

## Social Norms: A Review

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### Abstract

Social norms, as a topic of inquiry, has garnered significant attention from a variety of perspectives in recent years. Because of the rapidly-growing interest in social norms from scholars in multiple disciplines, this area of scholarship is often characterized by a lack of clarity on what constitutes social norms and how key concepts are operationalized. The objectives of this article are to (a) provide a review of the fast-expanding literature on social norms, (b) delineate similarities and differences in key operational definitions, (c) review theories that explicate how norms affect behaviors, (d) propose a revised theoretical framework that helps organize our understanding of normative influence on behavior, and (e) provide suggestions for future research in this area. This review highlights the need to consider whether a behavior is enacted spontaneously or after deliberation. If the former, whichever attitude or norm is most salient will likely have a direct effect on behavior. If the latter, we propose that behavioral, individual, and contextual attributes will influence the extent to which norms shape behavioral intentions and subsequent behavior. Finally, this review highlights the need for more studies designed to test the causal relationship between social norms and behaviors, as well as those that study norms from a qualitative perspective.

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### Highlights

- Different from codified laws, social norms are unwritten codes of conduct that are socially negotiated and understood through social interaction.
- Descriptive norms refer to people’s perceptions about the prevalence of a behavior in their social midst.
- Injunctive norms refer to people’s understanding about what others expect them to do in a social context.
- Social norms can be explicated at the individual level (i.e., perceived norms) or at the societal level (i.e., collective norms.)
- The focus theory of normative conduct highlights the critical role played by the salience of norms at the time of action.
- TNSB posits that the influence of descriptive norms on behavior is moderated by injunctive norms, outcome expectations, and group identity.
- We synthesize the research on the TPB, attitude accessibility, norm accessibility, dual-processing models of cognition, and the TNSB.
- We offer a consolidated framework that predicts when and why norms will influence behavior.
- Future research should employ qualitative designs to acquire richer data on how social norms evolve and influence individuals and communities.
- Future research should standardize the operationalization of norms to better understand their effect on behavior across different contexts.

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## Introduction

A rapidly-growing body of scholarship in recent years, particularly in the health communication and psychology literature, has focused on the role social norms play in shaping human behavior (Mollen, Rimal, & Lapinski, 2010). This area of research is based on the idea that individuals' behaviors and attitudes are shaped, in part, by the behaviors and attitudes of others in their social midst (Cialdini, Reno, & Kallgren, 1990). Scholars have conceptualized social norms as properties of both individuals (e.g., people's perceptions about what others in their social milieu do or want them to do) and social groups (individuals' relationships with other group members (Yanovitzky & Rimal, 2006). This mirrors the difference between perceived norms and collective norms, as explicated by Lapinski and Rimal (2005). Perceived norms refer to individuals' perceptions about others' behaviors and attitudes, whereas collective norms refer to "prevailing codes of conduct that either prescribe or proscribe behaviors that members of a group can enact" (p. 129).

Different from laws, whose proscriptions and violations are explicitly codified, what is normal, proper, sanctioned, or expected behavior is negotiated and understood through social interaction (Rimal & Lapinski, 2015). Through interpersonal discussions, direct observations, and vicarious interactions through the media, people learn about and negotiate norms of conduct. For this reason, the study of normative influences – how social norms arise, how they exert their influence – is a study of human interactions. As a result, many disciplines in the social sciences have carved out an area of scholarship that focuses on some aspect of norms.

As is often the case in the social sciences, the study of social norms, too, suffers from a lack of consistency in terminology, operationalization, and definitional purview of key constructs across the various disciplines. In an effort to consolidate and clarify the plethora of findings about social norms, we conducted a broad literature review by searching for keywords (i.e., norms, social norms, normative influence, perceived norms, etc.) across multiple disciplines. Below, we briefly summarize our findings of how different disciplines have approached the study of norms. Then, we propose a theoretical framework that further develops Ajzen and Fishbein's seminal work

on the theory of reasoned action (Ajzen, 1985; 1991; Ajzen & Fishbein, 1980), which explicates when normative influence may impact behaviors, particularly those related to health.

## Norms across Disciplines

Social norms are typically conceived in the social sciences as customary rules that constrain behavior by eliciting conformity (Bicchieri & Mercier, 2014). Early definitions described norms as "folkways" (Sumner, 1906), and "customs, traditions, standards, rules, values, fashions, and all other criteria of conduct which are standardized as a consequence of the contact of individuals" (Sherif, 1936). Norms have been characterized as "providing order and meaning to what otherwise might be seen as an ambiguous, uncertain, or perhaps threatening situation" (Raven & Rubin, 1976, p. 3). Norms may also be understood as "social behavior that is more characteristic of some sociocultural collective unit than of individuals observed at random" (Pepitone, 1976). These definitions share a common theme of explaining norms as collective awareness about the preferred, appropriate behaviors among a certain group of people. In the following section, we delineate the shared as well as unique ways that different disciplines, including social psychology, communication, public health, philosophy, economics, and sociology, have defined norms.

Early research conducted by social psychologists found that group norms dictated action in both ambiguous (Sherif, 1936) and unambiguous situations (Asch, 1951; 1955), and that people often adopted the opinion of other group members, even when it contradicted their better judgment. The appropriate course of action at any given moment may be clear to an individual, as, for example, when someone in distress needs assistance, but in the presence of passive others, people may choose to mimic such inaction and erroneously conclude that no intervention is required. This phenomenon has been extensively studied under the terms *bystander apathy* (Latané & Darley, 1969) and *diffusion of responsibility* (Darley & Latané, 1968). These ideas focus on how individuals make decisions under conditions of ambiguity when the correct frame of reference is not entirely clear or is obfuscated by a mismatch between one's own and others' judgment.

Sherif's (1937) seminal work informed this work by examining social influence on perception through autokinetic experiments, in which he demonstrated how groups naturally converged on an estimate of how much a still dot of light seemed to move.

Sherif referred to social norms as "social frames of reference" and conceptualized individual perceptions as being anchored around frames of reference provided by others. In his now classic study, people were first asked to make perceptual judgments alone, then in a group setting, and again alone. He found that judgments made in a group setting (which were different from those made individually) persisted even after the group was no longer present, demonstrating the power of group norms to shape perception and be internalized by the individual as accurate information (Sherif, 1937). Sherif concluded that, under conditions of ambiguity, the influence of a group is informational rather than coercive – that the group interaction can lead individuals to use the group's (rather than their own) frame of reference against which to make their assessments. Once individuals internalize this frame of reference, the presence of others is no longer necessary for the continued use of that group-derived frame of reference.

Asch (1951) later demonstrated a different type of normative influence through injunctive norms that occur when the "correct answer" is objectively verifiable. Asch designed an experiment where individuals were asked to compare a line's length to three other lines (only one of which was of the same length as the reference line) in a setting where other group members deliberately called out the incorrect answer. The question then was whether the individual deferred to the group or to his or her own answer. The pressure to conform to group opinion was taken as evidence of the power of normative influence, where the desire to assimilate with the majority, in contradiction to one's better judgment, motivated an individual's behavior (Asch, 1951; 1955). Injunctive norms differ from the informational norms identified by Sherif (1936) in that the absence of the group results in individuals resorting to their own judgments. In other words, whereas informational norms do not require the presence of the group to exert their influence, injunctive norms do.

Deutsch and Gerard (1955) challenged the informational versus normative function of social influence that were operationalized by Sherif (1937) and Asch (1951).

The authors defined normative social influence as the pressure to conform to the expectations of others. In contrast, informational social influence was defined as the pressure to accept information provided by others as evidence about reality. Deutsch and Gerard (1955) argued that a mutual process of informational and normative influence was at play in Sherif (1937) and Asch's (1951) experiments because humans are socialized to believe that others' perceptions and judgments are reliable sources of information. Thus, Deutsch and Gerard concluded that it was no surprise that discrepant information provided by others induced a reconsideration of perspective.

Social identity theory (Tajfel & Turner, 2004) further built on these earlier works by positing that group memberships inform one's identity and that individuals strive to enhance their self-image through in-group bias that favors their social group. Furthermore, individuals typically identify with multiple groups, each of which informs a different version of "self" that is dependent on the social context (Maines, 1989). Encompassed within social identity theory is self-categorization theory (Maines, 1989; Turner & Oakes, 1986), which describes how group identification influences behaviors associated with group membership, such as conformity, leadership, stereotyping, and ethnocentrism (Brown, 2000). In particular, self-categorization theory posits that the more salient a person's identification with a certain category, the more likely the person is to act in accordance with the norms associated with that identity (Brown & Turner, 1981; Haslam, Reicher, & Platow, 2013). Thus, the social group membership that is most salient to us at any given time will influence which – or, more specifically, whose – norms we are likely to follow.

