

When conspicuous consumption backfires:  
How signals of status undermine cooperation

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***ABSTRACT***

Since Veblen (1899), signaling status through conspicuous consumption is presumed to be socially advantageous. Given the myriad of social benefits granted to high-status individuals, it behooves people to ensure that others can observe their wealth and status. In the present research, however, we examine when it is strategically better for people to refrain from conspicuous consumption. Specifically, in cooperative contexts, people respond less favorably toward conspicuous consumers because they perceive those individuals to be less warm and cooperative and expect them to behave less cooperatively. Furthermore, people show some awareness of the benefits of modesty and refrain from conspicuous consumption in contexts where it is beneficial to appear cooperative. Thus, despite theory and evidence of the social value of conspicuous consumption, when it pays to appear cooperative, conspicuous consumption backfires.

*Keywords:* conspicuous consumption, status, signaling, bragging, cooperation, self-promotion, luxury

The desire to achieve high status is considered to be a universal and fundamental drive (Anderson, Hildreth, and Howland 2015; Fiske and Taylor 2008; Frank 1999; Huberman, Loch, and Öncüler 2004). This makes sense given that status typically provides myriad social benefits. People with high status have greater social influence, power, and access to other resources (Ball et al. 2001; Moore 1968; Nelissen and Meijers 2011; Thye 2000).

Yet, people can only reap the benefits of high status if others know that they have it. Since status itself is unobservable, it needs to be communicated, or signaled to others. One common means of signaling status is through the conspicuous consumption of luxury goods (Drèze and Nunes 2009; Eastman, Goldsmith, and Flynn 1999; Griskevicius et al. 2007; Mandel, Petrova, and Cialdini 2006; Rucker and Galinsky 2008). The high monetary cost and the visibility of luxury convey economic status to others, thus enabling the social advantages of having status (Miller 2009; Saad 2007; Veblen 1899).

Whereas past research has overwhelmingly emphasized the social advantages of conspicuous consumption, we argue that it is not universally advantageous. Specifically, we suggest that conspicuous consumption, as a means of status signaling, inherently involves putting the self above others, which is a sign that one will not cooperate. As a result, we propose that it is disadvantageous to conspicuously consume in environments where a consumer benefits from appearing warm and cooperative. In this paper, we show how conspicuous consumption can backfire and result in negative outcomes for the self in cooperative contexts. Furthermore, we show that consumers sometimes strategically avoid conspicuous consumption in an effort appear cooperative.

### ***SIGNALING STATUS THROUGH CONSPICUOUS CONSUMPTION***

In *The Theory of the Leisure Class: An Economic Study in the Evolution of Institutions* (1899), Thorstein Veblen coined the term “conspicuous consumption” to refer to the public display of economic status via the acquisition of luxury goods and services. Such purchases provide utility beyond any hedonic or utilitarian value by enabling consumers to signal their status to others and thus improve their social standing. Nowadays, the ubiquity of status signaling via conspicuous consumption is evident by the demand for luxury (Eastman et al. 1997). Indeed, a recent field experiment in Indonesia found that high-income customers were more likely to purchase a credit card marketed as “the platinum card” than a nondescript card with identical benefits (Bursztyn et al. 2018).

Research on conspicuous consumption in marketing has primarily focused on *who* engages in it and *how* they do it. As a general rule, people who engage in conspicuous consumption are those who aim to gain or signal their status (Braun and Wicklund 1989; Lee and Shrum 2012; Mazzocco et al. 2012; Ordabayeva and Chandon 2011; Rucker and Galinsky 2008; Sundie et al. 2011; Wang and Griskevicius 2014). The most common way of doing this is by consuming luxury goods and services that are observable to others (Bearden and Etzel 1982; Griskevicius et al. 2007; Kastanakis and Balabanis 2014; Melnyk and van Osselaer 2012). Moreover, many luxury brands thrive by including distinctive logos or other characteristics (e.g., Burberry’s plaid) that serve as social signals of status (Han, Nunes, and Drèze 2010). Beyond luxury, other goods and services have come to convey culturally-specific status, such as green products (Griskevicius, Tybur, and Van den Bergh 2010), altruistic signals (Berman et al. 2015), products that convey non-conformity (Bellezza, Gino, and Keinan 2014), or symbols of “coolness” or autonomy (Warren and Campbell 2014). Thus, consumers strategically signal status depending on their expectations about the meaning of particular symbols to different

groups.

### ***JUDGMENTS OF CONSPICUOUS CONSUMPTION***

Relatively less research has examined the *consequences* of conspicuous consumption. Yet an implicit assumption of the Veblen account is that the signal value associated with conspicuous consumption is positive. Indeed, most empirical work highlights myriad benefits. Perceived affluence is positively associated with personal abilities (e.g., intelligence, self-discipline), sophistication, and a desirable lifestyle (Christopher and Schlenker 2000). Consistent with these perceptions, conspicuous consumption can be an effective strategy for social influence. For instance, people who wear upper-class clothing (e.g., business suits) are more successful negotiators (Kraus and Mendes 2014). Likewise, people are more likely to comply with and defer to others' requests, such as taking a few minutes to answer questions, when the requester is wearing clothing with high-status logos (Lee, Ko, and Megehee 2015; Nelissen and Meijers 2011). Finally, at least in the short-run, men who conspicuously consume are perceived as more desirable to potential mates (Sundie et al. 2011).

In spite of the social advantages of conspicuous consumption, recent work suggests possible negative judgments toward conspicuous consumers. For example, in certain contexts, conspicuous consumers are perceived as more arrogant (McFerran, Aquino, and Tracy 2014), less desirable as service providers (Mende, Scott and Bolton 2018), less warm (Cannon and Rucker 2019; Scott, Mende, and Bolton 2013), and in some cultures less moral (Goenka and Thomas 2019). Relatedly, people stigmatize materialistic consumers and prefer not to interact

with them (Van Boven, Campbell, and Gilovich 2010), and judge wealthy people as less warm (Durante, Tablante, and Fiske 2017).

More generally, conspicuous consumption is a form of impression management, which can lead to disliking of an individual who does it (Christopher and Schlenker 2000; Garcia, Weaver, and Chen 2018), as well as the conspicuous brand itself (Ferraro, Kirmani, and Matherly 2013). Individuals who are overly concerned with their appearance are viewed as less moral because people believe that those individuals are trying to misrepresent their true selves (Samper, Yang, and Daniels 2017) and because vanity is seen as diagnostic of a person's underlying immoral character (Tannenbaum, Uhlmann, and Diermeier 2011). Relatedly, conspicuous consumption is akin to bragging, and people tend not like braggarts (Berman et al. 2015; Godfrey, Jones, and Lord 1986; Rudman 1998; Scopelliti, Loewenstein, and Vosgerau 2015; Tal-Or 2010). Although braggarts have the intention of making others value them more, this behavior can also be detrimental for how they are perceived. Taken together, this work illustrates that, in spite of the many benefits of conspicuous consumption, it may also lead to negative judgments about a person's personality.

### ***THE CONSEQUENCES OF CONSPICUOUS CONSUMPTION FOR COOPERATION***

In the current research, we build from this prior work revealing negative judgments of conspicuous consumers, and explore the behavioral consequences of conspicuous consumption. In particular, we examine the relationship between conspicuous consumption and cooperation. Cooperation is an essential social behavior that entails forgoing one's narrow self-interest for the greater social good (Axelrod and Hamilton 1981; Rand and Nowak 2013; Van Lange 1999).

People are better off interacting with others who are likely to cooperate and avoiding those who probably will not. In this paper, we investigate conspicuous consumption as a potential cue for whether a person will cooperate or not.

By conspicuously consuming, a person is trying to boost their own social value or status in the minds of others. Status is a zero-sum, relative distinction; that is, not everyone can be high in status (Huberman et al. 2004; Mazzocco et al. 2012; Ordabayeva and Chandon 2011; Shalev and Morwitz 2011). Thus, conspicuous consumers convey that they put their own interests above others, which, by definition, is incompatible with being cooperative (Levine et al. 2018; Small and Cryder 2016).

If one doubts another's cooperativeness, then cooperation may breakdown; people tend to cooperate when they predict that others are going to cooperate, and behave in their own self-interest when they expect that others will do so too (Levine et al. 2018; Rand and Nowak 2013). Therefore, we argue that if conspicuous consumption contains a cue that a person is not cooperative and warm, then others will respond unfavorably towards them when it comes to cooperation.

Based on the logic outlined above, we propose that conspicuous consumption will backfire in cooperative contexts. This prediction stems from people's inferences about how conspicuous consumers will behave (that they will be less likely to cooperate). Yet, this backfire effect should be unique to cooperative interactions. If however, in a context for which self-interest is unproblematic, we do not expect a backfiring effect of conspicuous consumption.

