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Group Marketing: Theory, Mechanisms, and Dynamics

Group marketing uses the psychological mechanisms underlying group influence to drive customer behaviors that are beneficial to the firm. It is predicated on the firm's ability to guide two necessary and sufficient conditions: (1) a customer's awareness of an affiliation with the focal group and (2) exposure to group norms. By examining what it means to be affiliated with a group; determining how group norms are inferred, applied, and maintained; and testing a wide variety of ways in which these conditions become manifest, this research demonstrates the theoretical foundations of group marketing. Groups influence purchase behaviors by altering information and identity appraisals during decision making. Time in a purchase domain emerges as a critical determinant of the strength of group influence. Although previous research has suggested that social influence diminishes over time, a longitudinal field study and an experiment reveal that this prediction holds only when information appraisal dominates; an opposite effect arises when identity appraisal dominates. Group efficacy strengthens, but product price weakens, the effects of groups on purchase behaviors.

Keywords: group marketing, group dynamics, conforming purchase behavior, dynamic group influence, group norms

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> Humans are among the most "groupish" animals on the planet … [and] have an innate group psychology that regulates their group interactions.
>
> —Van Vugt and Kameda (2012, p. 298)

Group marketing—the use of the psychological mechanisms underlying group influence to drive behaviors that benefit the firm—appeals to marketers because of the strong and pervasive effects of groups on the decision making and behaviors of their members (Festinger, Schachter, and Back 1974; Van Vugt and Kameda 2012) and because groups are ubiquitous in modern life. Exemplifying this point, more than 1 billion people use the social media platform Facebook to organize in groups each month, providing firms more visibility and access to consumers (Guynn 2016). Discussed in marketing as consumer tribes (Cova, Kozinets, and Shankar 2012), brand communities (Muñiz and O'Guinn 2001), consumption communities (Thomas, Price, and Schau 2013), reference groups (Bearden and Etzel 1982), fan clubs (Schau, Muñiz, and Arnould 2009), or other aliases, groups alter how people decide which products to purchase (Kozinets 1999). In response, 53% of marketing executives report allocating some portion of their budgets to group marketing (CMO Council 2015). In the past five years, for example, Nike has shifted more than one-third of its multibillion dollar marketing budget to support group-based initiatives. The Nike+ system, which helps customers build groups, generated $840 million in sales in one year (Cendrowski 2012). Therefore, this research aims to provide a theoretical foundation for group marketing, identify the factors that determine its effectiveness, and show how its effectiveness evolves over time.

At the core of group marketing is the "group" and the processes by which this group alters the customer's decision making. Thus, an initial step in building a theory of group marketing is to explore the notion of the group across its diverse conceptualizations. Research has suggested that a minimal condition for triggering group-based behaviors (e.g., conforming) is a psychological affiliation with a social category or a shared collective perception among members of their own social unity (Goldstein, Cialdini, and Griskevicius 2008; Turner 1982). Beyond this psychological affiliation, arguably the most critical characteristic for predicting group influence on product purchases is the strength of group norms, or the informal understanding of what group members consider typical in relation to a product (Cialdini and Goldstein 2004). Thus, the necessary and sufficient conditions for a group to influence a person's purchase behavior are that (s)he is (1) psychologically affiliated with the group and (2) exposed to group norms.

Once these necessary conditions are met, group influence occurs through an alteration of two fundamental decision-making processes: (1) information appraisal, which captures the importance and perceived value of information to a focal

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decision (Cruz, Henningsen, and Williams 2000), and (2) identity appraisal, or the degree to which the focal decision is self-reinforcing (Bolton and Reed 2004). Group influences on these mechanisms can drive conforming behaviors in which the customer matches her or his attitudes and behaviors with the group's (Morgan and Laland 2012). However, this influence may change as time in a domain increases. By isolating information and identity appraisals, we aim to explain the divergence between research that suggests social influence diminishes over time (Risselada, Verhoef, and Bijmolt 2014) and evidence that indicates group marketing programs gain effectiveness over time (Cendrowski 2012). Overall, we propose that group marketing effectiveness depends on the dynamic interplay of the group's influence on information and identity appraisals.

Using a three-study, multimethod design, we examine the theoretical foundations of group marketing. With an experiment, Study 1 tests the necessary conditions for group marketing and demonstrates the mediating role of information and identity appraisal, through which a customer's affiliation with a group influences purchase behavior. In Studies 2a and 2b, we investigate the differential dynamic effects of these two mechanisms, using conditions that make one mechanism more salient than the other. With more than 4 billion longitudinal data points collected from approximately 11,000 participants in a massive multiplayer online role-playing game, in Study 2a we focus on functional versus social product purchases to isolate the dynamic effects of information and identity appraisal, respectively. In this research context, we can observe the effect of groups on members from the moment they enter a new purchase domain and capture a dynamic, nonlinear effect of group norms on purchases. The experiment in Study 2b isolates the decision type from other potential product confounds and examines the dynamic effects of groups on customers in a familiar purchase domain.

This research therefore makes three main contributions. First, we demonstrate that a customer must be psychologically affiliated with the focal group and also exposed to group norms for that group to influence behavior predictably. Without these minimal conditions, the customer has neither the motivation nor the means to conform with the group, and group influence is limited (Morgan and Laland 2012). In Study 1, assigning participants to an arbitrary group and exposing them to group norms (i.e., recommendations) activates implicit assessments that a recommendation from another member of the group is more diagnostic (information appraisal) and more accordant with the participant's self-identity (identity appraisal) than when this same recommendation comes from a non–group member. In turn, the participants are 1.4 times more likely to choose a product that conforms to group norms and willing to pay significantly more for the conforming product than an alternative (objectively superior) product.

Second, by disentangling the effects of the group on information and identity appraisals and identifying time in the purchase domain as a critical determinant of the strength of a group's influence, we demonstrate that the predictions of diminishing group influence over time are true only if information appraisals dominate. The opposite holds when identity appraisals are dominant. For people new to a purchase domain, the effect of the group norm on purchase behaviors follows an inverted U-shape when information appraisals dominate but a U-shape when identity appraisals dominate, as we show in Study 2a. For social decisions, the effect of group norms weakens initially, as the decision maker aims to protect a unique personal identity, but then grows as the group becomes a more significant contributor to the person's sense of social identity. The effects are confirmed in Study 2b on purchasers in a familiar domain. For social decisions, people who have spent an extended time in the domain (18 years) are willing to pay three times more for a product that conforms to the group than people who have spent a relatively short time there (3 years). The reverse is true for functional decisions.

Third, from these theoretical foundations, we present key process steps in executing group marketing. A company must first identify desirable customers and then establish a salient group through the use of either a firm-managed group or an external, independent group. Then, regardless of the type of group established, the firm must develop the necessary conditions for group marketing. Adapting group marketing strategies according to the customer's time in a specific domain also is essential to their effectiveness.

Theoretical Underpinnings of Group Marketing

Group marketing entails the use of the psychological mechanisms that underlie group influence to drive behaviors that benefit the firm; its theoretical foundation requires an adequate conceptualization of what constitutes a "group." Thus, as a first step, we examine the scholarly history surrounding groups, along with how they are understood today, to identify the necessary and sufficient conditions for a person to feel part of a group and what it means once (s)he obtains this sense. Group marketing success in turn depends on the conditions that allow a group to drive predictable behaviors. Group norms are essential to this process and provide a standard that an individual member tries to match. We therefore examine group norms; how they are inferred, applied, and maintained; and how this influences decision making and behavior. Finally, we theorize that group marketing effectiveness depends on the degree to which the group alters a person's information and identity appraisals during decision making, and we consider how the strength of group influence changes over time.

Psychology of Groups

The "group" is a useful abstraction that encompasses a wide variety of constructs studied in marketing, such as brand communities (Muñiz and O'Guinn 2001), consumer tribes (Cova, Kozinets, and Shankar 2012), consumption communities (Thomas, Price, and Schau 2013), and reference groups (Bearden and Etzel 1982). In the deep scholarly history surrounding groups, there is disagreement about what constitutes a group, what is required for a person to feel (s)he is part of a group, and what triggers the psychological mechanisms associated with groups (Turner 1982). Early definitions suggest that a group is "two or more persons who are interacting with one another in such a manner that each person influences and is influenced by each other person" (Shaw 1976, p. 11). Other definitions incorporate interdependent goal pursuit (Festinger,

Schachter, and Back 1974) and interpersonal attraction or liking between members (Lott and Lott 1965).

Interaction, shared goals, and affection, however, may be unnecessary for people to feel like part of a group. Turner (1982, p. 94) suggests that "members of a social group seem often to share no more than a collective perception of their own social unity and yet this seems to be sufficient for them to act as a group." People tend to organize the world into categories (Fiske 1992); if a person internalizes a category into a conception of the self, (s)he will feel like a member of that group and act in accordance with this group membership. In a variety of experiments in which participants were merely made aware (explicitly or implicitly) of their affiliation with a temporary and arbitrary group, this psychological group affiliation triggered such group behaviors as intergroup discrimination, intragroup altruism, and perceived in-group superiority (Brewer 1999; Crano 2000). It was associated with perceived intragroup similarity and intergroup dissimilarity (behavioral and attitudinal; Hogg and Turner 1987).

Marketing theories on groups are consistent with this psychological perspective and explicitly theorize about the importance of "consciousness of kind, … [a] connection that members feel toward one another, and the collective sense of difference from others not in the community" in building and maintaining brand-based groups (Muñiz and O'Guinn 2001, p. 413; Schau, Muñiz, and Arnould 2009). A common empirical design is to heighten a participant's awareness of membership within a group independent of the firm (e.g., ethnicity, gender), which uncovers the same pattern of effects across group-based behaviors (Goldstein, Cialdini, and Griskevicius 2008; Naylor, Lamberton, and West 2012). Even further, this conceptualization of groups provides clarity compared with the more general marketing notion of customer segments, which assumes no psychological connections between the customer and the category (i.e., segment) and does not require the customer's knowledge of his or her marketer-selected categorization. Thus, the necessary and sufficient condition for people to feel they are, and act as, a group is an acknowledgment of membership within a common social category.

Group Norms and Theories of Group Influence

Once a person is affiliated with a group, it can influence behavior, such that (s)he "comes to think feel, behave, and define [him- or herself] in terms of group norms rather than unique properties of the self" (Terry and Hogg 1996, p. 780); (s)he conforms to the group. Fundamental to this process is the existence and enforcement of group norms, or shared informal understandings of what is typical and acceptable, as defined by the group (Cialdini and Trost 1998). Group norms represent the "group prototype that describes and prescribes beliefs, attitudes, feelings, and behaviors that optimally minimize in-group differences and maximizes intergroup differences" (Terry and Hogg 1996, p. 780). Theory has suggested that group norms form because they provide the group and its members with an expedient way to meet their needs or are consistently accompanied by rewards (e.g., praise). Dissenting from strong group norms can prompt negative emotional (e.g., anxiety), physical (increased heart rate), and social (sanctioning) responses (Morgan and Laland 2012). In marketing, group norms become important when they take on product or brand relevance and serve as "manuals of 'how to consume'" (Schau, Muñiz, and Arnould 2009, p. 39). We use the term "group product norms" to capture those relevant to a particular product. Thus, norms define how to conform and provide a means of predicting a group's influence on a person's purchase behaviors.

