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Katharina Hutter and Stefan Hoffmann
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What is This?
Carrotmob and Anti-consumption: Same Motives but Different Willingness to Make Sacrifices?

Katharina Hutter¹ and Stefan Hoffmann²

Abstract
The carrotmob—often defined as an inverse boycott—is a new, fast-diffusing form of pro-environmental consumption focusing on societal issues. Organized by activists, consumers swarm a predefined store and collectively buy its products. In return, the company engages in pro-environmental actions. This is the first study that empirically analyzes consumer attitudes toward carrotmob and participation intention. The article compares the drivers of carrotmob and anti-consumption (e.g., ecological consumer boycotts). Both forms of consumer activism are triggered by ecological concern. However, carromobbing differs because participants do not have to sacrifice their preferred consumption patterns. Study 1 (n = 437) demonstrates that willingness to make sacrifices moderates the impact of ecological concern on attitudes toward the carrotmob. Study 2 (n = 153) establishes external validity by modifying the carrotmob target. As expected, the carrotmob is an alternative consumption option attractive for consumers unwilling to make sacrifices in expressing their environmental concerns.

Keywords
carrotmob, anti-consumption, boycotts, willingness to make sacrifices, environmental concern, macromarketing

Introduction
Mankind is confronted with growing environmental problems including the destruction of rain forests, water, and air pollution and increasing carbon dioxide (CO₂) emissions and global warming. Consumers all around the globe increasingly are becoming aware of these problems and agree that humans should protect the environment (Soyez et al. 2009). More and more people realize that environmental problems, such as producing unnecessary waste, are connected to modern consumption patterns and that societal change toward more environmentally friendly consumption is needed (Albinsson, Wolf, and Kopf 2010). The more individuals are environmentally concerned, the more they agree that they should change their way of consumption (Bamberg 2003).

In particular, different forms of anti-consumption have evolved to help reduce ecological footprints and/or to influence the supply side to produce in a more environmentally friendly way (Black and Cherrier 2010; Cherrier, Black, and Lee 2011; Prothero, McDonagh, and Dobscha 2010; Sharp, Høj, and Wheeler 2010; Zavestoski 2001). However, many forms of anti-consumption, such as boycotting (Sen, Gürhan-Canli, andMorwitz 2001), brand-avoidance (Lee, Motion, and Conroy 2009), voluntary simplicity (Etzioni 1998), and frugality (Witkowski 2010), require that participating consumers reduce consumption generally and/or abstain from consuming specific products (Lee, Motion, and Conroy 2009). Pro-environmentally motivated anti-consumption obviously requires sacrifices, but many consumers are not willing or able to bear the subjective costs of reduced consumption and thus are unwilling to make sacrifices.

This article explores a new form of pro-environmental consumption as one possible way that might solve this dilemma: The carrotmob. The first part of this artificial term refers to the old saying that a man can persuade a donkey to walk forward by beating the animal with a stick or by offering a carrot. The carrotmob builds on the latter strategy to shape behavior of a target company. The second part of the name is borrowed from the term flash mob. Carrommobbers collectively swarm a specific store and purchase its goods because the company promised to invest a predefined share of revenue in environmentally friendly improvements. Participating in carrommob is based on pro-environmental motives similar to many forms of anti-consumption. Hence, a highly relevant question is whether the carrotmob gives consumers unwilling to make sacrifices a new...
platform to express pro-environmental concerns that traditionally have been expressed by some form of anti-consumption.

So far, most carrotmobs strive to reduce the target company’s energy consumption and CO₂ emissions (Heiskanen et al. 2010). Macromarketing is interested in environmental issues including sustainable consumption from the perspective of society (Dolan 2002; Fuller, Allen, and Glaser 1996; Kilbourne, McDonagh, and Prothero 1997; Layton and Grossbart 2006). As carrotmobs are carried out for social and societal reasons, they also fall into the field of macromarketing (Monieson 1988; Fisk 1981). This field of research is conducted in the service of humanity (Monieson 1988). It covers both “the impact and consequence of marketing systems on society” and “the impact and consequence of society on marketing systems” (McGinnis and Gentry 2009). Macromarketing recognizes a conflict between the microscopic level of individual consumption (maximizing short-term profits without limitations), the micro institution (companies maximizing profit at the expense of the environment), and the macroscopic level (long-run damage of the environment and society; Crane 2000; van Dam and Apeldoorn 1996). The carrotmob suggests a new way to solve this conflict. Carrotmobs try to stimulate consumer behavior on the micro level in order to help solve societal and/or environmental problems on a macro level by raising the society’s attention toward environmental issues. Furthermore, carrotmobs are interesting from the standpoint of the marketing discipline because they provide some form of legitimacy to marketing, while other forms of anti-consumption have a more hostile posture toward marketing. Carrotmobs consider the impact of consumption on the environment but act in accordance with the very existence of markets and marketing practices. Carrotmobs seek to “save” both the environment (or social issues) and marketing.

Furthermore, “vote-for” behavior is more effective than the “vote-against” behavior (McGinnis and Gentry 2009). Since a carrotmob uses a rewarding strategy to foster micro institutions (companies) to engage in environmental issues, it might be more effective for urging changes on the macro level (society) than boycotts. Hence, from the macromarketing perspective, the question arises whether the carrotmob is a new approach in which societal forces (activists and consumers) bundle their purchase power within a given marketing structure to force companies to act more socially and/or environmentally responsible.

To date, the academic literature has not yet empirically analyzed consumers’ motivation to participate in carrotmobs. As this is the first empirical study of participation intention, we start the investigation of consumer attitudes toward the carrotmob in an exploratory way. Afterward, we conduct two empirical studies that are based on 465 and 153 respondents, respectively. In both studies, we apply structural equation modeling (SEM) to test our fundamental hypothesis that the effect of ecological concern on attitudes toward the carrotmob is moderated by the willingness to make sacrifices. We organize the remainder of the article as follows: First, we review the relevant literature on anti-consumption and carrotmob. Second, we develop our hypotheses. Third, we report the empirical investigations. Finally, we point out avenues for further research.