These conceptualizations of norms proposed by social psychologists significantly overlap with the communication field's conceptualization of norms. Carey (1989) conceptualized communication as serving both an instrumental and ritualistic function. The use of communication to achieve some end (e.g., when information is disseminated to raise awareness about an issue) exemplifies the instrumental function of communication, while the manner in which traditions and norms manifest exemplifies the ritualistic function of communication. Hence, communication and norms interface with each other both instrumentally (e.g., when communication serves as the vehicle through which norms are disseminated in a com-

munity; Real & Rimal, 2007) and ritualistically (e.g., when rituals themselves serve to communicate a community's values; Strano, 2006). Thus, one reading of the literature emanating from the communication and social psychology fields is that communication scholars tend to focus on understanding the communicative processes that lead to perceived norms (Arrow & Burns, 2004; Hogg & Reid, 2006; Kincaid, 2004; Lapinski & Rimal, 2005; Rimal & Real, 2005), whereas social psychologists tend to emphasize how social norms impact behavior and group approval of such behavior (Jackson, 1968).

Public health's use of social norms significantly overlaps with psychology and communication as well. In public health, social norms are viewed as part of a theory and evidence-based approach that can address health stigmas and morbidities. Social norms theory, which states that behavior is often influenced by incorrect perceptions about how one's peers behave (Perkins & Wechsler, 1996), was first introduced in the context of health education to address heavy alcohol use among American college students (Perkins & Berkowitz, 1986; Perkins, 1995). Since then, public health interventions have incorporated social norms to address a wide variety of health issues, including eating habits (Rah, Hasler, Painter, & Chapman-Novakofski, 2004), alcohol consumption (Campo, Cameron, Brossard & Frazier, 2004), smoking (McMillan, Higgins, & Conner, 2005), drug use, exercise, seat belt use, drunk driving, safer sex practices, sexual assault prevention, and organ donation (Scholly, Katz, Gascoigne, & Holck, 2005). Such interventions attempt to correct misperceptions about unhealthy behaviors, or emphasize the influence that people in one's social environment can have on behavioral intentions.

Norms have also been addressed in philosophy and economics, where they are viewed as providing rules to guide behavior. Arguably, individuals will only follow such rules if they perceive that the majority of the population also follows the same guidelines, and if doing so seems to be the optimal choice for the individual (Bicchieri, 2005). From a philosophical standpoint, norms are considered in terms of how they may encourage moral behavior: Motivating pro-social actions relies upon changing people's expectations about how others behave and how others think one should behave in similar circumstances (Bicchieri, 2010; Bicchieri & Chavez, 2010). Thus, in philosophy, social norms are thought to serve as

a form of "grammar of social interactions" by defining what is morally acceptable in a society or group (Bicchieri, 2005, p. 1).

In a different vein, economists have explored how complying with norms influences market behavior and rational decision-making (Akerlof, 1976; Young, 1998). More specifically, norms have been applied to understanding what constitutes a fair division of resources (Paternotte & Grose, 2013). Economists observe that norms can enable coordination with others through conformity or cooperation, prompt one to act beyond self-interest, and indicate the appropriate course of action in social situations (Binmore, 2006; Bicchieri, 2008; Gintis, 2010; Paternotte & Grose, 2013). Similar to scholars in psychology, communication, and public health, economists recognize norms as occurring at the intersection of individual and collective behavior.

Sociologists conceptualize norms as rules of behavior that exist at both the formal and informal levels—informal norms are considered more salient and reinforced. Two kinds of informal norms, folkways and mores, have been defined. Folkways, similar to descriptive norms, are informal customs that are expected to be followed (e.g., appropriate dress), but whose violation is not offensive enough to warrant punishment. In contrast, similar to injunctive norms, mores are informal rules (e.g., religious or cultural doctrine) whose violation results in severe social sanction. The Talcott Parsons functionalist school of thought identified norms as dictating the interactions of people in all social encounters (Parsons, 1951). In his theory of the socialized actor, Parsons proposed a utilitarian framework to help understand human actions. He argued that a common value system is embodied through norms, which enable individuals to constrain egotistical desires in order to achieve a collective goal. Karl Marx offered another perspective by arguing that norms were employed to establish social order by guiding the expectations and behaviors of different social classes (Scott & Marshall, 2005). Thus, sociologists view norms as regulating behavior through consensus, as well as exercising control through social sanctions.

Finally, the field of law also considers social norms by questioning why people conform to social norms in the absence of legislation (e.g., fidelity to a romantic partner). Law scholars propose that rational individuals will conform to social norms, such as reassuring one's

romantic partner of continued commitment through gift-giving, in order to receive long-term benefits that are independent of legal considerations, even when such norms require one to suppress natural preferences (Posner, 2002). From a legislative perspective, social norms can be conceptualized as an efficient alternative to legal rules because they guide against negative externalities and provide social signals at little or no cost (Ellickson & Ellickson, 2009; Posner, 2009).

Our review demonstrates that scholars from a variety of disciplines have explored the central idea behind norms – how norms are sustained in a society, how individuals’ understanding of norms shapes their behavioral decisions, and the important social functions norms play in sustaining cultural traditions and mores. In the next section, we cover different types of norms. Then, we describe concepts and theories that focus on the relationship between norms and behaviors. Finally, we propose a theoretical framework that organizes potential moderators of the norm to behavior relationship based on ecological position.

### A Clarification of the Different Types of Norms

Despite their distinct approaches to understanding norms, scholars in psychology, communication, and public health conceptualize different types of norms—collective, perceived, injunctive, descriptive, and subjective—in a similar manner. A brief description of each follows in an effort to distinguish distinct norms, as well to illuminate similarities between them.

Collective norms operate at the social system level and represent a collective social entity’s code of conduct. In contrast, perceived norms operate at the psychological level and represent how individuals construe the collective norm, either correctly or incorrectly (Lapinski & Rimal, 2005). The concept of pluralistic ignorance, where the majority of group members reject a norm but incorrectly believe that others do not, illustrates the potential mismatch between collective and perceived norms (Katz & Allport, 1931; Krech & Crutchfield, 1948; O’Gorman, 1988). Pluralistic ignorance is closely aligned with social norms theory, as articulated by Perkins and Berkowitz (1986). However, the term “social norms” is not monolithic and includes several types of norms, such as injunc-

tive and descriptive norms, which influence behaviors in unique ways.

Injunctive norms refer to beliefs about what others think should be done, whereas descriptive norms refer to beliefs about what others actually do (Asch, 1951; Cialdini, Reno, & Kallren, 1990; Kallgren, Reno, & Cialdini, 2000). Descriptive norms are distinct from collective norms in that descriptive norms refer to perceptions about the prevalence of a behavior, whereas collective norms refer to the actual prevalence of the behavior. Whereas violating injunctive norms are typically associated with social repercussions, non-compliance with descriptive norms tends to be free from such consequences (Lapinski & Rimal, 2005). Descriptive and injunctive norms are often congruent, but they may also be in conflict with one another. For example, most college students believe that drinking alcohol enables them to fit in with their peers, that their peers expect them to drink, and that the majority of college students consume alcohol (Perkins & Berkowitz, 1986); in this case, injunctive and descriptive norms are aligned. In contrast, an individual may perceive that the majority of people recycle (i.e., high descriptive norms), but feel that there is little pressure to conform (i.e., low injunctive norms) because others will not easily know if they do not comply (Ewing, 2001); in this case, injunctive and descriptive norms are incongruent.

Another distinction between descriptive and injunctive norms pertains to the underlying motivations they serve. Descriptive norms are thought to provide an information-processing advantage and act as a decisional shortcut when individuals decide how to behave in any given situation (Cialdini, Reno, & Kallgren, 1990). Observing the prevalence and popularity of a behavior provides “social proof” that others are enacting the behavior and thus doing so illustrates the underlying motivation to do the right thing (Cialdini et al., 1990; Cialdini & Trost, 1998). When individuals believe that many others are engaging in a behavior, they tend to also believe that the behavior is appropriate in that context. Thus, descriptive norms serve efficiency and accuracy functions, and the extent to which they affect behavior can indicate the extent to which individuals are driven by a desire to be socially appropriate (Cialdini & Trost, 1998).

Injunctive norms, on the other hand, convey what ought to be done in a given situation, and they illuminate the underlying values that individuals perceive to be held

by others in their social group. Along these lines, injunctive norms are thought to guide behaviors because of individuals' desire to belong to a group that is unified by shared values (Cialdini & Goldstein, 2004)—a concept expressed in the main tenet of social identity theory (Tajfel & Turner, 2004). Also, in contrast to descriptive norms, which can be morally neutral (e.g., choosing a particular consumer product), injunctive norms tend to imply moral judgment in the sense that actions that are viewed unfavorably (e.g., littering) are punished through social sanctions.