### ***ARE PEOPLE STRATEGICALLY MODEST?***

Beyond examining the effects of conspicuous consumption on cooperation, we also examine the effects of anticipating a cooperative task on individuals' choices to conspicuously consume. Specifically, we expect that people will strategically avoid conspicuous consumption in contexts where it pays to appear warm and cooperative.

Previous literature on impression management has shown that people try to present the best versions of themselves so that they will be evaluated favorably and reap the benefits from making a good impression (e.g., Goffman 1959; Leary and Kowalski 1990; Schlenker and Leary 1982). Moreover, people frequently try to self-present by sharing information that is consistent with their desired identity and qualities (e.g., Belk 1988; Berger and Heath 2007; Escalas and Bettman 2003, 2005; Levy 1959). Since status brings many social advantages (Anderson et al. 2015; Fiske and Taylor 2008; Frank 1999; Huberman et al. 2004), it is unsurprising that consumers often engage in conspicuous consumption to realize the advantages that come from being perceived as high status (Christopher and Schlenker 2000; Kraus and Mendes 2014; Lee et al. 2015; Nelissen and Meijers 2011; Sundie et al. 2011).

Yet previous research has not examined whether people ever strategically refrain from conspicuous consumption as an impression management strategy. It is possible that consumers overgeneralize and believe that signaling status through conspicuous consumption is always advantageous, and neglect to recognize the contexts in which it could be disadvantageous. Alternatively, if it is true that people hold beliefs that conspicuous consumers are less cooperative, then they likely use that knowledge when attempting to portray an image as a cooperative person. In other words, people will realize that it behooves them to refrain from



conspicuous consumption in certain situations, and act accordingly. We predict that people will draw on their beliefs about the negative association between conspicuous consumption and cooperation, and will act “strategically modest” when expecting to engage in a cooperative task.

## ***OVERVIEW OF STUDIES***

We begin by testing whether people behave less favorably toward an individual who conspicuously consumes in cooperative contexts. Study 1 examines participants’ behavior in an incentive-compatible cooperation game where participants observe whether their partner conspicuous consumes or opts to be more modest. Study 2 examines a similar question in a naturalistic online context, where participants observe an individual’s social media profile and then decide whether to recommend them for a cooperative group. Study 3 explores a boundary condition of whether the group emphasizes cooperation or competition. Next, we turn to examine whether people refrain from conspicuous consumption when the context demands cooperation. Study 4 examines this in an incentive-compatible cooperation game. Studies 5 and 6 return to the naturalistic online setting and examines people’s choice of what to include in their social network profile when it useful for them to appear cooperative.

We drew on pilot data to determine sample sizes. In the studies using the PD game (Studies 1 and 4), we planned to collect 100 participants per cell. In the scenario based studies where the key prediction was a main effect (Studies 2 and 5), we planned to collect 200 participants per cell. We increased this sample size (based on a power calculation of pilot tests) for studies where the key prediction was an interaction effect (Studies 3 and 6). In all studies, our sample size was determined in advance, and we report all measures assessed. No conditions

or participants were dropped from any of the analyses. Of note, all studies conducted after September 2018 (Studies 2, 3, 5, and 6) were pre-registered at [as-predicted.org](https://as-predicted.org).

### ***STUDY 1***

In this study, we investigate how one partner's conspicuous consumption influences the other's behavior in the Prisoner's Dilemma (PD) game. The PD game is the principle stylized model of cooperation. When tested with real behavior, it has high internal validity and an incentive-compatible design (Murnighan and Wang 2016). In the PD game, a participant's dominant strategy is to act in their own self-interest (e.g., to defect, regardless of what their partner does). However, the best joint outcome occurs when both participants cooperate.

We use a sequential PD game, in which Person A makes their decision first, followed by Person B. Previous research finds that in sequential PD games, participants tend to reciprocate the decision of the previous participant (i.e., tit-for-tat): if Person A cooperates, then Person B tends to cooperate; if Person A defects, then Person B tends to defect (Andreoni and Miller 1993; Rand and Nowak 2013). However, if Person B does not observe the decision of Person A, then Person B may use other information they have about Person A to make their best guess about what Person A's decision was (Levine et al. 2018). Thus, to the extent that Person B infers that Person A acted cooperatively, then Person B will be more likely to reciprocate with cooperation, even in the absence of knowing Person A's decision with certainty. On the other hand, to the extent that Person B infers that Person A acted selfishly (i.e., defected), then Person B will be more likely to reciprocate with defection.

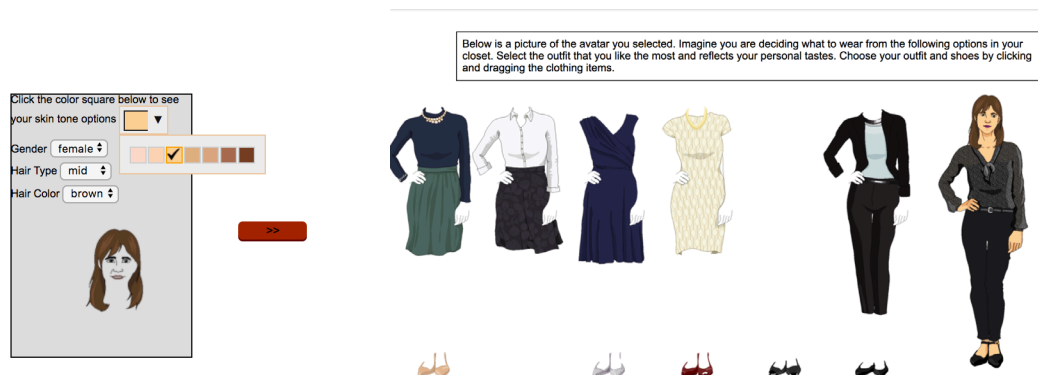
If conspicuous consumption is negatively associated with cooperation, then we expect that Person As who conspicuously consume will be seen as less likely to cooperate. As a consequence, we expect that Person Bs will behave less cooperatively toward them.

We operationalize conspicuous consumption through luxury-branded logos on avatars. Participants and their partners design their own avatar and make a choice of whether to include a luxury-branded logo on their clothing. This form of conspicuous consumption mimics the way people sometimes present themselves in virtual networks (e.g., by designing an avatar in the popular Bitmoji app).

### ***Methods***

One hundred ninety-nine paid online participants from Amazon Mechanical Turk (AMT; 47% female; mean age = 34.88) were instructed to create an avatar in a web application. All participants were told that they could create their avatar to look any way that they wanted, and that their avatar would be displayed to another participant. First, participants indicated the gender, hair color, hair length, and skin tone they wanted their avatar to have. Participants then navigated to another page where they could dress their avatar by selecting one of six different outfits and one of six different pairs of shoes. See Figure 1 for screenshots of the avatar creation task.

*Figure 1: Avatar creation task in Study 1.*



Finally, participants could choose a logo to put on the clothing of their avatar. The brands included: Prada, Gucci, Salvatore Ferragamo, Dior, Louis Vuitton, Hermès, Burberry, and Polo Ralph Lauren, or they could select “I choose unbranded clothing.” This served as a measure of participants’ preference for conspicuous consumption. Overall, 26% of participants ( $n = 52$ ) chose to put a luxury-branded logo on their avatar’s clothing. This decision preceded the experimental manipulation and thus could not have been affected by it (and indeed was not,  $p = .97$ ).

After creating their avatar, participants navigated to the second part of the survey. All participants were instructed that they would have to complete a tedious task as part of the study. The task required them to solve captchas by typing the correct letters of seven-letter words that were visually obscured.

Participants were then given the instructions regarding the PD game. Specifically, they were told they would be working on this task with a partner, and that the number of captchas that each of them would complete depended on a decision that both of them would make. In this variation of a PD game, participants could choose how to allocate work by deciding whether to transfer units of work to their partner.<sup>1</sup> In this task, transferring work to one’s partner represents the self-interested choice (i.e., defection; less work is preferable), while not transferring work represents the cooperative choice (i.e., doing the work oneself). If both participants decided to cooperate, they each had to complete only 30 units of work. If they both defected, the amount of work doubled, and they each had to complete 60 units of work. If only one person defected, the participant who cooperated had to complete 90 units of work, while the participant who defected did not have to complete any (0) units.

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<sup>1</sup>We used units of work rather than money as the currency for our PD game because the manipulation of conspicuous consumption could affect beliefs about who wants and needs money.

After passing a comprehension check about the game instructions but before playing, participants were randomly assigned to one of two partner conditions.<sup>2</sup> In each of the two conditions, participants read that their partner created an avatar and chose whether to include a luxury-branded logo on their avatar's clothing, which they knew would be seen by others. Specifically, this partner could choose from a list of luxury fashion brands (Prada, Gucci, Salvatore Ferragamo, Dior, Louis Vuitton, Hermès, Burberry, and Polo Ralph Lauren), or they could select an option that said: "I choose unbranded clothing".

In the *conspicuous consumption* condition, participants learned that the partner chose to dress their avatar in luxury-branded clothing. To ensure that participants were not evaluating based on associations to specific brands, they were not told which specific brand the partner chose. In the *modesty* condition, participants learned that the partner selected the unbranded clothing option.