Theoretical Background

Definition of the Carrotmob

The carrotmob is a subtype of boycott. While boycotters collectively punish companies for unacceptable behavior by not buying their products (Friedman 1999), buycotters reward desirable behavior of companies by increasing purchases (Friedman 1996). Hoffmann and Hutter (2012, p. 218) define the carrotmob as

a temporary boycott in the form of a purchase flashmob by a group of consumers organised by activists. These activists choose the company offering the best bid within an auction as the target of the carrotmob. The best bid can be defined in terms of the company’s monetary and/or non-monetary inputs or in terms of expected improvements in issues the activists ask for.

The first carrotmob was initiated by Brent Schulkin and involved a liquor store in San Francisco on Saturday, March 29, 2008 (Pezzullo 2011). Activists asked twenty-three liquor stores in the Mission District whether they wanted to become the carrotmob target and how much they were willing to invest in pro-environmental improvements. K&D Market set the highest bid by promising to invest 22 percent of its profits on a given day for energy-efficient improvements. Thus, the activists chose K&D Market as the target of the carrotmob.

By November 2012, more than 250 carrotmobs had already taken place worldwide (Carrotmob 2012), but carrotmobs have been most frequent in North America and Europe (Hoffmann and Hutter 2012). In the United States, Germany, Finland, and the United Kingdom, carrotmobs are particularly popular. Since the first carrotmob, the diffusion pace has steadily increased. Carrotmobs have been arranged for food stores (supermarkets, bakeries), nonfood stores (clothing, flowers), gastronomy (restaurants, cafés), and entertainment offers (clubs, theaters). So far, carrotmobs have pursued three main objectives: make the target save energy, reduce waste, and use socially responsible suppliers. These objectives are mirrored in the target companies’ quid pro quos. Most companies have promised to invest in more energy-efficient devices (e.g., lighting, heating) or to save energy in general (e.g., switching off lights as often and for as long as possible). Less often companies have agreed to reduce waste, to start recycling and composting, to ban plastic bags, or to buy products from local suppliers or fair-trade products.

A carrotmob follows a typical procedure: First, the initiators of the carrotmob invite selected companies (usually from one specific field and from one specific area) to an auction. The company setting the best bid (e.g., the highest percentage of the carrotmob sales volume that the company invests in environmentally friendly devices) becomes the carrotmob target. After the activists have chosen the target company, they schedule a specific date. They announce the carrotmob to consumers using
social media such as blogs, Facebook, and Twitter (Pezzullo 2011). During the carrotmob event, consumers collectively purchase the target’s products. Hence, the carrotmob is a sub-type of a flash mob since a group of individuals gathers at a predefined point in time at a public place jointly performing an action (Hoffmann and Hutter 2012).

According to the carrotmob organizers (Carrotmob 2012), one of the main advantages of a carrotmob over a boycott is that the carrotmob appeals to activists, consumers, and the target company. The carrotmob creates a win–win situation. The target company increases its sales volume. In return, it fulfills a promise given in the auction. Thus, activists and participating consumers encourage a company to act in a desired manner and to change socially irresponsible practices. In this way, the carrotmob connects to macromarketing’s interest in how to benefit society (Shultz 2007).

The carrotmob ties into other forms of pro-environmental consumption. It supports similar objectives and includes the same vote-for mechanism of other types of boycotts, such as supporting environmentally friendly or fair-trade products. The carrotmob also overlaps with donations of money to pro-environmental and social initiatives. However, while donating requires some sort of altruistic giving, carrotmobbers only spend money for products they use themselves. Although activists might use the carrotmob platform for many different concerns (e.g., social improvements for employees), most previous carrotmobs have addressed pro-environmental issues. Accordingly, this study focuses on pro-environmental carrotmobs.

**Anti-consumption**

Anti-consumption “literally means against consumption” (Lee, Fernandez, and Hyman 2009, p. 145). More specifically, anti-consumption is an expression of the averseness to the processes of (mass) consumption and/or the acquisition, use, and disposal of certain commoditized goods and services (Lee et al. 2011; Zavestoski 2002). Anti-consumption research identifies the causes and motives why consumers reject products or brands (Lee, Fernandez, and Hyman 2009). Anti-consumption is often motivated by the wish to make a difference and it partly overlaps with consumer resistance (Lee et al. 2011; Peñaloza and Price 1993; Roux 2007).

Various manifestations of anti-consumption and consumer resistance include boycotts and brand-avoidance. A consumer boycott is “an attempt by one or more parties to achieve certain objectives by urging individual consumers to refrain from making selected purchases in the market place” (Friedman 1985, p. 97). Brand-avoidance is a deliberate rejection of brands (Lee, Motion, and Conroy 2009).

**Overlap of Carrotmob Motives and Anti-consumption Motives**

Many consumers engage in anti-consumption practices because of environmental concerns (Albinsson, Wolf, and Kopf 2010; Black and Cherrier 2010; Cherrier 2009). Carrotmobs are also usually initiated because of environmental concerns (Heiskanen et al. 2010; Hoffmann and Hutter 2012; Pezzullo 2011). Hence, we assume that participating in carrotmobs and practicing anti-consumption have the same motivational foundation. Additionally, people engage in some form of anti-consumption to urge change in specific practices of an institution (Cherrier 2009). Carrotmobbers also aim at changing corporate behavior (e.g., toward more pro-environmental production; Pezzullo 2011). Lee et al. (2011) classify anti-consumption into three nonexclusive phenomena: reject, restrict, and reclaim. Rejection means to exclude certain goods from consumption. Restriction implies lowering or limiting consumption of some goods. Reclaim fosters an ideological rethinking of the processes of acquisition, use, and dispossession. The carrotmob falls into the third category. Carrotmobbers reclaim social and ecological responsibility from companies instead of rejecting or restricting their own consumption patterns. The carrotmob fulfills the ideological shift by rewarding corporate pro-environmental behavior.