Closely aligned with injunctive norms is the construct of subjective norms, which is included in the theory of reasoned action and the theory of planned behavior (Ajzen, 1991). In these theories, subjective norms refer to the

perceived social pressure to enact a behavior from important others in one's social environment. Thus, whereas injunctive norms refer to perceptions of approval by others and descriptive norms refer to perceptions about what others actually do, subjective norms refer to perceptions about what important others *expect* one to do (Park & Smith, 2007). Research has demonstrated that the different types of norms represent distinct dimensions of normative influence. Indeed, in one study, pressure from one's social group (i.e., subjective norms), societal approval of a behavior (i.e., injunctive norms), and popularity of a behavior (i.e., descriptive norms) served as distinct predictors and moderators of behaviors related to organ donation (Park & Smith, 2007). Table 1 presents a brief summary of the different types of norms.

**Table 1.** *Distinctions among the Various Types of Norms.*

Type of norm	Underlying meaning	Level of explication	Utility
Collective	Actual prevalence of the focal behavior	Societal	Establish a code of conduct
Perceived	Perceptions about the prevalence of behavior and pressures to conform	Psychological	Avoid cognitive dissonance
Injunctive	Perceived pressures to conform to avoid social sanctions	Social	Gain social approval
Descriptive	Perceived prevalence of the focal behavior	Social	Provide social information
Subjective	Perceptions about what important others expect one to do	Social/Psychological	Maintain interpersonal harmony

In the following section, we examine the key frameworks that scholars have proposed to explain when norms may influence behavior.

### Focus Theory of Normative Conduct

Criticisms about social norms as an explanatory concept for behavior include that they are too broad (e.g., “help those in need”) and can be contradictory at times (e.g., “mind your own business”), making them ill-suited for empirical study (Berkowitz, 1972; Darley & Latané,

1970; Krebs, 1970; Schwartz, 1973). Furthermore, certain actions that are accepted by virtually everyone as a positive behavior, such as altruism, suggest that some behaviors can be explained more by situational context rather than by individual-level differences in normative influence (Schwartz, 1973). In response to these criticisms, social scientists have proposed the focus theory of normative conduct (Cialdini, Reno, & Kallgren, 1990), which posits that social norms do not necessarily exert the same degree of influence at all times or in all contexts. Rather, according to the theory, norms motivate behavior when they become salient. Thus, whether a descriptive or an injunctive norm is primarily activated in any given situation should help predict which norm has greater influence on an individual's behavior in that particular circumstance.

The focus theory of normative conduct has been examined in the context of littering (Cialdini et al., 1990; Reno, Cialdini, & Kallgren, 1993), stealing wood from a national park (Cialdini, 2003), and recycling (Cialdini, 2003). Results demonstrate that highlighting injunctive versus descriptive norms had variable effects depending on whether the prevalent behavior was environmentally harmful or beneficial. In other words, different norms are more impactful in different situations.

For example, participants were more likely to litter in an already littered environment compared to a clean environment. Furthermore, the most littering occurred when they observed a confederate also littering in the littered environment, presumably because he or she accentuated the pro-littering descriptive norm (i.e., most people litter). In contrast, when a confederate littered in a clean environment, the least amount of littering occurred, presumably because injunctive norms against littering (i.e., one should not litter) became particularly salient as participants observed the rare occurrence of an individual littering in an otherwise pristine environment (Cialdini et al., 1990).

Similarly, messages about stealing wood from a national park were significantly more influential when they emphasized injunctive norms (e.g., "Please don't remove the wood from the park") rather than descriptive norms (e.g., "Many past visitors have removed wood from the park, changing the natural state of the forest"). These results indicate that for situations characterized by widespread misconduct (e.g., underage drinking, illegal drug use, environmental pollution), it is more effective to

highlight what is right rather than what is regrettably common (Cialdini, 2003). One probable explanation is that emphasizing the frequency of an undesirable behavior can be misinterpreted as a norm, and therefore acceptable, rather than as a wrongdoing that should be stopped.

Although emphasizing injunctive norms has been demonstrated as a more effective strategy in the context of dissuading environmentally harmful behaviors, the same is not true for environmentally beneficial behaviors, such as recycling. In the case of recycling, emphasizing compatible injunctive and descriptive norms appears to be more effective. Such messages emphasize that recycling is an approved and prevalent behavior, thus suggesting that one should not be the lone rebel against a positive and popular cause (Cialdini, 2003). These environmental behavior studies support the tenets of the focus theory of normative conduct by demonstrating the importance of communicating norm messages that are consistent with one another. When descriptive and injunctive norms are in opposition, such as when people believe that most others eat unhealthy foods but that they advocate for healthier food consumption, it is more effective to make the injunctive norm salient rather than simultaneously communicating incompatible descriptive and injunctive norms. Thus, the focus theory of normative conduct suggests that norm accessibility—whether injunctive or descriptive—can impact behavior.

Further exploring the notion of norm accessibility, we consider research on implicit normative evaluations. Findings demonstrate that just as attitudes can become relatively automatic (Bargh & Pietromonaco, 1982; Chartrand & Bargh, 1999), so too can normative evaluations (Yoshida, Peach, Zanna, & Spencer, 2012). For example, if an individual is repeatedly exposed to other members of her social group disparaging an individual or social group, she is likely to develop negative implicit normative evaluations about that individual or social group (i.e., automatically associate that her social group dislikes this person or group). Whereas explicit normative evaluations reflect deliberative, conscious consideration (e.g., how do members of my social circle perceive elderly people?), implicit normative evaluations are peripherally processed (e.g., subconsciously recalling stereotypical media portrayals of the elderly). Implicit normative evaluations are thought to develop from observing how most others treat and evaluate other social groups (Yoshida et al., 2012).

## Norm Accessibility vs. Attitude Accessibility

A parallel distinction between explicit and implicit evaluations exists for attitudes. Implicit attitudes typically develop through personal experience, are involuntarily formed, and exist at the unconscious level (e.g., feeling alarmed when one sees a spider in the room). In contrast, explicit attitudes are deliberately formed, easy to self-report, and exist at the conscious level (e.g., feeling warmer towards a new acquaintance who shares the same taste in sports as oneself; Gawronski & Bodenhausen, 2006).

Research on attitude accessibility argues that the more easily a construct is activated in memory, the more likely it will be to predict behavior (Arpan, Rhodes, & Roskos-Ewoldsen, 2007; Fazio, 1986; Fazio & Roskos-Ewoldsen, 2005; Rhodes & Ewoldsen, 2009; Rhodes, Roskos-Ewoldsen, Edison, & Bradford, 2008; Roskos-Ewoldsen, 1997). Attitude accessibility can motivate more deliberative processing about behavioral choices, as when an individual considers that she likes the source of a message and consequently increases her support for that message (Fabrigar, Priester, Petty & Wegener, 1998; Roskos-Ewoldsen, 1997; Roskos-Ewoldsen, Bichel, & Hoffman, 2002). However, attitude accessibility is particularly influential when making spontaneous decisions—if an individual does not have the resources or motivation to engage in central processing, attitude accessibility is likely to have a more direct effect on behavior (Fazio, 1986; 1990). For example, smokers were more likely to process anti-smoking ads as more biased and less convincing than non-smokers, particularly when they were able to quickly recall people who supported their smoking behavior (Rhodes et al., 2008).

## The Prototype Willingness Model

The notion of implicit versus explicit norms and attitudes has been further addressed in the prototype willingness model (Gibbons, Gerrard, Blanton, & Russell, 1998). This model extends research on dual process models that have identified two distinct modes of information processing: central and peripheral (Chaiken & Trope, 1999; Cosmides & Tooby, 2000; Shafir & LeBoeuf, 2002; Stanovich & West, 2000). The prototype willingness model proposes that deciding whether to enact a particu-

lar behavior can either be deliberately processed, as described in the TPB, or spontaneously processed. In the latter instance, the model suggests that behavior is more dependent upon willingness and perceived similarity to a behavioral prototype—the extent to which they see themselves as similar to the prototypical person who performs the behavior in question.

For example, although an adolescent may have stated that she does not intend to consume alcohol or drugs after deliberating the negative consequences in a classroom environment, she may spontaneously end up experimenting with drugs and alcohol if she finds herself in an enabling situation later on. The prototype willingness model posits that the more favorable individuals perceive the image of a typical person who enacts a particular behavior (e.g., the classmates I know who drink alcohol at parties are cool, popular, fun, etc.), the more willing they will be to accept the social consequences associated with the behavior, including being seen by others as someone who engages in the behavior (Gerrard, Gibbons, Houlihan, Stock & Pomery, 2008). Thus, the prototype willingness model has roots in both social identity theory and accessibility research.

