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An Explication of Social Norms

This article identifies four factors for consideration in norms-based research to enhance the predictive ability of theoretical models. First, it makes the distinction between perceived and collective norms and between descriptive and injunctive norms. Second, the article addresses the role of important moderators in the relationship between descriptive norms and behaviors, including outcome expectations, group identity, and ego involvement. Third, it discusses the role of both interpersonal and mass communication in normative influences. Lastly, it outlines behavioral attributes that determine susceptibility to normative influences, including behavioral ambiguity and the public or private nature of the behavior.

The study of norms is of particular importance to communication scholarship because, by definition, norms are social phenomena, and they are propagated among group members through communication (Kincaid, 2004). Communication plays a part not only in formulating perceptions about norms (as when people use the preponderance of a behavior depicted in the media to form their perceptions about the prevalence of the behavior), but also in acting as a conduit of influence (when people base their decisions to act in a situation on the support for their actions that is communicated to them). This article is based on the premise that, given the centrality of communicative processes in propagating information about norms, its inclusion would enhance the explanatory power of theories of normative influences. The purpose of this article is to explore the intersection between social norms and communication by specifying the meaning of norms, delineating the moderators in the relationship between norms and behavior, and highlighting some of the attributes of behaviors that determine their susceptibility to normative influences.

That human behavior is guided by perceptions about the popularity of the behavior comes as no surprise to social influence scholars, marketing professionals, or others interested in human decision-making processes. A casual observation of almost any exercise in social persuasion reveals that one of the factors people use in making behavioral decisions pertains to their assessment as to whether others also engage in the behavior. Yet, the power of normative influences has to be understood in the context of individuals' own judgments and behavioral constraints. Humans do not act solely on the basis of the popularity of a behavior. Otherwise, the world would not have witnessed minority behaviors that have shaped history, ones that are described as acts of bravery and courage in fighting the powerful, and sometimes coercive, forces perpetrated by the majority. Nor would we have seen acts of defiance in everyday life, in which individuals take an unpopular stance despite group pressures.

Delineating the conditions that promote from those that inhibit normative influence makes the study of norms particularly fruitful. Important questions remain in the literature, including these: How is normative information shared among group members? What factors must exist in order for people to exercise their own judgment and defy normative influences? Conversely, what factors promote the influence of norms? As has been pointed out elsewhere (Cialdini, 2001), conforming to social norms is often the appropriate course of action because collective wisdom tends to serve the individual, and the group, well. Among other things, it can provide a convenient decision-making heuristic and thus obviate the need to think critically about the consequences of each decision before acting on it, a process Cialdini called *fixed-action patterns*. Special circumstances exist, however, when collective action is detrimental to individual well-being. This has been demonstrated both experimentally and through observational studies of mob inaction (see Latane & Nida, 1981, for a review), bystander apathy (Latané & Darley, 1968) being a particularly egregious form of inaction on the part of individuals who interpret others' unwillingness to help someone in need as a situation that requires no individual intervention.

Empirical support for normative influences is, at best, mixed. Interventions that attempt to change individuals' behaviors by changing their normative beliefs show few enduring effects, and many evaluations of norms-based approaches suffer from methodological limitations, making the results suspect (Berkowitz, 2004; Borsari & Carey, 2003). A recent review of norms-based interventions to reduce college students' alcohol consumption (Wechsler et al., 2003), for example, failed to find behavior change across any of seven behavioral measures. Despite these results, it would be incorrect to conclude that norms are inconsequential. Rather, given numerous reasons to believe the contrary (see Borsari

& Carey, 2001), a more productive strategy would be to determine whether the inclusion of communication in models of normative influences would provide more explanatory power. An examination of the experimental literature on the influence of group norms on behavior provides cross-sectional evidence for the short-term influence of norms, potential moderators of the norm-behavior relationship (Cruz, Henningsen, & Williams, 2000), and the nature of behaviors that are susceptible to normative influence (Bagozzi, Wong, Abe, & Bergami, 2000). Before addressing these issues, however, we discuss several important conceptual distinctions in the literature on norms.

Specifying the Meaning of Norms

Collective and Perceived Norms

In order to clearly specify the process of normative influence and to explicate the role of communication in this process, it is first necessary to distinguish between norms that exist at the collective level (for example, the level of the group, community, or culture; Arrow & Burns, 2004), on the one hand, and people's understanding of those norms, also called perceived norms, on the other hand. At the collective level, norms serve as prevailing codes of conduct that either prescribe or proscribe behaviors that members of a group can enact. Individuals' interpretation of these norms, the construct of interest in this article, is referred to as perceived norms. Individuals may or may not construe the collective norm correctly; pluralistic ignorance (O'Gorman, 1988) is a specific example of a mismatch between the two. Because collective norms are seldom formally codified or explicitly stated (Cruz et al., 2000), there is likely to be divergence in how people interpret them. For this reason, an aggregation of perceived norms among members of a social system will likely not represent the prevailing collective norm.

This distinction between collective and perceived norms highlights the etiological difference between these two constructs. Collective norms operate at the level of the social system, which could be a social network or the entire society. They represent a collective social entity's code of conduct. Collective norms emerge through shared interaction among members of a social group or community (Bettenhausen & Murnighan, 1985), and the manner in which norms emerge is dependent on, among other things, how they are transmitted and socially construed. Perceived norms, on the other hand, exist at the individual, psychological level. They represent each individual's interpretation of the prevailing collective norm.