Iyer and Munchy (2009) distinguish different types of anti-consumption on basis of the two dimensions: “level of consumption” and “focused issues”. The former describes some anticonsumers as striving to decrease their overall level of consumption, whereas others avoid consuming specific brands or products. Focused issues distinguish anticonsumers from those who are concerned about societal issues (such as environmentalists) and those who care about personal issues (such as simplifying their own life). Combining the dimensions creates four types of anti-consumption: First, global impact consumers are interested in reducing the general level of consumption for the benefit of society or the environment. Second, simplifiers wish to drop out of the fast-paced, high-consumption society and move to a simpler, less consumption-oriented lifestyle. Third, market activists try to use consumer power to impact societal issues. Fourth, antiloyalists are consumers who explicitly refuse certain brands. Carrotmobbers overlap with the market activists, as they focus on specific products (e.g., products harming the environment) for social reasons (e.g., protecting the pro-environment).

**Carrotmob as Pro-Environmental Consumption for Consumers Unwilling to Make Sacrifices**

Typical forms of anti-consumption such as boycotts imply that consumers have to abandon a product or brand. While some consumers get along without those products, others might not be willing or able to miss a convenient item (Connolly and Prothero 2003). The boycott literature provides evidence that consumers avoid joining boycotts because they do not want to miss their favorite products or brands, because the switching costs are too high, and/or because no adequate substitutes are available (Klein, Smith, and John 2004; Hoffmann 2011; Sen, Gürhan-Canli, and Morwitz 2001). Refusing to purchase certain items can often be emotionally and/or financially costly (Cherrier and
Murray 2007), since consumption provides comfort, satisfies physical needs, and contributes to the construction of one’s self (Ewen 1988). Consumers often create their individual identities by choosing from a diverse set of products or services (Firat and Venkatesh 1995; Holt 2002).

Carrotmobbers are not confronted with these costs. Hence, the underlying mechanisms of boycott (as a form of anti-consumption) and buycott (including carrotmob) behaviors may be markedly different. Consumer participation in both types of action might be based on the desire to make a difference and the wish to identify with the activist group and thus to enhance one’s self-view (Hoffmann 2011; Klein, Smith, and John 2004). However, boycotts are hostile “vote-against” behaviors, whereas carrotmobs are friendly “vote-for” behaviors (McGinnis and Gentry 2009). Vote-against by anti-consumption is by definition linked to self-restrictions, which consumers negatively associate as “colder” and “darker” (Connolly and Prothero 2003). Hence, in boycotts consumers have to weigh up the benefits and costs of the participation (Hoffmann 2011; Klein, Smith, and John 2004; Sen, Gürhan-Canli, and Morwitz 2001). As individual costs are high, the willingness to make sacrifices has to be high. Previous literature has demonstrated that boycotts therefore suffer from social dilemmas. Consumers who support the boycott’s objective but are not willing to make sacrifices, tend to free ride on the boycotting behavior of others (Delacote 2009; Rea 1974; Klein, Smith, and John 2004; Sen, Gürhan-Canli, and Morwitz 2001).

Carrotmobs are social events that are exciting and stimulating (Heiskanen et al. 2010; Pezzullo 2011). Carrotmobs are planned in such a way that the collective objective (increasing purchases to exert influence) and the individual objectives of participating consumers (purchasing an item to satisfy individual needs) do not diverge. Participation requires little subjective costs and thus the willingness to make sacrifices does not need to be high. Sacrifice can involve money or time and effort (Belk 1996). We define the willingness to make sacrifices as voluntary restriction of one’s own consumption patterns (e.g., abandoning a previously used product) under the condition that the abandonment has emotional and/or financial consequences (e.g., time or money for finding substitutes).

**Proposed Model and Hypotheses Development**

The model depicted in Figure 1 explains consumers’ intention to participate in carrotmobs. First, it proposes that ecological concern improves attitudes toward the carrotmob (Hypothesis 1). Positive attitudes toward the carrotmob, in turn, foster the intention to participate (Hypothesis 2). Most importantly, the model proposes that willingness to make sacrifices moderates the impact of ecological concern on attitudes toward the carrotmob (Hypothesis 3). The model further assumes that consumers’ involvement in the target company’s products and services affects participation intention.

Ecological concern is considered as a pro-environmental value orientation (Soyez et al. 2009). The literature distinguishes different dimensions of pro-environmental value orientation: anthropocentric, ecocentric, and ego-centric (Dunlap and van Liere 1978; Soyez et al. 2009; Stern, Dietz, and Kalof 1993; Thompson and Barton 1994). Anthropocentric-orientated people consider humans as dominators of nature. Nature has to be used for the benefit of man. Ego-centric-oriented individuals are deeply affected by the natural environment and seek to enjoy nature (e.g., nature as stress reducer or as enabler of a higher quality of life). In contrast, individuals with an ecocentric value orientation claim that the environment needs to be protected for its own sake. Ecocentric value orientation is based on the widely cited new environmental paradigm (NEP) of Dunlap and his colleagues’ (Dunlap and van Liere 1978; Dunlap et al. 2000). Ecocentric value orientation is closest to the typical pro-environmental motivation of anti-consumption practices. Therefore, we focus on this type of value orientation. One of the main objectives of the carrotmob is urging companies to act more pro-environmentally. Consequently, consumers who believe that the environment is worth being protected may have more positive attitudes toward the
carrotmob. Hence, we expect that ecological concern has a positive impact on attitudes toward the carrotmob.

**Hypothesis 1:** Environmental concern improves attitude toward the carrotmob.

According to balance theory (Heider 1958), individuals strive for internal balance. Diverging attitudes and behavioral intentions evoke internal disbalance. Hence, we expect that individuals transfer attitudes toward the carrotmob to their participation intention in order to avoid dissonance. Numerous studies confirm the effect of attitudes on behavior intention (e.g., Brown, Homer, and Inman 1998). We propose that positive attitudes toward the carrotmob raise the participation intention.