We synthesize the findings on norm accessibility, attitude accessibility, and dual-processing models of cognitive processing to argue that under severe time constraints, when decisions have to be made instantaneously, individuals will resort to whichever attitude or norm is most salient. For example, internal attitudes that contribute to snap judgments can lead to unconsciously biased behavior (Payne, 2006). Alternatively, if public behaviors are made salient, individuals can resort to normative considerations – as would be the case in bystander apathy, when collective inaction is the norm (Latané & Darley, 1969). Thus, it is likely that whichever norm or attitude happens to be most salient will directly influence behavior when an individual is making a peripherally processed, spontaneous decision:

However, when an individual is engaged in deliberative processing that includes time to consider behavioral intentions, which variables help predict behavior?

## The Theory of Planned Behavior

The theory of planned behavior (TPB) begins to address this inquiry by predicting that attitudes, norms, and perceived behavioral control (i.e., self-efficacy) influence behavior. TPB posits that an individual's relatively positive or negative evaluations of a behavior, along with perceptions about what important others in one's life would prefer one to do, and an individual's perceived self-efficacy to enact the behavior will shape an individual's behavioral intentions and subsequent behavior (Ajzen, 1991; 2006). A meta-analysis examining TPB's application to health-related behaviors found that attitude was the strongest predictor of behavior, followed by perceived behavioral control, and then subjective norms (McEachan, Conner, Taylor, & Lawton, 2011). Attitudes were found to predict behaviors as diverse as choosing a restaurant (Brinberg & Durand, 1983), using condoms (Albarracin, Johnson, Fishbein, & Muellerleile, 2001), and exercising (Hagger, Chatzisarantis, & Biddle, 2002). Though considered less impactful, norms were found to influence decision-making about diverse health behaviors, such as safer sex, health screenings, and physical activity, among others (Albarracin et al., 2001; Albarracin, Kumkale, & Johnson, 2004).

However, we note that the studies applying the theory of planned behavior to explore behavior are not consistent in how they operationalize "norms" (i.e., subjective, injunctive, descriptive). Empirical tests of TRA and TPB often include descriptive and injunctive norms when examining the impact of subjective norms (Boer & Westhoff, 2006; Lapinski & Rimal, 2005; Manning, 2009; Park & Smith, 2007; Ravis & Sheeran, 2003). Perhaps a more accurate model of TPB would identify the three types of norms under the broader umbrella term of "social norms." Furthermore, the theory of planned behavior conceptualizes normative influence as a combined cognitive process of: "what do important others expect me to do?" and "motivation to comply with important others." However, this conceptualization may be misleading in its simplicity, especially considering that there are many other factors (e.g., individual, contextual, and behavioral) that can influence the impact of norms on behavior. Exploring these factors may help illuminate when and why norms are likely to influence behavior, thereby highlighting their importance.

We aim to further unpack the norms to behavior pathway proposed by the TPB. In particular, we explore the different individual, contextual, and behavioral attributes that moderate the impact of norms on behavior when an individual is making a deliberated decision. The theory of normative social behavior (TNSB) begins to explore this type of framework by recognizing the moderating role of several variables. In the following section, we explicate the TNSB and then incorporate its findings into a theoretical framework that focuses on the norms-to-behavior pathway.

## Theory of Normative Social Behavior

In the theory of normative social behavior, Rimal and Real (2005) delineate the conditions under which descriptive norms affect behaviors. Drawing extensively on the focus theory of normative conduct (Cialdini et al., 1990; Reno et al., 1993), the authors note that prior work on norms failed to explicate the conditions under which norms would be expected to influence behaviors, and its corollary – the conditions under which norms would not serve as behavioral drivers.

After all, norms, though often powerful, do not always affect behaviors. People do not act solely on the basis of what others are doing in a given situation – they also behave defiantly, refusing to go along with the clear majority. Many prominent historical figures – Rosa Parks, Nelson Mandela, Mahatma Gandhi – have earned their distinction precisely because they exercised their own better judgment and refused to follow existing norms. Indeed, one may even define leadership as the characteristic of individuals who can instill new norms. Thus, because there is evidence demonstrating both the power and limitations of norms, a fruitful avenue of research is to articulate the conditions under which norms are able to exert their influence on behaviors and those under which norms are not reliable behavioral predictors. This is the underlying approach in the TNSB.

According to the theory (Rimal & Real, 2005), the effect of descriptive norms on behaviors has to be understood in the context of meaningful moderators. The TNSB originally identified injunctive norms, outcome expectations, and group identity as potential moderators in the relationship between descriptive norms and

behaviors. Since the original conceptualization of the theory, a number of other modifiers have been introduced and tested by various researchers. We describe the TNSB's original modifiers, as well as the newer additions, below.

### Moderators in the TNSB and beyond.

Underlying variables that have been empirically identified to moderate the influence of descriptive norms on behaviors include: injunctive norms, perceived social distance, outcome expectations, group involvement, and ego-involvement. In addition, behavioral attributes, such as ambiguity and behavioral privacy, can influence susceptibility to normative influence (Lapinski & Rimal, 2005; Rimal, Lapinski, Cook, & Real, 2005).

*Injunctive norms*, referring to beliefs about what should be done, moderate the relationship between descriptive norms (beliefs about what is actually done) and behaviors, such that when injunctive norms are strong, the impact of descriptive norms on behaviors increases. When people perceive they will face social sanctions if they do not comply with the norm, they are more likely to conform if they also perceive that the behavior is highly prevalent (Rimal & Real, 2003b). For example, in Asch's (1951) experiments, participants felt pressure to yield to the majority's incorrect choice, even though the correct answer was visually unambiguous, because they wanted to fit in with the rest of the group and avoid potential ostracism or ridicule. In this example, both descriptive norms and injunctive norms were congruent and a significant number of individuals conformed.

*Perceived social distance* refers to the distance between self and different reference groups. Perceived social distance moderates normative influence on behavior such that norms emanating from close others are more predictive of behavior than those from distal others (Neighbors et al., 2010). We can identify two reasons why this might be the case. First, by definition, people care more about those close to them, and by extension, their opinions and behaviors are more likely to be influential. Second, defiance of norms are more likely to become known to those who are close; hence pressures to conform are greater when the norms emanate from close rather than distal others. For example, research has consistently indicated that proximal norms are stronger predictors of the quantity and frequency of alcohol consumption than distal

norms (Borsari & Carey, 2003; Lewis, 2008; Lewis & Thombs, 2005). In other words, the closer an individual perceives herself to be to a social group, the more likely those group norms will influence her behavior.

*Outcome expectations* refer to people's beliefs that engaging in a behavior will either lead to relatively positive or negative consequences. Outcome expectations moderate the impact of descriptive norms on behaviors such that when one sees that others benefit from enacting a particular behavior, one is more likely to enact that behavior as well, in order to avoid being at a comparative disadvantage (Rimal, Real, & Morrison, 2004). Thus, believing that a behavior is beneficial and observing that many others are engaging in the behavior can have a multiplicative effect on one's own behavior. However, the impact of outcome expectations need not be confined to boosting the effect of descriptive norms on behaviors; outcome expectations also exert a direct influence on behaviors. When perceived benefits are potent, the perception itself may guide behaviors so strongly that other factors, including descriptive norms, become inconsequential.

For example, if students perceive that consuming alcohol is beneficial to their social life because it makes them more confident and gregarious, they are more likely to drink, regardless of the perceived prevalence of drinking among others (Rimal & Real, 2003a). The health belief model (Janz & Becker, 1984) and social cognitive theory (Bandura, 1986) incorporate outcome expectations (i.e., perceived benefits) as a predictor of behavior. Health interventionists should be aware that adolescents can be prone to imitating health-risk rather than health-promoting behaviors because risky behaviors, such as recreational drug use and binge eating, tend to be perceived as enjoyable and beneficial in the short-term (Rivis & Sheeran, 2003). Acknowledging and understanding the positive outcome expectations and perceptions about prevalence certain audiences may associate with an activity are necessary to implementing effective intervention messages against risky health behaviors.