Because collective norms exist at the social level and because they are not explicitly codified, measuring them represents one of the primary

challenges for communication scholars. There are, however, meaningful indicators than can be used to tap into collective norms, some of which could include a study of the media environment, structural characteristics of the social system, and social networks. Collective norms are not measured by aggregating individuals' beliefs. If we were to ask individuals about their beliefs about what is normative behavior, we would be tapping into perceived, rather than collective, norms. It is, of course, likely that the two norms would be related, but they are conceptually distinct. Assessing collective norms requires the collection of data at the social level, as aggregating data collected at the individual level to represent collective norms is likely to be misleading. By the same token, perceived norms are operationalized at the individual level, and deriving perceived norms from measures taken at the collective level is likely to suffer from ecological fallacy. Because perceived norms, by definition, are the results of individuals' construal processes, questions about the role of communication in normative influences are asked in the domain of perceived, not collective, norms.

Injunctive and Descriptive Norms

Bendor and Swistak (2001) proffer that norms are meaningful only to the extent that individuals perceive that their violation will result in some social sanction. To the extent that individuals' behaviors are driven by a desire to avoid social sanctions, we can conceptualize the underlying influence as being driven by *injunctive norms*. Injunctive norms refer to people's beliefs about what ought to be done (Cialdini, Reno, & Kallren, 1990). *Descriptive norms*, on the other hand, refer to beliefs about what is actually done by most others in one's social group. The distinction between people's judgments about the prevalence of a behavior and the social sanctions incurred for enacting the behavior is often confounded (e.g., Mizuno, Kennedy, Seals, & Myllyluoma, 2000) or not acknowledged in the literature on norms (e.g., Cheung, Chan, & Wong, 1999; Ewing, 2001), despite other research indicating the benefits of doing so (Borsari & Carey, 2001; Cialdini et al., 1990). Although both types of norms promote behaviors by providing information about what is adaptive behavior in a given situation (Reno, Cialdini, & Kallgren, 1993), descriptive norms provide information about what is done, and injunctive norms indicate what ought to be done (Kallgren, Reno, & Cialdini, 2000). Thus, the primary difference between the two is that descriptive norms typically do not involve social sanctions for noncompliance with the norm.

Both descriptive and injunctive norms can be considered at the collective or individual level. At the individual level, descriptive norms pertain to people's perceptions about the prevalence of the behavior in question. Similarly, injunctive norms pertain to pressures that individuals perceive

to conform. At the collective level, information about descriptive norms may be gathered by observing media depictions of trends surrounding a particular issue. Similarly, information about injunctive norms may be collected by studying policies enacted by specific communities to promote or proscribe a certain behavior.

It is quite often the case that injunctive and descriptive norms are congruent. For example, individuals who attend a formal meeting may notice that, because most others are silent and attentive (descriptive norms), they are required to act in a similar manner and that they will incur social sanctions if they do not comply (injunctive norms). Similarly, college students may perceive that most of their peers consume alcohol (Perkins & Berkowitz, 1986), and that they will lose friendships if they themselves do not (Rimal & Real, 2003). There are many situations, however, when these two types of normative influences do not overlap, such as when people approve of, but do not practice, particular behaviors (Cialdini et al., 1990). Descriptive and injunctive norms can also be antagonistic, and they may provide persons with conflicting information about normative behaviors in a given context.

Although he did not explicitly address the injunctive-descriptive norm distinction, Festinger (1954) argued that persons use social comparison processes to evaluate their own beliefs relative to the social reality. These social comparison processes occur when people look to others for guidance on how to behave in a situation, particularly when the situation is characterized by ambiguity. Working from this idea, Jones and Gerard (1967) suggested that normative influences typically take two forms. First, because people are dependent on others to meet their needs, they are concerned about others' evaluation of their behaviors. Jones and Gerard called this *effect dependence*. Second, individuals can look to others in order to know what they are doing, a process that Jones and Gerard called *informational dependence*.

Fazio's (1990) model of spontaneous processing focuses on the informational nature of norms, suggesting that they serve to help persons define a particular situation, and this definition allows them to understand specific events within that situation. Informational dependence can be further classified into two types, depending, in part, on whether people believe their behaviors will be known by others. People may look to their referents to determine the prevailing norms surrounding a particular behavior, but can also choose to defy the norms if they believe that their behaviors will not become known to referent others. For example, individuals may perceive that most others recycle their waste, but they themselves may choose not to do so in a private setting because enactment of this behavior will not be known to others (Ewing, 2001). If, however, informational dependence is coupled with a perceived threat

of social sanctions for defying the norm, then such influences may be due to injunctive norms, or a combination of the two.

Individuals often misperceive the prevalence of a behavior (i.e., descriptive norms) in their social midst (e.g., Clapp & McDonnell, 2000; Perkins & Wechsler, 1996; see Berkowitz, 2004, and Borsari & Carey, 2003, for reviews), and the magnitude of this misperception is positively related to interpersonal discussion about the topic (Real & Rimal, 2002). Individuals who engage in interpersonal discussion about an issue (drinking on campus, for example) seem to believe that many more others engage in the behavior than is objectively the case. Thus, interpersonal communication can result in the transmission of incorrect beliefs about the prevalence of a behavior. A similar pattern of findings has also been observed when the communication activity is mediated. Research based on cultivation theory (Gerbner, Gross, Morgan, & Signorielli, 1994) showed, for example, that heavy television viewing is positively correlated with the perceived prevalence of professions most often depicted in TV programs. Both lines of work demonstrate a positive association between communication activity and perceived prevalence, indicating that both interpersonal and mediated messages may influence perceptions of the prevalence of a behavior.

