I'll trade you diamonds for toilet paper: Consumer reacting, coping and adapting behaviors in the COVID-19 pandemic

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A B S T R A C T

In this research, we document some of the many unusual consumer behavior patterns that came to dominate the early days of the COVID-19 pandemic. We offer insights based on theory to help explain and predict these behaviors and associated outcomes in order to inform future research and marketing practice. Taking an environmentally-imposed constraints point of view, we examine behaviors during each of three phases: reacting (e.g., hoarding and rejecting), coping (e.g. maintaining social connectedness, do-it-yourself behaviors, changing views of brands) and longer-term adapting (e.g. potentially transformative changes in consumption and individual and social identity). We discuss implications for marketing researchers and practice.

1. Introduction

In December 2019, a resident of Wuhan, China came down with a mysterious ailment, thus marking the beginning of a global pandemic that would come to define life in most countries across the globe in the early 2020′s. With this research, we aim to document some of the many unusual consumer behavior patterns that came to dominate the early days of the COVID-19 pandemic. Our intention is exploratory, with an eye toward providing insights based on theory that can inform future researchers as well as marketing practitioners. We examine both the more transient consumer behaviors that may retreat once the pandemic passes, as well as the more transformative behaviors that may come to dominate our society for years or generations to come.

Given that the world has not seen a pandemic on this scale in over a century, little existing consumer behavior research in this context guides our work (Jones, Waters, Holland, Bevins, & Iverson, 2010). Nonetheless, throughout history, pandemics, from the black plague in the middle ages to the Spanish Flu in the early 20th century, have wrought enormous social change (Reeves, Carlsson-Szlezak, Whitaker, & Abraham, 2020) and it is likely that the COVID-19 pandemic will do the same. Further, scientists suggest that new pandemics will continue to pose a risk in the future (Global Preparedness Monitoring Board, 2019). Therefore, understanding consumers' lives in the face of this pandemic and beyond is vitally important for marketers as well as

business and public policy makers more broadly.

In this research, we take an environmentally-imposed constraints point of view (Hamilton, Mittal, Shah, Thompson, & Griskevicius, 2019) to begin to understand the consumer journey during a pandemic. Specifically, we propose that as consumers become aware of the potential for a pandemic, they first *react* by attempting to defend against perceived threats and regain control of lost freedoms. As time passes, they *cope* by exerting control in other domains and adopting new behaviors. Eventually, consumers *adapt* over time by becoming less reactive and more resilient. Using this structure, we document a variety of reacting and coping consumer behaviors observed anecdotally and in the popular press, and suggest theories that may help explain and predict these behaviors and associated outcomes. We further explore ways in which the COVID-19 pandemic may be serving as a catalyst for consumers' longer-term adaptive responses. While by no means comprehensive, it is our hope that this research can provoke analysis and discussion, serving as a starting point for consumer behavior researchers as well as marketing practitioners.

2. Reacting to the COVID-19 threat

2.1. Consumer hoarding behavior

Through the month of January 2020, the *Novel Coronavirus* was

generally perceived in the U.S. and throughout much of the world as a threat to consumers on distant shores. Those sounding alarms were frequently viewed as extreme survivalist "preppers" who were bound to stock up for any threat, large or small (Austin, 2020). However, a wave of preparedness buying at the end of February and early March quickly evolved into extreme buying with an 845% spike in consumer household spending (NCSolutions, 2020); a level which could not be met by suppliers, leading to empty shelves, stock-outs and product scarcity. Shoppers quickly cleared the shelves of all manner of disinfectant and cleaning products, toilet paper, and even water (NCSolutions, 2020). Whereas some of these goods, such as toilet paper, are often hoarded at first signs of a natural disaster (Kaigo, 2012), cleaning products might be more unique to a pandemic. What kinds of products consumers hoarded in the COVID-19 pandemic, and why, are interesting questions for researchers, especially given scientists' view of the likelihood of either another wave of COVID-19 or of future pandemics.

Hoarding behavior (as distinct from compulsive hoarding; Frost & Gross, 1993) is defined as the act of collecting and safeguarding a large quantity of possessions (i.e. more than is required for present needs) for future use (Chu, 2018). Hoarding behavior has an evolutionary basis and is instinctual when a threat is perceived (Frost & Gross, 1993). It is motivated by fear of being caught unprepared (Frost & Gross, 1993) and is heightened following an adverse event due to an increase in risk-aversion (Cameron & Shah, 2015) and anticipated regret (Gupta & Gentry, 2019). Further, according to psychological reactance theory (Clee & Wicklund, 1980), a threat to product availability is experienced by consumers as a loss of control and increases the perceived need for the threatened object. Possession, therefore, restores this loss of control and contributes to a sense of security and comfort (Frost & Hartl, 1996). Thus, while some degree of hoarding might be warranted for preparedness, consumers also engage in hoarding beyond what is needed as an emotional reactance response (Sneath, Lacey, & Kennett-Hensel, 2009).