Although norms are often transferred through overt interactions among group members (e.g., storytelling, demonstrations, rituals), they can be inferred with relatively little or even no direct contact. Once a person is psychologically affiliated with a group, (s)he will "construct a context-specific group norm from available, and usually shared, social comparative information" (Terry and Hogg 1996, p. 780). A person can "infer the common characteristics of [the] category from individual exemplars and then assign them to all members," including the self (Turner 1982, p. 30). Even when a person is arbitrarily assigned to a group, (s)he tends to infer group norms from any available information, which in some cases is only the knowledge of the self as an exemplary group member (Naylor, Lamberton, and Norton 2011). Finally, group norms can be communicated through a non–group member, suggesting that no interaction with other group members is needed (Goldstein, Cialdini, and Griskevicius 2008). Without knowledge of the group norm, however, predicting conforming behavior becomes impossible because there is no known standard against which customers will gauge their own behavior.

This reasoning suggests that the effectiveness of group marketing is predicated on a firm's ability to guide two necessary and sufficient conditions that dictate whether a group will influence an individual member's behavior. First, the person must be psychologically affiliated with the focal group. This affiliation can be manifest in several ways. It might be arbitrarily assigned, assumed through self-selected membership, or primed even if the customer acknowledges no prior affiliation (e.g., "You are part of the running community"). Second, the person must be exposed to group norms. Just as there is more than one way for a person to recognize affiliation with a group, there is more than one way a person can be exposed to and infer group norms. We propose and test three. Group norms can be (1) communicated by a single suspected or known group member; (2) inferred from the observation of group members' behaviors; or (3) presented through third-party communication of a norm described as affiliated with the focal group.

Mechanisms Underlying Group Influence

When a person affiliates with a group, his or her cognitive processing changes fundamentally, "as if the [group's] resources, perspectives, and identity along with [his or her] own, are accessed and are affected by the outcomes of any action [he or she] might take" (Aron and McLaughlin-Volpe 2001, p. 89). This shift affects two fundamental decision-making processes: information and identity appraisal (Deutsch and Gerard 1955).

Information appraisals. Group affiliation can affect decision making by altering information appraisals, such that information from the group seems more accurate or diagnostic than information from other sources. Because group affiliation creates feelings of similarity and superiority among group

members, it provides a heuristic for filtering the vast amounts of potentially relevant information. Group norms provide guidelines for how to act in a given situation, without requiring the investment of time or cognitive effort but while still offering an outcome with a high probability of effectiveness (Cialdini and Trost 1998). Thus, to maximize effectiveness, a member often interprets group norms more favorably relative to other information sources and pursues group-consistent behaviors (Kaplan and Miller 1987).

Identity appraisals. Group affiliation can also affect decision making by altering identity appraisals, such that the salience of group identity increases for self-relevant decisions (Bolton and Reed 2004; Escalas and Bettman 2005). People have an ingrained need to belong but also to be distinct, and those two needs must be balanced to maintain a positive self-concept (Brewer 1991). Developing and maintaining a social identity can be key to this objective. A social identity is a core aspect of the self-concept, achieved through a self-awareness of membership in a social category and the evaluative and emotional implications of this membership (Tajfel and Turner 1985). When a person affiliates with a group, the group becomes an "extension of the self beyond the level of the individual," represented by the shift in which "*I* becomes *we*" (Brewer 1991, p. 476). Group norms can define what is appropriate for enacting the self (i.e., presenting the self to others). Thus, to maintain a positive self-concept, a person often uses group norms as a reference for self-relevant behaviors and pursues purchase behaviors that conform to the group's.

Dynamic effect of group mechanisms on behavior. Evidence is mixed about how a group's influence on members might vary dynamically (Cendrowski 2012; Risselada, Verhoef, and Bijmolt 2014). Although time in the group affects these relationships, it should uniformly strengthen the group's influence on both information and identity appraisals rather than present a condition in which opposing effects may occur (Algesheimer, Dholakia, and Herrmann 2005). However, we theorize that time in the relevant purchase domain, the specific sphere of activity or knowledge relevant to the focal purchase decision, will create conditions in which group norms have differential effects on information and identity appraisals, which may be key to resolving this conflict. When people enter a new purchase domain (e.g., new hobby, first child), they face numerous, unfamiliar product decisions, and their previous knowledge and behaviors may not be relevant for making effective or appropriate product choices. By definition, this new domain falls outside the decision maker's current understanding of self, such that (s)he may feel like an outsider. In these new domains, membership in a domain-specific group may be particularly important, because it provides access to valuable, domain-relevant information and helps alleviate the discomfort of an outsider position as the person increasingly integrates new roles into her or his self-concept.

However, as time progresses, the person becomes more familiar with the purchase domain and is no longer a low-knowledge buyer but rather starts to repeat behaviors learned in the domain, which affects the relative value of group-provided information (i.e., information appraisal). As the person's commitment to the domain deepens, (s)he stops feeling like an outsider and instead accepts the domain as part of his or her self-identity, which in turn affects the relevance of group norms for identity management (identity appraisal). Thus, we propose that the net effect of the group on behavior depends on the sum of its dynamically varying influence on information and identity appraisals as the person's time in a purchase domain increases.

Testing the Necessary Conditions of Group Marketing (Study 1)

Building on extant research, we first demonstrate the necessary conditions of group marketing (Study 1)—namely, that a customer must be aware of his or her affiliation with the focal group and must be exposed to the desired group norm. In addition, we test whether these effects occur through the group's impact on information and identity appraisals. In Studies 2a and 2b, we investigate the dynamic aspects of these effects. Table 1 lists the objectives, approaches, theoretical tests, and key takeaways from all three studies.

Study 1: Conceptual Model and Hypotheses

The effectiveness of group marketing lies in its ability to leverage a person's affiliation to a group to drive behaviors that ultimately benefit the firm. A common group marketing strategy uses advocates within a group to provide recommendations to other possible customers (Kozinets et al. 2010). Because this advocate serves as a group exemplar, the recommendation provides a means to infer group norms. Group members are perceived as more similar and superior, so the information they provide seems more trustworthy and accurate than information from non–group members (Meyerson, Weick, and Kramer 1995). Thus, affiliation and exposure to group norms through a recommendation can alter information appraisals. People also use recommendations to identify appropriate behavior for their identity management efforts. However, what is "appropriate" depends on a person's definition of self; membership in a group marks an expansion of the self to incorporate that group's identity. This membership also alters identity appraisals, such that recommendations from other group members appear more relevant to identity management than recommendations from nonmembers (Brewer 1991). Thus, decisions based on group-provided recommendations seem more accurate and in line with the self than decisions based on the same recommendation from a non–group member, which should increase purchase behaviors that reflect group norms.

H_1: (a) Product choice and (b) willingness to pay for the focal product is greatest when a customer is affiliated with a group and exposed to group product norms (i.e., test of necessary conditions).

H_2: When affiliated with a group (vs. no group affiliation), the effect of a customer's exposure to group product norms on purchase behavior is mediated by (a) information and (b) identity appraisals (i.e., test of mediating mechanisms).

Study 1: Design and Sample

To test the necessary conditions of group marketing, we use a 2 (group membership vs. no membership) × 2 (recommendation vs. no recommendation) between-subjects experimental design in which we manipulate group membership and exposure to a

TABLE 1
Testing the Theoretical Foundations of Group Marketing

Study: Research Design	Objective	Condition 1: Customer Awareness of Affiliation with Group	Condition 2: Customer Exposure to Group Norms	Strength of Group Norms	Key Takeaways
Study 1: Experiment	• Confirms two necessary conditions for group marketing to influence behavior: (1) customer awareness of affiliation with focal group and (2) exposure to group norms. • Demonstrates how the group alters information and identity appraisals.	Group (vs. no group) affiliation is primed using arbitrarily assigned groups.	Group norms are exposed to participants through a group member's electronic recommendations.	Group norm strength held constant across experimental conditions.	• Groups influence purchase behavior even when group affiliation is irrelevant and arbitrary and exposure to group norms is brief. • Group influence operates by altering information and identity appraisals in decision making.
Study 2a: Longitudinal field study	• Resolves conflicting findings on dynamic group influence in a new decision domain. • Confirms the differential impact of the group on information and identity appraisals on purchase behavior over time.	Group affiliation through self-selected membership in the focal group.	Group norms are inferred from direct interactions with and observations of other group members.	Group norm strength is measured on the basis of the consistency of observable product purchase behaviors within the group.	• Group norms have differential effects on purchase decisions as time in the domain increases. • For people new to a purchase domain, the effect of group norms on purchase behavior follows an inverted U-shape for functional decisions if the information appraisal dominates. • For people new to a purchase domain, the effect of group norms on purchase behavior follows a U-shape if the identity appraisal dominates.
Study 2b: Experiment	• Isolates the decision context (functional or social) from other potential product confounds as a key moderator of group influence over time. • Provides causal evidence of the impact of group product norms on purchase behavior.	Existing group association made salient through external communication.	Participants are exposed to group norms using a feedback mechanism (poll) that conveys aggregate group behaviors.	Group norm strength is manipulated using false feedback, reflecting group-based agreement on product choice as split between products, either 50/50 (low) or 25/75 (high).	• For people familiar with a purchase domain, group product norms have a diminishing effect on purchase decisions if the information appraisal dominates. • For people familiar with a purchase domain, group product norms have an increasing effect on purchase decisions as time in the domain increases if the identity appraisal dominates.

recommendation, then measure both information and identity appraisals. With this design, we can compare a focal condition, in which the customer is associated with a group and exposed to its norms (group × recommendation), against each of the three other conditions for theory testing. First, the no group × no recommendation condition captures unbiased individual choice and serves as our control, so we can calculate the full effect of the group on purchase behavior. Second, the group × no recommendation condition offers a comparison with a mere social presence condition. Third, we test the effect of a group recommendation against general word of mouth (no group × recommendation condition), so the same recommendation comes from a non–group member.

Participants, recruited through Amazon's Mechanical Turk, consisted of 222 adults (59% women) with a median age of 35–44 years, ranging from 18 years to older than 65 years. In pretests, we selected an appropriate product: athletic shoes, which can be evaluated using functional or social perspectives, are gender neutral, and have attributes that can be evaluated positively or negatively by a group. As a stringent test of group influence, we used a product choice exercise that required participants to choose between Products A and B, such that Product A was objectively superior to Product B from both functional (i.e., higher attribute values) and social (i.e., more appealing colors) perspectives (see the Appendix). In a pretest, Product A was consistently chosen over Product B (72% vs. 28%) and earned higher quality, visual appeal, and overall product ratings ($p < .01$). In addition, all product attributes were fictitious (e.g., Cuprotex, Flexion), reducing the potential that preexisting notions might influence the product choice.