The key outcome measure in this study was participants' decisions about whether to cooperate or defect. After making their decision, participants indicated their belief about whether that person would cooperate or not, and judged them on several items related to warmth and cooperativeness ( $\alpha = .94$ ). Specifically, participants rated the extent to which the target individual was nice, generous, sincere, and good (adapted from Barasch et al. 2014), and whether they thought the individual believes that everyone should be treated with dignity and respect, tries to imagine himself in other people's shoes so they can understand them, and would rather be kind than get revenge when someone hurts them (adapted from Clonginer et al 1993; all items measured from 1 = "Not at all" to 7 = "Extremely").

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<sup>2</sup>In Study 1, participants who failed the comprehension check were not permitted to continue with the study (Study 1: 60/259 failed). In Study 4, however, participants could answer the comprehension check items until they got them correct, so no one "failed" and everyone continued with the study.

Finally, as a manipulation check of the target's motive to be conspicuous, participants indicated to what extent the individual likes to show off when they get the chance, likes to impress others, and is trying to signal their status (1 = "Not at all", 7 = "Extremely";  $\alpha = .97$ ). At the end of the survey, participants learned the outcome of the PD game and completed the amount of work dictated by that outcome.<sup>3</sup>

## **Results**

*Manipulation check.* A t-test revealed that participants evaluated their partner as more motivated to be conspicuous when the partner chose a luxury-branded logo for their avatar ( $M = 5.50$ ,  $SD = 1.09$ ) compared to when they did not ( $M = 2.48$ ,  $SD = 1.28$ ;  $t(197) = 17.98$ ,  $p < .001$ ;  $d = 2.56$ ).

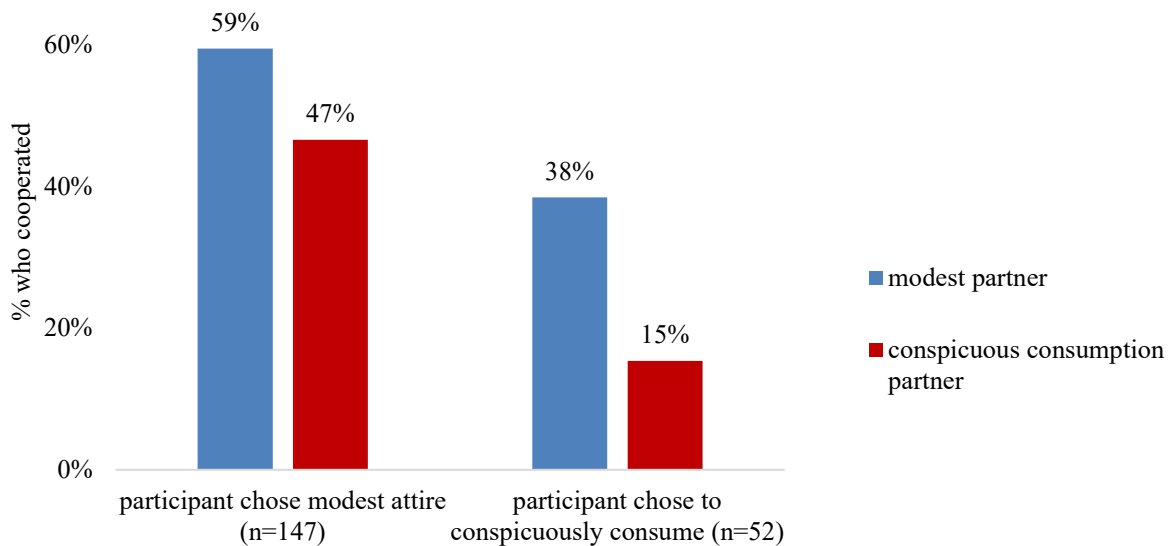
*Results.* We regressed participants' cooperation decisions (defect = 0, cooperate = 1) on the condition representing their partner's choice to conspicuously consume (conspicuous consumption = 1, modesty = -1), participants' own choice to conspicuously consume (conspicuous consumption = 1, modesty = -1), and the interaction. By including participants' own conspicuous consumption choices in the model, we can test an alternative explanation. Specifically, it could be that participants are less cooperative with conspicuous consumers because they feel distant or dissimilar from those who choose to adorn their avatar with high-status brands. If true, then participants who choose a luxury-branded logo for their own avatar should not penalize others who do so as well. However, if our theory is correct, then regardless of whether participants choose to be conspicuous, they should still infer that conspicuous partners will not cooperate, and thus will be less prone to cooperate themselves.

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<sup>3</sup>For simplicity of payment administration in this and subsequent studies using the PD game, all participants were matched with a partner who had cooperated.

We found that people cooperated to a lesser extent when their partner conspicuously consumed (38.4%) than when they were modest (54.0%;  $B = -0.44$ ,  $SE = .19$ ; Wald- $\chi^2(1, N=199) = 5.41$ ,  $p = .020$ ). In addition, we found that participants who chose to conspicuously consume were less likely to cooperate (26.9%) than those who were modest (53.1%;  $B = -0.61$ ,  $SE = .19$ ; Wald- $\chi^2 = 10.30$ ,  $p = .001$ ). The interaction between participants' own choice to conspicuously consume and their partner's choice was not significant ( $B = -0.13$ ,  $SE = .19$ ; Wald- $\chi^2 = 0.90$ ,  $p = .344$ ). That is, participants cooperated less with a conspicuous partner than with a modest one, regardless of whether the participant chose to conspicuously consume (conspicuous consumption partner: 15% vs. modest partner: 38%;  $\chi^2(1, N=52) = 3.52$ ,  $p = .061$ ;  $d = .54$ ) or chose to be modest (conspicuous consumption partner: 47% vs. modest partner: 59%;  $\chi^2(1, N=147) = 8.44$ ,  $p = .004$ ;  $d = .49$ ). The lack of an interaction for this outcome suggests that the effect of conspicuous consumption on cooperation is not driven by participants feeling dissimilar or distant from their partner.

*Figure 2: Cooperation decisions in Study 1.*



*Prediction of Partner's Cooperation Decision.* Next we replaced the dependent measure of the regression with participants' prediction of their partner's decision (defect = 0, cooperate = 1). When their partner conspicuously consumed, participants predicted that their partner would cooperate less often (40%) than when their partner was modest (62%;  $B = -0.18$ ,  $SE = .17$ ; Wald- $\chi^2 = 5.97$ ,  $p = .015$ ). Furthermore, participants' own choice to conspicuously consume also negatively impacted cooperation predictions (35%) compared to when participants chose to be modest (57%;  $B = -.48$ ,  $SE = .17$ ; Wald- $\chi^2 = 7.76$ ,  $p = .005$ ). Partner's conspicuous consumption decision and participants' own choice to conspicuously consume did not interact ( $B = -0.08$ ,  $SE = 0.17$ ; Wald- $\chi^2 = 0.19$ ,  $p = .662$ ).

*Judged warmth/cooperativeness composite.* While these two sets of measures were based on separate scales (perceived warmth and perceived cooperativeness), the two scales were highly correlated ( $r(199) = .78$ ,  $p < .001$ ) and all of the items loaded onto a single factor in a factor analysis (loadings  $> .78$ ). Thus, we combined them into a single measure for all our analyses. Findings remain the same if we examine each scale separately.

We next examined participants' evaluations of their partner's warmth/cooperativeness using an ANOVA and the same predictors as above. We observed an effect of partner's choice, such that conspicuous consumers were evaluated as less warm/cooperative ( $M = 4.35$ ,  $SD = 1.02$ ) than partners who were more modest ( $M = 5.05$ ,  $SD = 0.92$ ; ( $F(1, 195) = 11.62$ ,  $p = .001$ ;  $d = .49$ ). We did not observe an effect of participants' own choice on these inferences (participants who chose to conspicuously consume:  $M = 4.79$ ,  $SD = 1.02$ ; participants who chose modest attire:  $M = 4.67$ ,  $SD = 1.04$ ; ( $F(1, 195) = 0.66$ ,  $p = .419$ ;  $d = .11$ ). These results were qualified by an interaction between the two independent variables ( $F(1, 195) = 5.50$ ,  $p = .020$ ;  $d = .33$ ). Specifically, participants who chose modest attire judged the partner who conspicuously



consumed as less warm/cooperative ( $M = 4.22$ ,  $SD = 0.96$ ) than the modest partner ( $M = 5.11$ ,  $SD = .91$ ;  $t(1, 145) = -5.76$ ,  $p < .001$ ;  $d = .96$ ). However, this effect was attenuated for participants who chose to conspicuously consume themselves (conspicuous partner:  $M = 4.71$ ,  $SD = 1.11$ ; modest partner:  $M = 4.87$ ,  $SD = 0.93$ ;  $t(1, 50) = -0.58$ ,  $p = .564$ ;  $d = .17$ ).