The relationship between injunctive norms and communication, however, has not been explicitly addressed in the literature. On the one hand, it could be hypothesized that when people observe many others engaging in a particular behavior, they likely conclude that the behavior is socially acceptable, hence few social sanctions will be incurred by engaging in the behavior. Similarly, observing that only few others engage in the behavior could result in the belief that the behavior is deviant in nature. On the other hand, whether particular behaviors are construed as being socially acceptable or deviant in nature is likely determined by the perceived similarity between oneself and the actors and observations about whether the actors are subsequently sanctioned or rewarded for their behaviors (Bandura, 1973). The larger point here is that, because descriptive and injunctive norms may be communicated through different mechanisms and because they can differentially exercise their influence on behaviors, theoretical models of normative influences should take this distinction into account (Borsari & Carey, 2003).

The subjective norms construct, as articulated in the theory of reasoned action (TRA; Ajzen & Fishbein, 1980) and theory of planned behavior (TPB; Ajzen, 1988), pertains to a form of injunctive norms. It is concerned with people's motivation to comply with the beliefs of important referents. The theory, however, does not address descriptive norms. Further, the confounding of injunctive and descriptive norms is apparent in the literature on norms-based interventions designed to

modify misperceptions of norms and subsequent behaviors. Those designed to curtail alcohol consumption among college students primarily focus on modifying perceptions of descriptive norms (Bosari & Carey, 2003; Perkins & Berkowitz, 1986); those seeking to reduce adolescent substance use, on injunctive norms (Unger, Rohrbach, Howard-Pitney, Ritt-Olsen, & Mouttapa, 2001); and those promoting the use of condoms, on a mixture of the two (Mizuno et al., 2000). Yet, all three types of campaigns are conceptualized as being based on norms.

Rimal and Real (2003) argued that injunctive norms moderate the relationship between descriptive norms and behavioral intention such that the influence of descriptive norms on behaviors is heightened when injunctive norms are also strong and attenuated when injunctive norms are weak. Thus, when people perceive that social sanctions exist for noncompliance, they are more likely to conform if they also perceive that the behavior is widespread among their peers. The interactive effect of injunctive and descriptive norms on behaviors can also be derived from the Asch (1951) study in which injunctive norms were deliberately manipulated to be strong (Kitayama & Burnstein, 1994). In a small-group setting, all confederates provided an obviously incorrect response, thus creating a situation in which naive subjects felt compelled to go along with the group because they perceived the correct response was obvious to everyone else and that others also expected them to conform (Ross, Bierbrauer, & Hoffman, 1976). More relevant to our discussion here, when the descriptive norms were low—as when other confederates were shown not to conform with the majority—naive subjects did not conform either. Thus, strong injunctive norms, by themselves, were not adequate to influence behavior; greatest compliance was observed when descriptive and injunctive norms were both high.

Toward a Theory of Normative Influences

The theory of normative social behavior (TNSB; Rimal & Real, in press) builds from the work of Cialdini and others (Cialdini et al., 1990; Kallgren et al., 2000; Reno et al., 1993) in that it distinguishes descriptive from injunctive norms and focuses on factors that moderate the influence of descriptive norms on behaviors. These moderators include injunctive norms, outcome expectations, and group identity. Variables comprising the model have consistently explained more than 50% of the variance in behavioral intention in three studies (Rimal & Real, in press, 2003; Rimal, Real, & Morrison, 2004). The TNSB, however, does not address the ways in which normative information is communicated or the ways in which communication might be used to augment normative perceptions. Moreover, it does not address the moderating role of ego involvement

on the descriptive norm–behavior relationship. In the following sections, we briefly review the moderators of the relationship between descriptive norms and behaviors, and then we extend the model by including the role of communication as a variable in the model.

Moderators in the Influence of Descriptive Norms

Empirical evidence suggests that there are a number of factors that moderate the relationship between descriptive norms and behaviors (Bagozzi et al., 2000; Cruz et al., 2000). Rimal and Real (2003) posited that the explanatory power of norms-based models can be enhanced if careful attention is paid to the underlying cognitive mechanisms. Rimal and Real (in press) identified three such moderators—injunctive norms, outcome expectations, and group identity—that influence behaviors directly and also through their interaction with descriptive norms. The interaction between injunctive and descriptive norms has been discussed above, and it will not be repeated here. Research on social norms (Bagozzi et al.; Cruz et al.; Rimal & Real, 2003) has indicated that the perceived popularity of a behavior will compel people to act accordingly if they (a) perceive that enacting the behavior will confer benefits (outcome expectations), (b) share strong affinity with their referent group (group identity), or (c) view the attitude or behavior as central to their self-concept (ego involvement).

Outcome Expectations. Outcome expectations refer to the beliefs that enacting a particular behavior will confer the benefits that one seeks (Bandura, 1986). More specifically, outcome expectations are conceptualized as the product of a mental calculus that people perform between the benefits of taking actions and costs associated with those actions (Rogers, 1975; Rosenstock, 1974). To the extent that outcome expectations can be thought of as beliefs that guide behaviors, the TRA (Ajzen & Fishbein, 1980) treats outcome expectations as part of attitudes toward a behavior.

