizing, I found that the increased willingness to find the lamp a new home in the high (vs. low) anthropomorphism condition was mediated by increased empathy for the lamp.

Theoretical Contributions

Overall, this research advances the anthropomorphism literature which has generally argued and found evidence for a negative effect of product anthropomorphism on willingness to replace and dispose of the product because consumers tend to form relational bonds with such products (Chandler and Schwarz 2010; Neave et al. 2015; 2016; Timpano and Shaw 2013; Wan and Chen 2021). By demonstrating that anthropomorphism can also increase consumers' willingness to dispose of possessions to others, the present research expands our understanding of possession anthropomorphism and its consequences. Furthermore, the current research also extends the empathy helping literature. Past research has studied circumstances in which consumers express an empathic response to distressed entities, including children (Bagozzi and Moore 1994; Fisher and Ma 2014), animals (Loughnan et al. 2014; Taylor and Signal 2005), and nature (Clayton and Opotow 2004; Schultz 2000). To my knowledge, the current research is the first to provide empirical evidence in support of the empathy-helping account for consumer products. Finally, the current research also contributes to the consumer disposal literature by studying everyday functional products. Most of the disposal literature has focused on studying possessions that have special meanings or associations for consumers (Brough and Isaac 2012; Lastovicka and Fernandez 2005; Price et al. 2000; Trudel et al. 2016; Winterich et al. 2017). However, consumers also acquire and retain utilitarian possessions that are not special for their owners, but we do not know much about such possessions. Therefore, the current research extends our understanding of consumer disposal behavior about utilitarian possessions without sentimental meanings.

Practical Implications

The findings of this research can help in the process of responsible decluttering. The cluttering of consumer's living and working spaces with unused possessions comes at a cost. Chae and Grace (2014) have shown that presence of clutter can reduce consumer ability to exercise self-control. Decluttering and tidying consultants can design interventions that nudge consumers to see their stuff through the anthropomorphic lens to responsibly dispose of their unused but usable possessions to others who would use it. In fact, the incorporation of anthropomorphic rituals (e.g., praying to the house) in tidying and decluttering one's house is becoming popular (Kondo 2014). People can even consider watching toy story for 15 minutes before deciding to move ahead with decluttering the toy boxes. Such an approach has the potential to not only help consumers to declutter but also ensure the unneeded products are responsibly disposed of to others instead of being thrown in the garbage. Similarly, non-profits seeking donations of goods (e.g., Goodwill, Salvation Army) can design advertising campaigns that prompt consumers to anthropomorphize their abandoned possessions, in turn increasing their willingness to donate the goods to non-profits.

Prompting people to anthropomorphize their possessions should be reasonably achievable, especially given consumer exposure to and familiarity with anthropomorphism. Most adults have anthropomorphized their possessions as children (Carey 1985), suggesting consumers may be able to temporarily access and activate the anthropomorphic schema when prompted. Moreover, popular movies, such as *Wall-E* and *Toy Story*, are enjoyed by kids and adults alike and have made anthropomorphism appear as a common and natural reaction (Lanier, Rader, and Fowler 2013). Further, consumers often give names and gendered pronouns to their

possessions (e.g., cars; Bucklin 2017), or even use personality variables to describe their possessions (*drunk vacuum cleaner*; Kleinman 2021). People are also familiar with the anthropomorphism of other consumption-related entities, such as brands (Aaker 1997; Aggarwal and McGill 2012; Puzakova and Aggarwal 2018). Firms have started leveraging technology to anthropomorphized consumer products (e.g., *Siri*, *Roomba, Pleo*) further increasing the degree to which we are exposed to anthropomorphic products. The presence of anthropomorphic features and functions in a product can be potential avenues to prime consumers to think of products as possessing a human-like mind. In sum, prompting consumers to see their possessions through the anthropomorphic lens can be executed in practically useful ways.

Limitations and Future Research

Although I test the hypotheses across different product domains and anthropomorphism manipulations, there are a few limitations that can be potentially investigated in future research. First, I studied utilitarian possessions devoid of sentimental value for consumers. However, the effect may reverse for special possessions because such possessions carry emotional meanings and memories that consumers might not be easily willing to let go of (Winterich et al. 2017). Similarly, the possession type – utilitarian vs. hedonic - may also influence the current findings. On the one hand, it seems that anthropomorphism could reduce consumer willingness to dispose of their hedonic (vs. utilitarian) possessions because consumers tend to be more attached to them (Chan 2015; Shu and Peck 2011). On the other hand, anthropomorphism could increase disposal because if hedonic possessions are perceived to be more valuable (Dhar and Wertenbroch 2000) then it may increase consumer's own perceived wastefulness for abandoning the possession, in

turn increasing their motivation to give it to someone else. Other product level variables, such as the perceived market value of the product and the extent of leftover utility in the product among others may also moderate the current findings. Future research should investigate the role of such product-level variables in further expanding our understanding of disposal behaviors.

Moreover, it might be interesting to look at how different anthropomorphism triggers influence the disposal of abandoned possessions. Epley (2018; p. 594) argues that given the fuzziness in understanding what it means to be a human (e.g., whether it is triggered by perceptions of being alive vs, having feelings vs. being similar to a human face in design), consumer behavior researchers need to "provide more precise boundaries" on the concept of anthropomorphism. While this research remained closer to the recommended definition in the field, it would useful to study how the current findings hold against different triggers of object anthropomorphism. Finally, the empathy-helping account indicates that consumers are likely to *help* an anthropomorphized product to the extent it is experiencing some form of *distress*. Future research investigations should consider identifying the forms of product-related distress (e.g., product damage, product mishandling) that can activate an empathy-helping pathway. Additionally, what other kinds of helping behaviors (e.g., product repair) would result from the empathy-helping pathway?

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Study 1 scenario and manipulation

Condition: Anthropomorphized Toaster

Please imagine that while cleaning your house you come across this toaster, which is in a clean, good and usable condition but has not been used at all in over 1 year.

Now for a moment imagine **this toaster is a person**. Keeping that in mind, please describe this toaster covering the following points:

1. What would this toaster feel about not being used for over a year?
2. What emotions would this toaster experience about not being used for over a year?
3. What would this toaster think about not being used for over a year?

Spend at least 2 minutes on this writing task

Condition: Non-Anthropomorphized Toaster

Please imagine that while cleaning your house you come across this toaster, which is in a clean,

good and usable condition but has not been used at all in over 1 year.

We want you to describe this toaster in the box below.

Spend at least 2 minutes on this writing task

Appendix B

Study 2 scenario and manipulation

Condition: Anthropomorphized Jacket

This is Victor. He is a light winter jacket. You found Victor at a GAP store. You bought him as an extra light winter jacket. However, you haven't used him at all and he lies in your storage room since the day you got him. Victor is in usable condition right now.

Condition: Non-Anthropomorphized Jacket

This is a light winter jacket. You found it at a GAP store. You bought it as an extra light winter jacket. However, you haven't used it at all and it lies in your storage room since the day you got it. The jacket is in usable condition right now.