Study 1: Procedure

After they provided demographic information, half of the participants were put into an arbitrary group and informed that the remainder of the tasks would be conducted with their group; the other half proceeded to the product choice task without any group assignment and were informed that they would complete the remaining tasks individually. For the group manipulation, group membership was based on a trivial criterion—whether, in a series of choice tasks, they chose sunset or sunrise. By using minimal conditions to prime affiliation to a group, we ensure that the groups in our experiment have no significant real-world meaning, in terms of prior beliefs or other implicit affiliations, which minimized potential confounds. The group manipulation worked as expected, in that participants in the group condition reported feeling more like they were part of a group ($M_{nongroup}$ = 3.20, M_{group} = 4.22; F(1, 220) = 16.20, $p < .01$).[1]

Next, participants were randomly selected to receive (vs. not receive) a recommendation during their product choice task. Participants in the no-recommendation condition saw a photo of the two products and a description of their attributes. Participants in the recommendation condition received the same product photos and descriptions, along with "live comments" that consisted of two comments in favor of Product A and two comments in favor of Product B from other participants. If the participant was also assigned to the group procedure, the comments in favor of Product B came from a member of the participant's arbitrarily assigned group (e.g., Sunset Group Member 002). Comments in favor of Product A came from non–group members (e.g., Sunrise Group Member 009). Although participants in the nongroup condition read the same information and labels, they were not assigned to a shared group. The manipulations worked as expected, in that participants in the recommendation condition acknowledged receiving a recommendation more than those in the control condition ($M_{control}$ = 2.05, M_{rec} = 3.65; F(1, 220) = 39.05, $p <$ .01). We did not find any significant interaction of group membership and recommendation manipulations on perceptions of the recommendation ($p = .24$). The recommendation was perceived similarly in the group and nongroup conditions, thereby enabling us to isolate the effects of the same recommendation from a group versus a non–group member. Finally, participants made their product selection and stated how much they were willing to pay for each product. We transformed this result into a relative measure (willingness to pay for Product B − willingness to pay for Product A). Because we predict that group affiliation alters the way people process information about a product decision, information appraisals should be manifest in evaluative assessments of a product, so we measure its impact using assessments of product quality (Cruz, Henningsen, and Williams 2000). For identity appraisals, we use self–brand connection, which captures the degree to which the focal product appears self-relevant (Escalas and Bettman 2005). We also captured individual color preferences and age as controls. Table 2, Panel A, contains the descriptive statistics; the Appendix offers more details on the procedures and measures.

Study 1: Results and Discussion

A chi-square test of the number of participants who chose Product B within each of the four conditions was marginally significant ($\chi^2(3) = 6.48$, $p = .09$), and the group × recommendation condition exhibited significantly more conforming behavior. Specifically, 45% of participants chose Product B, compared with 24%–32% in all other conditions providing support of H_{1a}. The 2 (group vs. no group) × 2 (recommendation vs. no recommendation) factorial analysis of covariance revealed a marginally significant interaction effect on willingness to pay (F(1, 222) = 3.34, $p = .07$). To test H_{1b}, we decomposed this finding using three orthogonal contrasts to compare the group × recommendation (i.e., both necessary conditions) condition with all other conditions (i.e., the contrast coding compared group × recommendation vs. [1] no group × no recommendation, [2] no group × recommendation, and [3] group × no recommendation). Consistent with our hypothesis, all contrasts were significant, such that participants in the group × recommendation condition were willing to pay a significantly higher amount for the conforming product (all

[1]To verify that participants in the group condition felt that they were a part of a group, we ran a pretest in which we tested the sunrise/sunset group manipulation. After completing the group manipulation, participants (n = 50) rated their perceptions of both sunrise and sunset group members on a series of attributes, including friendliness, intelligence, helpfulness, likeability, and cooperativeness. In a series of paired sample t-tests across all attributes, participants rated members of their arbitrarily assigned group more favorably (all ps < .05).

TABLE 2
Descriptive Statistics and Correlations

A: Study 1

	M	SD	Correlations										
			1	2	3	4	5	6	7	8	9	10	11
1. Group affiliation	3.72	1.96											
2. Group product norms	2.85	2.07	.14										
3. Information appraisal	5.11	1.21	.08	.11									
4. Identity appraisal	3.33	1.67	.20	.27	.51								
5. Willingness to pay	−7.07	19.51	.00	.22	.40	.56							
6. Color preference	5.59	1.44	.04	.03	−.01	−.16	−.18						
7. Age	2.57	1.17	.03	−.08	.01	.02	−.02	−.14					

B: Study 2a

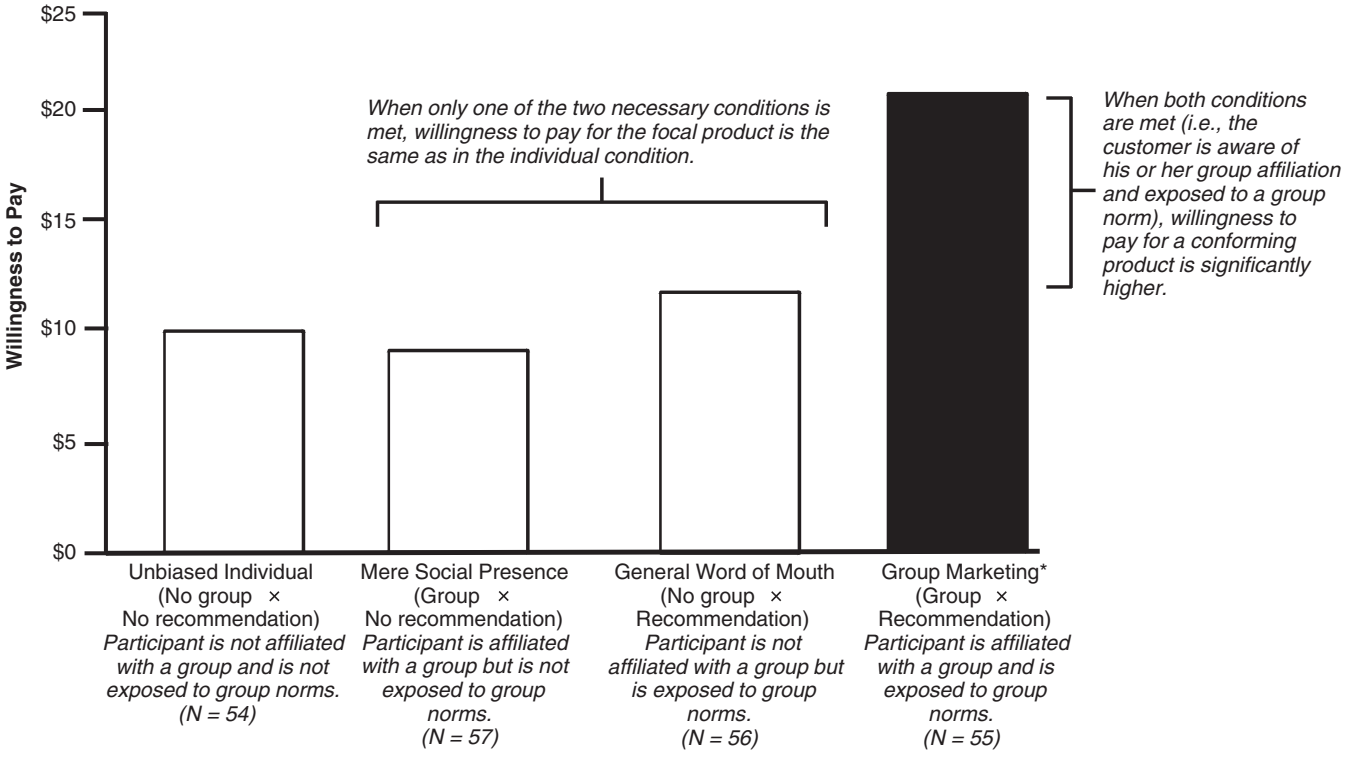
	M		SD		Correlations										
	Functional	Social	Functional	Social	1	2	3	4	5	6	7	8	9	10	11
1. Group product norms	.033	.029	.041	.037											
2. Time in domain (in minutes)	1,746.23	1,521.42	13,861.16	14,217.67	.12/.16										
3. Group efficacy	15.37	14.18	11.22	12.06	.10/.12	.26/.31									
4. Product price	13.42	12.15	4.33	3.84	.11/.07	.04/−.02	.02/−.06								
5. Network contagion	81.46	75.32	63.11	69.24	.09/.11	.30/.31	.14/.20	.04/−.11							
6. Installed user base	8,321	5,366	6,445	3,102	.18/.13	.30/.39	.32/.36	−.06/−.02	.21/.34						
7. Customer gender	.61	.64	.42	.39	−.09/.08	−.05/−.07	−.09/.03	−.04/−.03	−.02/−.06	−.04/.04					
8. Customer average wallet	13.05	12.48	6.05	5.82	.15/.15	.27/.32	.24/.32	.03/−.02	.17/.20	.21/.29	−.03/−.01				
9. Average customer performance	73.43	67.42	61.22	67.04	.06/.07	.25/.31	.31/.32	.04/−.05	.21/.22	.33/.39	.04/.05	.29/.31			
10. Group size	11,902.34	9,938.14	9,612.15	7,322.38	.07/03	.16/.17	.14/.13	.02/.08	.13/.18	.07/.09	.02/.05	.23/.31	.28/.23		
11. Friendship centrality	162.01	147.32	176.32	113.06	.10/.08	.34/.35	.10/.16	.29/.30	.08/−.04	−.06/−.05	.13/−.15	.06/−.07	.05/.11	.10/.09	
12. Business relationship centrality	103.22	86.24	152.34	86.22	.08/.11	.29/.31	.08/.13	.32/.31	.06/−.05	−.07/−.03	.08/−.06	.05/−.03	.06/.05	.06/.07	.31/.27

C: Study 2b

	M		SD		Correlations										
	Functional	Social	Functional	Social	1	2	3	4	5	6	7	8	9	10	11
1. Group product norms	4.45	4.35	1.63	1.29											
2. Time in domain (in days)	66.82	88.21	80.69	96.93	.04/.20										
3. Willingness to pay	−8.40	−2.67	32.49	33.42	.20/.14	−.00/.00									
4. Typical purchase price	90.31	76.72	32.83	23.40	−.05/−.08	−.01/−.03	.18/.11								
5. Color preference	5.78	5.57	1.31	1.25	−.01/.02	.21/−.05	.06/.04	.06/−.06							

Notes: We report correlations for functional/social decisions. Similar to Iyengar, Van den Bulte, and Valente (2011), we deleted cases that do not contribute to the likelihood function of the hazard models and report the descriptive statistics for the remaining sample. Correlations that are greater than or equal to .14 (Study 1), .01 (Study 2a), and .18 (Study 2b) in absolute value are significant at $p < .05$.

FIGURE 1
Study 1: Empirical Test of Necessary Conditions for Group Marketing



*Group marketing condition is significantly different from each of the three other conditions (all *p*s < .05).
Notes: To aid in interpretability, willingness to pay was transformed by a constant, such that all means are positive.

*p*s < .05) than were those in the other three conditions.[2] Compared with the unbiased individual choice condition (no group × no recommendation), only the group recommendation condition was significantly different. Thus, there is no influence on willingness to pay when only one of the necessary conditions is met. Figure 1 illustrates these effects.

Following the bootstrapping procedures described by Preacher and Hayes (2008), we conducted a moderated mediation analysis (PROCESS Model 7; 5,000 bootstrapped samples) to test the underlying processes. We entered both information and identity appraisals as mediators of the effect of exposure to the group product norm (0 = no recommendation, 1 = recommendation) on willingness to pay, with group membership as the moderator (0 = nongroup, 1 = group). Consistent with our predictions in H_2, the highest-order index of moderated mediation was significant for both the information (index = 1.82, SE = 1.10; 95% confidence interval [CI] = [.25, 4.80]) and identity (index = 7.01, SE = 2.52; 95% CI = [2.66, 12.81]) appraisals. Decomposing this finding further, the information (effect = 1.56, SE = .77; 95% CI = [.38, 3.55]) and identity (effect = 5.82, SE = 1.87; 95% CI = [2.48, 9.84]) mechanisms mediated the effect of the recommendation on willingness to pay in the group condition, whereas these effects were attenuated in the nongroup condition (information: effect = –.26, SE = .65; 95% CI = [–1.97, .76]; identity: effect = –1.19, SE = 1.53; 95% CI = [–4.44, 1.62]).