When the high prevalence of a behavior is accompanied by beliefs that the behavior results in significant benefits, individuals are more likely to engage in the behavior (Rimal & Real, in press, 2003). That perceptions of benefits result in engagement of the behavior is not surprising; other theoretical models, including the health belief model (Janz & Becker, 1984), TRA (Ajzen & Fishbein, 1980), and social cognitive theory (SCT; Bandura, 1986) have posited as much. It should also be noted that the relationship between outcome expectations and behavior, by itself, is not indicative of the influence of descriptive norms. It becomes so when outcome expectations interact with descriptive norms to influence behaviors. By not engaging in a behavior known to have desirable outcomes, individuals may also become fearful that they will be denied im-

portant outcomes that others—many others—who engage in the behavior are able to attain. Research indicates that the threat of a potential loss looms large in people's minds. Kahneman and Tversky (1984) and Kahneman, Knetsch, and Thaler (1991) have shown, for example, that the threat of losing something is a greater motivator of action than the potential for gaining something of equal value. Hence, reluctance to deprive oneself of benefits that one perceives many others derive from the behavior can result in greater likelihood that one will enact the behavior (Rimal et al, 2004).

Group Identity. Numerous studies have documented the role that individuals' social networks play in initiating and reinforcing both positive (Hibbard, 1985; House, Landis, & Umberson, 1988; Valente, 1994) and negative (Donohew et al., 1999; Dorsey, Sherer, & Real, 1999; Fraser & Hawkins, 1984; Kandel, 1973; Seeman, Seeman, & Sayles, 1985) behaviors. In order for individuals to be influenced by their social networks, they must either feel some degree of affinity or desire connections with their reference group.¹ Thus, identity with one's reference group enhances the likelihood of being influenced by members of this group. Research on nominal groups has shown that identification plays a central role in an in-group member's ability to persuade other group members (Wilder, 1990). In the absence of this form of identification, there is no reason to expect group identity to affect individuals' behavioral choices. When people perceive that they are connected with members of their reference group, there are likely two reasons why they would be more likely to conform. First, members experience positive affect when they do so (Christensen, Rothgerber, Wood, & Matz, 2004). Second, there is an implicit understanding that their compliance (or failure to comply) with the group behavior will be known by other group members and that group members will have access to information about their expression of group solidarity. When individuals perceive that the prevalence of a behavior among their reference group is widespread and their identification with the group is strong, then they are more likely to engage in the behavior themselves (Rimal & Real, in press). Conversely, if members feel strong affinity with the group and concomitantly believe that a behavior is unpopular among group members, then they are less likely to engage in the behavior themselves.

Given the variation in the nature of group identity across cultures (Triandis, 1989) and findings indicating that the nature of group identity may be determined by culture (Markus & Kitayama, 1991), one cannot overlook the role of culture on identity-driven influences. Bagozzi et al. (2000) tested the TRA in several cultures and found that the effect size for the influence of subjective norms varied for members of different cultural groups, with participants from China exhibiting the stron-

gest relationship between subjective norms and behavioral intentions. They suggested that this was due, in part, to Chinese participants having stronger identification with referent groups than those from the United States. Likewise, Park and Levine (1999) found that the normative factors in the TRA were significantly associated with interdependent but not with independent (that is, the extent to which one is self rather than collectively oriented) self-construal. It is likely then that, to the extent that the strength of group identification is culturally determined, culture can indirectly influence susceptibility to normative effects. Thus, in cultures in which the collective is emphasized over the individual (Hofstede, 1980) or in which interdependent views of self predominate (Markus & Kitayama), norms appear to exert a more powerful impact on behaviors (Bagozzi et al.; Park & Levine).

Ego Involvement. Involvement is the “motivational state induced by an association between an activated attitude and some aspect of the self” (Johnson & Eagly, 1989, p. 293). Ego involvement refers to the extent to which individuals’ self-concept is connected with their position on a particular issue and forms an integral part of how individuals define themselves (Johnson & Eagly, 1989; Lapinski & Boster, 2000; Sherif & Hovland, 1961; Sherif, Kelly, Rodgers, Sarup, & Tittler, 1973). Although discussions of ego involvement have generally centered around attitudes (e.g., Johnson & Eagly), persons may also be highly ego-involved in behaviors (Lapinski & Boster, 2001) if these behaviors are linked with self-concept. For example, persons who see themselves as “drinkers” view this role as a central part of their self-concept (Conner & Armitage, 1998) and are thus likely to be highly ego-involved in behaviors related to alcohol consumption.

The effect of descriptive norms on behavior is strengthened for those whose self-identity is closely aligned with the enactment of the behavior or those who are highly ego-involved in a behavior. Rimal et al. (2004) found, for example, that students’ self-perceptions surrounding alcohol consumption had both a main effect as well as an interaction effect (with descriptive norms) on their behavioral intention. Students who perceive themselves as drinkers, compared to those who perceive themselves as nondrinkers, are not only more likely to consume alcohol, but also more influenced by their perceived prevalence of consumption. Although the exact mechanism underlying this effect has yet to be determined, it is possible that strong descriptive norms activate the relevant aspect of self-concept and make one’s ego involvement more salient, thereby increasing the likelihood of behavioral action. This is consistent with Fazio’s (1986, 1990) model, which posited that attitude-behavior consistency is enhanced when the relevant attitude is made salient at the time of behavioral action.

Given the empirical evidence discussed above, it is expected that the three moderators (outcome expectations, group identity, and ego involvement) will have both direct effects and moderated effects (with descriptive norms) on behaviors.

