Casual consumption as an automatic process: The case of snacking

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Abstract

Research on consumer behavior addresses issues of impulsive, or uncontrolled consumer behaviors, predominantly at the point of purchase. However, actual usage as opposed to purchasing of goods is often even less the outcome of volitional control; rather, it casually accompanies other activities, such as snacking while video watching. For marketers, a thorough understanding of casual consumption triggers can offer valuable consumer insights, given that most consumer touch points occur after purchase. This research presents a conceptual framework of casual consumption based on grounded implicit cognitions, and applies it to snacking. The framework suggests that casual consumption is induced by specific situations that trigger habitual behaviors, by product cues that automatically activate associated evaluations stored in memory, or by personal characteristics that elicit approach/avoidance behavior. We take a broad framework approach to assess the potential these triggers have in inducing casual consumption. Findings show that the identified drivers simultaneously influence casual consumption. The negative effect of a covariate (BMI) hints at the interference of conscious reflection in casual consumption.

Keywords: Casual consumption, grounded cognition, habitual behavior, implicit attitude, approach-avoidance tendencies

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Think about the last time you ate sweets, chips, or peanuts while watching TV or a movie. Most likely, you did not engage in an elaborate decision-making process, but acted with limited or no reflection. For long, research in social cognition has departed from the premises of rational and conscious decision making, recognizing that most human behavior is influenced by automatic and non-conscious processes (Bargh, 2002). Daily consumption decisions in particular are most likely not made deliberately; rather, they are the consequence of automatic and non-conscious, or almost non-conscious, cognitive processes (Dijksterhuis, Smith, Van Baaren, & Wigboldus, 2005; Maison, Greenwald, & Bruin, 2004). These processes do not require any effort, are initiated spontaneously, and are even difficult to avoid (Fazio, 1990).

Marketing research on automatic influences of consumer behavior so far focused on the pre-purchase stage, giving scant attention to the usage stage itself. While there are manifold marketing studies investigating impulsive purchases (e.g. Lades, 2014; Mishra & Mishra, 2010; Sinha & Wang, 2013), only a few marketing studies have investigated actual usage. Analyses of actual usage patterns have been addressed in other disciplines, especially in the field of clinical research, relating to addiction or obesity (Rothman, Sheeran, & Wood, 2009). The few marketing-related studies of usage also link to issues of addiction or dysfunctional consumption (e.g. Zhang & Shrum, 2009).

We argue that insight in automatic processes during the usage stage can give valuable support to marketing practitioners and academics. While most decision analyses focus on a single purchase at the point of sale, the fact that usage ultimately leads to repurchasing calls for more attention. Customer relationship management would profit from research addressing the question of "How do our consumers use our products?" rather than focusing on the question of "How do we get consumers to buy our products?" We argue that the former

question can be addressed by analyzing automatic mental processes. Those processes tend to guide human behavior whenever there is either limited opportunity, or motivation to enter into deliberate cognitive processes (Fazio, 1990). Decision making at the point of sale (purchase) requires some amount of time and involves pain in the form of incurring monetary loss (Thomas, Desai, & Seenivasan, 2010). In other words, this specific situation involves motivation, i.e. financial consideration, and opportunity, i.e. time, to consider consumption choices. These two constraints are typically absent in actual usage situations, e.g. opening a bottle of beer or eating a cookie. Thus, automatic processes are likely to steer actual consumption more than buying decisions. Consequently, simple aspects such as proximity (Hunter, Hollands, Couturier, & Marteau, 2018) and visibility (Painter, & Wansink, 2002) often determine actual consumption. For example, chocolate consumption is doubled if placed openly instead of in a container on a working desk (Painter, & Wansink, 2002).

Casual consumption also involves risks to consumers as it is characterized by low ability to control one's behavior. If consumers are not aware of the non-conscious aspect of their behaviors, they are unlikely to change these behaviors (Chartrand, 2005; Dijksterhuis and Smith, 2005). This is illustrated by the voluminous literature on impulsive consumption (Hoch & Loewenstein, 1991) that associates casual consumption with negative outcomes such as heavy smoking, unhealthy eating, or over-indebtedness (Sinha & Wang, 2013; Zhang & Shrum, 2009).