*Mediation analyses.* To examine whether participants' predictions about their partner and judged warmth/cooperativeness drove their decision of whether to cooperate or defect, we performed separate mediation analyses using those measures as mediators. In each analysis, the independent variable was whether their partner conspicuously consumed (conspicuous consumption = 1, modesty = 0) and the dependent variable was participants' cooperation decision (defect = 0, cooperate = 1). Both variables mediated the effect of conspicuous consumption on cooperation decisions (cooperation predictions: Indirect effect = -0.16,  $SE = .06$ , 95% CI [-0.27, -0.05], Herr 2018; judged warmth/cooperativeness: Indirect effect = -0.30  $SE = 0.013$ , 95% CI [-0.60, -0.09], with 10,000 bootstrapped samples, PROCESS Model 4, Hayes 2013).<sup>4</sup>

## ***Discussion***

In Study 1, participants were less likely to cooperate in the PD game when their partner chose to conspicuously consume compared to when their partner eschewed status signals. This pattern was mediated by participants' predictions of what their partner would do in the game and their judgments of their partner's warmth and cooperativeness. In addition, this effect holds regardless of whether participants themselves choose a high-status logo for their avatar, providing evidence that participants are not less cooperative with conspicuous consumers because they feel distant or dissimilar from them.

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<sup>4</sup>Of note, the bootstrap procedure for estimating the indirect effect is incompatible with a binary mediator. See "Additional Analyses" in Supplemental Materials for pathways of all mediation analyses.

Interestingly, in terms of judgments of warmth and cooperativeness, we did observe an attenuated interaction between participants' choice to conspicuously consume and their partner's choice. Thus, people may be motivated to judge others less harshly for a decision that matches their own. However, this does not explain their cooperation decisions.

## ***STUDY 2***

In Study 2, we test our hypothesis in a more naturalistic setting. Specifically, many social networks, from Facebook to Meetup.com, involve meeting new people virtually and creating communities around common interests. In these environments people curate their image through photos and posts on their profile (e.g., Hancock and Toma 2009; Grewal, Stephen, and Coleman 2019).

In this study we ask participants to imagine they are part of a group seeking cooperative new members, and to assess whether another person should be invited to join their community. We predicted that participants would be less likely to recommend an individual who included conspicuous consumption in their profile compared to an individual who did not, and that this effect would be mediated by judgments of that individual's warmth and cooperativeness.

### ***Methods***

Three hundred and ninety-five paid online participants from AMT (33% female; mean age = 36.03) were asked to imagine that they were part of a social group that works as a team. All participants were told that they had been tasked by the group to find cooperative, selfless, and generous people to join their community, and that they would evaluate the social network profile of one individual who they were considering for their group.

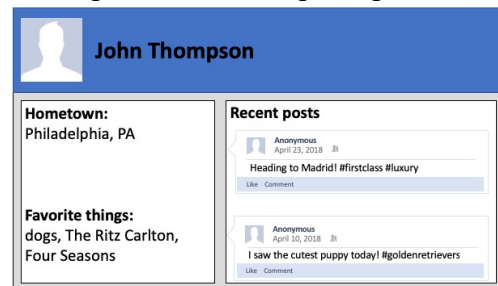
Participants were then randomly assigned into one of two profile type conditions (*conspicuous consumption* vs. *neutral*). Everyone saw a profile for John Thompson, which contained his hometown (Philadelphia, PA), his favorite things, and his recent posts. In both conditions, John shared the same neutral information under “favorite things” (e.g., “dogs”) “and” “recent posts” (e.g., “I saw the cutest puppy today! #goldenretrievers”). Participants in the *conspicuous consumption* condition saw the exact same profile (with the same neutral information in these sections), except the “favorite things” and “recent posts” also included additional information about conspicuous consumption (e.g., favorite things: “The Ritz Carlton, Four Seasons”; recent posts: “Heading to Madrid! #firstclass #luxury”). See Figure 3 for an example of the stimuli. In addition, we manipulated the category of the conspicuous consumption information included in these sections, such that participants saw a post from one of four domains (attire, cars, travel, or food; see Table 1 for the text across conditions). We pre-registered and planned the sample size for sufficient power to detect a main effect of profile type.

Figure 3: Example of social media profile used in Study 2.

A: Neutral profile



B: Conspicuous consumption profile



Note: Each of the 8 profiles from the 2×4 design looked identical to this figure, except “recent posts” and “favorite things” contained the text from Table 1 (depending on condition).

*Table 1: Content posted on each of the eight profiles in Study 2.*

Category	Profile type	Favorite things	Recent Posts
Attire	Neutral	Running	Running in the spring is the best!
	Conspicuous	Running, Louis Vuitton, Gucci	Running in the spring is the best! Went shopping this weekend. #Prada
Cars	Neutral	Pizza	Went to an amazing pizza place last night!
	Conspicuous	Pizza, My Porsche	Went to an amazing pizza place last night! I had so much fun driving in the countryside this weekend. #autumn #porsche
Travel	Neutral	Dogs	I saw the cutest puppy today! #goldenretrievers
	Conspicuous	Dogs, The Ritz Carlton, Four Seasons	I saw the cutest puppy today! #goldenretrievers Heading to Madrid! #firstclass #luxury
Food	Neutral	Dance	Attended an amazing dance class this weekend!
	Conspicuous	Dance, Dom Perignon Champagne, 5 star restaurants	Attended an amazing dance class this weekend! Went to an amazing restaurant last night! Check it out @LeBernardin #gourmet #finedining

The key outcome measure in this study was whether participants recommended the target individual to be admitted into their social group (from 1 = “I would definitely NOT recommend” to 7 = “I would definitely recommend”). In addition, participants evaluated the target individual’s warmth and cooperativeness ( $\alpha = .93$ ) using the same items as the previous study.<sup>5</sup>

It is possible that participants’ recommendations would also be influenced by perceptions that conspicuous consumers are wealthier. Therefore, we asked participants to judge how wealthy the target individual was (from 1 = “Not at all” to 7 = “Extremely”). In accordance with our pre-registration, we tested whether our key analysis was robust to controlling for this judgment.

Finally, participants responded to four manipulation check questions intended to capture perceptions of the target individual’s motive to be conspicuous ( $\alpha = .96$ ). Specifically, participants rated whether they thought the individual was trying to signal their status, was trying

<sup>5</sup>Based on the factor loadings of Study 1, we pre-registered to include all items in one composite measure of judged warmth/ cooperativeness. Again, they were highly correlated ( $r(395) = .78, p < .001$ ) and the items loaded together on the same factor in a factor analysis.

to signal their wealth, liked to show off when they get the chance, and liked to impress others (from 1 = “Not at all” to 7 = “Extremely”).<sup>6</sup>

We pre-registered the methods and analysis plan for this study (<http://aspredicted.org/blind.php?x=g93c9q>).

## **Results**

This study was a 2 (profile type: conspicuous consumption vs. neutral)  $\times$  4 (consumption category: attire, cars, travel, food) design. The key test of our prediction was the main effect of profile type. As pre-registered, we also include consumption category and the interaction as factors in all of our analyses.

*Manipulation check.* The results of an ANOVA revealed that the target individual was perceived as more motivated to be conspicuous in the *conspicuous consumption* condition ( $M = 5.88$ ,  $SD = 1.26$ ) than in the *neutral* condition ( $M = 3.36$ ,  $SD = 1.48$ ;  $F(1, 387) = 348.93$ ,  $p < .001$ ;  $d = 1.90$ ).<sup>7</sup>

*Recommendation.* Consistent with our prediction, an ANOVA revealed that participants were less likely to recommend the target individual to be part of their group when the individual’s profile included conspicuous consumption ( $M = 3.57$ ,  $SD = 1.83$ ) than when it did not ( $M = 4.12$ ,  $SD = 1.46$ ;  $F(1, 387) = 11.15$ ,  $p = .001$ ;  $d = .34$ ; see **Figure 4**, Panel A). There was no difference in recommendation based on consumption category ( $F(3, 387) = 1.07$ ,  $p = .361$ ;  $d$

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<sup>6</sup>Study 2 also included exploratory measures of judged likability and judged competitiveness (1 = “Not at all” to 7 = “Extremely”). See “Additional Analyses” in the Supplemental Materials for results.

<sup>7</sup>There was also an unexpected main effect of consumption category ( $F(3, 387) = 2.94$ ,  $p = .033$ ;  $d = .30$ ), as well as an interaction between profile type and consumption category ( $F(3, 387) = 3.09$ ,  $p = .027$ ;  $d = .31$ ). This interaction was due to the fact that the simple effects were larger in some categories than others (see Supplemental Figure 1 in “Additional Analyses” in the Supplemental Materials). However, the target who conspicuously consumed was judged as more motivated to be conspicuous than the neutral target in all four consumption categories.

= .18), nor was there an interaction between profile type and consumption category ( $F(3, 387) = 2.11, p = .098; d = .26$ ).