Communication of Norms

Many norms-based interventions seek to correct misperceptions about the prevalence of a behavior with the belief that correcting these misperceptions will result in behavior change (Berkowitz, 2004). These interventions, particularly those around alcohol use on college campuses, often focus on modifying descriptive norms (Perkins & Berkowitz, 1986; see Borsari & Carey, 2001, 2003, for reviews). Thus, the underlying strategy in these interventions is based on a central assumption about the role of communication—that, through a communication intervention, individuals' misperceptions about the prevalence of a behavior can be corrected. Indeed, there is support for this assertion, as revealed by a recent meta-analysis (Borsari & Carey, 2003). What is often neglected in this literature is the question of how these misperceived descriptive norms are formed to begin with. It is our premise here that individuals' communication patterns play a key role in the development of normative perceptions. Further, communication influences the extent to which people perceive a discrepancy between their own and others' attitudes or behaviors such that they believe they are in the minority when they are actually in the majority (pluralistic ignorance; Prentice & Miller, 1996), believe their behaviors are more different from others than they actually are (false uniqueness; Ross, Greene, & House, 1977), or think others think and act as they do when they do not (false consensus; Suls & Wan, 1987).

The literature indicates that the magnitude of the misperception and the influence of norms on behaviors will be determined by, among other things, the source of the normative information (referent group member, stranger, typical other; Borsari & Carey, 2003). For example, research framed in the TRA and other norms-based interventions has indicated not only that normative information from referent others can influence behaviors, but also that the social distance between the actor and the referent is negatively associated with the accuracy of normative perceptions (Baer, Stacey, & Larimer, 1991). Importantly, normative information from strangers or acquaintances can also influence behaviors, as has been demonstrated in previous research (Asch, 1951; Borsari & Carey, 2003; Cruz et al., 2000; Latane & Darley, 1968). Thus, referent group members (for example, family, friends, and relational partners), as well as acquaintances and strangers, can communicate normative information. From a normative perspective, what distinguishes influences emanating from familiar versus unfamiliar reference groups pertains to the

accuracy of perceptions (Borsari & Carey 2003), the durability of the social influence, and whether the normative information is internalized into the value system (Kelman, 1961). When individuals internalize normative information, the presence of the reference group is not required for sustained normative effects (Sherif, 1935). If, however, individuals enact a behavior in the absence of internalization—a process that Kelman (1961) termed *compliance*—then the presence of the reference group is required for normative influence to occur.

The role of communication in normative influences can also be derived from a number of theoretical perspectives, including cultivation theory (Gerbner et al., 1994), the diffusion of innovations (Rogers, 1995), social cognitive theory (Bandura, 1986), and uncertainty reduction theory (Berger, 1987; Berger & Calabrese, 1975) and its extensions (uncertainty and anxiety management theory, among others; Brashers et al., 2000; Gudykunst, 1995). Both cultivation theory and social cognitive theory, for example, address how individuals internalize normative information from exposure to messages in the media by developing perceptions about the prevalence of the depicted acts (cultivation theory) or through observational learning (social cognitive theory). Similarly, the role of interpersonal communication in normative influences can be derived from the diffusion of innovations and uncertainty reduction theory; in the former, opinion leaders can be thought of as key players in the transmission of normative information, whereas in the latter, active, passive, or interactive strategies can be construed as mechanisms through which normative information is communicated. Although these theoretical perspectives provide insight into the influence of people's normative beliefs on their behaviors or the process through which normative beliefs are formed, there is a paucity of research on the attributes of behaviors that make them more or less vulnerable to normative influences. Trafimow and Finlay (2001) and Trafimow and Fishbein (1994) pointed out that behaviors can be classified into those controlled normatively versus those controlled attitudinally and that this behavior type moderates the relationship between subjective norms and behaviors as articulated in the TRA. Extending this idea further, we propose that certain attributes of behaviors make the behaviors more or less likely to be influenced by perceptions about others' beliefs and observation of others' behaviors (Bagozzi et al., 2000; Cialdini, 2001). Some of these attributes are discussed below.

Focus on Behavioral Attributes

Our discussion so far illustrates the need to consider both the role of communication and the underlying cognitive processes in theorizing about

normative influences. What has not been discussed in this article, and what has remained largely ignored in the health communication literature in general and the norms literature in particular, is how the magnitude of normative influence varies according to the attributes of particular behaviors. Behavioral attributes refer to the defining features that comprise the behavior rather than the situations or contexts in which the behavior is enacted.

We distinguish behavioral attributes from behavioral domains in that the latter term is used to signify the actual behaviors (getting tested for HIV, smoking, voting, etc.), whereas the former is used to signify components that comprise the behavior in question. So, for example, getting tested for HIV, as a behavioral domain, is a behavior that has several attributes, some of which may include concerns about confidentiality (Delerger, Lovejoy, & Winstead, 1998; Woods et al., 1999), perceived stigma (Aggleton & Parker, 2002; Capitanio & Herek, 1999), and so forth. Each behavioral domain can be broken down into meaningful attributes. What defines “meaningful,” of course, is a conceptual issue—certain attributes may be more or less relevant for pursuing the underlying relations in a particular theory.

The purpose of the following sections is to elaborate on two such attributes, ambiguity and behavioral privacy, which are relevant for understanding normative influences. In each case, the extent to which these behavioral attributes exist for a given behavior is not a dichotomous issue. Behaviors can vary on a continuum from being characterized as more or less ambiguous or private. We should also note that behavioral attributes and situational or contextual factors may overlap. The same behavior—say, donating to charity—may be enacted in different situations, such as at home, away from the public eye, or in the workplace, among one’s coworkers. Thus, different ends on the same (behavioral privacy) continuum may be relevant in different contexts. Finally, our selection of attributes is not meant to be exhaustive; rather, the attributes are being proposed as a means of stimulating research in this area.