Marketers as well as consumer protection agencies need to understand the processes that underlie such automatic consumption patterns if they want to have an effect on volumes and frequencies of consumption. This paper seeks to expand the discourse on automatic processes beyond purchase decisions and apply it to actual usage. We investigate "casual consumption," i.e. everyday consumption choices that occur almost automatically, with limited consideration. Casual consumption can involve food intake, but also wine (Gluckman,

1990), over-the-counter medicine (Baudot, 1991), music (Krause, North, & Hewitt, 2015), or personal care products (Bennett, Ritz, Cassady, Lee, & Hertz-Picciotto, 2010).

We identity drivers of casual consumption by taking a broad perspective on automatic influences. Specifically, we refer to the concept of grounded cognition which assumes that situated conceptualizations in the human mind produce perception, internal states, and action (Barsalou, 2015). Building on this, we distinguish three types of automatic response that could be at stake in a given situation: automatic response to a situation (e.g. watching a movie at home may triggers snacking), to an object (e.g. product cues evoking strong associations), and to personal characteristics (e.g. smokers craving for cigarettes).

Situated Cognition Framework

Marketing research so far has investigated automatic influences of consumer behavior in a fragmented way. Initial research has mostly focused on impulse purchasing (Bargh, 2002), until attention shifted to automatic influences of memory associations (Dimofte, 2010) and, more recently, back to behavioral habits (Shah, Kumar, & Kim, 2014). Separate research streams investigated either environmental triggers, or person-specific drivers of such automatic processes (Dijksterhuis et al., 2005). Prominent studies also investigated specific types of drivers in isolation, as e.g. the unhealthy/tasty intuition (Raghunathan, Naylor, & Hoyer, 2006) or craving (Forman et al., 2007).

Models from social psychology offer a more holistic view of human behavior and motivation by suggesting that the brain is organized around a situation processing architecture (Barsalou, 2003). A person does not perceive, comprehend, feel, and ultimately act independently of the situation he or she is facing. According to this situated conceptualization framework, the brain holistically reacts to situations on the spot (Barsalou, 2003). Multiple

neural systems process situational elements in parallel, generating interdependent streams of information that ultimately lead to action (Papies, Best, Gelibter, & Barsalou, 2017).

We argue that research on casual consumption can benefit from adopting such a broader and holistic framework. Grounded cognition theory postulates that cognitive processes should not be investigated in isolation, because situated conceptualizations grounded in the bodily system produce perception, internal states, and actions (Pecher & Zwaan, 2005). Automatic human action results from mental simulations shaped by stimuli, as well as by the situation and personal background experiences. To illustrate this embeddedness of automatic processes, Lugli, Baroni, Gianelli, Borghi and Nicoletti (2012) revealed a triadic interaction between self, others, and objects in approach-avoidance behavior: a pretty/ugly object does not *per se* cause an automatic approach/avoidance action. Instead, a simulated social context influences the effect an object's valence has on the automatic activation of the motoric system.

Grounded cognition theory implies that a situation leads to perceptions, cognitions, and actions that jointly explain automatic human actions. Consumers accumulate consumption conceptualizations in their minds based on past experiences with products in distinct situations. On later occasions, these person-specific representations evoke anticipatory inferences. Before reaching for a snack, a repeat consumer has already anticipated – or simulated – the consumption experience (along a sequence of action, taste, reward) by means of pattern completion inferences. Thereby, re-enacting previous situations evokes the sense of being in the situation, acting in it, and responding to it emotionally (Barsalou, 2015).

In line with this reasoning, we strive to highlight the co-existence of casual consumption drivers along the personal characteristics effect, the stimulus effect, and the

situation effect. For each effect dimension, we assess automatic processes which are initiated spontaneously, and almost without cognitive effort and control.