The National Youth Anti-Drug Media Campaign, run in the United States between 1998 and 2004 to reduce drug use among adolescents, illustrates an example of the potential negative consequences of a failure to take into account the effect of descriptive norms. The campaign largely focused on linking marijuana use to negative

physical, social, psychological, and aspirational consequences, as well as educating and enabling America's youth to reject illegal drugs. However, an evaluation of the campaign found that greater exposure to the campaign was associated with both *weaker* anti-drug norms and *greater* marijuana initiation (Hornik, Jacobsohn, Orwin, Piesse, & Kalton, 2008). The authors noted that one of the underlying mechanisms linking exposure to negative outcomes was the possibility that adolescents who viewed the anti-drug advertisements concluded that many of their peers used drugs (why else would so many resources be spent on this cause?), and this heightened descriptive norm, in turn, guided their behaviors. Similarly, Stuart and Blanton (2003) concluded that uncertainty about behavioral norms coupled with negatively framed messages increased the perception that unhealthy behaviors, such as unprotected sex, were relatively common. These findings echoed the results of Cialdini's research (Cialdini, Reno, & Kallgren, 1990) that tested the focus theory of normative conduct in the context environmental pollution.

Prospect theory (Kahneman & Tversky, 1984) provides another reason to consider outcome expectations. Prospect theory posits that people are risk *seeking* in the domain of losses and risk *averse* in the domain of gains (Tversky & Kahneman, 1981). In other words, the threat of loss looms larger in people's minds than the thrill of a prospective gain of equal value (Kahneman & Tversky, 1984; Kahneman, Knetsch, & Thaler, 1991). This theory has been used in the health communication literature to design messages with differential frames for detection versus treatment of fatal diseases (Rothman & Salovey, 1997). For example, an early study done by Tversky and colleagues (McNeil, Pauker, Sox, & Tversky, 1982) demonstrated that students, patients, and even physicians were susceptible to message framing effects when making critical medical decisions. They chose surgery over radiation therapy to treat lung cancer when outcomes were presented in terms of survival rates rather than in terms of mortality, even though, mathematically, the two were equivalent.

Indeed, framing effects research indicates that anticipated regret can be a strong motivator for behavior. For example, the price at which an individual is willing to part with a possession tends to be higher than the price at which the individual would be willing to buy the same item (Kahneman, Knetsch, & Thaler, 1991). Applying

loss aversion to a public health context, emphasizing the potential cost of not obtaining a health screening (e.g., "If you avoid getting a mammogram, you fail to take advantage of the best method for detecting breast cancer early") tends to motivate more action than emphasizing the potential benefits (e.g., "If you get a mammogram, you take advantage of the best methods for detecting breast cancer early"). Combined with descriptive norms (i.e., when many others are thought to be engaging in a behavior), the threat of a potential loss (of inaction, say) is likely to be magnified in people's minds. Hence, descriptive norms and anticipated costs are likely to have an interactive effect on behavior (Rimal & Real, 2005). Such findings have practical implications for whether we should frame messages as health-risk or health-promoting and whether we should depict that many others are engaging in the behavior to motivate action (Meyerowitz & Chaiken, 1987; Rothman & Salovey, 1997).

*Group involvement* speaks to the idea that social networks have significant impact on behavior, as reflected in social identity theory, which posits that part of our self-concept is derived from group membership. By group membership, the theory refers to social groups and categories that have emotional and value significance to the individual (Hogg & Reid, 2006; Tajfel & Turner, 2004). Group involvement can influence both positive and negative behaviors, particularly when we strongly identify with the group (Donohew et al., 1999; Fraser, & Hawkins, 1984; Hibbard, 1985; House, Landis, & Umberson, 1988; Kandel, 1973; Seeman, Seeman, & Sayles, 1985; Valente, 1994). As noted by self-categorization theory, identifying with a particular social group makes it more likely that one will comply with that group's social norms. Perhaps because individuals have a stronger desire to be accepted by the group (Christensen, Rothgerber, Wood, & Matz, 2004), and group values are a defining aspect of one's identity (Hogg & Reid, 2006). For example, adolescent smokers' cigarette consumption has been linked to their friends' encouragement and approval (Duncan, Tildesley, Duncan, & Hops, 1995; Flay, Hu, & Richardson, 1998), as well as media messages conveying that smoking promotes popularity (McAllister, Krosnick, & Milburn, 1984). Overall, youth who are friends with smokers are more likely to smoke themselves (Kobus, 2003). Similarly, greater identification with same-sex students, same-race students, and same-Greek-status students is associated

with stronger relationships between perceived drinking norms in the specific group and one's own drinking patterns (Neighbors et al., 2010). This has also been shown for use of steroids among high school students (Woolf, Rimal, & Sripad, 2014).

*Ego involvement*, which is distinct from group involvement, refers to the extent to which one's self-identity is aligned with a particular issue or behavior (Johnson & Eagly, 1989; Lapinski & Boster, 2001). The effect of descriptive norms on behavior is strengthened for those with high ego involvement (Lapinski & Rimal, 2005). For example, students' self-perceptions related to drinking alcohol has been found to moderate the effect of descriptive norms on behavioral intention—those who perceive themselves as “drinkers” are not only more likely to consume alcohol, but are also more likely to be influenced by perceptions about drinking prevalence among their peers (Conner & Armitage, 1998; Rimal et al., 2004).

*Self-efficacy* is another variable that has been found to moderate the relationship between descriptive norms and behaviors. Self-efficacy refers to people's confidence in their ability to exert personal control (Bandura, 1986). When people's efficacy is high, not only are they more likely to take on challenging tasks, but they are also more likely to persevere when they face setbacks. Individuals with high self-efficacy construe these setbacks as the result of a lack of effort, as opposed to an indication of their inherent inability (Bandura, 1977). College students often find it difficult to refuse their peers' invitation to drink, but research has found that those with high refusal self-efficacy not only moderate their drinking, but are also less affected by descriptive norms (Jang, Rimal, & Cho, 2013). College students with low refusal self-efficacy tend to be more susceptible to drinking on the basis of their perceptions about how many others are drinking; when their refusal efficacy is high, however, they tend not to be affected by whether just a few or many in their social midst are consuming alcohol (Jang et al., 2013).

Beyond the psychological processes that moderate the impact of normative influence on behavior, certain behavioral attributes also need to be considered in order to fully understand the impact of norms. Attributes are “the constituent characteristics that comprise a behavioral domain” (Rimal, Lapinski, Turner, & Smith, 2011, p. 18); these are the building blocks of behaviors – the primary

factors that define the behavior. For example, addiction can be thought of as the primary attribute of smoking, and need-for-privacy can be thought of as one of the key attributes of obtaining an HIV test. The main idea behind the attribute-based approach is that the focus is on the different types of moderating factors that can help predict when and why norms will influence behavior.

*Ambiguity* is one example of a situational attribute that may moderate the impact of norms (Rimal & Real, 2003b; Rimal et al., 2004). When one is in a new and unfamiliar environment, the accepted rituals and modes of conduct are not yet fully understood, and hence many behaviors take place in ambiguous contexts. For example, how much do you tip a taxi driver in an unfamiliar culture, or do you even tip at all? In an ambiguous situation, when one cannot rely on habitual, familiar behaviors from the past, the power of normative influence increases (Cialdini, 1993). When one does not know what to do, one looks to the behaviors of others as a guide. Thus, ambiguous situations strengthen the influence of descriptive norms because we depend on others to illuminate appropriate modes of conduct by providing social approval cues (Cialdini et al., 1990; Darley & Latané, 1968).

In one study, ambiguity about alcohol consumption on college campus moderated the relationship between descriptive norms and behavioral intentions such that incoming freshmen who felt less ambiguous about drinking norms on campus were more likely to drink if they perceived drinking to be a very common norm (Rimal et al., 2004). Another classic example of how ambiguity shapes normative influence is the bystander apathy effect, where the likelihood of an individual helping a person in need decreases as the number of bystanders increases (Darley & Latané, 1968; Latané & Nida, 1981). Researchers posit that the bystander effect is due to individuals looking to others for information on how to act; thus, rather than acting immediately, people wait to interpret others' response, which results in inaction (Cialdini et al., 1990; Cialdini, 2001). Though ambiguity may strengthen the effect of descriptive norms on behavior, it is not a necessary condition in order for norms to influence behavior. Indeed, we can be guided by others' behaviors even when the appropriate course of action is unambiguous, as during Asch's 1951 line experiments (Asch, 1951; Lapinski & Rimal, 2005).