Study 1 thus provides a foundation for investigating group marketing by first demonstrating the two necessary conditions for group influence. When a customer is knowingly associated with the focal group and exposed to group norms, (s)he is willing to pay significantly more for a product that conforms to the group than when none (unbiased individual) or only one (mere social presence, general social influence) of the conditions is present. The same recommendation becomes nearly three times more influential when coming from a group member than a non–group member. This result is particularly powerful considering the experimental design, because it shows that even very brief, arbitrary group membership can dramatically influence individual behavior. We also demonstrate that groups influence decision making by altering information and identity appraisals. Although the recommendations were equally favorable toward both products, only when the product was recommended by a group member (vs. non–group member or no recommendation) was it appraised more favorably.

Testing the Dynamic Effects of Group Marketing (Studies 2a and 2b)

The effects of groups on information and identity appraisals are independent and can vary over time. We predict that the effect

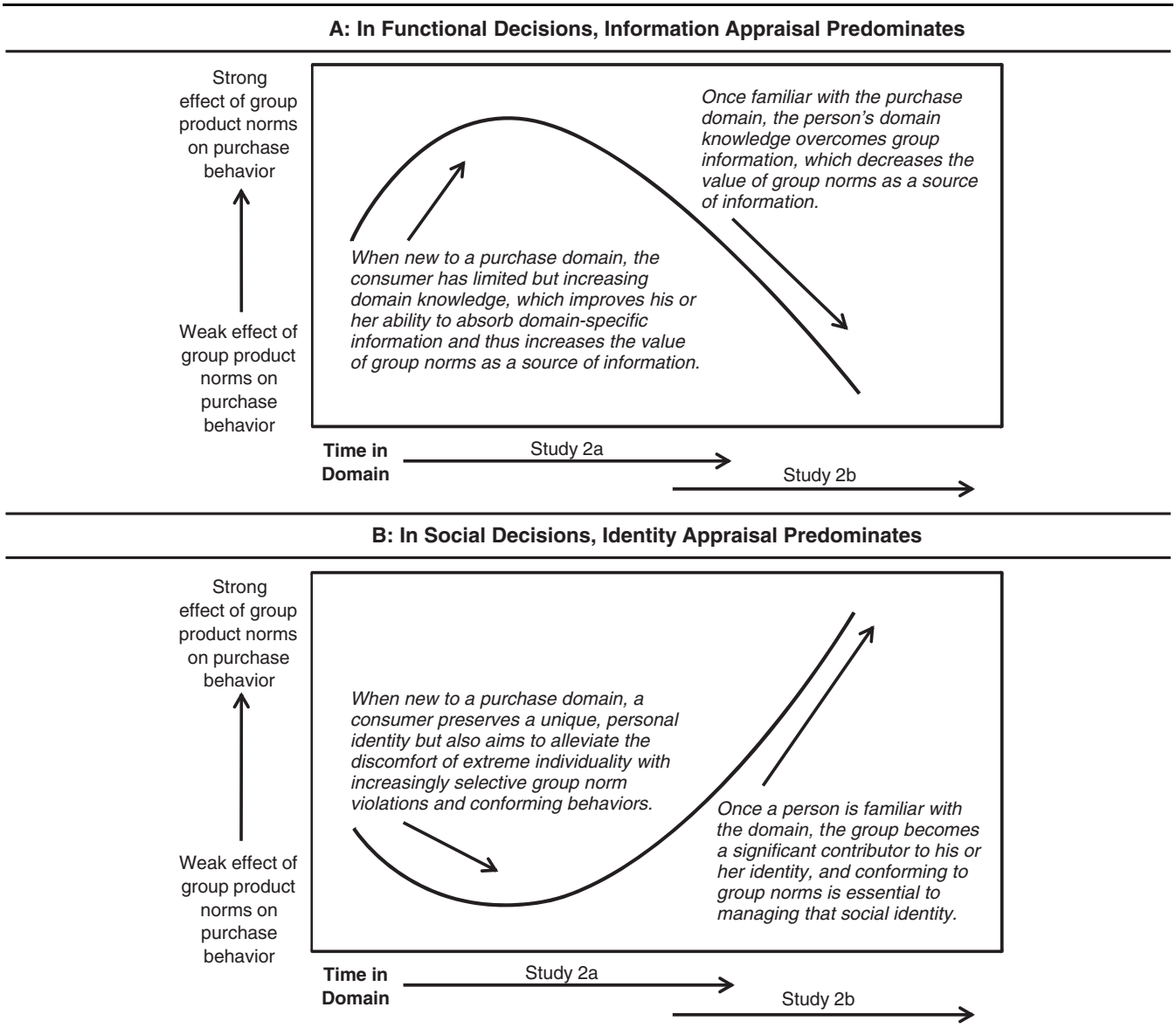
[2]The effects we observe theoretically could reflect a degradation of the nonconforming product (Product A) rather than an enhancement of the value of the conforming product (Product B). A nonsignificant analysis of variance comparing the mean willingness to pay for just Product A (nonconforming product) rules out this alternative explanation (F(3, 218) = 1.22, p = .30).

of groups on purchase behavior through information appraisals likely follows an inverted U-shape, such that the effect strengthens at first and then weakens as people become more familiar with the purchase domain. The effect of groups through identity appraisals instead should follow a U-shape as time in the domain increases, weakening at first but then becoming stronger (see Figure 2). We capture the dynamic effects by observing group members over time as they enter a new purchase domain in Study 2a or make a more familiar purchase in Study 2b.

Study 2: Conceptual Model and Hypotheses

Although group influences on information and identity appraisals can drive conforming behavior, in certain conditions, one mechanism might predominate over the other. Tasks that enable people to discover a correct answer, rather than express an opinion, increase information appraisals (Kaplan and Miller 1987). Identity appraisals instead are stronger when the decision involves high levels of conspicuousness or emphasizes social and emotional relations over evaluations of factual information (Bearden and Etzel 1982). Accordingly, to isolate the different effects of groups on information and identity appraisals, we consider decision processes associated with the purchase of functional and social products. Functional products provide utility; when faced with the need to purchase them, people tend to rely on data and available information (Crano 2000), gauging the accuracy of this information to predict the product's functional benefits. Social products instead act as "symbols and sentiments used to build individual and social identities and

FIGURE 2
Dynamic Effects of Group Product Norms on Purchase Behavior



communicate meanings to others," so these decision processes rely more on building and maintaining the self-concept (Schau, Muñiz, and Arnould 2009, p. 1011).

Regardless of whether purchases are functional or social, the strength of a group norm can affect the degree of influence a group has on a product decision. When the information circulating within the group about a product becomes more consistent, the group norm strengthens and is more clearly defined. When more people respond to the same situation (e.g., purchase decision) in the same way, they increasingly perceive that behavior as correct, triggering a "consensus implies correctness" appraisal (Cialdini and Trost 1998, p. 163). For functional decisions, it increases assessments of the group's credibility and enhances the member's confidence and trust in the information (Meyerson, Weick, and Kramer 1995), which then appears more diagnostic for the decision and influences information appraisals (Figure 2).

Group norms also should affect the identity appraisals that occur during social product decisions. If the group norm is weak, members cannot easily identify group-specific cultural markers or socially appropriate behaviors. As it strengthens, more consistent norms clarify the collective group identity and more clearly define "symbols that mark the identity and practices that distinguish members from non-members" (Komito 1998, p. 99). In addition, with strong group norms, inconsistent purchase behavior raises a more dramatic contrast. The resulting cognitive dissonance prompts discomfort for the dissenting group member and challenges the group's identity, which can provoke sanctions from other group members who work to maintain its integrity (Fehr and Fischbacher 2004). Thus, during social decisions, strong group norms alter identity appraisals in favor of the group, which motivates members to make product purchases that conform with the purchases of other group members.

Dynamic effect of groups on information appraisals. Functional decisions require information appraisals; a person uses information to determine the uncertainty and risks associated with a decision. People attempt to alleviate these risks by appraising both external information (i.e., behavior of others) and internal information (personal experiences). With more time in a domain, a tension arises between these sources of information. The interplay between knowledge acquired from the group and private knowledge determines the net dynamic effect of groups on conforming behavior. When a person has spent only brief time in a domain, (s)he lacks fundamental domain knowledge, so publicly observable group behavior is more diagnostic than private knowledge. Yet this lack of domain knowledge limits the person's capacity to interpret and absorb information in the domain (Zahra and George 2002). As domain knowledge grows, the capacity to identify relevant information from observations of the group increases, so group influence strengthens as the new member builds domain knowledge and absorbs information from group behavior more readily.

Over time, private knowledge continues to build and eventually outweighs the knowledge gained from observations of group behavior. Group information spreads quickly and becomes redundant (Risselada, Verhoef, and Bijmolt 2014). With more time in the domain, frequent interactions with external ties provide diverse perspectives and new knowledge that is not available within the group (Perry-Smith and Shalley 2003), leading to greater domain expertise and, thus, more confidence in the person's autonomous decision-making abilities. That is, as private knowledge increases over time, the value of group information relative to other information lessens, the person attends less to group information, and the impact of group norms on purchase behavior weakens. Figure 3 summarizes the overall conceptual model.

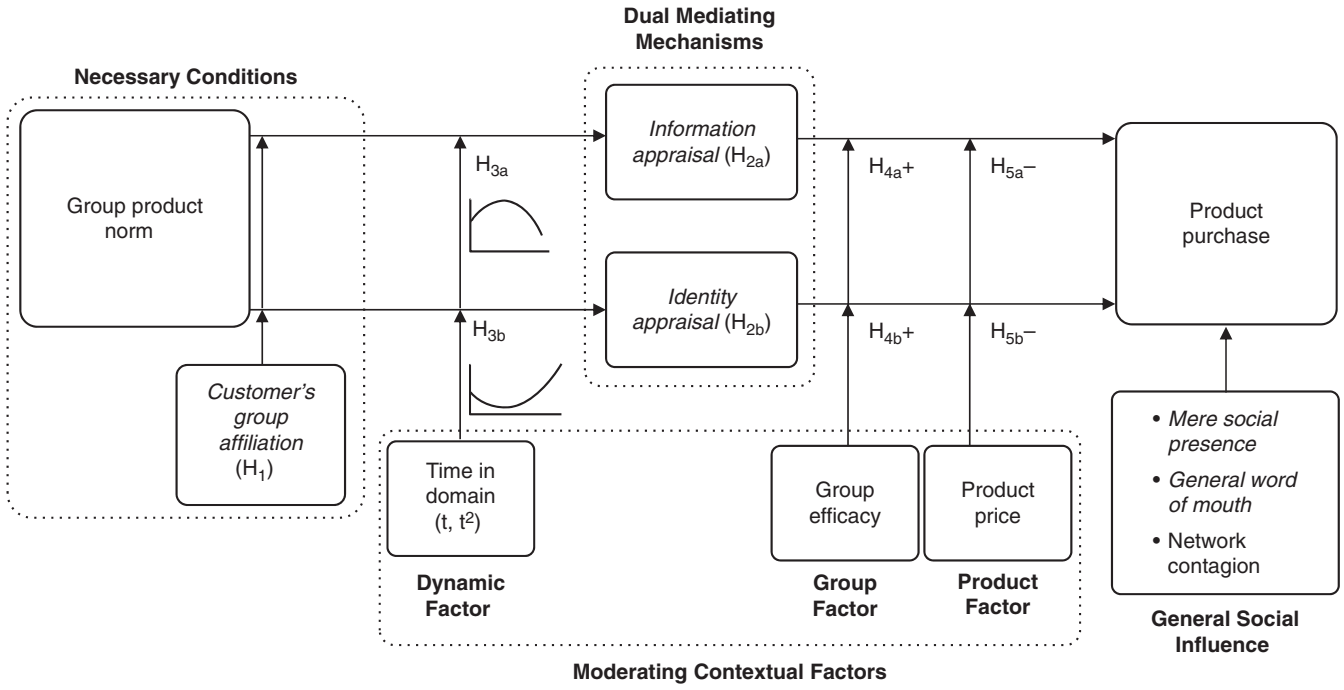
H_{3a}: For functional decisions, the strength of the effect of group product norms on purchase behavior follows an inverted U-shape as a member's time in the domain increases.