As a robustness check, and in accordance with our pre-registration, we conducted an ANCOVA with the same variables controlling for judged wealth. Indeed, judged wealth was a significant covariate of recommendation ( $F(1, 386) = 7.25, p = .007; d = .27$ ). Yet, as predicted, we still observe a significant effect of profile type on recommendation when judged wealth was included in the model ( $F(1, 386) = 18.53, p < .001; d = .44$ ). There was no effect of consumption category on recommendation ( $F(3, 386) = 1.36, p = .255; d = .20$ ), nor was the interaction significant in this model ( $F(3, 386) = 1.62, p = .184; d = .22$ ).

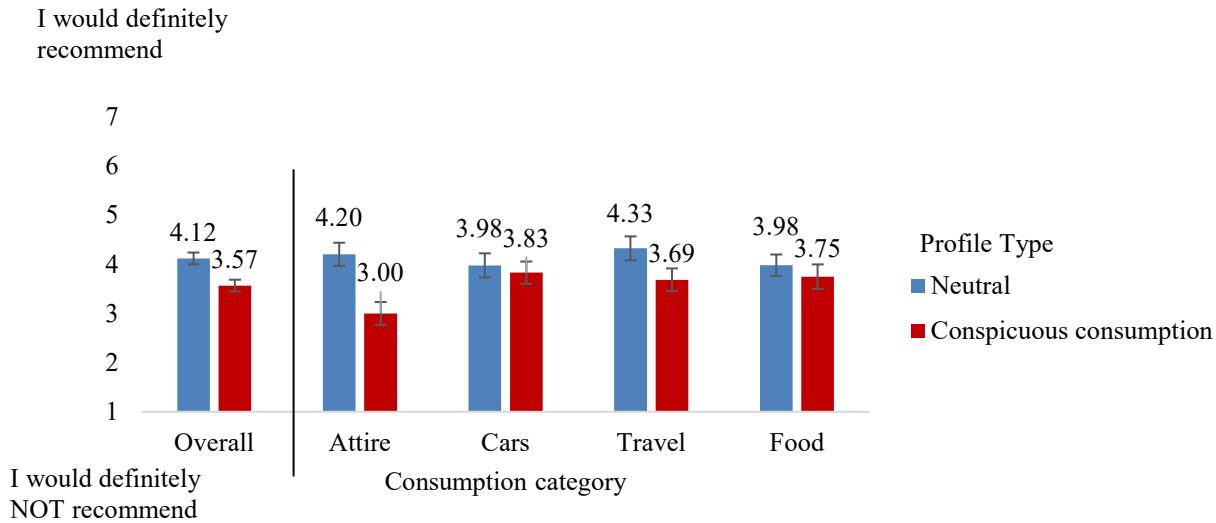
*Judged warmth/cooperativeness composite.* As predicted, we found the same pattern of results for judged warmth/cooperativeness. Specifically, an ANOVA revealed that participants perceived the individual whose profile displayed conspicuous consumption as less warm/cooperative ( $M = 4.09, SD = 1.33$ ) than the individual whose profile did not ( $M = 4.78, SD = 0.92, F(1, 387) = 36.63, p < .001; d = .61$ ; see Figure 4, Panel B). There was no difference in this composite measure based on consumption category ( $F(3, 387) = 1.02, p = .383; d = .18$ ). There was a unexpected interaction between profile type and category ( $F(3, 387) = 3.66, p = .013; d = .34$ ), as certain contrasts were unexpectedly larger than others.

As a robustness check, we conducted an ANCOVA with the same variables but controlling for judged wealth. Judged wealth was a significant covariate of judged warmth/cooperativeness ( $F(1, 386) = 12.12, p = .001; d = .35$ ). However, as predicted, we still observe a significant effect of profile type ( $F(1, 386) = 49.20, p < .001; d = .71$ ). There was no significant effect of consumption category ( $F(3, 386) = 1.18, p = .317; d = .19$ ), and an

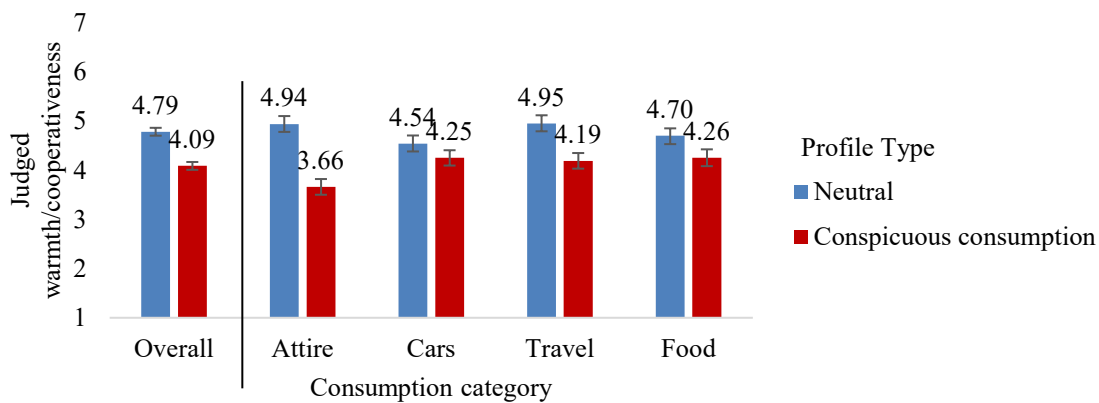
unexpected interaction between profile type and consumption category when judged wealth was included in the model ( $F(3, 386) = 2.76$ ,  $p = .043$ ;  $d = .29$ ).

*Figure 4: Study 2 results. Panel A depicts participants' recommendations of a target for a cooperative group. Panel B depicts judged warmth/cooperativeness.*

#### A: Recommendation of a target for a cooperative group



#### B: Judged warmth/cooperativeness



*Mediation analyses.* Next, we conducted a mediation analysis with 10,000 bootstrapped samples, with profile type (conspicuous consumption = 1, neutral = 0) as the independent variable, recommendation as the dependent variable, and judged warmth/cooperativeness as the

mediator. As expected, perceptions of the target individual's warmth and cooperativeness mediated the effect of conspicuous consumption on recommendation (Indirect effect = -0.74, SE = .12, 95% CI [-0.98, -0.50]; PROCESS Model 4; Hayes 2013).

### ***Discussion***

Using a naturalistic social media context, Study 2 provides further evidence that conspicuous consumption can have negative consequences when it is advantageous to appear cooperative. In particular, people are less likely to recommend an individual who posts about their conspicuous consumption for a cooperative group than an individual who does not. Moreover, this is driven by inferences about the target individual's warmth/cooperativeness, such that conspicuously consuming causes the individual to be perceived as less cooperative/warm, which in turn makes them less appealing for a cooperative group.

## ***STUDY 3***

In Study 2, participants decided whether to recommend a target for a cooperative group based on their social network profile. In the present study, we examine whether participants' responses toward conspicuous consumers depend on the type of person that is desirable for their group. Consistent with Study 2, we predicted that conspicuous consumers would be less preferred for groups seeking cooperative individuals, but that this preference would be reduced or even reversed for groups seeking competitive individuals. That is, we expected that conspicuous consumption would only backfire in contexts for which the appearance of cooperativeness is crucial.

### ***Methods***



One thousand sixty-three participants recruited from AMT (47% female; mean age = 36.78) partook in a study in which they were asked to imagine that they were part of a social group that works as a team. The study was a 2 (profile type: conspicuous consumption vs. neutral)  $\times$  2 (cooperation emphasized vs. competition emphasized) between-subjects design.

Like Study 2, participants were randomly assigned into one of two profile type conditions (*conspicuous consumption* vs. *neutral*). To simplify the design in this study, we only used one consumption category (travel). Again, all participants were asked to imagine that their social group was seeking new members. However, in this study, participants were randomly assigned to learn that their group was looking for either cooperative or competitive members. Similar to Study 2, in conditions where cooperation was emphasized, participants were told that they were tasked by their social group with finding “extremely cooperative people” to join the group. In conditions where competition was emphasized, participants were given the same instructions, but were tasked with finding “extremely competitive people” to join. All participants were then asked to evaluate one individual based on their social network profile.

Again, our primary dependent variable was whether participants recommended that the target individual be admitted into their social group (from 1 = “I would definitely NOT recommend” to 7 = “I would definitely recommend”). In addition, participants rated the target individual’s warmth and cooperativeness using the same items as the previous studies ( $\alpha = .94$ ).

Finally, participants rated the target’s motive to be conspicuous using the same manipulation check items as in the previous study ( $\alpha = .96$ ). In addition, participants indicated what type of members their group was seeking (“Cooperative” or “Competitive”).

We pre-registered the methods and analysis plan for this study (<http://aspredicted.org/blind.php?x=9348u6>).