**Hypothesis 2:** Positive attitudes toward the carrotmob increase participation intention.

Most importantly, this article proposes that willingness to make sacrifices moderates the influence of ecological concern on attitudes toward the carrotmob. Traditionally, consumers expressed their ecological concern with anti-consumption practices requiring participants to make sacrifices. Those consumers unwilling to make sacrifices had no adequate way to express their ecological concern via their consumption patterns. The carrotmob is a new form of ecological consumption that suits the motives of ecologically concerned consumers with weak willingness to make sacrifices. On the other hand, those who are willing to make sacrifices might consider anti-consumption as the “true” way to reduce environmental pollution. As there are now various ways to express ecological concern, persons with different levels of willingness to sacrifice should be distinguished.

Given that somebody is concerned about ecological issues, weak willingness to make sacrifices might prevent him or her from joining boycotts. This consumer might consider the carrotmob as an alternative way expressing ecological concerns and thus develop positive attitudes toward the carrotmob. In contrast, those who are willing to make sacrifices prefer boycotting as this is the more consistent way to personally make a difference. In fact, Cherrier, Black, and Lee (2011) demonstrate that consumers who practice nonconsumption for environmental reasons define their social identity by distinguishing themselves (I) from others (them) who they consider less caring and responsible. Schaefer and Crane (2005) state that “deep green” environmentalists strongly reject green marketing and greenwashing. By contrast, consumers who feel uneasy with making sacrifices avoid boycotting. They are presumably more open to carrotmobs. We expect a greater impact of ecological concern on the attitudes toward the carrotmob for those unwilling to make sacrifices (past nonboycotter) than for those willing to make sacrifices (past boycotter).

**Hypothesis 3:** Willingness to sacrifice moderates the influence of ecological concern on attitudes toward the carrotmob. The impact of ecological concern is more intensive for individuals unwilling to make sacrifices than for those willing to make sacrifices.

Consumers usually buy products that are relevant to them and in which they are interested (Phelps and Thorson 1991). In particular, for products and services used by a specific target group (e.g., clubs visited by teens and young adults), product involvement plays an important role. The carrotmob implies that consumers purchase products or services of a specific target company. Thus, we add the path involvement to participation intention to our model without formulating a hypothesis.

**Overview of Studies**

We conducted a series of studies to investigate the moderating role of sacrifice in the context of carrotmob behavior (Figure 2). Starting with a pilot study using qualitative data, we demonstrated that consumers believe the carrotmob supports societal change. Hence, the carrotmob is relevant to macromarketing. Next, a pretest revealed that willingness to make sacrifices correlates with boycott behavior mirroring the anti-consumption view of our study. In the two main studies, we tested the moderating role of willingness to make sacrifices on the impact of environmental concerns on attitudes toward the carrotmob.
Pilot Study: Carrotmob Benefits for Society

Objectives and Procedure

Since this is the first study to analyze consumer attitudes toward a carrotmob and intention to participate, we first ran an exploratory analysis to gain a broader understanding of consumer attitudes toward the carrotmob. The explorative part of the study primarily strives to answer the following research questions: “What are consumer attitudes toward the carrotmob?” (Research Question 1) and “Who do consumers expect to benefit from carrotmobs?” (Research Question 2).

Given that the carrotmob is a fairly new concept not familiar to every consumer, we explained the concept to the participants of the study at the very beginning. Afterward, the respondents had to answer two open-ended questions considering (1) their general evaluation of the carrotmob and (2) their opinion of who benefits from a carrotmob. At the end of our questionnaire, we provided an open field for further comments. As no participant used this field to report any confusion about the open-ended questions, these questions were well understandable.

Sample

A total of 465 undergraduate first-year business administration students (50.2 percent female, 21.3 years on average) took part in the study. Undergraduate students are an appropriate sample since participants in previous carrotmobs were young adults (Pezzullo 2011).

Results

We categorize the participants’ answers to the two open-ended questions in an inductive procedure. Three coders coded the statements based on coding prescriptions (Table 1). The findings are independent of the perspective of single researchers as we generally found very high levels of intercoder reliability. In 92.0 percent of all cases, the coders agreed upon which category a statement belongs (Neuendorf 2002).

More than half of the participants (54.5 percent) evaluated the carrotmob positively. Only 11.0 percent had negative associations. Furthermore, the respondents stated that apart from the target company (32.3 percent), mainly society (50.3 percent) benefits from a carrotmob. Hence, consumers believe that the carrotmob exerts effects on a macro level.

The qualitative pilot study revealed several aspects affirming that it is worth analyzing carrotmobs from a macro-marketing perspective. First of all, society benefits from a carrotmob. The respondents consider the carrotmob as a way to protest against socially and ecologically irresponsible mass consumption and to urge companies to act more responsibly. Thus, the effects of carrotmobs are not restricted to the relationship between companies and customers. Carrotmobs, which are based on microscopic consumption behavior, also exert positive effects on the macro level of society creating a win–win situation. No party has to “pay the costs” and thus activists, companies, and consumers can jointly strive to achieve their goals.

These findings are in line with conceptual approaches (Hoffmann and Hutter 2012). The carrotmob exerts societal influence as it draws public attention to prosocial (here pro-environmental) issues. Members of society start reflecting their own behavior pattern. Aggregated consumer behavior might sum up to a changing process on the societal level. The carrotmob uses guerrilla tactics (unconventional, surprising, innovative actions) to attract the media in order to spread its message (Hutter and Hoffmann 2011). This catalytic function might also ensure that more companies strive to become a carrotmob target.

Pretest: Willingness to Make Sacrifices

Since boycotters abandon preferred products and replace them with less favorable alternatives that might cause even higher

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### Table 1. Categories of Answers to the Open-Ended Questions.