In the case of the COVID-19 pandemic, consumers' hoarding tendencies were likely exacerbated by supply chain disruptions resulting in empty retailer shelves. Product scarcity is another reactance-inducing environmental cue (Fitzsimons & Lehmann, 2004). Consumers are accustomed to the availability of a large assortment of products from a wide variety of retailers. Product scarcity threatens the freedom to choose from among these assortments (Gupta & Gentry, 2019) and empty shelves make this threat highly visible (Robinson, Brady, Lemon, & Giebelhausen, 2016). Therefore, if the scarce items are perceived to be important and the threat of continued availability high, consumers will seek to restore control by hoarding. Scarcity also may cause consumers to adopt a competitive mindset in which they see others seeking these goods as adversaries, leading to territorial behavior (Kirk, Peck, & Swain, 2018). In the early buying frenzy periods, this was reflected in aggressive behaviors exhibited by some consumers in order to win out over the competition (Impelli, 2020).

On the other hand, retailers are not powerless to help consumers feel more in control in this situation and reduce potential reactance. During the pandemic, retailers often began limiting purchases of in-demand items to one per customer per day, perhaps giving consumers more confidence that product choices would be there when they need them. Keeping empty store shelves stocked with substitute products (e.g. facial tissues for toilet paper or soap for disinfectant) might also help to avoid cuing scarcity, thus dampening consumers' reactance responses. In response to stock-outs, consumers are also more likely to pay attention to the supply and demand of goods (Ge, Messinger, & Li, 2009), so even providing consumers with information regarding anticipated deliveries may help restore their sense of control. These areas suggest opportunities for future research into pandemic-related hoarding behavior.

2.2. Rejection of behavioral mandates

Behaviors such as social distancing and wearing masks have been shown to slow down the spread of viruses. Nonetheless, when U.S. state governments first began implementing stay-at-home orders, many consumers seemed to go out of their way to ignore them, and beaches and other public areas remained packed with revelers.

One factor which determines whether such recommendations will be adopted is consumers' motivation to comply (White, Thorseth, Dreibelbis, & Curtis, 2020). The manner and source of communications, paradoxically, can motivate either adherence or rejection. Recommendations from a recognized expert are usually an effective means of persuasion (Fitzsimons & Lehmann, 2004). However, if consumers perceive that a recommendation is contrary to their current beliefs, they may perceive a threat to their attitudinal and behavioral freedoms, leading to a state of psychological reactance (Fitzsimons & Lehmann, 2004). In this case, consumers may reject the recommendation, despite any benefits it may offer. In particular, when recommendations employ fear inducing messages, commonly used in public health campaigns, they may induce individuals to behave in direct opposition to what has been recommended (Shen, 2010). Some COVID-19 related campaigns in other countries, such as Australia's viral plea by medical personnel to stay home so they can work (Adomaite & Tymulis, 2020), were more other-focused than fear-inducing and may have been more effective. Further research into the reactance-eliciting potential of public health-related messages is warranted.

3. Consumers' coping behaviors

3.1. Maintaining social connectedness in a time of social distance

The COVID-19 Pandemic was the point at which "social distancing" entered consumers' popular vernacular. According to the U.S. Centers for Disease Control (CDC), social distancing encompasses efforts to lower the risk of exposure by limiting personal contact with others, maintaining distance from others, and taking other precautionary actions such as wearing masks and gloves (Bates, 2020). One of the hallmarks of social distancing practices was "sheltering in place," or stay-at-home orders. However, the need to belong is one of the most fundamental human motivations (Baumeister & Leary, 1995) and consumers showed remarkable innovativeness and resiliency in order to meet this need. For example, when the virus made self-quarantining obligatory, many people chose to abandon their own homes in order to shelter in place with friends or family members, giving rise to the term "quaranteaming" (Hohman, 2020). Social exclusion also increases perceptions of physical vulnerability (Dean, Wentworth, & LeCompte, 2019), so hunkering down with others – perhaps even with relative strangers (Walton, Cohen, Cwir, & Spencer, 2012) – can be especially comforting when faced with the physical threat of a virus.