## Results

*Manipulation checks.* We first examined whether the profile type manipulation worked as intended. As expected, the results of a t-test revealed that the target individual was perceived as more motivated to be conspicuous in the *conspicuous consumption* condition ( $M = 5.65$ ,  $SD = 1.40$ ) than in the *neutral* condition ( $M = 2.90$ ,  $SD = 1.48$ ;  $t(1, 1061) = 31.03$ ,  $p < .001$ ;  $d = 1.91$ ).

We next examined what types of members participants reported their group was seeking. As expected, more participants (93%) indicated that the group was seeking cooperative members when cooperation was emphasized compared to when competition was emphasized (27%;  $\chi^2(1, N=1063) = 509.51$ ,  $p < .001$ ;  $d = 1.92$ ).

*Recommendation.* Next, we conducted a 2 (profile type)  $\times$  2 (cooperation emphasized vs. competition emphasized) ANOVA for our key outcome variables. For recommendation, there was a significant effect of whether cooperation or competition was emphasized ( $F(1, 1059) = 39.09$ ,  $p < .001$ ;  $d = .39$ ), such that participants recommended targets more when cooperation was emphasized ( $M = 4.27$ ,  $SD = 1.55$ ) than when competition was emphasized ( $M = 3.65$ ,  $SD = 1.72$ ). There was no effect of profile type on recommendation ( $F(1, 1059) = 0.42$ ,  $p = .517$ ;  $d = .00$ ). However, as predicted, there was a significant interaction between the two factors ( $F(1, 1059) = 35.89$ ,  $p < .001$ ;  $d = .37$ ). Specifically, as in Study 2, when cooperation was emphasized, participants recommended the target with a conspicuous profile ( $M = 3.93$ ,  $SD = 1.57$ ) less than the target with a neutral profile ( $M = 4.58$ ,  $SD = 1.45$ ;  $t(1, 526) = -4.69$ ,  $p < .001$ ;  $d = .45$ ). However, when competition was emphasized, this pattern reversed: participants recommended the target with a conspicuous profile ( $M = 3.90$ ,  $SD = 1.64$ ) more than the target with a neutral profile ( $M = 3.37$ ,  $SD = 1.77$ ;  $t(1, 532) = 3.81$ ,  $p < .001$ ;  $d = .31$ ).

*Judged warmth/cooperativeness composite.* We next conducted a similar ANOVA examining the judged warmth and cooperativeness composite as the dependent variable. Consistent with our prediction and with Study 2, participants judged the target with a conspicuous profile ( $M = 4.30$ ,  $SD = 1.27$ ) as less warm/cooperative than the target with a neutral profile ( $M = 5.22$ ,  $SD = 1.00$ ;  $F(1, 1059) = 178.92$ ,  $p < .001$ ;  $d = .82$ ). There was also a significant effect of whether cooperation or competition was emphasized ( $F(1, 1059) = 15.79$ ,  $p < .001$ ;  $d = .25$ ), such that participants evaluated the target as less warm/cooperative when cooperation was emphasized ( $M = 4.64$ ,  $SD = 1.21$ ) than when competition was emphasized ( $M = 4.88$ ,  $SD = 1.25$ ). In addition, the interaction was not significant ( $F(1, 1059) = 0.30$ ,  $p = .584$ ;  $d = .00$ ).

*Mediation analysis.* We conducted an exploratory moderated mediation analysis where the independent variable was profile type (conspicuous consumption = 1, neutral = -1), the moderator was whether cooperation (= 1) or competition (= -1) was emphasized, the mediator was the judged warmth and cooperativeness composite, and the dependent variable was recommendation (Hayes, 2013 PROCESS Model 15 with 10,000 bootstrapped samples). We found that the moderated mediation index was significant ( $-.26$ ,  $SE = .04$ , 95% CI  $[-0.36, -0.18]$ ). Consistent with our theory, when cooperation was emphasized, judged warmth/cooperativeness mediated the effect on recommendation (Indirect effect =  $-0.42$ ,  $SE = .04$ , 95%CI  $[-.50, -.35]$ ). A priori, we did not have a prediction about the mediation when competition was emphasized. The mediation analysis revealed that judged warmth/cooperativeness was also a significant mediator in this condition, but that the effect was significantly weaker (Indirect effect =  $-0.15$ ,  $SE = 0.03$ , 95% CI  $[-.22, -.09]$ ).

**Discussion** Like in Study 2, we find that people are less likely to recommend a conspicuous consumer for a cooperative group. In this study, we further demonstrate an important moderator of this effect. While people respond unfavorably to conspicuous consumers in cooperative contexts, conspicuous consumption is not a liability in competitive contexts. This supports our theory that conspicuous consumption should be penalized only when cooperativeness is a particular priority.

### ***STUDY 4***

In the studies thus far, we have focused on how people *respond to* conspicuous consumers compared to more modest consumers. In the remaining studies, we pivot to examine people's *choice of whether to conspicuously consume* – that is, whether they act strategically when it is beneficial to appear cooperative.

In this study, we return to the sequential PD game, but only half of participants anticipate playing the game. These participants have an opportunity to design an avatar that their partner will view before making their cooperation decision. Because participants will receive a higher pay-off if their partner cooperates, it behooves them to appear cooperative in order to induce their partner to reciprocate with cooperation. Given that people perceive a negative relationship between conspicuous consumption and cooperativeness, we predict that participants will be less likely to conspicuously consume when they anticipate a PD game, compared to when they do not, in an attempt to induce their partner to cooperate.

### ***Methods***

Two hundred and fourteen paid participants (61% female; mean age = 28.48) from a behavioral lab at a northeastern university were instructed to create an avatar in a web

application that would be shown to a partner. First, like in Study 1, participants selected gender, hair, skin tone, and an outfit for their avatar. Next, participants chose whether to put a luxury brand on their avatar's clothing, or to wear unbranded clothing.

Participants were randomly assigned to one of two between-subject conditions. In the *display only* condition, participants were told that their avatar would be shown to a partner, but that their partner would not make any decisions with regards to them. In the *cooperative task* condition, prior to making their avatar, participants read the instructions describing the PD game used in the previous studies. All participants in this condition were assigned to be Person A in the sequential PD game, and told that while their decision of whether to cooperate would not be observable to Person B, their avatar would be observable to Person B before s/he made a decision in the game. Therefore, in both conditions, the participant's avatar would be observable to their partner, but only in the *cooperative task* condition, would their partner subsequently make a decision about whether to cooperate or defect. This design allows us to examine whether people are strategic about their choice to conspicuously consume when they are playing the PD game, over and above their baseline preference for creating a luxury-branded avatar that others will see. Presumably, in the *cooperative task* condition, participants would strategically consider how their avatar's appearance might affect their partner's willingness to cooperate. Our primary dependent variable in this study is whether participants chose to put a luxury-branded logo on their avatar's clothing.<sup>8</sup>

## **Results**

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<sup>8</sup>In the *cooperative task* condition only, participants ended the survey by choosing whether to cooperate or defect, and predicted their partner's choice. 50% of people cooperated and 50% predicted that their partner would cooperate. These were highly correlated,  $r = .69, p < .001$ .

When participants only displayed their avatar with no expectation of a cooperative task, 50% of participants chose a luxury-branded logo for their avatar. However, when participants anticipated a cooperative task, only 33% chose a luxury-branded logo for their avatar ( $\chi^2(1, N=214) = 6.59$ ,  $p = .010$ ;  $d = .36$ ).

### ***Discussion***

The results of this experiment provides initial support for our prediction in an incentive-compatible setting. In the PD game, participants can earn a higher pay-off if their partner cooperates; thus, it is beneficial in this context to signal cooperativeness. The results suggest that participants are aware that conspicuous consumption might backfire in this context, and thus strategically avoid luxury-branded logos to make a better impression.

## ***STUDY 5***

In this study, we further examine whether people are strategically modest, but we return to the more naturalistic context used in Studies 2 and 3. However in this study, participants' objective is to be selected for a social group based on their profile. We test whether people strategically change the content they post on a social network website as a function of the type of group they want to join. We expect that participants will avoid posting about conspicuous consumption when striving to join a group that is looking for cooperative members, compared to when the group does not specify cooperation (neutral control).

### ***Methods***

This study is a 2 (cooperation emphasized: yes vs. no)  $\times$  4 (consumption category: attire, car, travel, or food) fully between-subjects design. Three hundred eighty-six paid participants

(43% female; mean age = 36.71) from AMT were asked to imagine they were creating a profile on a social network website. When cooperation was not emphasized, participants were told that this website connects individuals for group activities. When cooperation was emphasized, participants were given the same information but also told that the social group they were hoping to join works as a team, and was specifically looking for extremely cooperative, selfless, and generous people to join their community.