<table>
<thead>
<tr>
<th>Question Category</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>General evaluation</td>
<td>Positive Participant states a positive attitude toward the carrotmob concept. She or he used positively connoted words, such as good, positive, innovative, interesting, amazing, and great</td>
<td>Good action I am positively impressed</td>
</tr>
<tr>
<td></td>
<td>Negative Participant states a negative attitude toward the carrotmob concept. She or he used negatively connoted words, such as ridiculous, negative, senseless, commercial, ideological, greed for gain</td>
<td>This is just a marketing gag</td>
</tr>
<tr>
<td>Benefiting party</td>
<td>Target company Participant expects that companies will benefit from the carrotmob in monetary and nonmonetary terms. She or he names increasing sales figures as well as consumer and media attention</td>
<td>The carrotmob will increase sales figures</td>
</tr>
<tr>
<td></td>
<td>Society Participant expects that society in general will benefit from the carrotmob in terms of increasing environmental awareness and ecological behavior both from consumers and companies. She or he names resource saving and social responsibility</td>
<td>Environmental protection</td>
</tr>
</tbody>
</table>

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subjective costs (e.g., in terms of breaking habits, longer trips to the store, accepting higher prices), boycotting might be an appropriate proxy variable for the willingness of making sacrifices. However, as not all consumers might perceive boycotting as a sacrifice and as not all nonboycotters might be unwilling to make sacrifices, we first ran a pretest with eighty-eight consumers (53.4 percent female, 24.2 years on average) to empirically test whether there is a substantial relationship.

In accordance with Klein, Smith, and John (2002) and Sen, Gürhan-Canli, and Morwitz (2001), we applied a single-item measure of boycott participation. We measured willingness to make sacrifices with twelve items adopted from Kinneer and Taylor (1973), Mainieri et al. (1997), Maloney and Ward (1973), and Minton and Rose (1997) covering relevant aspects of sacrifices in a consumer context (e.g., spend additional time, money, or effort as well as changing habitual behavior). All items were measured with seven-point Likert-type scales ranging from (1) strongly disagree to (7) strongly agree.

The willingness to make sacrifices scale displays a high level of internal consistency (Cronbach’s \( \alpha = .94 \)). The pretest confirms a strong relationship of boycotting with the scale (\( r = .525, p = .000 \)) and every single indicator (\( r_{\text{min}} = .401, p = .000 \); Table 2). Hence, we can feasibly operationalize willingness to make sacrifices via boycotting.

Furthermore, we examined whether willingness to make sacrifices is more strongly related to boycotts or carrotmobs. We asked the respondents to answer the question “Which concept requires making more sacrifices?” on a bidimensional scale ranging from (1) carrotmob to (7) boycott (\( M = 4.04, SD = 1.53 \)). Since the scale indicates a strong relationship to boycott behavior (\( r = .385, p = .000 \)) and willingness to make sacrifices (\( r = .391, p = .000 \)), we consider this indicator as an alternative operationalization for the moderator variable in Study 2.

### Study 1: Testing the Proposed Model

#### Objectives and Procedure

We ran a survey study to test our proposed model of carrotmob participation intention. We used a fictitious carrotmob announcement as a treatment (Figure 3). It describes that activists call for a carrotmob in a local club. The manager of the club had promised to invest in pro-environmental improvements. A previous test with ten subjects revealed that the announcement is perceived as realistic and the questionnaire is easy to understand.

After having read the announcement, the participants answered a questionnaire covering indicators of the five constructs included in our model. We also added filler items to control for common method variance ex post. To avoid biased answers, we disguised that the announcement was fictitious. At the end, participants were debriefed.

#### Sample

The sample of this study is similar to the one of the pilot study. Due to missing data, we had to exclude some respondents from the confirmatory test of the proposed model. After data cleansing, we could use data of 437 participants (50.9 percent female, 21.2 years on average) for SEM.

#### Measures

We took three items from Soyez et al. (2009) to measure ecological concern. We adopted three items from Laurent and Kapferer (1985) to measure involvement. Attitudes toward the carrotmob was also measured by a three-item scale. The measure of participation intention is adapted from Sen, Gürhan-Canli, and Morwitz’s (2001) boycott study. Based on the pretest’s findings, we operationalized willingness to make sacrifices by past boycott participation. In this way, we have a rather objective measure of the willingness to make sacrifices that is not affected by demand effects, such as social desirability. We split the respondents into a group who had already joined boycotts (\( n = 166 \)) and one without boycotting experience (\( n = 271 \)).

We used seven-point rating scales ranging from (1) strongly disagree to (7) strongly agree to measure ecological concern, attitudes toward the carrotmob, and product involvement. By contrast, we asked the respondents to rate their intention to
participate in the carrotmob on a percentage scale ranging from 0 to 100. We explicitly used different scaling formats to prevent common method variance (Podsakoff et al. 2003).

Reliability, Validity, and Common Method Variance

Confirmatory factor analysis (maximum likelihood estimation) with AMOS (v.18.0) confirms the measurement model of our focal constructs, $\chi^2(24) = 44.559$, $p \leq .01$, $\chi^2/df = 1.857$, Goodness-of-Fit Index (GFI) = .965, adjusted goodness-of-fit index (AGFI) = .935, root mean square error of approximation (RMSEA) = .056. All scales display a high level of internal consistency (Bagozzi and Yi 1988; Table 3). Cronbach’s $\alpha$ ranges from .86 to .90, composite reliability (CR) from .76 to .89, and average variance extracted from (AVE) .52 to .74. Additionally, Fornell and Larcker’s (1981) test demonstrates discriminant
validity. The AVE of each multi-item construct exceeds the construct’s squared correlation with any other scale ($r^2_{\text{max}}$).