Dynamic effect of groups on identity appraisals. Social decisions require a high degree of self-evaluative processing, in which the person determines the value of the decision for managing his or her identity. Thus, a person's self-concept and how it is defined play essential roles. The self is relatively stable and resistant to change, but with more time in a domain, the self-concept expands to incorporate new identities relevant to that domain and key social structures within it (Brewer 1991). This process involves a shifting balance between two significant components of identity: personal identity and social identity. As time in a domain increases, a tension arises between preserving the unique, personal identity versus managing the depersonalized social identity. In this process, the group provides a basis for self-evaluation.

When a person enters a new purchase domain, his or her unique, personal identity predominates, and (s)he is more characteristic of an outsider. This position can create a sense of individuality and extreme distinctiveness, leaving the person at risk of isolation and potential negative emotions (Brewer 1991). The group can provide a means to alleviate this vulnerability and reduce the outward contrast by supplying directions for how to enact an identity that is appropriate for the new domain. To gain acceptance, the person attempts to create outward perceptions of similarity with the group by pursuing as many conforming behaviors as necessary to alleviate the discomfort. However, this process of diluting the unique, personal self can threaten the identity, which often prompts people to pursue self-protective action to reduce the amount of self-dilution required to fit in to the new domain. As time in the domain increases, it becomes easier to identify core norms (e.g., language, roles) versus those that can be violated without issue and thereby manage the inconsistencies between outward actions and inward self-conceptions (Sedikides and Green 2000). The customer likely can comply with the minimum required group norms and avoid violating vital group norms while still protecting a unique self-concept. Therefore, group influences on conforming behavior should be strong at first but then weaken as the member learns how to preserve a unique identity.

Yet the self is essentially social in nature. As a person assimilates to the domain over time, the self expands, and the outsider becomes an insider. This transformation requires the person to abandon some unique properties and redefine the self as a prototypical member of that domain. To manage this self-dilution, which can threaten a sense of distinctiveness, group norms that once defined how to fit in emerge as guides for how to stand out through intergroup comparisons (Brewer 1991).

FIGURE 3
Effect of Group Product Norms on Purchase Behavior



Notes: Constructs in italics were tested in Study 1. Constructs in roman font were tested in Studies 2a and 2b.

The group identity becomes a strong contributor to the person's sense of distinctiveness, and the group norms that previously threatened the self transform to become self-reinforcing. The member thus conforms to group norms not only to be accepted but also to create favorable impressions relative to others in the domain (Schau, Muñiz, and Arnould 2009). In summary, we propose that the influence of groups on conforming behavior weakens initially as the person rejects group norms to preserve a personal identity, then becomes stronger as the group contributes more to identity, and the person uses group norms to maintain her or his self-concept.

H_{3b}: For social decisions, the strength of the effect of group product norms on purchase behavior follows a U-shape as a group member's time in the domain increases.

Factors moderating group influence. People use a wide range of heuristics to determine when to conform with others and whom to copy, according to situational factors (Morgan and Laland 2012). Some factors might strengthen or weaken the effect of groups. For example, group efficacy, or the ability of the group to perform effectively in the domain, might change a member's interpretations of group information and the value of the group to the self. When a group is objectively more effective in a domain, providing visible signs of success, the information it provides likely is perceived as more credible and legitimate, and people are more likely to imitate group behaviors (Lascu and Zinkhan 1999). Therefore, the perceived value of group information for making functional decisions increases, which should strengthen the effect of the group's norms on purchase behaviors (Crano 2000). Group efficacy also might increase the appeal of the group as a contributor to the person's identity and arise as a significant source of self-confidence, pride, self-worth, and positive distinctiveness (Grier and Deshpandé 2001). For social decisions, group efficacy should strengthen the effects of the group norm on conforming behavior by increasing the motivation to conform for identity enhancement.

H_4: For (a) functional and (b) social decisions, the positive effect of group product norms on purchase behavior is enhanced by group efficacy.

Finally, product characteristics, such as product price, affect the influence of groups on conformity behavior. For functional products, a higher price increases the person's desire to make a correct choice. If a correct answer exists, group members likely are motivated to exchange information more comprehensively and examine it carefully. The more extensive information search that results may extend beyond the group's boundaries and weaken the effect of group norms. For social products, as the price increases, the desire to make an appropriate decision again increases, because more expensive social products offer greater signaling power for a personal identity, which may weaken the effect of group norms on the self.

H_5: For (a) functional and (b) social decisions, the positive effect of group product norms on purchase behavior is suppressed by product price.

Study 2a: Dynamic Effect of Groups in New Purchase Domains

We test our conceptual model using observations of both functional and social product purchases to isolate the distinct, dynamic effects of groups on conforming behavior through

information and identity appraisals. This study captures early dynamic effects to understand the role of groups when members make purchases in a new domain.

Study 2a: sample. Study 2a took place within the context of a massive multiplayer online role-playing game. The game featured a three-dimensional, immersive virtual world, similar to Second Life. In these computer-mediated environments, participants' avatars inhabit, socialize, and perform economic and social activities. Participants can choose careers and engage in different tasks and activities, including organizing into groups to perform various tasks (e.g., hunting treasure, growing agricultural products, starting virtual families). Adding to the realism, participants can purchase virtual goods by exchanging real money for virtual currency, then use the virtual currency to buy products from virtual stores. From the firm, we obtained a detailed log file that contained all participants' activities, such as the time each participant logged in or out of the game, their detailed interactions with one another, the content of their interactions, and the products they purchased. The data began with the initial launch date of the game and spanned 64 subsequent days. Thus, we could unobtrusively observe the groups and capture the dynamic, nonlinear effect of group product norms on participants' purchases from the very moment they enter the domain.

Study 2a: measures. All correlations and descriptive statistics are in Table 2, Panel B; the construct definitions, operationalizations, and equations are in Table 3. One of the basic descriptors of a norm is that it represents typical behavior within the group. Thus, to quantify the strength of each potential group norm relative to a given product, which is a shared group-level variable that is relevant to participant i_0 for product j in group g at time t (GN_{i_0jgt}), we calculated the lagged percentage of participants who purchased the focal product j in group g at time t. This measurement allows the strength of norms to vary by product and allows each product norm to be independent of one another, as in real life. Take, for example, a group of teenage girls. Strong norms are easily observed in their common clothing choices. However, a choice of T-shirt style should not affect the normative choice of cell phones, so their product norms are independent. To capture the dynamic effects of groups over time, we measured the time each participant spent in the domain (T_{i_0t}) at time t. The data set provides detailed login and logout times, which we used to calculate the total minutes each participant spent in the domain before buying a product. For group efficacy (GE_{gt}), we calculated the average number of tasks successfully completed by all participants in group g at time t. To assess the role of product price (P_{jt}), we used data about the price a participant paid for product j purchased at time t.

Two experts with in-depth knowledge of the context coded the products as functional, social, or hybrid, according to the firm-provided descriptions of each product. For example, functional products included tools that helped the participants increase farming output or herbal supplements to increase their avatars' physical health. Social products included accessories and souvenirs that mainly enhanced the participant's image within the domain. Finally, we dropped products that were equally functional and social (e.g., vehicles). We also excluded products with average purchase frequencies of less than 25% of all products. Because approximately twice as many functional as social products emerged from these procedures, we randomly selected 24 functional and 12 social products to match the overall sample. Of the more than 200 groups in the domain, we randomly selected 40 groups; 1 contained too many missing values. Therefore, our data consist of more than 4.7 billion data points (52,833 observations × 39 groups × 36 products × 64 days). Although participants could belong to multiple groups, our model is based on the participants' dominant group, identified by where they spent the most time.[3] Following prior research on hazard models (Iyengar, Van den Bulte, and Valente 2011), we coded the initial purchase of a product as 1 if participants purchased during the observation period, before we truncated the data, and 0 otherwise.

Most marketing research has examined conforming behavior at the network level (Van den Bulte and Lilien 2001), but we aim to isolate the effects of group norms on conforming behavior while also controlling for network effects. Therefore, we calculated network contagion (NC_{i_0jt}) as a participant's exposure through various social interactions (communication, joint tasks, and transactions) to other participants who had previously purchased the product. We also controlled for the installed user base (IUB_{jt}), gender (G_{i_0}), customer average wallet (AW_{i_0t}), average customer performance (ACP_{i_0t}), group size (S_{gt}), friendship centrality (number of friends that participant i_0 made at time t, FC_{i_0t}; participants can "friend" each other in the domain), and business relationship centrality (number of business partners buying from or selling to participant i_0 at time t, BC_{i_0t}), all of which might affect individual product purchases.

Study 2a: analysis. Because the data are right censored, standard approaches are not suitable for analyzing purchases. Hazard models can analyze the effects of time-varying and time-constant covariates on a participant's purchase probability while accounting for right censoring (Cameron and Trivedi 2005). Similar to prior work (Iyengar, Van den Bulte, and Valente 2011), we used the lagged measure before users' adoption time t for all independent variables in our estimation. Therefore, we formulated the hazard model $h(t|\mathbf{X}_{i_0\mathbf{jgt}-1})$ for participant i_0's adoption of product j in group g at time t as follows:

$$\ln\left(h\left[t|\mathbf{X}_{i_0\mathbf{jgt}-1}\right]\right) = \boldsymbol{\alpha} + \mathbf{X}_{i_0\mathbf{jgt}-1}\boldsymbol{\beta}, \quad (1)$$

where t is the time that participant i_0 in group g purchased product j, $\boldsymbol{\alpha}$ is the baseline of the hazard model that represents the purchase of product j at time t in group g, $\mathbf{X}_{i_0\mathbf{jgt}-1}$ is a row vector of covariates that indicates that participant i_0 purchased product j in group g at time $t-1$, and $\boldsymbol{\beta}$ is a column vector of parameters to be estimated for product j in group g. Consistent with prior literature (Cameron and Trivedi 2005), we calculated participant i_0's purchase hazard rate $h(t|\mathbf{X}_{i_0\mathbf{jgt}-1})$ for product j in group g at time t as

$$h\left(t\left|\mathbf{X}_{i_0\mathbf{jgt}-1}\right.\right) = d\mathbf{F}(t)_{i_0jg}\Big/dt, \quad (2)$$

[3]As a robustness check, we tested the model on a subsample of participants who were members of only one group for the duration of the study. The results remained consistent, as we show in Web Appendix A.