The advent of virtual gatherings was another means of staying connected. The physical distancing necessitated by the pandemic stimulated burgeoning consumer use of mediating technologies in an effort to maintain social connectedness. Virtual dinner parties, happy hours, yoga classes, religious services, weddings, and cloud clubbing (parties with live D.J. performances) are just a few of the many ways people have stayed connected (Roose, 2020). Further, virtual reality allows individuals to create adventures anywhere in the world. From playing virtual poker in a casino (Roose, 2020), to climbing the highest mountains (Carter, 2020), creativity abounds.

Use of video conferencing technologies during the pandemic skyrocketed, and ZOOM™ has morphed from an obscure brand name to a household verb. Nonetheless, while substantial research has examined the use of video conferencing technologies in business and professional contexts (Yoo & Alavi, 2001), video chatting research in social contexts is more limited (Lee, Murphy, & Andrews, 2019). Telepresence refers to "the extent to which one feels present in the mediated environment,

rather than in the immediate physical environment" (Steuer, 1992, p. 6) and may help explain consumers' viral adoption of these technologies in social contexts. While typically associated with augmented and virtual reality technologies (Miller et al., 2019), a variety of interactive digital technologies can facilitate telepresence (Novak, Hoffman, & Yiu-Fai, 2000), likely including video chat platforms. Telepresence in digital technologies probably also helps to reduce perceptions of social distance, a form of psychological distance (Trope & Liberman, 2010), and telepresence and psychological distance theories could provide rich frameworks for understanding consumers' adoption and continued use of video chat technologies.

A related area of interest concerns consumers' identity-expressive choices of virtual or physical backgrounds for video chatting, as well as their evaluations of others' choices. For example, Claude Taylor's viral Twitter account @RateMySkypeRoom, in which he rates celebrities' video chat backdrops, reached 80,000 followers two weeks after its launch (Burnell, 2020). As newscasters broadcast from basements and bedrooms, their choice of background, virtual and otherwise, may also influence consumers' responses to their communications, suggesting new areas for research.

Nonetheless, anecdotal evidence suggests that the novelty of virtual gatherings may be wearing off, and consumers seem to be recognizing that reduced psychological distance is still no substitute for physical proximity to others. Despite emerging touch capabilities in virtual reality (Needleman, 2018), it is unlikely that humans' positive responses to interpersonal touch (Luangrath, Peck, & Gustafsson, 2020) will be replaced virtually anytime soon. Further, when video chatting, consumers may see not only the others in the group, but also an image of themselves, possibly increasing stress due to self-presentation concerns (Wegge, 2006). Consumers also report "ZOOM fatigue," which might result from cognitive challenges associated with this less natural communication technology. Chatting via video (vs. in person) requires more attention to the faces on the screen and the cognitive load of trying to see and interpret nonverbal cues in this restricted environment (Ferran & Watts, 2008) may be exhausting. The conversation flow is also less natural, as the technology does not permit everyone to hear multiple consumers speaking simultaneously. Research has also shown that individuals may also misattribute brief system delays or other technical glitches to a communication partner, thereby affecting their perception of the other's behaviors and personality (Schoenenberg, Raake, & Koeppe, 2014).

Consumers' motivations may also affect their outcomes from using this technology. Use of video chat for professional use is generally a result of extrinsic or utilitarian motivations, whereas social contexts are likely to be more intrinsically or hedonically motivated, likely changing consumers' reactions to the technology (Kirk, Swain, & Gaskin, 2015). Another phenomenon seems to be a need for reconnecting with people from our past during the pandemic (Firth, 2020) especially through video chats, and the reasons for this are not clear. It is possible this is due to a sense of nostalgia (Xinyue, Wildschut, Sedikides, Kan, & Cong, 2014) or increased mortality salience (Dunn, White, & Dahl, 2020), and this should be examined. Even so, hedonic motivations aside, consumers might also feel pressured to join a group video chat with friends or relatives since everyone knows they are home. This might impact their sense of autonomy and dampen pleasurable responses from using the technology. Further research examining use of video chatting technology in social contexts is much needed.

Consumers also showed signs of satisfying their need for social connectedness not only with other humans, but also with other living beings (Holbrook & Woodside, 2008; Kirk, 2019). Animal shelters have reported a rise in pet adoptions during the pandemic, and puppy breeders are swamped with orders (Phillips, 2020). Even interaction with anthropomorphized digital entities such as Alexa and Siri can mitigate the effects of social exclusion (Mourey, Olson, & Yoon, 2017), and it would be interesting to see if these simple devices can be helpful in meeting consumers social connectedness needs during times of social distancing.