All participants were then told that they had engaged in two activities over the weekend and needed to decide whether to post about those activities on their profile. Participants each saw two pre-written posts that described their activities: one post was about a neutral activity, while the other was about an activity that involved conspicuous consumption (posts presented in random order). Like in Study 2, we varied one of four consumption categories (cars, attire, travel, and food). For example, in the attire consumption category, the participant could choose to post something neutral (“Running in the spring is the best!”), something related to conspicuous consumption (“Went shopping this weekend. #Prada”), neither, or both. See Figure 5 for participants’ options of what to post across consumption category conditions. We pre-registered and planned the sample size to have sufficient power to detect a main effect of profile type.

The dependent variable in this study was participants’ choice of whether to post about conspicuous consumption or not. Thus, we coded anyone who chose to post about conspicuous consumption as 1 (and all else as 0).

*Figure 5:* Participants’ options of what to post by consumption category in Study 5. The first option is neutral and the second option is related to conspicuous consumption.

Attire	Car
<input type="checkbox"/> Running in the spring is the best! <input type="checkbox"/> Went shopping this weekend. #Prada	<input type="checkbox"/> Went to an amazing pizza place last night! <input type="checkbox"/> I had so much fun driving in the countryside this weekend. #autumn #porsche
Travel	Food
<input type="checkbox"/> I saw the cutest puppy today! #goldenretrievers <input type="checkbox"/> Heading to Madrid! #firstclass #luxury	<input type="checkbox"/> Attended an amazing dance class this weekend! <input type="checkbox"/> Went to an amazing restaurant last night! Check it out @LeBernardin #gourmet #finedining

At the end of the study, as a manipulation check we asked participants to rate how important it was for the group they were trying to join to find cooperative members (1 = “Not at all important” to 5 = “Extremely important”).

We pre-registered the methods and analysis plan for this study (<http://aspredicted.org/blind.php?x=62eg7e>).

## Results

*Manipulation check.* When cooperation was emphasized, participants rated it more important for the group to find cooperative members ( $M = 4.45$ ,  $SD = .73$ ) compared to when cooperation was not emphasized ( $M = 3.93$ ,  $SD = .90$ ,  $t(1, 385) = 6.27$ ,  $p < .001$ ;  $d = .64$ )

*Conspicuous Consumption Choice.* We employed a logistic regression to examine participants’ choice to post about conspicuous consumption (conspicuous consumption = 1, modesty = 0). The independent variables were the type of group they hoped to join (cooperation emphasized: yes = 1, no = -1), consumption category, and their interaction. For consumption category, we used attire as the reference category and three effects-coded variables (F, C, and T; Keppel and Wickens 2004; Rosenthal and Rosnow 1985).<sup>9</sup> Our key prediction was supported: participants chose to post about conspicuous consumption less when cooperation was

<sup>9</sup>Effects codes. attire: F=-1, C=-1, T=-1; food: F=1, C=0, T=0; car: F=0, C=1, T=0; travel: F=0, C=0, T=1. Since the randomization led to an uneven number of participants per cell, we mean-centered each new effects-coded variable so that each one's average across all participants equaled zero.

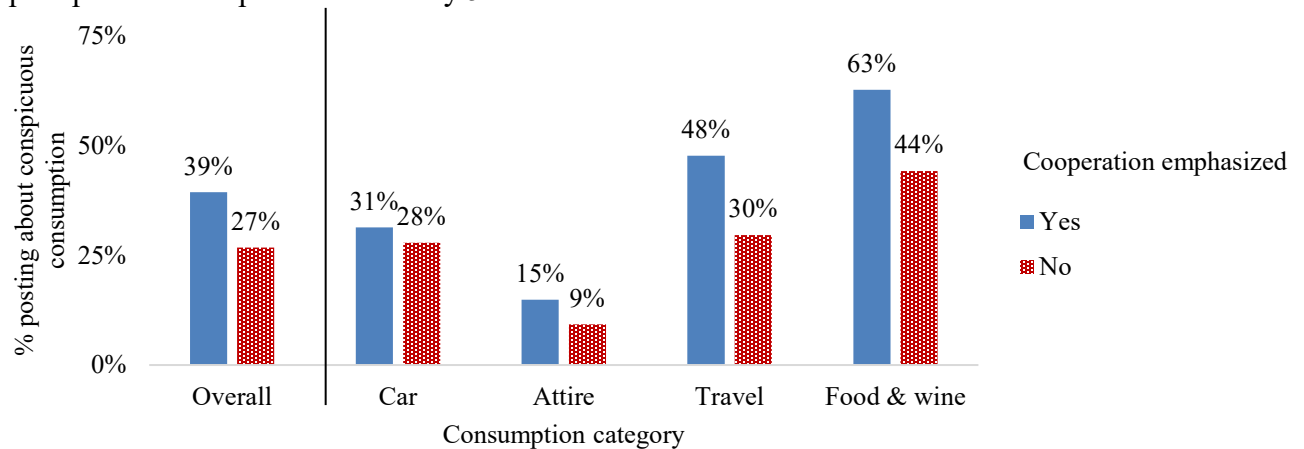


emphasized (27%) compared to when it was not (39%;  $B = -0.28$ ,  $SE = .12$ ,  $Wald-\chi^2 = 5.18$ ,  $p = .023$ ). For full regression results see Table 2. Figure 6 displays the conspicuous consumption rates overall and broken down by category.

*Table 2: Logistic regression on participants' choice to conspicuously consume in Study 5.*

	B (SE)	Wald- $\chi^2$ test
Constant	-0.82 (0.12)	$\chi^2 = 44.50$ , $p < .001$
Cooperation Emphasized	-0.28 (0.12)	$\chi^2 = 5.18$ , $p = .023$
C	-0.06 (0.20)	$\chi^2 = 0.10$ , $p = .756$
F	0.95 (0.19)	$\chi^2 = 24.13$ , $p < .001$
T	0.33 (0.19)	$\chi^2 = 2.83$ , $p = .093$
Cooperation Emphasized $\times$ C	0.20 (0.20)	$\chi^2 = 0.95$ , $p = .331$
Cooperation Emphasized $\times$ F	-0.10 (0.19)	$\chi^2 = 0.26$ , $p = .611$
Cooperation Emphasized $\times$ T	-0.11 (0.19)	$\chi^2 = 0.31$ , $p = .578$

*Figure 6: Percentage of people choosing to post about conspicuous consumption by whether the group emphasized cooperation in Study 5.*



## ***Discussion***

This study further demonstrates that people refrain from conspicuous consumption when it is useful to appear cooperative. We find this pattern across four consumption categories in a naturalistic scenario.

## ***STUDY 6***

In the previous two studies, we hypothesized and found that people refrain from conspicuous consumption when it behooves them to appear cooperative. Yet it could be the case that people refrain from any sort of displayed brand in these situations, regardless of whether it signals status or not. In this final study, in addition to manipulating whether the context emphasizes cooperation like in Study 5, we also manipulate whether the logo that can be selected for one's clothing represents luxury brands or more accessible, non-luxury brands. We predict that emphasizing cooperation will reduce preferences for a logo only when the set of logos represent luxury brands, and that this effect will be attenuated when people are choosing whether to wear non-luxury brands. In other words, there will be no strategic reason for people to refrain from choosing a logo for their clothing when cooperation is emphasized, except when the logo is a conspicuous signal of status.

## ***Methods***

One thousand three hundred and forty-five participants sampled from behavioral labs at three U.S. universities (school A:  $n = 588$ , school B:  $n = 177$ , school C:  $n = 580$ ) were asked to imagine they were creating a profile on a social network website. This experiment was a 2 (cooperation emphasized: yes vs. no)  $\times$  2 (brand choice set: luxury vs. non-luxury) fully between-subjects design.

We instructed participants to imagine that they hoped to be selected for a group online and their task was to choose what to wear for their social media profile picture. Like in Study 5, we manipulated whether (or not) cooperation was emphasized as desirable for a group that participants wanted to join. In addition, we manipulated the choice set of brand logos that participants could wear. In the *luxury brand* condition, participants saw a set of luxury-branded logos that included Prada, Gucci, Dior, Louis Vuitton, Hermès, and Burberry. In the *non-luxury brand* condition, participants saw a set of accessible brands that included Skechers, Old Navy, Lee, Gap, Levi's, and Disney.<sup>10</sup> Each participant chose whether to wear one of the brands in their profile photo, or to forego brands by choosing the option "I choose unbranded clothing." The choice to include a logo or not served as the primary dependent measure in this study.

As a manipulation check, we asked participants at the end of the study to rate how important it was for the group they were trying to join to find cooperative members (from 1 = "Not at all important" to 5 = "Extremely important").

We pre-registered the methods and analysis plan for this study (<http://aspredicted.org/blind.php?x=cw75ih>).

## **Results**

*Manipulation check.* When cooperation was emphasized, participants rated it more important for the group to find cooperative members ( $M = 5.59$ ,  $SD = .59$ ) compared to when it was not ( $M = 5.22$ ,  $SD = .76$ ;  $t(1, 1343) = 9.98$ ,  $p < .001$ ;  $d = .54$ ).