TABLE 3
Key Constructs, Definitions, and Operationalizations

Constructs (Label)	Definitions	Operationalizations
Group product norm (GN_{ijgt})	Informal understanding of what is typical among group members, relevant to a specific product.	$(\sum_{t=1}^{t-1}\sum_{i_0=1}^{N} y_{i_0jt} z_{ijt} w_{i_0gt} \gamma_{ii_0t}) / \sum_{i_0=1}^{N} w_{i_0gt}$, where N represents users in the domain, y_{i_0jt} captures whether participant i_0 purchased product j at time t, z_{ijt} is set to 1 if participant i purchased product j at time t and 0 if not, w_{i_0gt} equals 1 if participant i_0 joined group g at time t and 0 otherwise, and γ_{ii_0t} equals 1 if user i and i_0 and 0 are in the same group at time t, 0 if not.
Time in domain (T_{it})	The cumulative time a person spends in a given domain.	The total number of minutes each participant spent in the group g (based on login and logout times) until (s)he bought the product (at time t); if a participant did not purchase the product, we used the point at which we truncated the data.
Group efficacy (GE_{gt})	The ability of the group to perform effectively in a given domain.	$(\sum_{i}^{N} Task_{it} \times w_{igt}) / \sum_{i_0}^{N_{gt-1}} w_{i_0gt-1}$, where $Task_{it}$ represents how many tasks participant i finished at time t, and w_{igt-1} equals 1 if participant i joined group g at time t and 0 otherwise.
Product price (P_{jt})	Cost of a good.	How much a participant paid for product j purchased at time t.
Network contagion (NC_{ijt})	A person's exposure to prior product purchasers through various social interactions.	$\sum_{t=1}^{t}\sum_{i_0=1}^{N} y_{i_0jt}\gamma_{ii_0t}\ z_{ijt}$, where y_{i_0jt} captures whether user i_0 purchased product j at time t, z_{ijt} is set to 1 if user i purchased product j at time t and to 0 if not, and γ_{ii_0t} equals 1 if a connection formed at time t between user i and i_0 and 0 otherwise.
Installed user base (IUB_{jt})	Number of members who purchased product j throughout the entire domain.	The number of members in the entire domain who purchased the product before participant i_0 buys product j at time t.
Gender (G_i)	Customer gender.	Men = 1, women = 0.
Customer average wallet (AW_{it})	Average amount of financial resources an individual has available.	$\sum_{1}^{t} I_{i_0t}/t$, where I_{i_0t} is the income that participant i_0 earned in the game at time t.
Customer average performance (ACP_t)	Individual measure of ability to complete tasks successfully within the domain.	$\sum_{1}^{t} task_{i_0t}/t$, where $task_{i_0t}$ is the task that participant i_0 finished at time t.
Group size (S_{gt})	Number of people in a particular group.	$\sum_{i_0=1}^{n} w_{i_0gt}$, where w_{i_0gt} equals 1 if person i_0 joins group g at time t and 0 otherwise.
Friendship centrality (FC_{it})	Number of friends before time t.	Number of friends that participant i made at time t.
Business relationship centrality (BC_{it})	Number of business partners before time t.	Number of business partners that participant i made at time t.

TABLE 4
Dynamic Effects of Group Product Norms on Purchase Behaviors

A: Study 2a Results

	Hypothesis	Functional Decisions: Product Purchase		Social Decisions: Product Purchase	
		Model 1	Model 2	Model 3	Model 4
Group product norms		.20 (.01)**	.23 (.01)**	.28 (.02)**	.30 (.04)**
Moderator: Dynamic Factor					
Group product norms × Time in domain			.12 (.03)**		−.16 (.01)**
Group product norms × Time in domain^2	H_3		−.17 (.02)**		.27 (.11)**
Moderator: Group Factor					
Group product norms × Group efficacy	H_4		.04 (.00)**		.05 (.03)*
Moderator: Decision Factor					
Group product norms × Product price	H_5		−.03 (.01)**		−.05 (.02)**
Controls					
Time in domain		.13 (.03)**	.17 (.04)**	.21 (.03)**	.18 (.04)**
Time in domain^2		−.08 (.01)**	−.09 (.01)**	−.25 (.02)**	−.16 (.03)**
Group efficacy		.18 (.03)**	.13 (.02)**	.14 (.14)	.18 (.07)**
Product price		−.09 (.10)	−.06 (.10)	−.02 (.00)*	−.02 (.00)**
Network contagion		.06 (.02)**	.08 (.03)**	.15 (.04)**	.11 (.02)**
Installed user base		.17 (.02)**	.13 (.01)**	.11 (.02)**	.09 (.03)**
Customer gender		.30 (.03)**	.24 (.05)*	.26 (.03)**	.20 (.06)**
Customer average wallet		.25 (.07)**	.37 (.02)**	.20 (.05)**	.27 (.01)**
Average customer performance		.24 (.05)**	.21 (.03)**	.16 (.03)**	.11 (.02)**
Group size		.21 (.03)**	.32 (.01)**	.15 (.02)**	.24 (.06)**
Friendship centrality		.17 (.04)**	.11 (.01)**	.18 (.08)*	.10 (.01)**
Business relationship centrality		.11 (.01)*	.16 (.04)*	.18 (.06)**	.20 (.03)**
Inverse Mills ratio		.63 (.42)	1.02 (.36)*	.51 (.41)	.93 (.30)**
Log pseudo-likelihood		−173,018.73	−170,933.06	−48,977.38	−48,772.31
Akaike information criterion		173,046.73	170,969.06	49,005.38	48,808.31

B: Study 2b Results

	Hypothesis	Functional Decisions: Willingness to Pay				Social Decisions: Willingness to Pay			
		Model 1		Model 2		Model 3		Model 4	
Group product norms		14.20	(5.74)*	13.15	(6.73)	17.56	(5.90)**	22.79	(7.22)**
Moderator: Dynamic Factor									
Group product norms × Time in domain	H_3	−17	(.07)*	−20	(.12)	.17	(.06)**	.26	(.10)**
Group product norms × Time in domain^2				.00	(.00)			.00	(.00)
Controls									
Time in domain		−.02	(.04)	−.02	(.04)	−.03	(.03)	−.02	(.03)
Typical purchase price		.15	(.09)	.15	(.09)	.14	(.12)	.13	(.12)
Color preference		.90	(2.22)	.84	(2.24)	.37	(2.30)	.18	(2.30)
Intercept		−27.90	(15.03)	−27.41	(15.18)	−17.06	(18.82)	−17.57	(18.78)
R^2		.09		.08		.14		.14	

*$p < .05$.
**$p < .01$.
Notes: The cells contain regression coefficients. Standard errors are in parentheses.

where $\mathbf{F}(t)_{i_0\mathbf{jg}}$ is a cumulative distribution function of product j for participant i_0's purchase in group g at time t. To estimate the results, we used a partial likelihood estimation employing the proc phreg procedure in SAS 9.4. For the models of the predicted effects of the group product norm on purchase behaviors for functional (inverted U-shape) and social (U-shape) decisions over time, as moderated by group efficacy and product price, we test the following equation:

$$
\begin{aligned}
(3)\quad \ln\left[h\left(t|\mathbf{X}_{i_0\mathbf{jgt}-1}\right)\right] = {} & \boldsymbol{\alpha} + \boldsymbol{\beta}_1 GN_{i_0jgt-1} + \boldsymbol{\beta}_2 T_{i_0t-1} + \boldsymbol{\beta}_3 T^2_{i_0t-1} \\
& + \boldsymbol{\beta}_4 GE_{gt-1} + \boldsymbol{\beta}_5 P_{jt} + \boldsymbol{\beta}_6 GN_{i_0jgt-1} \times T_{it} \\
& + \boldsymbol{\beta}_7 GN_{i_0jgt-1} \times T^2_{i_0t-1} + \boldsymbol{\beta}_8 GN_{i_0jgt-1} \\
& \times GE_{gt-1} + \boldsymbol{\beta}_9 GN_{i_0jgt} \times P_{jt} + \boldsymbol{\beta}_{10} IUB_{jt-1} \\
& + \boldsymbol{\beta}_{11} G_{i_0} + \boldsymbol{\beta}_{12} NC_{i_0jt-1} + \boldsymbol{\beta}_{13} ACP_{i_0t-1} \\
& + \boldsymbol{\beta}_{14} AW_{i_0t-1} + \boldsymbol{\beta}_{15} S_{gt-1} + \boldsymbol{\beta}_{16} FC_{i_0t-1} \\
& + \boldsymbol{\beta}_{17} BC_{i_0t-1},
\end{aligned}
$$

where GN_{i_0jgt-1} captures the group norm of product j in group g at time t–1, T_{i_0t} represents the amount of time participant i_0 has spent in the domain at time t–1, GE_{gt-1} is the efficacy of group g at time t–1, P_{jt} is the price of product j at time t–1, NC_{i_0jt-1} is network contagion relevant to participant i_0 about product j at time t–1, IUB_{jt-1} indicates the installed user base of product j at time t–1, G_{i_0} is the gender of participant i_0, ACP_{i_0t-1} reveals average participant performance at time t–1, AW_{i_0t-1} stands for the participants' average wallet at time t–1, S_{gt-1} indicates group size at time t–1, FC_{i_0t-1} is friendship centrality, and BC_{i_0t-1} is business relationship centrality at time t–1.

Because we expect opposing effects of groups on information and identity appraisals, which would be lost if we aggregated the data, we ran two parallel models (functional and social) to isolate the different hypothesized curvilinear effects. A Schoenfeld test confirmed the assumptions of proportional hazard for both the functional (.68, $p > .20$) and social (.62, $p > .20$) models. To control for unobserved heterogeneity, we used a Cox proportional hazard model. Because participants could voluntarily join groups, our estimation may suffer from self-selection effects, so we adopted a two-stage self-selection model. For each group g, we conducted a probit selection model to determine whether customer i_0 participates. As independent variables, we included group efficacy (GE_{gt}), group size (S_{gt}), gender (G_{i_0}), customer average wallet (AW_{i_0t}), average customer performance (ACP_{i_0t}), friendship centrality (FC_{i_0t}), and business relationship centrality (BC_{i_0t}). We calculated the inverse Mills ratio and added it to our model (Equation 3) as a control.

Study 2a: results and discussion. To account for scaling differences, we standardized all variables before entering them into the models. The base model included the group norm (GN_{i_0jgt}), time in the domain (T_{i_0t}), group efficacy (GE_{gt}), product price (P_{jt}), and the control variables. The final model also tested for the moderating effects of time in the domain ($T^2_{i_0t}$), group efficacy (GE_{gt}), and product price (P_{jt}). The differences in the –2 log-likelihood between the base and final models (functional $\Delta\chi^2(4) = -2{,}085.67$, $p < .01$; social $\Delta\chi^2(4) = 205.07$, $p < .01$) provided support for including the interaction terms in the model. As Table 4, Panel A, illustrates, for functional decisions, time in the domain has a significant positive moderating effect ($\beta_6 = .12$, $p < .01$), but the quadratic term of time in the domain has a significant negative moderating effect ($\beta_7 = -.17$, $p < .01$), so the influence of the group norm on purchase behavior strengthens at first and then weakens over time, in support of H_{3a}. In support of H_{3b}, time in the domain has a significant negative moderating effect ($\beta_6 = -.16$, $p < .01$), and the quadratic term of time in the domain has a significant positive moderating effect ($\beta_7 = .27$, $p < .01$) on purchase behaviors, suggesting a U-shaped relationship for social decisions. Group efficacy strengthens the effect of the group product norm on conforming purchase behavior for functional decisions ($\beta_8 = .04$, $p < .01$), as we predicted in H_{4a}. Although the effect was positive, it was not significant for social decisions ($\beta_8 = .05$, $p > .10$), so we cannot confirm H_{4b}. Finally, price weakens the effect of the group product norm on purchase behavior for both functional ($\beta_9 = -.03$, $p < .01$) and social ($\beta_9 = -.05$, $p < .01$) decisions, as we predicted in H_5.

To test the effect of group norms relative to network contagion, we ran a chi-square difference test that compared the –2 log-likelihood from our original model with an alternative model in which the coefficients for the group product norm and network contagion were set to be equal. For both functional ($\Delta\chi^2(4) = 163.47$, $p < .01$; $\beta_1 = .20 > \beta_{12} = .06$) and social ($\Delta\chi^2(4) = 72.61$, $p < .01$; $\beta_1 = .28 > \beta_{12} = .15$) models, the original model fit significantly better than the alternative model, and group norms had a stronger effect than the social network.