Consumers demonstrated their creativity by fashioning face masks out of an assortment of materials including yarn, bridal gown material and even items recycled from trash (Wilson, 2020). Although face masks have long been commonplace in public in China, they were rarely seen in Western cultures prior to the COVID-19 pandemic. With the onset of the pandemic, however, wearing a face covering of some sort for protection of self and others became the norm, and face masks are likely to remain with us, at least for the immediate future.

Facial expressions are important vehicles for nonverbal communication, and consumers and service providers will need to learn how to convey emotions and intentions without a visible smile. Individuals may benefit from studying the practices of Muslim women, whose niqab leaves only the eyes visible for communication (Piela, 2021). For example, Duchenne smiles, which crinkle the corners of the eyes, convey intrinsic motivation (Cheng, Mukhopadhyay, & Williams, 2020) and should be visible even when the mouth is covered. Other body language or prosody (Frick, 1985) may also be needed to avoid miscommunication. One could imagine a market for face coverings that provide protection yet are transparent enough to keep facial expressions visible. At the same time, many consumers are starting to treat fabric face masks as an expressive accessory by acquiring or making them of specialized fabrics in identity-relevant colors or patterns. However, some consumers have reported concerns that face coverings can make them stand out in a negative way, as they may play into racial or political biases. Some have reported wearing light-hearted masks to make them seem more approachable (McNary, 2020). Given that consumers and frontline service personnel alike may be wearing masks for some time to come, understanding consumers' responses to wearing facemasks, as well as to face masks on others, is important.

3.2. Coping by doing-it-yourself

During the pandemic, legions of consumers have turned to do-it-yourself projects and home-bound activities such as cooking, baking, gardening, jigsaw puzzles, and family game nights. For example, social media mentions for painting and home renovation doubled the first two weeks of March 2020, and home improvement retailer sales spiked (Swan, 2020). Americans have begun cooking more than they have in 50 years (Taparia, 2020) and are reporting more confidence in the kitchen, more joy in cooking, and increased expectations that they will cook more after the pandemic (Hunter, 2020).

Researchers have found that lack of product availability motivates consumers to engage in do-it-yourself projects (Wolf & McQuitty, 2013), so it is not surprising that consumers fulfill their utilitarian needs by creating products themselves, such as by cooking or making protective masks. However, substantial evidence has documented that consumers place a higher economic valuation on their co-created products, such as a self-assembled bookcase (Norton, Mochon, & Ariely, 2012) or self-designed t-shirt (Franke, Schreier, & Kaiser, 2010), than on identical products made by someone else. Such co-creation efforts, known as *prosumption* (Xie, Bagozzi, & Troye, 2008), bolster consumers' feelings of competence (Mochon, Norton, & Ariely, 2012) and pride (Kirk et al., 2015), which may be especially important when consumers feel a loss of control in other life domains due to a pandemic. Many consumers also derive great pleasure from sharing the results of their do-it-yourself efforts with others (Belk, 2014).

Consumers' willingness to try co-creation activities is also influenced by their attitudes toward succeeding and failing (Xie et al., 2008). During a pandemic, even the availability of inputs, such as the yeast required to make a loaf of bread, are not always under consumers' volitional control. While potentially frustrating at first glance, it is possible that such potential external attributions for imperfect outcomes help grant consumers license to fail in their efforts, thereby actually increasing their likelihood of engaging in prosumption activities. Marketers can also help consumers succeed by providing them with

"constrained experiences," such as providing them pre-packaged kits for meals and other creative projects, thereby boosting their feelings of efficacy (Dahl & Moreau, 2007).

On the flip side, investment of self in co-creation enhances psychological ownership (Fuchs, Prandelli, & Schreier, 2010), or a feeling that the output is "mine!" (Pierce, Kostova, & Dirks, 2003). Thus, it is also possible that as consumers come to take ownership of new prosumption contexts in their homes, territoriality (Kirk et al., 2018) may also come into play. For example, in a household with traditional gender-defined roles, the wife may typically have cooked for the family, or the husband handled home-improvement projects, and therefore view such domains as "theirs." Such psychological ownership may lead to territorial responses, such as denigration or knowledge hiding (Kirk, 2017) even within family units. Even children and young people may become territorial as they see their parents adopting digital platforms which they previously viewed as their own (Kirk & Swain, 2018).