We carefully checked for common method variance (e.g., Lindell and Withney 2001; Malhotra, Kim, and Patil 2006; Podsakoff et al. 2003). An exploratory factor analysis including all items revealed seven factors explaining 62.9 percent of the variance, whereas one general factor would explain only 17.6 percent of the variance. Hence, the single-factor test indicates that common method variance did not distort the findings. Additionally, we calculated correlations between an unrelated marker variable (I am bored when events happen again) and the relevant constructs (Lindell and Withney 2001). Since none of these correlations is significant ($r_{\text{max}} = .060, p_{\text{min}} = .212$), there is strong evidence that common method variance does not inflate the results.

**Results**

We evaluated the suggested model using SEM as implemented in AMOS (v.18.0). We first ran a baseline model with no moderation effects to test Hypotheses 1 and 2. The analysis reveals an excellent global model fit, $\chi^2(73) = 122.788, p \leq .01, \chi^2/df = 1.682$, GFI = .946, AGFI = .918, RMSEA = .039. The ratio of $\chi^2$ to corresponding degrees of freedom ($\chi^2/df$) is far below 2.5. The GFI and AGFI exceed the threshold of .90 (Bagozzi and Yi 1988; Baumgartner and Homburg 1996), while the RMSEA is less than .05 (Browne and Cudeck 1992). The model explains about 37.2 percent of the carrotmob participation ($R^2 = .372$).

As postulated in Hypothesis 1, ecological concern statistically significantly influences the attitudes toward the carrotmob ($\beta = .393, p \leq .001$). Supporting Hypothesis 2, attitude toward the carrotmob fosters participation intention ($\beta = .561, p \leq .001$). Furthermore, the influence of involvement on carrotmob participation is statistically significant ($\beta = .234, p \leq .001$). Hence, the analysis fully confirms our baseline model (Figure 4).

In the next step, we included the willingness to make sacrifices as moderator variable to test Hypothesis 3. As the moderator is categorical, we applied multigroup structural equation modeling (MGSEM; e.g., Bagozzi, Baumgartner, and Yi 1992; Byrne, Shavelson, and Muthen 1989; Cortina, Chen, and Dunlap 2001). MGSEM requires multiple runs. In the baseline model, all structural parameters of the model are constrained equally across the two groups. Afterward, parameters of structural paths are estimated separately for the two groups. First, we set the path ecological concern to attitudes toward the carrotmob free to check the suggested moderating influence. Next, we released the path attitudes toward the carrotmob to carrotmob participation intention to explore for additional moderation effects. If one path is set free ($\Delta df = 1$), a change in chi squares of $\Delta \chi^2 \geq 3.841$ indicates that the moderation is statistically significantly ($p \leq .05$) more adequate than the fixed model.

As postulated, we found a significant model improvement for the moderation of the influence of ecological concern on attitudes toward the carrotmob ($\Delta \chi^2 = 4.159, \Delta df = 1, p \leq .05$). This influence is much stronger among nonboycotters ($\beta = .446, p \leq .001$) than among boycotters ($\beta = .244, p \leq .05$). Thus, the analysis supports the moderation effect suggested in Hypothesis 3.

**Discussion**

This study provides evidence that the carrotmob is an attractive way for consumers to express their ecological concerns. All hypothesized main effects are confirmed. First, ecological concern fosters positive attitudes toward the carrotmob. This is because the carrotmob aims at forcing companies to act more pro-environmentally. Our analysis reflects that people concerned about environmental issues have more positive attitudes toward the carrotmob. Second, people who positively evaluate the carrotmob are more likely to participate than those with a negative attitude. Third, product involvement further determines whether consumers join a carrotmob. The more persons...
are interested in the target company’s products and services, the more likely they will participate.

Most importantly, this study provides evidence for our fundamental claim. Consumers who are ecologically concerned need to be segmented. As expected, the impact of ecological concern on carrotmob attitudes is much stronger for persons unwilling to make sacrifices than for those who are willing. We empirically found that those who are not willing to make sacrifices are more willing to engage in carrotmobs and those who are willing to make sacrifices are less willing to engage in carrotmobs. The latter group might prefer anti-consumption behavior (as demonstrated by past behavior). For instance, people downshift to reduce their ecological footprint or join boycotts to urge the supply side to produce in a more environmentally friendly manner. As the results only indirectly support this statement, we call for further validation of this conclusion. By contrast, consumers who care about environmental pollution and who are unwilling to restrict their consumption patterns prefer carrotmobs as a means of expressing their concerns.

There might be alternative explanations for the results. Experienced boycotters might have a more complete view on some forms of activism and consider carrotmobs less effective than other forms of protests. That would be an explanation as to why they are less willing to participate in carrotmobs. On the contrary, some nonboycotters might be unfamiliar with any form of activism and thus are more willing to participate in carrotmobs.

**Study 2: Replication and Generalization**

**Objectives**

Although Study 1 has already confirmed our basic assumptions, there are several directions for improving the model. Research findings should to be replicated and cross-validated before establishing a theory. In accordance with Easley, Madden, and Dunn (2000) and Toncar and Munch (2010), we ran a second study that applies a modification design that replicates the results of our first study using deliberate modifications and extensions. First, Study 1 used clubs as the object of investigation since many carrotmobs have been carried out in clubs. We now use a food retailer as most people usually buy food themselves and are familiar with purchasing in local supermarkets. Furthermore, buying at a retailer is a less hedonic action than going to clubs. Hence, in Study 2 the fun side of participating in carrotmobs is less present. By considering retailers in addition to clubs, we factored in the possible explanation for carrotmob participation (hedonism, pleasure to be involved). Second, in Study 1 we used clubs as the object of investigation since many carrotmobs have been carried out in clubs. We now use a food retailer as most people usually buy food themselves and are familiar with purchasing in local supermarkets. Furthermore, buying at a retailer is a less hedonic action than going to clubs. Hence, in Study 2 the fun side of participating in carrotmobs is less present. By considering retailers in addition to clubs, we factored in the possible explanation for carrotmob participation (hedonism, pleasure to be involved). Second, in Study 1 we designed a fictitious treatment that was based on the announcements of early carrotmobs. The textual elements of these announcements explained the carrotmob method in a favorable way. In Study 2, we used an announcement with fewer verbal and persuasive elements. In this way, we demonstrate that the findings are robust across different designs of the treatment. Finally, in Study 1 we primarily looked at carrotmobs and we used past boycott participation as a proxy variable of the willingness to sacrifice to avoid answering effects. In Study 2, we used a scale that indicates the need to make sacrifices by participating in carrotmobs compared to boycotts. Furthermore, in Study 2, we directly compared how consumers evaluate boycotts and carrotmobs. Hence, we were able to pinpoint the conditions under which carrotmobs might be an effective alternative to anti-consumption behavior.