Situation focus: Habituation in context

Consumption occurs in a given situation which by itself influences the consumption experience (Strombeck & Wakefield, 2008). If a person repeatedly engages in a specific kind of consumption behavior when in a given situation, this joint conceptualization of past consumption experiences, i.e. the experience and the situation, becomes entrenched in the person's memory (Best & Papies, 2017). Consequently, facing again the same situation can trigger habitual behavior by pattern completion inferences (Barsalou, 2015).

While habits are not associated with a "hot" state of emotions, they nonetheless exert a strong influence on daily behavior. Nearly 50% of people's daily activities are repeated each day, often in the same circumstances and at the same time, with people´s minds occupied at something else (Wood & Neal, 2009). For different types of habitual behaviors, as e.g. grabbing fast food, watching TV news, or taking the bus, intentions tend to guide behavior only in the absence of strong habits (Ji & Wood, 2007). Consumers repeat their past behavior without considering their current goals (Dijksterhuis et al., 2005; Wood & Neal, 2009). Habits can even lead to an automated action against one's attitudes and liking, as reported by Wood and Neal (2009): Regardless of the freshness of the presented popcorn, popcorn-eating movie goers ate equally much even if they had expressed a dislike of stale popcorn.

Habits are not driven by a bodily state (e.g. feeling thirsty), nor by a stimulus (e.g. being exposed to a soda fountain), but by a situation (e.g. going to the pub with friends). They guide behavior almost automatically, without current goals or outcomes being considered. Thus, we postulate that habits can automatically drive casual consumption.

Stimulus focus: Product cues for implicit cognitions

Implicit cognitions are automatically evoked when known objects are presented (Greenwald & Banaji, 1995). Barsalou (2009) links implicit cognition to perceptual predictability. He argues that a stimulus presentation activates a similar perceptual memory and accelerates its processing by activating relevant processing areas. This grounded cognition interpretation mirrors the well-established view of attitudes as object-evaluation associations that are stored in memory and automatically activated upon mere exposure to the attitude object (Fazio, Sanbonmatsu, Powell, & Kardes, 1986). These evaluative associations stored in memory are implicit in that individuals can be unaware of their existence (Greenwald & Banaji, 1995). For example, Raghunathan et al. (2006) found that consumers implicitly associate "unhealthy food" with "good taste and enjoyment," even though they explicitly report the reverse.

Evaluative memory associations can guide behavior in a rather automatic way if individuals lack the opportunity and/or the motivation to reflect on their decisions (Fazio, 1990). They can also drive behavior outside of conscious awareness (Brunel, Tietje, & Greenwald, 2004; Maison, Greenwald, & Bruin 2004). Thus, we postulate that implicit object-related associations automatically drive casual consumption.

Person focus: Impulsivity and related traits

Being exposed to a product activates situated conceptualizations of previous (consumption) encounters in one's mind. Such conceptualizations can automatically evoke simulated experiences, thereby triggering emotions. Simulations of consuming the product/object can be compelling enough to trigger desire and induce spontaneous consumption (Barsalou, 2015). For example, a meta-analysis of neuroscientific studies shows that presenting relevant food stimuli induces activation of reward areas in food-lovers' brains (van der Laan, De Ridder, Viergever, & Smeets, 2011). An initial taste experience thus occurs

"with the eyes" before actual consumption takes place, thus triggering the later one. The extent of such a mental activation and reward anticipation is contingent on the person's previous experience, making it a personal characteristic.

Craving is such a personal characteristic. It is an especially strong persons´ desire for a specific substance (Forman et al., 2007). Craving is thus conceptualized as a cue-elicited expectation of an especially pleasurable sensation that accompanies substance-seeking and ingesting behaviors, involving e.g. food, cigarettes, or medication (Cepeda-Benito, Gleaves, Williams, & Erath, 2000). This results from neuro-adaption that occurs following repeated consumption, which sensitizes individuals' dopamine systems to a particular stimulus (Robinson & Berridge, 1993). Studies using functional magnetic resonance imaging (fMRI) show that craving is associated with activation in the hippocampus, caudate, and insula (Pelchat, Johnson, Chan, Valdez, & Ragland, 2004). Particularly hippocampal activation suggests that individuals' memory is more important than the actual reward stimulus.