To test the robustness of our findings, we conducted three additional analyses (see Web Appendix A). First, we ran a series of sensitivity analyses with different distribution assumptions: Weibull, exponential, and lognormal. The exponential duration distribution uses a constant hazard rate that does not vary with time, the Weibull distribution allows for a hazard rate with a monotonically increasing or decreasing rate (scale), and the lognormal distribution can structure an accelerated failure model. The results are largely consistent, though the Akaike information criteria for the Cox proportional hazard model are lower, indicating a better fit. Second, to ensure that our effects are due to the differences between social and functional decision contexts, not sampling differences, we ran a series of analyses of variance to test for mean differences between the two contexts across all covariates in the model. None of the tests was significant ($p > .05$). Third, we conducted the same test between sampled and nonsampled groups. Again, none of the tests was significant (see Web Appendix B).

Study 2b: Dynamic Effect of Groups in Familiar Purchase Domains

In Study 2a, we examined the dynamic effects of group norms on customer decisions when the customers are new to a purchase domain. In Study 2b, we examine the effects of groups when people are relatively more familiar with the domain. In addition, with Study 2a we used different products to identify decisions for which information and identity mechanisms should be most prominent, which helped us study the effect of groups over time using real customer purchases. Yet we could not isolate functional or social effects from other product characteristics. So, in Study 2b, we keep the product constant to address this potential confound.

Study 2b: design and sample. Study 2b uses two parallel experiments for functional and social products, each with one manipulated (group norm) and one measured (time in domain) variable. We captured the real time spent in the focal domain over the course of several years, and we used fictitious running groups. In this context, variations in time spent in the domain can be captured easily, group membership can be simulated through an experimental design, and people purchase both functional and social products. We used the same product choice situation from Study 1 and recruited 247 participants from Amazon's Mechanical Turk.

Study 2b: procedure. Because running was the focal domain, we measured time in the domain as the self-reported amount of time participants had been running over their lifetime, calculated using the average time per week and number of years running. To simulate the feeling of being in a group, we used their state of residence as a demarcation, informing participants,

"Congratulations! You've been selected to be part of our special [State Name] Runners Test Group! You will now join a selective group of people from [State Name] as [State Name] Runner 023." To confirm the effectiveness of this manipulation, we asked participants if they felt they were part of a group, using a seven-point Likert type scale (functional = 5.85, social = 6.00).

The description of the task—selecting the product that either performed better (functional) or was more self-expressive (social)—served as the manipulation for the decision context. Previous studies have suggested that a manipulation that indicates the decision has one correct answer (functional) or involves making a judgment (social) makes information and identity appraisals more salient, respectively (Kaplan and Miller 1987). Participants in the functional condition indicated that their decision was based on product performance more than did those in the social condition (M_{funct} = 5.79, M_{soc} = 4.86; F(1, 246) = 35.08, $p < .01$); those in the social condition noted that their decision was based on the self-expressiveness of the product more than did those in the functional condition (M_{funct} = 4.32, M_{soc} = 5.75; F(1, 246) = 59.07, $p < .01$). The participants then reviewed the two products and fictional feedback (i.e., visual representation of group members' product choices) from others who were reported to be in the same [State Name] Runners Test Group. The feedback served as the manipulation of the strength of the group norm and is similar to manipulations used in previous studies on group norms (Goldstein, Cialdini, and Griskevicius 2008). The manipulation performed as expected (functional M_{low} = 3.61, M_{high} = 5.28; F(1, 120) = 43.33, $p < .01$; social M_{low} = 3.74, M_{high} = 4.96; F(1, 125) = 35.15, $p < .01$). Finally, participants made their product selection and stated how much more they were willing to pay for the chosen product than for the other option. The correlations and descriptive statistics are in Table 2, Panel C (for the experimental stimuli and measures, see the Appendix).

Study 2b: results and discussion. Table 4, Panel B, presents the results of the regression analysis. We examined the effect of the interaction between group norms and the time spent in the domain on willingness to pay, controlling for the typical price paid for products in the focal product category and color preferences. As a replication of Study 2, we tested the quadratic coefficient for time, but in both models, including this term worsened overall model fit[4] (Models 2 and 4; Table 4, Panel B). This effect likely arose because our sample only captures the right-hand side of the curvilinear effects. That is, participants were new to the domain in Study 2a (two months), whereas the average participant in Study 2b had been in the domain for 11 years. Thus, we tested the hypotheses using the results from the linear Models 1 and 3 in Table 4.

In line with our arguments, for functional decisions, time in the domain should negatively moderate the effect of the group product norm on willingness to pay for the conforming product (i.e., second half of the curvilinear effect); it accordingly weakened the effect of the group norm on willingness to pay (β = –.17, SE = .07, $p < .05$), consistent with H_{3a}. For social decisions, the effect of the group norm on willingness to pay (β = .17, SE = .06, $p < .05$) for the conforming product strengthens as time in the domain increases, consistent with H_{3b}. Thus, with more time in the domain, group norms exert less influence on functional decisions and more influence on social decisions, in line with Study 2a.

[4]As a robustness check, we used a combined sample and tested the moderating effect of the decision context. As we expected, we found a significant (β = 3.01, SE = 1.02, $p < .01$) three-way interaction (decision context × group norm × time).

General Discussion

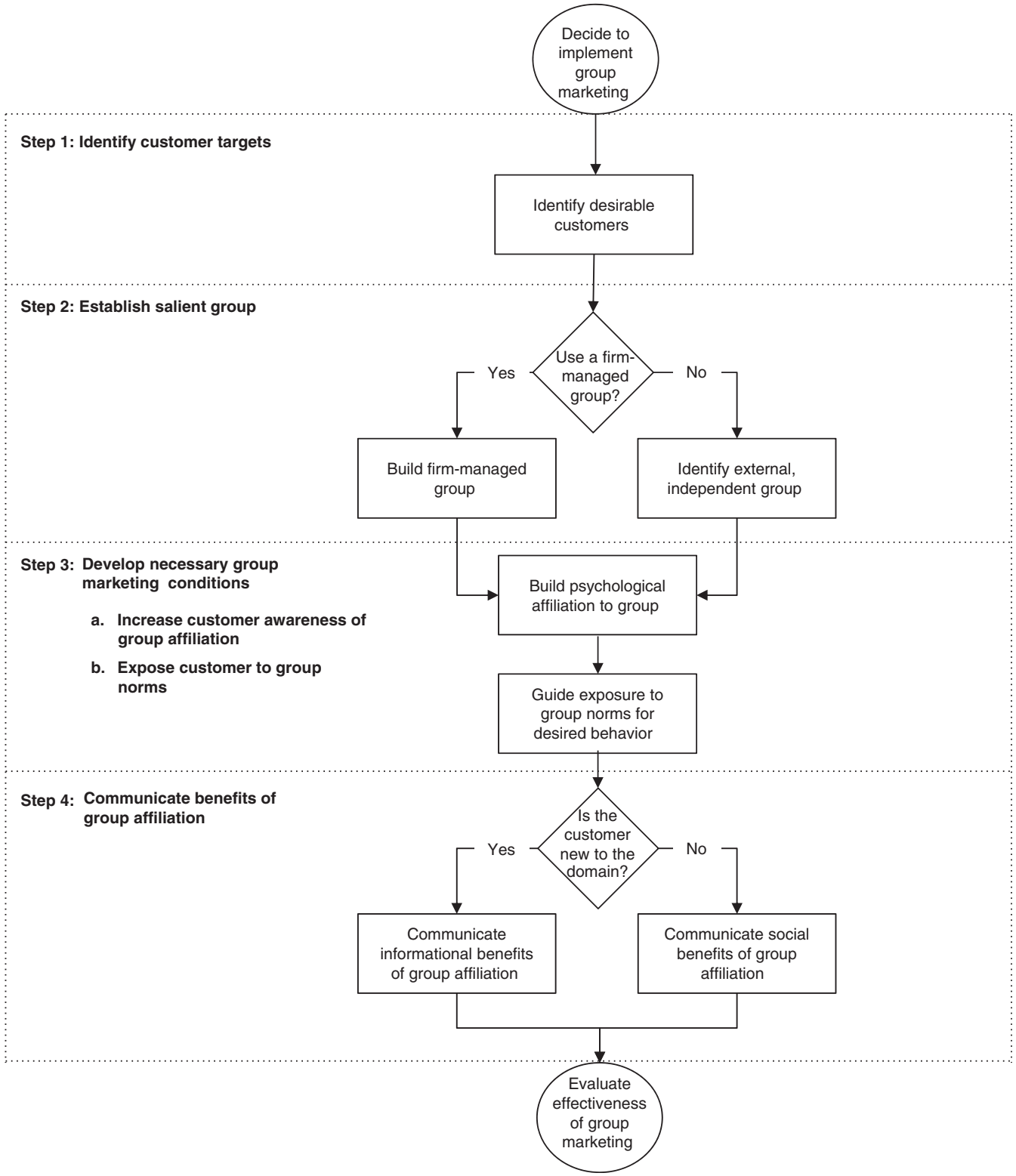
In this research, we attempt to provide a theoretical foundation for group marketing by exploring the notion of the "group" and how membership within a group can drive behaviors that conform to the group norm. Across three studies incorporating multiple methods, we demonstrate that when a customer is aware of her or his affiliation with the group and exposed to a group norm, it can alter information and identity appraisals during decision making, such that the customer tends to match her or his purchase behaviors with those of the group. Thus, this research contributes to marketing research on groups.

It also contributes to the discourse about the dynamic effects of groups on behavior and provides some resolution to contrasting findings that suggest increasing or decreasing social influence over time (Cendrowski 2012; Risselada, Verhoef, and Bijmolt 2014). We show that this conflict stems from a failure to account for two key factors. First, we distinguish information from identity appraisals. Second, we identify the time a person has spent in the purchase domain as a critical determinant of the group's dynamic effect. The group influence on purchase behavior through information appraisals diminishes over time; the reverse is true when an identity appraisal is most salient. If a person is new to a domain, (s)he is similar to an outsider and works to protect a unique personal identity while also reducing the discomfort of standing out from the domain. Thus, group influence is weak and limited to reducing outward contrasts. Over time, group norms become key for enacting a social identity, and the person conforms with the group to manage the self-concept. Finally, group efficacy strengthens and product price weakens a group's influence on members' behavior. To provide guidance to managers, we use these theoretical foundations to articulate the key process steps in executing group marketing and present these steps in Figure 4.

Managerial Insights: Process for Executing Group Marketing

In line with the theory we have presented, effective group marketing becomes a matter of strategically guiding the conditions that create group influence and dynamically customizing this as the customer's time in a domain increases. The first step in the group marketing process, as in many other marketing strategies, is to identify desirable customer targets using indicators such as projected customer lifetime value (Venkatesan and Kumar 2004) or customer engagement value (Kumar et al. 2010). Second, marketers must establish a salient group affiliation, which requires deciding between building a firm-managed group or identifying a customer's existing group affiliation, independent of the firm. Providing a firm-managed group (e.g., Barnes & Noble book clubs, Nike running clubs) has many benefits; it facilitates the firm's access to group members, and allows the firm to suggest group norms and

FIGURE 4
Process for Executing Group Marketing



manage norm exposure. However, it also accrues higher costs, such as those for platform design and management (Dholakia, Bagozzi, and Pearo 2004) or offline meeting spaces. Leveraging customers' affiliation with an independent group instead requires fewer resource investments but also cannot provide the access and control benefits of firm-managed groups. People

maintain psychological affiliations to groups at various levels of abstraction, from concrete groups (e.g., single working mothers) to broader social categories (e.g., parents), each associated with different group norms (Goldstein, Cialdini, and Griskevicius 2008). Thus, for both providing and leveraging groups, it is key to determine which group affiliation is most effective (e.g., Harley Davidson Owners vs. New Bikers; Schouten and McAlexander 1995), according to the firm's ability to identify and access members of the group and assessment group norms.