Ambiguity

Bystander apathy is perhaps one of the best illustrations of the role of ambiguity in normative influences, particularly because the situation is characterized by the high prevalence of a behavior (persons not helping others in need). Researchers who have studied this issue (e.g., Latane & Nida, 1981) have posited that bystanders look to others for an interpretation of the situation. Those others, in turn, interpret mass inaction as a situation that requires no intervention. Cialdini (2001) called this phenomenon “social proof,” the idea that people “view a behavior as correct in a given situation to the degree that we see others performing it” (p. 100). In this context, we use ambiguity to mean a situation in which

the appropriate course of action is unclear to the actor. Thus, ambiguity about the appropriate behavior may exist because the behavior is new, as when people find themselves in a new culture where the mores are not clear to them, or because, although the situation is not new, there is no obvious course of action, such as when an appraisal of the situation provides people with contradictory information about the situation (e.g., whether or not to intervene in a domestic dispute, Nabi, Southwell, & Hornik, 2002). In familiar situations—those marked with obvious behavioral responses—there is often no need to use others' behaviors as cues to inform decisions. After all, having experienced their own behavior in the past, and having been exposed to the consequences of those behaviors, people likely have a readily available repertoire of appropriate choices, based on their own judgment or on precedence (Arrow & Burns, 2004). It is when situations are characterized by ambiguity that persons are particularly likely to seek information from those around them for assistance in interpretation. Thus, though closely related, ambiguity and novelty are not synonymous.

In order to illustrate how ambiguity as a behavioral attribute facilitates the influence of descriptive norms, one can turn to the literature on college students' alcohol consumption (Conner, Warren, Close, & Sparks, 1999; Dorsey et al., 1999; Perkins & Berkowitz, 1986). For many students, going away to college is their first experience in a new and unfamiliar social environment, which means they have to learn new rituals and modes of conduct. Entering college is a time when individuals are faced with many new interpersonal, social, and academic demands. There is evidence that such a time is difficult for some students and that the stress they experience impacts both their physical and psychological health (Aspinwall & Taylor, 1992; Baker, 2003). Going to college is also a time when students experience a great deal of ambiguity, as they cannot rely on many of the habitual behaviors familiar to them in prior years.

One of the primary functions descriptive norms serve is that, under conditions of ambiguity, they help people understand the appropriate mode of conduct (Cialdini et al., 1990; Latane & Darley, 1968). When people are unsure about how to behave in a new or unfamiliar situation, they look to the behaviors of others (Cialdini, 2001). Others' engagement in a behavior then provides social approval cues, and once cues of perceived appropriate behavior are internalized, people are likely to engage in similar behaviors in the future even in the absence of the social cues (Kelman, 1961). In other words, ambiguity may at times facilitate the conversion of descriptive norms to injunctive norms.

In the absence of ambiguity, however, observation of others engaging in a behavior is likely to have little bearing on individuals' own understanding of the appropriate mode of conduct; instead, they can rely on

their own internal cues to determine how they should act. Further, if one does not perceive ambiguity, one is not likely to seek out normative information via active or interactive means (Berger & Calabrese, 1975). Thus, ambiguity is a facilitator of, but not a necessary condition for, the influence of descriptive norms on behaviors. People can be guided by others' beliefs and behaviors even when the appropriate modes of behavior are unambiguous to themselves.

Behavioral Privacy

The extent to which a behavior is enacted in a public or private setting is also likely to moderate normative influences (Bagozzi et al., 2000; Cialdini et al., 1990). In the extreme case, if a behavior is enacted in a completely private setting (for example, engaging in breast self-examination, Jirojwong & MacLennan, 2003, or compliance with a therapeutic regimen, Cameron, 1996) and neither its enactment nor its consequences are likely to be known by others (either by observation or by communication about the behavior), then injunctive norms would likely exercise little influence on behavior, though they could affect internal attitudes or beliefs. If a behavior is solely enacted away from the public eye, then not only is there no opportunity to observe others' behavior (and thus no information about behavioral prevalence), but one's own behaviors would also not be observable for others' scrutiny. Persons are also less likely to engage in interrogation of others (Berger & Calabrese, 1975) about largely private behaviors (e.g., condom use), further limiting the exchange of normative information for privately enacted behaviors. In this case, pressures to conform to others' behaviors or their beliefs about the appropriate course of action (i.e., injunctive norms) would be less relevant because of the absence of accountability for one's behaviors and limited knowledge of prevalence or potential social sanctions.

At the other extreme, behaviors that are enacted exclusively in a public setting are available for public scrutiny, via both observation and interrogation. From the perspective of normative influences, this means not only that people can observe others' behavior, but also that their behaviors, in their own minds, are observable to others. The implication of being able to observe others' behaviors, either directly or indirectly, is that individuals have ready access to information about descriptive norms. The implication of knowing that one's own behaviors are available for public scrutiny is that social sanctions can be exercised for violating injunctive norms. Under these conditions, the pressures to conform, that is, engage in behaviors perceived to be acceptable in others' eyes, are likely to be substantial. Thus, the influence of perceived norms is likely to be greater in the presence of referent others than when alone (Bagozzi et al., 2000) or when people perceive that others will have access to information about their behaviors or behavioral outcomes. This sug-

gests that, in order to understand how normative influences occur, researchers need to investigate the extent to which the behaviors in question are performed in a public or private setting.