Similarly to bodily need states, craving can affect behavior automatically. However, bodily need states are related to a specific situation, whereas craving is related to a specific stimulus and is person-dependent. Craving is not synonymous with hunger (Lafay et al., 2001), but is considered to be a harmful personal trait or state (Cepeda-Benito et al., 2000). For example, cravings for food have been associated with decreased quality of life, increased calorie intake, and obesity status (Forman et al., 2007). Previous research found craving and snacking to be related in obese French women (Basdevant, Craplet, & Guy-Grand, 1993). Craving does not need to be as severe as described above, and can even be tempered by the consumption (e.g. Temple, Chappel, Shalik, Volcy, & Epstein, 2008). Thus, we postulate that less severe modes of craving are also automatic drivers of casual consumption.

Overall, our model proposes that casual consumption is not limited to patterns of urge (i.e. to wanting, and less comprehensively, to physiological needs), as is the case with impulsive consumption; it can also be caused by more stable triggers (i.e. habits and memory associations). The model posits that three types of automatic effects can drive casual consumption: situation, stimulus, and personal characteristics. All effects are cognitively grounded and are the outcome of past behaviors and product experiences in consumption contexts.

Method

Experimental setting

Snacking at work was used as the casual consumption context to test our conceptual framework. When at work, individuals tend to be immersed in their work, making snacking a secondary activity characterized by limited consideration. Snacking at work is a daily activity that is common to many people: results from a recent CareerBuilder Survey (2017) show that 73 percent of workers snack on the job.

We simulated a snacking at work situation by asking members from the laboratory panel of a German University to participate in a scientific survey executed in the faculty´s laboratory. During the execution of the survey, participants were given the opportunity to grab snacks from bowls that were placed on their desks. The specific task environment limited emotionalizing effects of the surroundings and forced attention to the tasks to be executed. In this setting, in line with the model of "ego depletion," we expected to observe casual consumption, whereby consumers would perform uncontrolled actions while focusing on an unrelated task (Hagger, Wood, Stiff, & Chatzisarantis, 2010).

Before the experiment, participants were informed that the study would require them to test a mobile survey software, and that the experiment would involve physical body

measurement. On arrival, participants were welcomed, allocated to an individual laboratory booth, and asked to confirm their consent. Two pre-measured snack bowls with grapes and miniature chocolate pralines were placed at the back end of the desk in each booth. After completing both a questionnaire and implicit tests, participants were led to a side room where their weight and height were measured.

Participants

102 participants were recruited from a panel of the university´ research laboratory. They were reimbursed for their participation with a small monetary token and a cafeteria voucher. The age distribution ranged from 18 to 60 (M = 27,1; SD = 8,01), although the majority of participants were university students (82 %). The ratio of female (53.9 %) to male participants was approximately equal. We did not expect distortions due to educational level, yet the gender balancing was considered to be important, as hormonal differences can lead to differences in food preference and intake (e.g. Zucker, 1969).

Measures

We used actual consumption of miniature chocolate pralines as the dependent variable. The amount of consumed chocolate pralines was assessed by measuring the weight of the snacking bowl before and after the experiment. Following this, the percentage of consumed chocolate pralines was calculated to create a 0-100 bounded variable. On average, participants ate less than half of the bowl (M = 37%, SD = 0.37).

Product-unspecific snacking habits were assessed by observing grape intake. We expected that individuals displaying snacking at work habits would eat any food made available to them during the experiment. A pre-test revealed that student participants frequently consumed grapes or other fruits simultaneously to performing other activities. Thus, consumption of grapes was used as indicator of general snacking habits. We placed

bowls of grapes in every laboratory booth and measured their weight before and after the experiment. The difference was calculated as a percentage. Participants, on average, consumed more than half of the grape bowl (M = 61%, SD = 0.40).