Third, the firm must develop the necessary group marketing conditions to activate group-based psychological processes. It needs to build the customer's awareness of her or his affiliation with the group and then expose her or him to the desired group norms. As our research demonstrates, firms can strategically control group affiliation at the decision moment. Study 1 shows that disclosing information about a customer providing a product review (e.g., group membership) alters the effectiveness of that review. Reinforcing these findings, Naylor, Lamberton, and Norton (2011) find that reviews from similar or ambiguous reviewers are more persuasive than from dissimilar reviewers. In Study 2b, we show that firm communication can prime group affiliation. Similarly, Goldstein, Cialdini, and Griskevicius (2008) demonstrate that merely changing the wording (e.g., "other hotel guests," "other guests in this room") in marketing communication from more abstract to more concrete groups enhanced persuasiveness. Naylor, Lamberton, and West (2012) show that limiting disclosure of group member attributes to only their common brand usage (vs. also providing demographic information) can enhance the likelihood of new members joining the group because demographic attributes may put the group at risk of being perceived as an out-group. Thus, strategically disclosing or limiting group relevant information in customer-to-customer communication, marketing communication, or even group member recruitment can guide a customer's affiliation to the firm's desired group.

Firms also have many options for exposing the customer to group norms. If the firm provides groups, it can guide the development of beneficial norms through techniques such as storytelling, documenting, and creating rituals that perpetuate those desired norms. Group providers then can enhance these beneficial norms by influencing the status associated with compliance. For example, "Jeep Jamborees" are off-road challenges; when attendees complete the challenges, they earn status benefits within the Jeep brand community. If firms instead leverage existing groups, their focus should be on exposing customers to existing norms through marketing communication. As Study 1 suggests, seeding strategies—such that the firm incentivizes a group member to advocate certain behaviors—can be particularly effective for transmitting norms to customers in an independent group. Alternatively, the firm could communicate the norm directly using aggregate group information in its marketing, as in Study 2b.

The final step is adapting group marketing to the amount of time a customer has spent in the domain. People just entering a new domain typically represent an appealing target for acquisition. They exhibit both high demand for new products and a potentially long lifetime in the domain. Our findings suggest that group norms are more influential for information appraisals in this period. For group providers, communicating elements of the group that facilitate information exchanges (e.g., firm-sponsored training programs) could be effective for influencing the purchase behavior of people new to the domain. However, as a person becomes more familiar with the domain, the group influence on identity appraisals begins to dominate, so group providers should start investing in marketing that facilitates socialization among members, such as interactive forums or brand-fests. Marketers leveraging groups can customize their group marketing more effectively using product positioning. In Study 2b, we reframed a single product using a functional versus a social decision context. When customers have just entered a specific domain, the firm should focus on the functional benefits of the products, to increase their conforming behavior. Positioning the same product with social benefits instead might trigger self-protective responses and decrease purchase behavior. Later, though, repositioning the product according to its social benefits can enhance group marketing effectiveness.

Limitations and Further Research

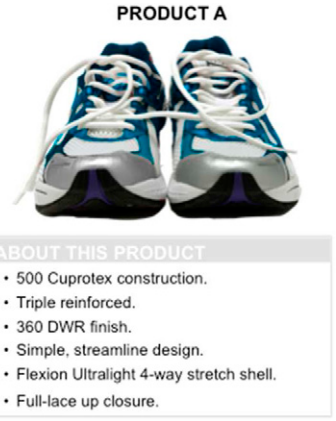
With our mixed research design, we can take advantage of both longitudinal data, with objective customer purchases and behavioral observations over time, and experimental designs that feature controlled manipulations. However, further research could examine which factors change over time (e.g., personal expertise). We replicate our findings across distinct purchase contexts, but other settings may provide different insights. Groups can form for many reasons, so a systematic investigation of group type is warranted. We examined two key constructs that likely leverage or hinder group influence, but others might be considered too—for example, group-level factors (e.g., stability, permeability) might be particularly informative. Group marketing effectiveness may also depend on marketers' ability to gather information from the group, which implies a useful research extension. Our study focuses exclusively on group influences on purchase behavior, but the same mechanisms and their dynamic influence over time may hold for other customer decisions, such as the choice to contribute content or recruit other group members.

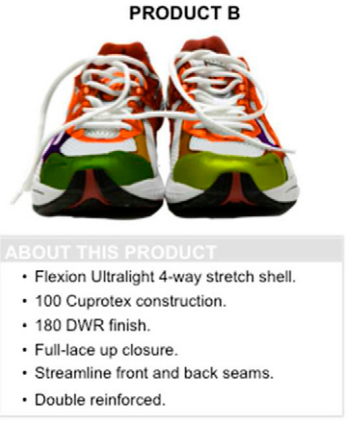
Most research, including ours, has conceptualized group affiliation as a person's membership, but membership is not required. A person might associate with a group to which (s)he aspires to belong. Alternative forms of affiliation, especially negative ones, warrant investigation. Research on reactance has suggested that when group norms are particularly strong or limiting, they may promote nonconformity rather than conformity (Brehm and Brehm 2013). We did not observe this effect in our research context; it represents a potential dark side of group marketing that should be investigated further. Subtle cues such as choice categories (Wittenbrink and Henly 1996; Mogilner, Rudnick, and Iyengar 2008) could provide a means of inferring group norms and influencing behavior, which warrants further investigation. Finally, people may conform through inaction; conformity by omission requires further consideration (Cialdini and Trost 1998).

APPENDIX
Experimental Designs, Objectives, Procedures, and Manipulations

A: Study 1

Procedures and Measures	Manipulations and Experimental Stimuli: No Group Manipulation	Manipulations and Experimental Stimuli: Group Membership Manipulation
• Random selection for the group membership manipulation. Participants respond to a series of arbitrary choices (e.g., sunrise/sunset, inside/outside, left/right). Half complete this task and move on to the product choice task, and the other half complete the task and are informed of their arbitrary group assignment.	"Congrats! You can now proceed to the next steps."	"Congrats! Based on your choices, you are part of the Sunrise Group."
• Group membership manipulation check: "I was part of a special group for this study."		"Past studies have shown that people's answers on the previous set of questions tend to reveal something fundamental about the psychological characteristics and personality of the person. Although psychologists do not place any value judgment on whether being a sunrise or sunset person is better, people within each group tend to be similar on a variety of dimensions."
• Product choice task to capture conforming purchase behavior. Participants begin the seemingly unrelated second study and choose between two products, A and B, evaluating them according to either functional or social criteria. In pretests, Product A was consistently rated as higher quality and more visually appealing and was chosen more often than Product B when there was no group influence.	**Product Choice Task**	
• Willingness to pay measure: "How much more are you willing to pay for Product A? Product B?" (Willingness to pay for Product B – Willingness to pay for Product A).		
• Information appraisal: "Product B is very low quality/very high quality, not at all useful/very useful, very poorly constructed/very well constructed."		
• Identity appraisal: "Product B reflects who I am. I consider Product B to be 'me' (it reflects who I consider myself to be or the way that I want to present myself to others). Product B suits me well."		





APPENDIX
Continued

A: Study 1

	Manipulations and Experimental Stimuli	
Procedures and Measures	**No Group Manipulation**	**Group Membership Manipulation**
• Recommendation manipulation, in which half of the participants were randomly exposed to four live comments from other participants, such that half recommended Product A and half recommended Product B.	**No Recommendation** No additional information.	**Recommendation** Order of comments randomized. Content of comments counterbalanced. **LIVE COMMENTS:** **Sunrise Group Member 009** - 7:43 AM PST **Product A** for the 360 DWR finish. It gives you more protection. **Sunset Group Member 002** - 7:43 AM PST I think lower Cuprotex gives you better mobility. I would choose **Product B**! **Sunrise Group Member 021** - 7:43 AM PST I prefer Flexion Pro so **Product A** seems better. **Sunset Group Member 019** - 7:43 AM PST I would choose **Product B** because Flexion Ultralight always outperforms Flexion Pro in my opinion.

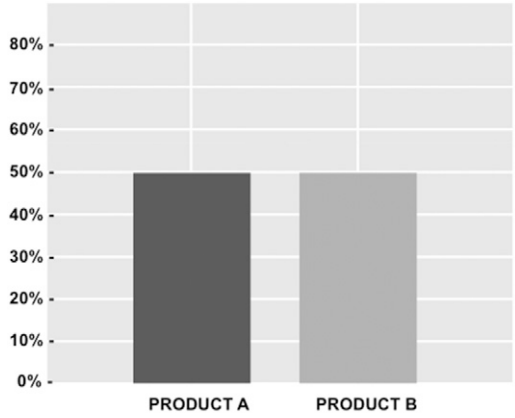
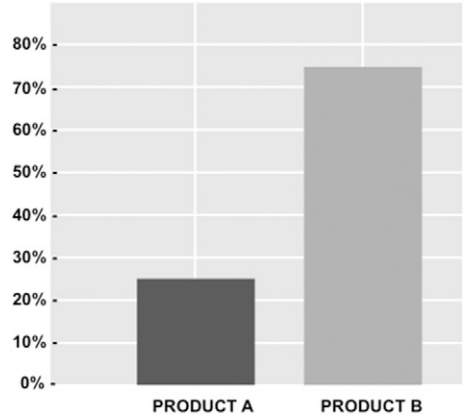
APPENDIX
Continued

B: Study 2b

	Manipulations and Experimental Stimuli	
Procedures and Measures	**No Group Manipulation**	**Group Membership Manipulation**
• Establish all participants' membership within a group. All participants were told they qualified to be part of a group, based on their responses to the previous demographic and filler questions.	Group membership control	
• Group membership manipulation check: "I was part of a special group for this study."		"Congratulations! You've been selected to be part of our special [State Name] Runners Test Group! You will now join a selective group of people from [State Name] as [State Name]Runner023."
• Present participants with the decision context manipulation. Participants complete the same product choice task as in Study 1.		**Functional [Social] Decision Manipulation**
• Functional decision manipulation check: "When considering the two products, I carefully considered product performance."		One of the most important features of a product is its ability to perform a set of uses for which it was designed [how much it expresses who you are]. Imagine you're in the market for a new pair of running shoes. Your last shoes performed poorly. As a result, now you are ONLY concerned with finding a pair of shoes that will perform well [really express who you are].
• Social decision manipulation check: "When considering the two products, I carefully considered product style."		
Present the group product norm manipulation and capture conforming purchase behavior. Half of participants were randomly selected to receive either the weak or strong group norms manipulation. Participants chose between products and rated how much they were willing to pay.		**Group Product Norms Manipulation** We've provided you with a poll from the other [State Name] Runners Test Group members to help you choose between the products.

APPENDIX
Continued

B: Study 2b

	Manipulations and Experimental Stimuli	
Procedures and Measures	**No Group Manipulation**	**Group Membership Manipulation**
• Group product norms manipulation check: "All of the group members' opinions reinforced each other"; "There was a very clear group opinion"; "The group was very cohesive." • Willingness to pay measure: "How much more are you willing to pay for [chosen product] than [other product]?" (Willingness to pay for Product B – Willingness to pay for Product A).	Weak Group Product Norms Manipulation 	Strong Group Product Norms Manipulation 

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