3.3. Consumers' changing views of brands

As consumers have begun to cope, they are responding differently to the actions of brands. In a recent Edelman Trust Barometer survey of 12,000 consumers worldwide (Rogers, 2020), two-thirds of consumers reported their future purchase decisions will be strongly influenced by how brands respond to the pandemic. One third have already actively switched from a brand based on what they perceived to be an inappropriate response to the crisis, and this figure rose to 76% in Brazil and 60% in India.

In particular, brands are vulnerable if they are perceived to be acting in a self-serving manner or to be unwilling to make sacrifices while expecting others to do so. For example, Reese Witherspoon's fashion line received a consumer backlash after their promotional contest giveaway was positioned as a thank-you to teachers, but perceived as a ploy for lead generation and data capture (Friedman, 2020). Consumers want their brands to have "skin in the game" and may not look kindly on furloughing employees in order to maintain profits. Such perceptions may also impact the financial valuation of the brand (Kirk, Ray, & Wilson, 2013).

According to psychological contract theory, consumers form psychological contracts with the brands they patronize based on implicit promises that they believe the brand has made (Montgomery, Raju, Desai, & Unnava, 2018; Rifkin, Kirk, & Corus, 2020). It is possible that brands with a socially responsible positioning (Gertner & Rifkin, 2017; He & Harris, 2020) may therefore be particularly subject to punishment by consumers if they are perceived to have betrayed their positioning promises during the pandemic.

Marketing communications will likely also be affected. Most consumers in the Edelman Trust Barometer survey reported that they expect brands to demonstrate awareness of the impact of the pandemic and show how their products can help people cope. Indeed, advertisers have responded accordingly. For example, Uber's advertising campaign is focused on the coping behaviors of consumers as they stay home (Zelaya, 2020). Many brands seem to be focusing their communications on messages of gratitude for healthcare workers and other essential frontline workers who are not able to stay home (Ad Council, 2020). Interestingly, the Edelman Trust survey found that 57% of consumers suggested communications that are too humorous or light-hearted would be inappropriate. The effects of gratitude (Bridger & Wood, 2017), humor (Alden, Hoyer, & Chol, 1993), and other emotion-eliciting messages by brands should be newly examined in the aftermath of the COVID-19 pandemic.

4. Adapting: The new normal

As consumers coped with the pandemic, almost overnight, homes began transitioning into make-shift offices, classrooms, broadcast studios, gyms, places of worship and doctors' offices. Personal computers became the gateway to the majority of human interaction and socializing beyond immediate family members. Co-creation, innovation and ingenuity abounded as new skills were adopted through do-it-yourself activities, and even technologically challenged populations learned new skills. In response to the need, regulatory barriers were torn down, paving the way for advances such as telehealth (WSJ, 2020) and ZOOM video chats. These innovations were adopted by consumers at a far accelerated rate than might have more naturally occurred. For example, television, social media and other transformational technologies often took years to achieve widespread adoption and had to overcome substantial consumer resistance. In contrast, *sheltering in place* became the catalyst to compress the adoption curve of many of these offerings at an unprecedented speed, assisting consumers in their efforts to cope with the pandemic.

As with other transformational events, there will be a "before" and "after." The search phrase, "How Corona will change the world forever," yielded 16,700,000 results as of April 24, 2020. In the preceding paragraphs, we have discussed some of the ways consumers have reacted and coped with the dramatic changes in their environment. Individually, many of the affordances discussed made the experience during this time period more palatable. Within a matter of weeks, emerging technologies not only satisfied basic needs (e.g. access to food, medical, and employment), but also satisfied needs such as belonging, community, status, stimulation, and self-esteem. Oftentimes, the most significant innovations and improvements are brought about by disruption (Christensen, 2013). Collectively, numerous predictions suggest that the COVID-19 pandemic will result in major societal shifts with the potential ultimately to enhance consumer experiences in the long term (Reeves et al., 2020). As consumers adapt to the new normal, even some of the worst moments of the pandemic may bring about long-lasting positive outcomes. While a post COVID-19 world remains to be seen, we look to prior literature to consider the potential long term consequences. Further, we raise issues and important questions which warrant further research.

4.1. Changes in the way we consume

Consumption patterns this millennium have shifted to a greater focus on experiences and less emphasis on possessions (Chun, Diehl, & MacInnis, 2017). As a result of shelter in place practices, however, many experiences as previously discussed are occurring with the confines of "home," powered by advances in virtual reality, augmented reality, video conferencing and online distribution options. Further research is warranted to determine if the changes that occurred during shelter in place form patterns which take hold in the longer term.