Implicit snacks associations were measured with an Implicit Association Test (IAT, Greenwald, McGhee & Schwartz, 1998). To specifically assess implicit associations with snacking products, we used a modified version of the Raghunathan et al.'s (2006) "Unhealthy=Tasty" IAT, with healthy *versus* unhealthy snacks as target categories. The test procedure consisted of seven stages and 180 trials (Greenwald, McGhee, & Schwartz, 1998). We assumed that individuals displaying stronger implicit associations between unhealthy snacks and enjoyable food would eat more chocolate pralines than individuals displaying weaker associations. IAT D scores were computed so that positive scores indicate an implicit preference for unhealthy snacks over healthy snacks. For the present sample, the "Unhealthy = Tasty" intuition observed in the US sample did not manifest in the IAT scores of German participants. Participants seem have a slight implicit preference for healthy snack (M = - 0.21, SD = 0.22).

Personal chocolate craving was measured with Cepeda-Benito et al.'s (2000) Food Craving Questionnaire-State (FCQ-S) which was adapted to chocolate stimuli. Particularly, three of five FCQ-S dimensions of craving were tested: intense desire to eat, lacking control of eating, and craving as a physiological state. Participants scored on average 2.37 (SD = 0.83) on the sum score with maximum equals five.

Two control variables were included in the analyses to guard against possible interfering effects. Although we obscured the study's objectives, many questions and experiments were related to food issues. Thus, participants might have become sensitized to food intake while taking the test which might have triggered inhibitory cognitive processes

like self-regulation. We expect this to be more relevant for participants facing body weight issues. This relies on previous studies that showed self-regulation was particularly notable for respondents who worried about maintaining a healthy body weight (Kroese, Evers, & De Ridder., 2009). Thus, we included the Body Mass Index (BMI) as a covariate to control for possible inhibitory cognitive processes. We also controlled for needs-triggered consumption. Respondents were asked not to eat anything four hours before taking the test. All but two respondents reported they had adhered to this request. Thus, we assume that only a negligible part of respondents' snack consumption variance might have been caused by needs-triggered consumption patterns.

Results

Descriptive analyses revealed a non-normal distribution of the dependent variable with many observations being either at the minimum level (n = 23 at 0%), or at the maximum level (n = 16 at 100 %). This violates a basic assumption of standard regression analysis. Such censored data can however be addressed with a Tobit regression (Tobin, 1958). Within its threshold values, the cases provide continuous values (Osgood, Finken, & McMorris, 2002). Cases outside the threshold values provide less, however valuable information. While the specific value of the outcome measure remains undefined, it is known that the value falls below (or above) the threshold. This information is used similarly to a Probit model setting (Tobin, 1958). Thereby, the analysis can avoid biases associated with assigning random values to censored data or just eliminating censored data (Osgood, Finken, & McMorris, 2002).

Table 1 shows that all coefficients are significant and that they jointly explain observed (chocolate) snacking behavior (Pseudo R^2 of 0.24). The coefficients are also in the expected direction: personal chocolate craving and implicit snacks associations steer chocolate pralines consumption. Grape consumption is also related to higher chocolate

pralines consumption, hinting toward non-discriminatory habituation effects. The only negative effect on casual snacking that is observed is the effect of BMI.

<Insert Table 1 around here>

The Tobit regression coefficients have to be interpreted with caution, as they reflect the impact on a latent variable y_i^* and not on the observed variable y_i (Greene 1999). For easier interpretation, a post-estimation of marginal effects (MEs) was conducted. These values report the marginal change in the observed snack consumption for values either above or including the lower threshold value. Table 2 shows that there are only minor differences between the two ME estimates. Including observations below the lower threshold value slightly increases the marginal effects of all four variables, justifying their usage for estimation purposes. The significance of all three effects turns out to be more or less identical, showing that casual consumption can be equally influenced by all three aspects of grounded cognition. The results indicate that situational, object-related, and person-related factors synergistically influence casual snack consumption. Overweight participants in our sample exhibit lower casual consumption, which is possibly a result of volitional inhibition.