*Behavioral privacy* refers to the extent to which a

behavior is enacted in a public or private setting. Behavioral privacy may moderate the impact of norms on behavior such that greater privacy decreases the effect of normative influence (Bagozzi, Wong, Abe, & Bergami, 2000; Cialdini et al., 1990; Lapinski & Rimal, 2005). If neither the enactment nor the consequences of a behavior are likely to be known to others, social norms lose their motivating power. Furthermore, descriptive norms are unable to be communicated in the context of privately enacted behaviors – after all, it is difficult to gauge the prevalence of private behaviors, such as condom use or STI testing. Thus, not only does behavioral privacy lead to reduced accountability, but it also limits knowledge about the prevalence and social consequences of a behavior (Albarracin et al., 2001; Lapinski & Rimal, 2005). Acknowledging the privacy level of enacting a particular behavior highlights the importance of understanding behavioral attributes in order to better understand normative influence. Interventions that are geared towards private behaviors, such as sexual health behaviors, should

recognize that normative influence may have a lower impact, compared to behaviors like food consumption in restaurants that are typically enacted in a public setting (Bagozzi et al., 2000; Mollen, Rimal, Ruitter, & Kok, 2013; Sutton, McVey & Glanz, 1999).

### A Revised Framework

The theory of normative social behavior highlights the utility of recognizing how different attributes moderate the impact of social norms on behavior. Extending the research on TPB, dual-processing models of cognition, and the TNSB, we propose that when an individual is not under time constraints (i.e., can make a deliberate decision) about whether to enact a particular behavior, behavioral intentions will be moderated by attributes that can be classified into three categories: behavioral, individual, and contextual.

Some of these attributes (e.g., injunctive norms, social distance, group involvement, ego involvement, self-efficacy,

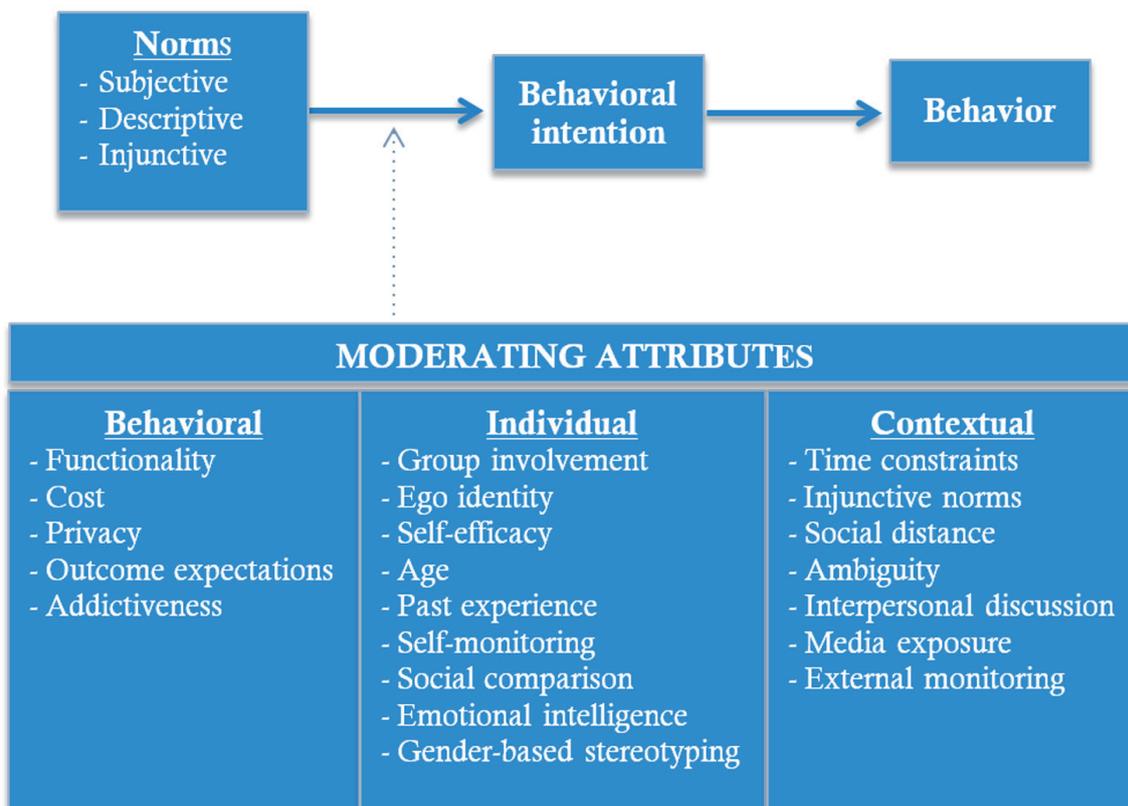


Figure 1. A revised framework of normative influences.

privacy, and ambiguity) have been discussed in the context of the TNSB. Below, we explain how these variables fit into our revised framework and explore additional behavioral, individual, and contextual variables that moderate the impact of norms on behavior.

**Behavioral attributes.** Let us revisit a prior example and consider a behavior that is highly associated with positive outcome expectations (e.g., eating a chocolate chip cookie will be delicious). In this case, such expectations will likely reduce the influence of norms (e.g., none of my other friends are buying a cookie) because of the positive emotions associated with the behavior. However, behaviors are often associated with more than one outcome expectation (e.g., chocolate chip cookies are delicious, but they are fattening). Different outcome expectations can have disparate influence depending on the context, the other attributes of the individual, and the behavior. For example, if the behavior (e.g., underage drinking) is viewed as a social lubricant (behavioral attribute) and one is with friends (contextual attribute), the expectation that it will be fun and socially advantageous (behavioral attributes) may outweigh the knowledge that it is illegal (behavioral attribute) and violates injunctive and subjective norms. Furthermore, if one has had past positive experiences (individual attribute) with a particular behavior, norms may be even less likely to have significant influence.

In contrast, if the behavior is performed in a relatively public setting (e.g., smoking outside), the individual will be more likely to consider the descriptive (i.e., do other people smoke), injunctive (i.e., do other people think it is wrong to smoke), and subjective norms (i.e., do those close to me want me to smoke) surrounding the behavior because observation and judgment from others are more likely to occur. Privacy and outcome expectations are but two of the behavioral attributes that may influence an individual's intention to enact a particular behavior. We also include functionality, cost, modifiability, and addictiveness as additional behavioral attributes to consider in our proposed framework.

**Functionality.** Based on a functional analysis of attitudes (Katz, 1960), behaviors can serve different functions: utilitarian, value expressive, social adjustive, and/or ego defensive. Utilitarian functions help an individual gain rewards and avoid punishments. For example, being “politically correct” in conversation with new acquaintances

is utilitarian because it guards against accidentally offending others. Value-expressive functions serve to communicate to others one's principles and identity. For example, wearing a pro-democrat t-shirt serves to publicly express the political party one endorses, thereby indicating personal values to some extent. Challenging existing norms (e.g., Rosa Parks refusing to sit in the back of the bus) may also serve a value-expressive function. The social-adjustive function helps identify the individual with a group to gain group approval. Social identity theory encompasses this concept. For example, one may choose to adopt the behaviors of a group of people with whom one wishes to be friends (e.g., drinking alcohol with other students in the dorm). Lastly, ego-defensive functions are thought to outwardly project one's internal, intrapsychic conflict. For example, deep-seated negative attitudes towards a particular social group may be expressed through hostile behavior (e.g., homophobia and xenophobia) against the social group (Augoustinos, Walker, & Donaghue, 2014; Lindzey, Gilbert, & Fiske, 1998). Depending on which of these functions a behavior is perceived to fulfill will likely influence the extent to which normative influence will occur. If a behavior is social adjustive, group norms should have more influence. In contrast, a behavior that is perceived to fulfill a value-expressive or utilitarian function will likely be less swayed by wider social norms.

**Cost.** Different behaviors have different costs. These costs can be conceptualized as both an objective attribute and a subjective perception. After all, different individuals place different value on one hour of time. Behaviors that are perceived to be high in monetary cost, such as buying a new car, should be less susceptible to normative influence than behaviors that are low in monetary cost, such as renting a movie. In the case of buying a car, the individual will likely devote a significant amount of time developing her own assessments about which car is best based on research from credible sources. In contrast, an individual may be open to seeing whichever movie her friends want to see without much consideration because it costs relatively little in terms of time and money. On the other hand, individuals who view two to three hours of time as a significant cost will likely be less swayed by group opinion when it comes to renting a movie, even though the monetary cost is low.

Finally, the addictiveness of a behavior has direct

impact on the extent to which norms will have influence on a person's behavioral intentions. The more physically and/or psychologically addictive a behavior, the less likely norms will have influence, as addiction is characterized by an inability to reduce or control a behavior, spending irrational amounts of time pursuing the behavior, and continuing the behavior despite known adverse consequences (American Psychiatric Association, 2013).

### Attributes of the individual.

Beyond attributes of the behavior, our framework also proposes individual-level attributes. We recommend that a number of individual-level variables be taken into account when examining the effect of norms on behavioral intentions and behavior. Such variables include group involvement, self-efficacy, age, past experience, degree of self-monitoring, tendency towards social comparison, emotional intelligence, and endorsement of gender stereotypes. Below, we explicate the potential influence of each of these individual level factors.