In addition, future changes are expected which will continue to facilitate social distancing and diagnosis (identifying those who are carriers of the virus), but will have other implications for consumers as well. For example, in addition to the acceleration of online retailing, other distribution options in which no physical human interaction is needed, such as curbside pick-up, robotic delivery, and "Walk out Shopping" (Amazon, 2020), may gain in popularity. Retail designs such as decals (replacing temporary cones in the first days of social distancing indicating how far apart to stand) and plexiglass dividers used everywhere from cashiers to dividers on the beach (CBS, 2020b) will enhance permanent social distancing measures with an eye towards preventing contagion. Distribution channels may be disrupted as in the car industry, paving the way towards the nascent practice of car vending machines and online car buying (Brown, 2017), and product scarcity may open doors to more direct-to-consumer offerings.

Additionally, a major shift can be expected in the field of telemedicine. Prior to COVID-19, the field was struggling to take hold and met with resistance from both regulators and consumers (Olson, 2020). While not a panacea for all conditions, video interactions along with patient assisted devices such as wearables (e.g. Apple watches), blood pressure monitors and remote stethoscopes are among the innovations

that enable remote diagnosis and treatment (Thompson, 2020). Telemedicine played a particularly important role since some patients contracted the virus while seeking medical treatment and many physicians' offices were closed due to shelter in place measures (Thompson, 2020). As a result, telemedicine has not been able to keep up with demand and will likely to continue to grow (Olson, 2020).

Numerous experts have suggested that improved ability to diagnose individuals who may be carriers is the key to controlling COVID-19 as well as future threats. Thus new technologies and practices are emerging which will help detect signs of illness so individuals can take appropriate measures to avoid infecting others. For example, thermal screening is being considered as a front line tool to detect those with elevated temperatures. It is conceivable that in order to enter a mall, store or other establishment, individuals will go through a screening device preventing those who are potentially ill from entering. Eventually, this practice could extend to wearables, whereby these diagnostics are available for every individual 24/7. A second tool gaining traction is the establishment of an alert system through smart phone tracking technology. Already in widespread use in Australia and Singapore (CBS, 2020b), this technology identifies and alerts individuals who have come in close contact with someone who is potentially contagious. Currently, numerous ad hoc efforts are taking place using GPS and Bluetooth technologies with few security measures in place to protect data privacy. Google and Apple are working together to create software that allows different apps to work together taking security and privacy into account (Valentino-DeVries, Singer, & Krolik, 2020). A third, less technology-dependent strategy, is the institution of drive-through testing centers which are currently make-shift uses of parking lots (CBS, 2020a) but may be more institutionalized in the future.

Combined, these measures will undoubtedly save lives and enable a return to normalcy. Additionally, they will impact consumers in other ways. For example, consumers may have a greater focus on preventative vs. treatment-based health care and the interconnectedness of individuals may become more salient in conversations around universal health care. These measures, however, also have substantial implications for the already much debated issues of privacy and surveillance (Gandini, 2019; Martin, Borah, & Palmatier, 2017).

Many individuals who initially contracted the virus were stigmatized for engaging in behaviors which either did or could inadvertently transmit COVID-19 to others (Brigden, 2020), while others took to "pandemic shaming" by "virus vigilantes" who called out friends, neighbors and others who were suspected of not taking proper precautions (Belkin, 2020) by posting on social media and engaging in other forms of negative word-of-mouth. Even extramarital transgressions were exposed on the grounds of risking contagion (Lemon, 2020).

Looking forward, these tradeoffs between privacy and public health monitoring could become especially consequential in light of predictions that digital identity may become as commonplace, consequential, and indelible as a credit score (Botsman, 2017; Rifkin et al., 2020). The amount and sensitive nature of the data necessary to enact these measures is alarming and experts warn that health information is not adequately protected with current regulations. In fact, once the data leaves the health system, protections no longer fall within the jurisdiction of Health Insurance Portability and Accountability Act (HIPAA), leaving consumers extremely vulnerable (Gostin, Halabi, & Wilson, 2018). Facebook, Google, Twitter and other marketers would therefore be free to use and sell acquired data points with limited oversight (Gostin et al., 2018). These data could be combined with other consumer information which is tracked at the most granular level utilizing powerful data-mining tools and then sold to untold parties (Singer, 2020). The United States is the exception to other developed countries in that it has neither a comprehensive consumer protections law, nor independent agency oversight for the regulation of data usage or privacy (Singer, 2020). The risks of this lack of oversight become apparent when considering current practices in China which some have