<Insert Table 2 around here>

Discussion

Conclusions

Research on automatic influences of consumption behaviors has mostly focused on the purchase stage, and has paid limited attention to the usage stage *per se*. This study attempts to adjust the disproportionate focus on purchasing by investigating drivers of casual consumption. Our results demonstrate that casual consumption of chocolate snacks is jointly determined by three factors that influence human behaviors in an automatic manner: a specific situation automatically triggers habitual behaviors; a given stimulus automatically activates

associated evaluations stored in memory; and, craving is a persons´ visceral desire that automatically elicits approach behavior.

Implications

Snacking is a common consumer behavior whose investigation is relevant to marketers and society, as it can have implications for, among other things, product design, communication, and distribution. Frito-Lays's failure of environmentally friendly "Sunchips" packaging (Horovitz, 2010) can serve as a warning: the innovative packaging material made an unusually loud noise, thus disturbing consumers watching movies. Had the Frito-Lays' product managers better understood the casual consumption context, they could have prevented the consumer backlash. This context also holds important implications for fostering healthy consumption. The mere fact that most unhealthy snacks are ready to eat immediately after purchase, while healthy alternatives, e.g. fruits, require washing, cutting, and other preparation, renders the former more convenient. Companies should invest more effort in lowering the consumers' threshold for engaging in sustainable casual consumption.

Based on our model of casual consumption, consumer protection agencies can initiate behavioral change on the situational, stimulus, and personal levels. First, altering the situational context can change stimulus-reaction patterns. For example, changing how food items are organized in a cafeteria can enhance healthy food choices (Thaler & Sunstein, 2009). Second, companies should be encouraged to highlight product information, e.g. using nutrition labels, as product cues to counter easily retrievable implicit associations. Finally, consumers' personal characteristics can be modified. For example, evaluative conditioning (Hofmann, De Houwer, Perugini, Baeyens, & Crombez 2010) and approach-avoidance training (Schumacher, Kemps, & Tiggemann, 2016) can alter automatic action tendencies.

Limitations and Outlook

We created and analyzed a casual consumption situation, yet in a laboratory environment. The negative effect of the BMI measure on casual snacking suggests that people might have felt inhibited as if in a public space, even though their privacy was ensured. Patterns of casual consumption in experimental circumstances might also differ from those which occur during hedonic experiences, as in watching a soccer game. However, even in private settings, casual consumption can accompany a variety of non-emotional tasks, as in doing homework, personal book-keeping, or general activity planning such as online-shopping. Moreover, mental fatigue might have exaggerated the size of revealed effects (Yoon, Cole, & Lee, 2009). However, other daily life events could also induce the same or even higher levels of mental fatigue, as e.g. crying children at home. We also recognize that there might be reflective processes leading to snack consumption, as e.g., one publication's title suggests: "It´s my party and I eat if I want to" (Verhoeven, Adriaanse, de Vet, Fennis, & de Ridder, 2015, p. 20). However, we exclusively focused on the automatic mechanism of casual consumption. Future studies could investigate the relative influence of conscious and automatic processes in casual consumption.

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Tables

Table 1: Tobit regression coefficients on snack consumption

	Coefficient (S.E.)	*t*	*p*
Chocolate Craving	0.20 (0.06)	3.36	< 0.01
IAT "Unhealthy = Tasty"	0.75 (0.22)	3.48	< 0.01
Grape consumption	0.56 (0.12)	4.38	< 0.01
BMI	- 0.23 (0.01)	- 2.45	< 0.05

Pseudo R^2 = 0.24; N = 102, 23 left censored, 16 right censored

Table 2: Marginal effect post-estimation on snack consumption

	ME for obs. incl. y=0			ME given that y>0		
	dy/dx (SE)	*z*	*p*	*dy/dx (SE)*	*z*	*p*
Chocolate Craving	0.16 (0.05)	3.39	0.001	0.11 (0.03)	3.37	0.001
IAT "Unhealthy = Tasty"	0.59 (0.17)	3.52	< 0.001	0.43 (0.12)	3.50	< 0.001
Grape consumption	0.44 (0.10)	4.42	< 0.001	0.32 (0.07)	4.39	< 0.001
BMI	-0.18 (0.01)	-2.47	0.014	-0.13(0.01)	-2.46	0.014