Higher *group involvement* is likely to increase the influence of descriptive, injunctive, and subjective norms on behavior because one strives to fit in with the group identity that is central to one's self-concept (e.g., we are members of college Greek life). In contrast, higher *ego involvement* in an issue (e.g., being a member of a particular political party) is likely to reduce the influence of contextual norms (e.g., everyone else at one's workplace supports policies championed by another political party) on one's behavior because upholding an important self-identity takes priority to assimilating.

*Self-efficacy* may also reduce normative influence, particularly if the situation is characterized by peer pressure. Self-efficacy, which refers to one's perceived ability to enact a particular behavior, can serve to empower oneself against a group behavior that one is reluctant to engage in (e.g., a college student's decision not to go out drinking with friends when she has an important test to prepare for). As a result, one may be less likely to succumb to undesirable behaviors others are engaging in, such as binge drinking or bystander apathy, because one feels more confident in one's ability to withstand group pressure.

*Age.* Adolescence and young adulthood are thought to be associated with heightened sensitivity to social in-

fluence, as evidenced by the plethora of studies exploring peer influence on tobacco and alcohol use among adolescents and college students (Elek, Miller-Day, & Hecht, 2006; Mollen et al., 2010). In particular, the influence of injunctive norms may be especially strong among adolescents and young adults who feel social pressure to fit in with their peers. In order to achieve a more comprehensive understanding of how age interacts with normative influence, utilizing more diverse participant populations beyond the typical college student sample is necessary for future studies. The critical point here pertains to the source of the normative information. For adolescents, prevalence of a behavior may be influential if the actors engaging in the behavior are same-age peers, whereas a highly prevalent behavior among an older age group may not have the same level of impact.

*Past experience* has been found to decrease the pressure to conform to injunctive norms in the context of binge drinking. Past experience with a behavior results in more knowledge, which potentially leads to less reliance on injunctive norms because one no longer needs to rely on others for information about what is appropriate in a given circumstance (Prislin, 1993). Past experience enables one to hold perceptions of descriptive norms with more certainty, which in turn can strengthen the descriptive norm-behavior relationship (Manning, 2009). Past experience, in this context, overlaps conceptually with the idea of ambiguity mentioned earlier. We have chosen to explicate this construct separately because of the literature attached to it, but we believe sufficient literature now exists for a more careful and thorough analysis that delineates the overlap and unique properties of various moderators.

*Self-monitoring* refers to regulating one's behaviors as a function of social context to ensure an appropriate and desirable public appearance (Synder, 1974). By definition, low self-monitors tend to be influenced by their personal values, whereas high self-monitors tend to be influenced by the behavior of those around them (Gangestad & Snyder, 2000). Indeed, a study examining self-monitoring as a moderator of the effectiveness of persuasive messages aimed at reducing college binge drinking found that high self-monitors intended to drink significantly less than low self-monitors when presented with a social norms message about drinking prevalence (Miller, 2009). Thus, high self-monitors are more likely to be influenced by descrip-

tive and injunctive norms than low self-monitors. For low self-monitors, health messages that appeal to positive self-schema (e.g., being a responsible, healthy individual who refrains from binge drinking) may be more effective than norms-based messages because such messages highlight personal values rather than the social environment (Miller, 2009).

*Tendency to engage in social comparison* has also been found to moderate the norm-behavior relationship, at least in the context of alcohol consumption. Individuals who are more prone to socially comparing themselves with their peers are more strongly influenced by descriptive norms (Litt, Lewis, Stahlbrandt, Firth, & Neighbors, 2012). Individuals high in social comparison orientation are more likely to experience negative consequences associated with drinking and be more susceptible to peer influence on drinking (Lewis et al., 2008; Litt et al., 2012). Similarly, research has demonstrated that individuals who have a tendency toward appearance-related social comparisons are more likely to be affected by the abundance of thin-ideal images propagated by media models (Dittmar & Howard, 2004). Thus, it is worthwhile to acknowledge that social comparison orientation may influence how norms affect health behavior.

*Emotional intelligence*, which is defined as mental abilities to handle emotional information, is associated with a reduced tendency to be influenced by peer norms (Salovey & Mayer, 1990). This relationship has been explored in the context of how perceived norms about the frequency and amount of peers' alcohol consumption influence alcohol use among college students. Results demonstrated that the effect of perceived peer norms on alcohol use was stronger for students with low emotional intelligence scores (Ghee & Johnson, 2008). Whether or not higher emotional intelligence would decrease the effect of perceived peer norms in other contexts should be considered. It seems likely that emotional intelligence may be a relevant covariate primarily in contexts where peer pressure is a factor.

*Endorsement of gender stereotypes* may also influence how norms affect behavior. This relationship has been studied in the context of the workforce, where a history of male-dominated, higher-status positions (e.g., male physician versus female nurse) has created a hierarchical social structure in which normative expectations about male and female behavior affect interactions and per-

petuate gender-biased expectancies (Eagly, 1983). Thus, when individuals subscribe to a prevalent gender stereotype (believing there are more male physicians than female physicians or fewer male nurses than female nurses), they are more likely to behave in ways that further reinforce the stereotype. The influence of gender stereotypes on normative influence may also exist in health contexts. For example, stereotypes about sexual promiscuity as more socially acceptable for men than for women may affect an individual's approach to sexual behavior if he subscribes to such gender stereotypes. Alternatively, an individual may dismiss descriptive and injunctive normative expectations and behave contrary to the norm (e.g., being a sexually promiscuous woman or an abstinent man).

*Affective commitment* refers to internalizing the values associated with a particular group and identifying with the attitudes and behaviors of other members of the group (Hwang & Kim, 2007). Affective commitment may increase one's motivation to comply with injunctive norms regardless of whether the norms are consistent with the descriptive norms of the general population. The concept of affective commitment originally stems from organizational behavioral literature. For example, feeling emotionally attached to an organization increases one's motivation to comply with behavioral norms, regardless of whether the norms denote low or high performance (Allen & Meyer, 1990; Hunter & Gellatly, 2007). Affective commitment can also be applied to public health contexts. Internalizing and identifying with a group's values, such as one's sorority or fraternity, may trump the influence of health behavior norms that exist outside the group. These ideas echo the concept of group involvement, but places special emphasis on the emotional nature of being motivated to comply with a particular group.

### Contextual attributes.

Finally, we consider how social and environmental context can influence the effect of social norms on behavioral intentions and subsequent behavior. In our discussion, we address time constraints, injunctive norms, ambiguity, external monitoring, social distance, opportunities for interpersonal discussion, and degree of media exposure.

*Time constraints* are likely to influence the extent

to which normative considerations will have influence in any given situation – when making a spontaneous decision with little or no time to deliberate, norms will likely influence behavior only to the extent that they are more immediately salient than one's attitudes. We made the argument earlier that time constraints remove behavioral intentions from the attitude/norm pathway to behavior and instead the saliency of a particular attitude/norm determines behavior. However, if an individual has time to deliberate before acting, normative considerations are more likely to come into play, especially when the individual is in a public environment and social sanctions are a possibility.

This argument is closely aligned with *injunctive norms*, which refer to what others think one ought to do. When injunctive norms are strong, perhaps because one is in a public setting or in close proximity to important others, descriptive norms are likely to have significant influence on behavioral intentions and subsequent behavior because the individual seeks group approval and wishes to avoid moral judgment. To a similar effect but for different reasons, when a situation is *ambiguous* (e.g., helping a person in need; tipping in a foreign country), descriptive norms are also likely to have greater influence on behavioral intentions because uncertain individuals look to others for more information. In contrast, *external monitoring*, where exogenous entities can enforce group rules and sanctions, has been found to diminish group-oriented behavior in favor of self-interest (Cardenas, Stranlund, & Willis, 2000), perhaps because individuals strive to gain the favor of the external monitor than of the group. Similarly, when an individual perceives greater *social distance* from a particular group, her behavior will likely be less influenced by those distal norms because there is less pressure and motivation to comply. Indeed, an adolescent is more likely to succumb to peer pressure from close friends rather than from acquaintances, reflecting the significant influence that proximal norms can have on behavior.