Consider condom use (Albarracin, Johnson, Fishbein, & Muellerleile, 2001) and college students' alcohol consumption (Perkins & Berkowitz, 1986). Because sexual behaviors are enacted in a private setting, individuals are not likely to have direct access to prevalence information, and injunctive norms are less relevant because social sanctions are difficult to impose when violation of norms cannot be verified. Granted, individuals may feel pressure from their partners to use a condom, and this pressure can substantially influence behavior (Sheeran & Taylor, 1999), but such an influence is not normative; it is only interpersonal. To the extent that individuals perceive that many others use condoms, one can conclude that the underlying descriptive norms are based not on direct observation of others' behaviors, but rather on the communication of those norms to them via one of the mechanisms described above.

College students' alcohol consumption, on the other hand, is usually enacted in a public setting. Individual students not only have a more direct access to others' behaviors (through passive and active strategies, as defined in URT, Berger & Calabrese, 1975), but their own behaviors are also available for public scrutiny and interrogation. Thus, this behavior is likely to be affected by both descriptive and injunctive norms.

This discussion about the public scrutiny of one's behavior highlights two issues. First, it points to the differential impact of norms according to the public nature of a behavior. Second, because researchers seldom theorize about normative influences as a function of behavioral attributes, it offers one explanation for the lack of consistent findings in the norms literature. It may explain why some interventions designed to increase condom use, a largely private behavior, find small effects for normative influences (Sutton, McVey, & Glanz, 1999). Likewise, those that examine more public behaviors such as food consumption in restaurants (Bagozzi et al., 2000) or waste paper recycling (Cheung et al., 1999; Ewing, 2001) find significant normative effects.

Conclusion

In this article, we have argued that the research on normative influences can be enhanced through (a) a clearer specification of the meaning of norms; (b) delineating factors that moderate the influence of descriptive norms on behaviors; (c) addressing the role of communication processes in the transmission and formation of norms; and (d) theorizing about behavioral attributes that make normative influences more or less relevant.

Following previous theorists, we classified norms as collective or perceived and also as descriptive or injunctive. Whereas collective norms are manifest at the social or institutional level, perceived norms are manifest at the individual level. Both collective and perceived norms can be either descriptive or injunctive in nature. At the level of the individual, descriptive norms pertain to perceptions about the prevalence of the behavior in question. Similarly, injunctive norms pertain to pressures that individuals perceive to conform. At the level of the collective, information about descriptive norms may be collected by observing media depictions of trends surrounding a particular issue. Similarly, information about injunctive norms may be collected by studying policies enacted by specific communities to promote or proscribe a certain behavior.

Although we have addressed a number of variables that moderate the descriptive norm-behavior relationship, we acknowledge that there are other possible moderators. It is possible, for example, that self-monitoring—the extent to which one's behavior is driven by concerns about how one appears to others (Snyder, 1974)—will also influence one's susceptibility to normative influences. Although this relationship seems logical, others have examined the relationship between norms and self-monitoring with mixed results (Dakin, 1998; DeBono & Omoto, 1993). Moreover, other forms of involvement (e.g., impression-relevant, issue-relevant) may also moderate the relationship between norms and behaviors (Johnson & Eagly, 1989). We have chosen to limit ourselves to explicating relationships for which we have empirical evidence, and we leave it to other researchers to add to our list.

The inclusion of communication processes in norms-based theories is likely to enhance scholars' understanding about how norms are formed, transmitted, and modified among members of a social group. Furthermore, the expansion of theoretical models to include the role of various moderators (outcome expectation, group identity, and ego involvement) in the relationship between descriptive norms and behaviors is likely to add significant explanatory power of these models.

Finally, in order to better understand how normative influences occur, it has been proffered here that researchers should focus on various behavioral attributes that define particular behaviors. Ambiguity and behavioral privacy have been highlighted as two attributes that are meaningful from the perspective of normative influences. There are potentially many other attributes (for example, level of addictiveness, level of stigma, etc.) associated with particular behaviors, and hence the selection of these two is for illustrative purposes only. It is meant to stimulate thinking about the intersection between the underlying theoretical assumptions, on the one hand, and the relevant behavioral attributes, on the other.

Authors

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Note

¹ It should be noted that persons often identify with multiple reference groups, including those defined by their engagement in or abstinence from a particular behavior. For example, students may identify not only with their alcohol-consuming peers but also with others who do not consume alcohol. The extent to which students' perceptions about the prevalence of alcohol consumption affect their own consumption, however, will likely depend on the affiliations that students consider more important or those that they use to define themselves.