referred to as Orwellian (Gandini, 2019). The Chinese government, in partnership with industry, recently instituted a "Chinese citizen score," which utilizes artificial intelligence, surveillance footage, customer transactional data and other digital footprints to reward and punish individuals based on unspecified criteria (Botsman, 2017). Over and above the citizen score, the government requires residents to download a health code app which dictates which residents must be under a mandatory quarantine and then can use the GPS function to ensure compliance (Valentino-DeVries et al., 2020). This reveals the potential power of these data capabilities and foreshadows the consequences of the trade-off of tolerating privacy and surveillance for safety. While the efforts in the United States are not as overt, the frequency and severity of data protection failures in the United States gives reason to pause (Singer, 2020). However, given the life and death consequences of COVID-19 tracking, it is likely that the balance between safety and surveillance will lean further towards the former (Valentino-DeVries et al., 2020).

4.2. Changes in who we are as consumers

"In our individual and collective memories this disease has ripped us away from our dear ones and deeply marked our psyche" (Bender & Pannett, 2020).

Some of the outcomes of COVID-19 will be more intangible than others. Arguably, few will emerge from this period untouched. Originally conceptualized as an outcome of war, *moral injury* occurs when individuals experience, bear witness to, or learn about egregious transgressions which are incompatible with their own morality and expectations (Litz et al., 2009). Numerous realities during the COVID-19 pandemic defied expectations beyond imagination. Among the most serious transgressions were individuals left to die alone while loved ones were forced to stay away, medical personnel compelled to choose who would and would not receive life-saving treatment, and families precluded from carrying out funerals and other rituals related to the grieving process due to social distancing. First responders and other essential workers were worn out as they risked their own health and those of their families, while many others were furloughed or unemployed. As individuals sought to protect their own interests, often helping the most vulnerable populations took a back seat, with perhaps the exception of the emptying out of animal shelters. Individuals will need to come to terms with their own behaviors such as shaming and being shamed. Further, many have questioned whether those in authority could have mitigated the negative outcomes if they acted collectively, sooner, better, more efficiently and so on. The moral ambiguities raised during this period are profound. Accordingly, the likelihood of experiencing *agentic* moral injury through sins of omission or commission or *receptive* moral injury by becoming the target of, bearing witness to or learning about immorality of others (Litz, Lebowitz, Gray, & Nash, 2017) is extremely high. Depending on how profoundly it is experienced, moral injury contains the power to shape self-identity and world outlook with implications for marketers. It remains to be seen how these reshaped world views will be formed by consumers' positive characteristics such as greater empathy, tolerance, interconnectedness and resilience, and negative ones such as bitterness, insularity, and defeat.

4.3. Changes in who we are as humans

The onset of the pandemic in a matter of weeks has fundamentally altered the nature and degree of human interaction throughout the world (Kitchen, 2020). The technologies which are the underpinnings of these transformations have the capacity to not only improve lives, but in some cases save them and enable human connections and positive outcomes which otherwise would not be possible (Pew Research Center, 2018a). These advancements, however, do come at a cost. Prior research points to causation between these technologies and cognitive

analytical and problem-solving deficits, in conjunction with digital addiction. Emotionally, individuals may experience any number of negative feelings such as threats to self-esteem, social status, anxiety, fear, envy, loneliness and an overall fear of missing out (Pew Research Center, 2018b).

These technologies can also result in a blurring of lines between fantasy and reality. For example, avatars, virtual robotics and other digital and AI technologies afford individuals the opportunity to play out alternate versions of themselves through magical universes and masked identities (Hooi & Cho, 2014). This is not a new phenomenon in that throughout history, scholars have questioned the distinction between fantasy and reality (Mattessich, 2003). For example, where would one cross the line in Disney's Magic Kingdom in comparison to the lights of Times Square in New York City, or a planned community (Fırat & Dholakia, 2006)? It has been suggested that the current reality is merely a simulation constructed by past human agency (Baudrillard & Foss, 1983; Fırat & Dholakia, 2006). The potential for reality and fantasy to be indistinguishable, however, becomes much greater with the sophistication of AI and other technological innovations, which will enable computers and robots to replicate human qualities linguistically, physically, intellectually and emotionally (Belk, 2019, 2020). Robots and humans will become interchangeable as they take on anthropomorphized personas capable of satisfying both physical and emotional needs (Belk, 2019). Paradoxically, humans are predicted to become more machine-like as they carve out digital representations of the self which are "more anonymous, invisible, fanciful, and even imaginary" (Belk, 2020, p. 2).