*Attire Choice.* Using a logistic regression, we regressed participants' choice to dress themselves with a brand or not (chose a brand = 1, chose no brand = 0) on the type of group they

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<sup>10</sup>We chose these brands based on the results of a pretest where participants indicated that people who wore the luxury brands were perceived as wealthier and higher status) than people who wore the non-luxury brands ( $F(1, 99) = 175.82$ ;  $p < .001$ ; for full details about the pretest, see Supplemental Materials).

hoped to join (cooperation emphasized: yes = 1, no = -1), brand choice set (luxury = 1, non-luxury = -1), and their interaction. We observed an effect of whether cooperation was emphasized on the choice to display logos ( $B = -.20$ ,  $SE = .06$ ,  $\text{Wald-}\chi^2 = 11.87$ ,  $p = .001$ ) and no effect of brand choice set ( $B = 0.07$ ,  $SE = .06$ ,  $\text{Wald-}\chi^2 = 1.30$ ,  $p = .254$ ). However, this was qualified by an interaction ( $B = -.16$ ,  $SE = .06$ ,  $\text{Wald-}\chi^2 = 7.74$ ,  $p = .005$ ). Specifically, replicating the previous two studies, among those who could choose a luxury-branded logo, participants were less likely to choose to display a logo on their clothing when the group they hoped to join emphasized cooperation (27%) compared to when the group did not (43%;  $\chi^2(1, N = 673) = 19.78$ ,  $p < .001$ ;  $d = .35$ ). However, among those who could choose an accessible, non-luxury brand, this same contrast was not significant: participants were no less likely to choose a logo for their profile picture when the group emphasized cooperation (31%) compared to when it did not (33%;  $\chi^2(1, N = 672) = 0.22$ ,  $p = .640$ ;  $d = .04$ ). This study presents an important boundary condition for our effect, such that people do not eschew brands as a general rule, but strategically avoid logos only when those logos signal status.

## ***Discussion***

This study again shows that people are less likely to display luxury logos when they want to appear cooperative. However, people are no less likely to display accessible, non-luxury logos when appearing cooperative is important. Thus, people's strategic response is to refrain from signaling *status*, rather than signaling more generally.

## ***GENERAL DISCUSSION***

The current research demonstrates how conspicuous consumption is socially disadvantageous for cooperation. We consistently find that people respond less favorably toward

conspicuous consumers in situations for which cooperation is desirable. Specifically, they are less likely to cooperate with conspicuous consumers (Study 1), and less likely to recommend conspicuous consumers for a cooperative group (Studies 2 and 3) but not for a competitive group (Study 3). In Studies 4-6, we consistently find that people strategically refrain from conspicuous consumption in cooperative settings. At the same time, people do not avoid displaying more accessible, non-luxury brands when they want to appear cooperative (Study 6). Thus, people seem to be aware of the benefits of modesty in this context, and strategically avoid status symbols when aiming to signal that they are likely to cooperate.

We test these predictions in complementary paradigms. First, we use the Prisoner's Dilemma game, a tightly-controlled and consequential game that models cooperative decision making (Murnighan and Wang 2016). Second, we designed scenarios that mimic common social network platforms, where people curate their image. In this environment, we test how people respond to profiles that display conspicuous consumption and also whether people elect to share conspicuous signals on their profile. Across both of these paradigms, we operationalize conspicuous consumption in a few ways, including hashtags followed by luxury brand or product names, as well luxury logos included on the clothing of an avatar created to represent the self. Taken together, these studies present robust evidence for our predictions.

### ***Theoretical Contributions***

This research makes unique contributions to the literatures on conspicuous consumption and impression management. Only recently has consumer research started to explore the downsides of conspicuous consumption (e.g., Cannon and Rucker 2019; Ferraro et al. 2013; Van Boven et al. 2010). The current studies go beyond measured trait inferences and examine the relationship between conspicuous consumption and cooperation. In doing so, we demonstrate

consequential behaviors that stem from judgments of conspicuous consumers. Moreover, past research has explored when people choose to display their status and wealth via conspicuous consumption as a means of making a favorable impression (Miller 2009; Saad 2007; Veblen 1899). Our research demonstrates that people also strategically *avoid* conspicuous consumption at times, when their goal is to appear cooperative. Thus, impression management concerns can encourage consumers to either increase or decrease their conspicuous consumption depending on what is desirable in a given situation. If consumers understand the meaning of consumption cues, they can use them strategically to present themselves in a way that is best for the situation at hand.

The current work also contributes to research on the determinants of cooperation (e.g., Rand and Nowak 2013). While a large body of research has studied what influences cooperation (e.g., individual differences, motivational and contextual factors), there is far less work on what people choose to signal and the impact of those signals on cooperative behavior (but see Levine et al. 2018). We identify an important cue, frequently used by consumers, which can harm cooperation. Thus, we highlight the importance of consumption choices as signals in strategic social interactions.

### ***Implications for Consumers and Marketers***

The high demand for luxury goods is typically explained by the social advantages of conspicuous consumption (Veblen 1899). We do not dispute that conspicuous consumption is beneficial in many contexts. Indeed, we find that conspicuous consumption helps a person gain acceptance into a group that is seeking competitive members (see Study 3). However, our research suggests a more nuanced view of the social effects of conspicuous consumption. Specifically, our findings caution against using this strategy indiscriminately. Consumers should

consider how important it is for them to appear cooperative, and strategically refrain from conspicuous consumption when the goal to achieve cooperation is more important than other social goals (e.g., to appear wealthy or successful).

These strategic concerns are particularly important in the era of social media (cf. Deighton, Goldenberg, and Stephen 2017), where consumers can easily broadcast their consumption choices to large audiences. Many people show off their conspicuous consumption through posts on Instagram, Twitter, and Facebook (e.g., Sekhon et al. 2015). Such posts may be beneficial for communicating one's status, but as we've shown, they can also backfire. A boastful post could wind up on social media accounts such as "Rich Kids of Instagram," which highlights extreme acts of conspicuous consumption and has over 400,000 followers and countless angry comments (Swanson 2015). Celebrities and other public figures also risk their reputations when they post about their conspicuous consumption. For instance, when Louise Linton, wife of the U.S. Secretary of the Treasury, posted a photo of herself from an official government visit with many luxury-branded hashtags, she was vilified on social media and in the press (Calfas 2017).

Given that the value of conspicuous luxury products is diminished in cooperative contexts, marketers should also consider this in deciding how and where to advertise their brands. For example, our findings suggest that it would be ineffective and possibly detrimental for a luxury marketer to target consumers who desire to appear cooperative, such as volunteers, community organizers, and public servants. Marketers might also consider promoting less conspicuous products in situations where consumers are expected to be selfless (e.g., charity events).

### ***Limitations and Future Directions***

In terms of the studies herein, it is important to note that we examined our predictions in a controlled environment, where conspicuous consumption was a salient manipulation within a single interaction with a target individual. Such an experimental design improved the internal validity of our studies by allowing us to isolate the effect of conspicuous consumption while controlling for wealth and other inferences. However, in the real world, the same individual might send a mix of signals. Furthermore, observers might interpret conspicuous consumption differently if they have other knowledge about the individual or have accumulated information across repeated interactions with them. People may soften their view of conspicuous consumers when they perceive that the status is earned or deserved, or when they already have favorable impressions of the individual (e.g., Berman et al. 2015). In addition, acting “humble” while conspicuously consuming might mitigate the negative effect, or it could make it worse (cf. Sezer, Gino, and Norton 2018).

Moreover, our studies isolate the motive to appear cooperative while controlling for other motives (but see Study 3, which also isolates the motive to appear competitive). However, social goals are often complex and competing, and consumers may at times want to appear cooperative while also signaling other traits as well. In these situations, they will need to consider trade-offs (e.g., modesty may signal cooperativeness, which is beneficial, but also low status, which is detrimental). Responses to conspicuous consumption might also be weaker if status is less central to the signal at hand, or the signal contains greater nuance. For example, a shirt with an Ivy League logo could convey wealth but also intelligence, competence, and hard work, and a Tesla logo may show off status while also communicating concern for the environment. Future research might examine how more complex sets of signals and goals shape impressions and drive cooperative behavior.



We have conceptualized conspicuous consumption and modesty as opposite ends of a continuum, and we operationalized the contrast between them in different ways. In Study 1 modesty was the deliberate choice to avoid a luxury logo, whereas in Studies 2 and 3, it was the absence of conspicuous consumption. Future research should more deeply explore other points along this continuum, from extremely modest to extremely conspicuous. For example, the effects of conspicuous consumption might be greater when the signal (e.g., logo) is larger or flashier, and it is likely that the degree to which a person appears conspicuous also depends on the context and surrounding cues (e.g., audience size).

In summary, although there are myriad advantages of conspicuous consumption, there are also disadvantages. We highlight how conspicuous consumption can have detrimental effects on cooperation due to its negative association with cooperation. Thus, when the goal is cooperation, conspicuous consumption backfires.

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