Norms, by definition, are social phenomena that spread through communication (Kincaid, 2004; Lapinski & Rimal, 2005). Thus, we include degree of *interpersonal discussion*, as a contextual attribute that is dependent on the communication occurring in one's social network. Social actors tend to rely on interpersonal discussion in order to understand the prevalence, rituals, and accept-

ability of a behavior (Real & Rimal, 2007). The extent to which interpersonal discussion about a behavior occurs, as well as the degree to which such discussions spread accurate or inaccurate information (i.e., pluralistic ignorance) about the behavior, may impact the degree to which norms influence behavior (Katz & Allport, 1931; Prentice & Miller, 1993). Indeed, research has demonstrated that descriptive norms about alcohol consumption are more predictive of drinking behavior when college students discussed alcohol than when they did not (Real & Rimal, 2007). Thus, including exposure to peer communication as a potential contextual moderator may be appropriate when examining susceptibility to normative influence.

Similar to interpersonal discussion, *media exposure* may contribute to inaccurate perceptions about the prevalence of a behavior. Descriptive norms can be affected by the degree to which an individual consumes the media's agenda (McCombs, 2005; Morgan & Shanahan, 2010), which in turn affects behaviors. For example, one may believe the world to be a scarier and more violent place than it is due to over-exposure to violence and crime on news programs that prioritize such segments (Griffin & McClish, 2011). Cultivation theory captures this idea by positing that long-term, frequent exposure to television encourages viewers to believe the social reality portrayed on television (Cohen & Weimann, 2000; Morgan & Shanahan, 2010). Thus, heavy television viewers tend to subscribe more strongly to inaccurate descriptive norms about the prevalence of violence in their midst, which may motivate subsequent behaviors related to safety (e.g., installing home security systems, buying a gun).

Beyond television, it is possible that greater immersion in the media environment in general (e.g., magazines, films, social media, blogs, and newspapers) can also affect the perceived acceptability of a behavior. For example, unflattering media portrayals have successfully reduced binge drinking by increasing perceptions of social disapproval associated with the behavior (Yanovitzky & Stryker, 2001). Alternatively, pro-smoking media have been shown to increase adolescent smoking by providing representative cues (e.g., ads portraying youthful, glamorous smokers) that indicate smoking to be a popular and acceptable behavior among one's peers (Gunther, Bolt, Borzekowski, Liebhart, & Dillard, 2006). Thus, exposure to media can influence normative perceptions, which in turn can affect behaviors.

One of the assumptions we have adopted in this paper is that when an individual makes a spontaneous decision, she will likely enact a behavior that is informed by the most salient attitude or norm that comes to mind in that moment. In other words, the behavioral intentions pathway is bypassed. In contrast, when an individual has time to deliberate before acting, she will have the cognitive ability to consider both attitudes and norms when making her decision. While attitudes have been shown to have significant influence on behavior, the norm to behavior pathway is less clear. We have attempted to clarify when, how, and why norms are likely to shape behavior by proposing a theoretical framework that highlights the moderating role of behavioral, individual, and contextual variables that influence the norm to behavior relationship.

### Future Directions

A practical consideration remains upon identifying the different moderators in the norm to behavior relationship: How does this help health communication and public health practitioners who are designing health interventions? Considering the *modifiability* of a particular attribute may offer useful implications on an applied level. Although there is not a common metric that allows us to place the proposed moderators on this implied continuum of modifiability on an empirical basis, we have taken the liberty to classify moderators into two broad categories – less versus more amenable to change – on a purely intuitive basis. While some attributes are more amenable to change (e.g., outcome expectations, group identification, injunctive norms, ambiguity about the appropriate behavior, and perceived social distance), others are relatively static (e.g., behavioral privacy, cost, and functionality). The extent to which this is true is, of course, both conceptual (e.g., we think of self-monitoring as a personality variable and therefore, by definition, less amenable to change) and empirical.

Assessing an attribute's modifiability can help identify effective strategies for norms-based interventions. For example, assuming that greater group identification increases the influence of injunctive norms on behavior, a norms-based intervention can aim to increase group salience (a modifiable attribute) to heighten the influence of norms on behavior. Similarly, assuming that outcome

expectations are modifiable, interventions can increase the number of negative outcomes associated with a particular behavior to shift expectations. An informational campaign could disseminate a multitude of negative consequences in conjunction with a positive outcome typically associated with an unhealthy behavior (e.g., Smoking a cigarette may temporarily kill your appetite, but it also causes bad breath, wrinkles, stained teeth, tooth loss, lung cancer, and premature death). Ambiguity could be manipulated by sharing facts early on about a potentially vague behavioral norm (e.g., The majority of students on campus get tested for STD's at least ten times a year - have you been tested yet?). Thus, considering the modifiability of behavioral, individual, and contextual attributes has practical implications for health behavior change tactics.

Another area for future research is to take advantage of existing national datasets to link existing behaviors with community norms. Social norms, for example, have been measured in various ways, including: exploring non-normative data in nationally representative surveys (e.g., the Demographic and Health Surveys) and inquiring about descriptive norms, injunctive norms, and whose opinion matters (i.e., the referent group) through self-report questionnaires. Nationally representative datasets allow researchers to detect possible norms through four main indicators. One, precise data available about different regions of a country allow researchers to look for high spatial or ethnic variation, which could indicate that a practice is considered normative in a certain area but not in another. Such findings would provide approximations about the social relationships that may potentially exist among a particular group of people, which guides their attitudes and behaviors. Two, representative datasets may illuminate a wide discrepancy between attitudes and behaviors. The information gleaned from representative datasets may suggest that perceived social norms are driving a behavior, despite the fact that many feel negatively about the behavior. Third, longitudinal data from nationally representative surveys may reveal that a particular practice has persisted for many years despite modern advancements that have replaced other practices. For example, though the years of education a woman receives may be rapidly increasing, observing that the majority of women still do not receive skilled antenatal care may suggest that skilled antenatal care is against the social

norm. Finally, nationally representative datasets allow analysts to determine if there has been a relatively rapid change in a practice after its lengthy persistence. Multi-level modeling is commonly utilized as a statistical strategy to help researchers understand how community-level norms correspond to individual-level attitudes and behaviors when working with large, nationally representative datasets (Mackie, Moneti, Denny, & Shakya, 2012).

Though national survey data can provide a useful proxy for whether norms are at work or not, they are unable to empirically confirm their presence. Thus, to delve more deeply into the presence and function of social norms on individual level outcomes, it would be beneficial to utilize direct survey questions to pinpoint participants' beliefs about what others should do and actually do, as well as how others perceive the participant's behavior. Unfortunately, standard survey research may not capture respondents' normative expectations through such questions. Rather, it may opt for a less direct route by asking about the number of people who expect the respondent to comply with a particular attitude or behavior, the respondent's motivation to accommodate these individuals' wishes, and the degree to which the respondent feels others expect him or her to comply (Mackie et al., 2012).

Mollen et al. (2010) conducted a content analysis of norms-based studies and found that approximately 38% of norms-based studies used a cross-sectional design, 18% used an experiment or field-experiment design, and another 15% used a quasi-experimental design. The remaining studies consisted of interviews (13%), content analyses (8%), unstructured interviews (3%), literature reviews (3%), and case studies (3%). Approximately 28% of the reviewed studies pertained to an intervention or an experimental manipulation, while the rest of the studies tested theoretical propositions or determining cross-sectional relationships between variables. This review showed the rich diversity of methods being used to study normative influences, but the predominance of cross-sectional designs has impaired our ability to test causal models to delineate the mechanisms through which norms affect behaviors from other instances when behaviors guide normative perceptions. A compelling need thus exists for norms-based interventions implemented through rigorous experimental designs.

The literature on social norms is mostly quantitatively oriented. We call for more qualitative studies that

can provide a richer perspective on how individuals and societies understand norms, the manner in which norms evolve over time, and pathways that norms adopt as they travel within a social community. Qualitative methods can also inform our understanding of the intersection between norms, on the one hand, and rituals, mores, and traditions, on the other.

Another area for future research pertains to what one might call "conceptual house-cleaning." By this we mean that researchers need to standardize their conceptual definitions and operationalizations. Although the interest in norms across multiple disciplines is exciting, lack of uniformity in operational definitions has given rise to non-uniformity in what constitutes social norms and how they are measured. Hence, different scholars operationalize the same constructs in different ways, making it difficult to reach consensus in tabulating the effect of norms.

Finally, we believe the time is ripe to develop a thematically based framework that explicates the role of various moderators in the relationship between social norms and behaviors. In this paper, we have addressed how one might predict behavior when normative considerations carry more weight than attitudes. Our framework unpacks the norm to behavior relationship, particularly in the context of deliberative processing, by delineating moderators in terms of whether they are properties of behaviors, individuals, or environments. This conceptualization also lends itself to categorizing moderators according to an ecological framework that ranges from a micro-level focus at the individual level to a macro-level focus at the contextual (i.e., structural, environmental) level. In this way, we offer a broader organization of the research exploring the norm to behavior relationship. These conceptually guided approaches are likely to make significant inroads in our further understanding of social norms.

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