**Preparation and Procedure**

Prior to data gathering we applied a content analysis of recent carrotmob announcements to identify which elements and phrases they usually contain. The analysis of twelve carrotmob announcements revealed that every flyer included the following elements: call for carrotmob, main objective, date, time, and the target company’s address. More recent announcements contain fewer textual elements that describe the carrotmob method. Based on these findings, a designer created a realistic announcement for a carrotmob in a local supermarket for pro-environmental improvements (Figure 5). After having read the announcement, the participants answered a questionnaire. Finally, we thanked the participants and disclosed that the announcement was fictitious.

**Sample**

Since the carrotmob target is a supermarket, we recruited a consumer sample of potential carrotmob participants. In total, 153 persons participated (56 percent female, 24.3 years on average).

**Measures**

The questionnaire consisted of the five constructs used in the first study with one exception. This time we additionally measured the moderator variable willingness to make sacrifices via the question “Which concept requires to make more sacrifices?” Subjects answered on a bidimensional scale ranging from (1) carrotmob to (7) boycott. In this way, we could
directly check whether the different level of perceived need to make sacrifices influences consumer decisions.

To compare consumer’s attitudes toward carrotmob and boycott, we used six additional image measurements on bidimensional semantic differential scales ranging from (1) to (7). Three indicators reflected the scope of the societal view (passive/active, past-oriented/future-oriented, and global/local) and three indicators measured the anti-consumption view (consumption-oriented/abstinence from consumption, abstinence from sacrifices/need for sacrifices, and warm/cold). Furthermore, we asked about the participants’ attitudes toward boycott using a three-item scale equivalent to the scale attitudes toward carrotmob.

A confirmatory factor analysis confirmed the measurement model, $\chi^2/df = 1.224$, GFI = .952, AGFI = .912, RMSEA = .038. All scales once more displayed high internal consistency (Cronbach’s $\alpha \geq .70$).

Results

In the first step, we compared the image profiles of carrotmob and boycott. As Figure 6 indicates, from the macromarketing (societal) view, consumers evaluated the carrotmob as more active ($M_C = 5.14; M_B = 3.81$), future-oriented ($M_C = 4.54, M_B = 3.65$) and local ($M_C = 4.88, M_B = 3.33$) than the boycott. Note that carrotmobs were connotated more active than boycotts, since consumers need to actively join the carrotmob for being part of it (e.g., going to the event at the right time, buying things etc.), while consumers could participate in boycotts by staying passive (e.g., they don’t have to go somewhere and do/buy something specific). In that way, participation in boycott was perceived as more passive than participation in carrotmobs.

From the anti-consumption (individual) view, a boycott was more anti-consumption-oriented ($M_B = 4.08; M_C = 2.61$), more strongly associated with sacrifices ($M_B = 4.26; M_C = 2.44$), and associated colder ($M_B = 3.64; M_C = 1.95$) than a carrotmob. T tests confirmed that carrotmob and boycott differ significantly on each dimension ($p < .001$).

In the second step, we evaluated the suggested model using SEM. We first successfully replicated the proposed model from Study 1 using past boycott behavior as moderator (Table 4, model 1). Hence, this model was robust across different fields and announcement designs. This study used a food retailing treatment. As most consumers frequently buy in supermarkets, we did not find any influence of involvement on participation intention. Hence, a more parsimonious model could be built.
without involvement as indicated by an improved global model fit (Table 4, model 2). Thus, for the following analyses we used the model excluding involvement.

Next, we analyzed the moderated model MGSEM. As group moderator we used the measure of willingness to make sacrifices that was divided by a median split. Hence, we compared a group of respondents that believes that boycott requires markedly more sacrifices than carromobs and a group that does not. In the first MGSEM run, all structural parameters of the model were constrained as equal across the two groups. We then released the path ecological concern to attitude toward the carrotmob (Table 4, model 3). The change in chi-squares indicated that the moderated model is significantly more appropriate than the fixed model ($p \leq .05$). Again, the influence of ecological concern on attitudes toward the carrotmob was markedly stronger among people unwilling to make sacrifices ($\beta = .709, p = .000$) than among people willing to make sacrifices ($\beta = .129, p > .05$).

To directly compare boycott and carrotmob, we additionally checked how consumers’ intention to join a boycott evolves. As boycotts are based on triggering effects that are negatively connoted (e.g., scandals, crises), we could not use the carrotmob call directly for analyzing the intention to participate in a boycott. Therefore, we asked for consumers’ attitudes toward boycotts called for ecological reasons. As expected, ordinary least squares regression demonstrated that an interaction effect occurs between ecological concern and willingness to make sacrifices on attitudes toward boycotts ($\beta = .361, p \leq .001$). Consumers who were ecologically concerned had negative attitudes toward boycotts the more they believed that boycotts required sacrifices. Ecological concern had no main effect ($\beta = .138, p > .05$) indicating that the effect of ecological concern on boycott attitudes was completely contingent on the willingness to make sacrifices.

To ensure the stability of our results, we carefully controlled the attitudes toward the company (I like the retailer). Multivariate analysis of covariance (MANCOVA) yielded effect of company attitudes neither on ecological concern, $F(6,153) = 1.393, p > .05$, nor on attitudes toward the carrotmob, $F(6,153) = 1.023, p > .05$, nor on carrotmob participation intention in general, $F(6,153) = 1.003, p > .05$. Furthermore, MANCOVA confirmed that there was no significant effect of attitudes toward the company, Wilk’s $\lambda = .877, F(6,153) = 1.080, p > .05$, on ecological concern, attitudes toward the carrotmob and carrotmob participation intention in general. The results were stable concerning attitudes toward the company.