While it is not our intent to suggest that COVID-19 will precipitate an overnight transformation, we do question whether the affordances experienced during the pandemic will have moved the needle in determining what it means to be human. Will the allure of attending parties where we are anonymous, or of receiving empathetic responses from a robot who seems to understand us perfectly be preferred over real relationships fraught with human frailties? Will virtual experiences seem more attractive than enduring the risks and hassles of world travel? Alternatively, will this experience make us more grateful and more eager to experience the world as we are given back our freedom?

5. Limitations and future research

Consumer behavior during COVID-19 and the societal changes the pandemic brings will surely provide fodder for many lifetimes of research, and we have left many important topics untouched. For example, the economic and financial impacts are already devastating for many consumers, often forcing them into modern-day versions of depression-era breadlines for the first time in their lives just to feed their families (Meyerson, 2020). The disastrous economic effects are hitting women and minority populations the hardest, because they have fewer assets to enable them to weather the storm, and because they are less likely to hold white-collar jobs that can be done remotely (Knowledge@Wharton, 2020). School and daycare center closings have made the pandemic especially devastating for women with young children who need day care (Alon, Deopke, Olmstead-Rumsey, & Tertilt, 2020). Even the health effects of COVID-19 are disproportionately affecting minority populations in the U.S., for reasons that are still emerging (CDC, 2020). We have also not discussed the outpouring of prosocial behavior and gratitude for front-line workers on display by consumers every day. Consumers are donating blood and opening their homes, risking their lives as volunteers, and across the world, thanking healthcare workers by singing from their balconies, applauding, and honking horns (Snouwaert, 2020).

There are many additional darker effects of the pandemic which will likely impact consumer behavior, both during the pandemic and after. For example, given mandated close quarters due to stay-at-home requirements, domestic abuse may be on the rise (McCormack, 2020). As throughout history (Snowden, 2019), pandemics also provide an excuse

for rising racial and anti-immigrant biases.

Most of our examples have come from the U.S., and country differences are important. For example, as of May 1, 2020, Sweden had never issued a stay-at-home order, while New Zealand reported that the country had become COVID-19 free. Other topics we have not addressed here include demographic, cultural and other individual differences, all of which will become interesting and important topics for future research. For example, the ability and motivation of elders to adapt to new technologies, such as video chat, in order to remain connected with their families seems notable. It is also likely that countries with stay-at-home orders may experience a bit of a baby boomlet nine months afterward. Consumers may also enjoy more leisure time in the future if they are able to reduce commuting times by working remotely.

Finally, despite our best efforts, given the exploratory nature of this research, the choice of topics we have discussed is influenced by our own personal experiences, scholarship, and individual biases and by the media we consume. Other researchers will rightly choose many other topics that may be viewed as important influencers and indicators of consumer behavior during the COVID-19 pandemic.

6. Conclusion and recommendations

History has shown that times of crisis often result in major transformations throughout society. In this research, we have documented some of the consumer behavior patterns characteristic of the early days of the COVID-19 pandemic, some of which may foreshadow changes that will ultimately revolutionize life as we know it. Taking an environmentally-imposed constraints perspective, we have offered insights based on theory to help understand these behaviors in order to inform future research and marketing practice. We have addressed consumer behaviors in each of three phases: *reacting* (e.g., hoarding and rejecting), *coping* (e.g. maintaining social connectedness, do-it-yourself behaviors, changing views of brands) and longer-term *adapting* (e.g. potentially transformative changes in consumption and individual and social identity). Although the economic and research opportunities are unlimited, we suggest just a few areas as a starting point:

- How will virtual and remote consumer experiences reset consumer expectations, wants and needs for future engagement?
- How will consumers shift their lifestyle and consumption priorities (e.g. greater work life balance, more or less emphasis on trivialities, desire for greater independence or interdependence)?
- How will the psychological factors which arise from COVID-19 (e.g. fear, anxiety, moral injury, empathy, gratitude, even pride) impact consumers' attitudes and behaviors?
- How will psychological contracts between consumers and institutions evolve?
- What balance will consumers and society embrace between security and privacy?

Challenging as these times are, we hope that ultimately, history will note them less for tragedy and trauma, and more as a testament to human creativity, adaptability and resilience in the face of inescapable disruption.

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