### Discussion

The second study replicated the results of Study 1 and thus generalized that consumers might express their ecological concerns via carrotmob participation. The basic idea of this research is that ecologically concerned people may not engage in pro-environmental behavior because they are not willing (or able) to make sacrifices. This is particularly relevant since many forms of pro-environmental consumption behavior are based on anti-consumption. For example, boycotts for expressing ecological concern often claim to make sacrifices (e.g., change consumption patterns). Given that we need more pro-environmental consumer behavior, innovative ways of fostering this way of consumption are required.

We further found that the main characteristics of a carrotmob are more positive compared to a boycott, which might strengthen the catalytic function of the carrotmob stimulating pro-environmental behavior in the society. It might be easier to convince people to participate in a carrotmob action perceived as warm and active instead of in a cold and passive anti-consumption action.

The results show that the carrotmob provides a new platform to express pro-environmental concerns that consumers traditionally had to express by some form of anti-consumption. The degree to which consumers are willing to make sacrifices determines which form of ethical consumerism fits to a consumer. The carrotmob represents a rewarding approach of activism. The present findings may contribute to our understanding of a broader spectrum of activist consumer behavior beyond the single site of the carrotmob. From our findings, we conclude that other types of rewarding strategies (e.g., boycotts) might also offer alternative ways to participate in activism movements for those consumers not willing to make sacrifices. The results further provide new insights into the field of macromarketing. Collective consumer actions aiming to urge change on a macro (societal) level depend on motives (i.e., environmental concern) and barriers (i.e., willingness to make sacrifices) on the micro (individual) level. Hence, our study addresses the interplay of micro-consumer behavior and macro-societal processes. Therefore, the carrotmob might be considered as one new approach in which societal forces (activists and consumers) bundle their purchase power within a given marketing structure to force companies to act more socially and/or environmentally responsible.

Carrotmob also might be connected to the field of cause-related marketing. Cause-related marketing does not negate consumption, but extends the benefits of consumption from the mere satisfaction of the consumer’s needs to some wider social or ecological benefits. By consuming something, the customers provide some benefits to some good cause. The carrotmobs could be considered as a form of cause-related marketing with the interesting spin that the initiative does not come from a company, but from consumers.

### Further Research

Our study provides a first contribution to the academic literature on consumers’ carrotmob motivation embedded in research stream of pro-environmental consumption. We highlight that those who are unwilling to limit themselves may consider the carrotmob as a positive approach to express concern that otherwise had to be demonstrated in some form of anti-consumption. This finding provides fruitful avenues for future
research on pro-environmental consumption, sustainable consumption, and anti-consumption.

First, we found a lower impact of ecological concern on the attitudes toward the carrotmob for those who had previously engaged in anti-consumption than for those who had not engaged in anti-consumption. Further research needs to gain a deeper understanding of this finding. How do anticonsumers view the carrotmob? On one hand, the carrotmob might encourage companies to become more ecologically friendly. It helps to change companies’ behavior and it might raise ecological awareness of other companies, consumers, and the media. On the other hand, carrotmobbers do not need to restrict their way of consumption. Hence, many consumers who engage in pro-environmentally motivated forms of anti-consumption might reject the assumption that carrotmobbing truly is a way to help solve environmental problems. They might even consider carrotmobbers negatively as they gather for one (presumably joyful) event without changing their usual way of consumption. We call for future studies to analyze whether anticonsumers and carrotmobbers could build a joint pro-environmental movement or if they are separate groups with different objectives and identities. We especially appeal for further research using different research methods (e.g., qualitative methods) to get comprehensive reasons why consumers join a carrotmob.

Second, research should examine the external validity of our findings by analyzing various types of carrotmobs with respect to target field and company, and to aspects of administration (e.g., location: metropolis vs. small town, time: weekend vs. weekday, further promotion: additional incentives such as companies’ price cuts or nonmonetary incentives). Further variables such as product type or value of the target company’s investment could have an impact on consumers’ motivation to participate.

Third, future studies should check for mediating variables on carrotmob participation, such as brand image or the corporate reputation of the target stores. Moreover, consumer motives also might be culturally different. Further studies on carrotmob participation might apply a sociocognitive perspective considering influence variables such as subjective norm, moral obligation, or the striving for self-enhancement. Additionally, in this study, we considered egocentric pro-environmental values as a driver of participation. Future research might also consider consumers with egocentric attitudes (Soyez et al. 2009), since they might have a reduced willingness to make sacrifices due to the centrality of their ego for them.

Finally, like in many other studies, our findings are limited by the fact that we analyzed the intention to participate in a carrotmob. A gap may exist between the behavioral intentions and real behavior due to situational factors such as time, costs, and mood. Future studies are needed to overcome this restriction. One feasible option might be to evaluate past real behavior. As carrotmob is a fairly new concept, few people have participated. However, given the steadily rising number of carrotmobs, future studies should be able to measure real (past) carrotmob participation.

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Author Biographies

Katharina Hutter is a lecturer in marketing at the Technical University of Dresden (Germany). Her research interests include ethical consumption, particularly prosocial marketing and unconventional communication strategies. She specializes in alternative methodologies of marketing communications such as guerrilla marketing. Her further research interests are cross-cultural marketing and advertising efficacy.

Stefan Hoffmann is a professor of marketing at the Christian-Albrechts-University Kiel, Germany. He received a diploma in psychology from the University of Mannheim, Germany, and a PhD and a second promotion (habilitation) in business administration from the Technical University of Dresden, Germany. He has published several articles about ethical consumption focusing on boycott behavior. His further research interests are cross-cultural marketing, health marketing, and advertising efficacy.