References

- Aggleton, P., & Parker, R. (2002). *HIV/AIDS stigma and discrimination: A conceptual framework and basis for action*. New York: UNAIDS.
- Ajzen, I. (1988). *Attitudes, personality, and behavior*. Chicago: Dorsey.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice Hall.
- Albarracín, D., Johnson, B. T., Fishbein, M., & Muellerleile, P. A. (2001). Theories of reasoned action and planned behavior as models of condom use: A meta-analysis. *Psychological Bulletin*, *127*, 142–161.
- Arrow, H., & Burns, K. L. (2004). Self-organizing culture: How norms emerge in small groups. In M. Schaller & C. S. Crandall (Eds.), *The psychological foundations of culture* (pp. 171–200). Mahwah, NJ: Erlbaum.
- Asch, S. (1951). Effects of group pressure upon the modification and distortion of judgments. In H. Guetzkow (Ed.), *Groups, leadership, and men* (pp. 177–190). Pittsburgh, PA: Carnegie Press.
- Aspinwall, L. G., & Taylor, S. E. (1992). Modeling cognitive adaptation: A longitudinal investigation of the impact of individual differences and coping on college adjustment and performance. *Journal of Personality and Social Psychology*, *63*, 989–1003.
- Baer, J. S., Stacy, A., & Larimer, M. (1991). Biases in the perception of drinking norms among college students. *Journal of Studies on Alcohol*, *52*, 580–586.
- Bagozzi, R. P., Wong, N., Abe, S., & Bergami, M. (2000). Cultural and situational contingencies and the theory of reasoned action: Application to fast food restaurant consumption. *Journal of Consumer Psychology*, *9*, 97–106.
- Baker, S. R. (2003). A prospective longitudinal investigation of social problem-solving appraisals on adjustment to university, stress, health, and academic motivation and performance. *Personality and Individual Differences*, *35*, 569–591.
- Bandura, A. (1973). *Aggression: A social learning analysis*. Oxford, UK: Prentice Hall.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bendor, J., & Swistak, P. (2001). The evolution of norms. *American Journal of Sociology*, *106*, 1493–1545.
- Berger, C. R. (1987). Communicating under uncertainty. In M. E. Roloff & G. R. Miller (Eds.), *Interpersonal processes* (pp. 39–62). Newbury Park, CA: Sage.
- Berger, C. R., & Calabrese, R. (1975). Some explorations in initial interactions and beyond: Toward a development theory of interpersonal communication. *Human Communication Research*, *1*, 99–112.
- Berkowitz, A. D. (2004). *The social norms approach: Theory, research and annotated bibliography*. Retrieved January 25, 2005, from <http://www.edc.org/hec/socialnorms>
- Bettenhausen, K. L., & Murnighan, J. K. (1985). The emergence of norms in competitive decision-making groups. *Administrative Science Quarterly*, *30*, 350–372.
- Borsari, B., & Carey, K. B. (2001). Peer influences on college drinking: A review of the research. *Journal of Substance Abuse*, *13*, 391–424.
- Borsari, B., & Carey, K. B. (2003). Descriptive and injunctive norms in college drinking: A meta-analytic integration. *Journal of Studies on Alcohol*, *64*, 331–341.
- Brashers, D. E., Neidig, J. L., Haas, S. M., Dobbs, L. K., Cardillo, L. M., & Russell, J. A. (2000). Communication in the management of uncertainty: The case of persons living with HIV or AIDS. *Communication Monographs*, *67*, 63–84.
- Cameron, C. (1996). Patient compliance: Recognition of factors involved and suggestions for promoting compliance with therapeutic regimens. *Journal of Advanced Nursing*, *24*, 244–250.

- Capitanio, J. P., & Herek, G. M. (1999). AIDS-related stigma and attitudes toward injecting drug users among Black and White Americans. *American Behavioral Scientist*, 42, 1148–1161.
- Cheung, S. F., Chan, D. K.-S., & Wong, Z. S.-Y. (1999). Reexamining the theory of planned behavior in understanding wastepaper recycling. *Environment and Behavior*, 31, 587–612.
- Christensen, P. N., Rothgerber, H., Wood, W., & Matz, D. C. (2004). Social norms and identity relevance: A motivational approach to normative behavior. *Personality and Social Psychology Bulletin*, 30, 1295–1309.
- Cialdini, R. B. (2001). *Influence: Science and practice* (4th ed.). New York: HarperCollins.
- Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology*, 58, 1015–1026.
- Clapp, J. D., & McDonnell, A. L. (2000). The relationship of perceptions of alcohol promotion and peer drinking norms to alcohol problems reported by college students. *Journal of College Student Development*, 41, 20–26.
- Conner, M., & Armitage, C. J. (1998). Extending the theory of planned behavior: A review and avenues for future research. *Journal of Applied Social Psychology*, 28, 1429–1464.
- Conner, M., Warren, R., Close, S., & Sparks, P. (1999). Alcohol consumption and the theory of planned behavior: An examination of the cognitive mediation of past behavior. *Journal of Applied Social Psychology*, 29, 1676–1704.
- Cruz, M. G., Henningsen, D. D., & Williams, M. L. M. (2000). The presence of norms in the absence of groups? The impact of normative influence under hidden-profile conditions. *Human Communication Research*, 26, 104–124.
- Dakin, S. A. (1998). Can one make a difference? Exploring the differential effects of norm salience and the self-monitoring trait on the norm focus theory's application to recycling behavior. *Dissertation Abstracts International: Section B: The Sciences & Engineering*, 59(6-B), 3119.
- DeBono, K. G., & Omoto, A. M. (1993). Individual differences in predicting behavioral intentions from attitude and subjective norm. *Journal of Social Psychology*, 133, 825–831.
- Delerga, V. J., Lovejoy, D., & Winstead, B. A. (1998). Personal accounts on disclosing and concealing HIV-positive test results: Weighing the benefits and risks. In V. J. Delerga, & A. P. Barbee (Eds.), *HIV and social interaction* (pp. 147–164). Thousand Oaks, CA: Sage.
- Donohew, R. L., Hoyle, R. H., Clayton, R. R., Skinner, W. F., Colon, S. E., & Rice, R. E. (1999). Sensation seeking and drug use by adolescents and their friends: Models for marijuana and alcohol. *Journal of Studies on Alcohol*, 60, 622–631.
- Dorsey, A. M., Sherer, C., & Real, K. (1999). The college tradition of “drink ’til you drop”: The relationship between students’ social networks and engaging in risky behaviors. *Health Communication*, 4, 313–334.
- Ewing, G. (2001). Altruistic, egoistic, and normative effects on curbside recycling. *Environment and Behavior*, 33, 733–764.
- Fazio, R. H. (1986). How do attitudes guide behavior? In R. M. Sorrentino & E. T. Higgins (Eds.), *The handbook of motivation and cognitions: Foundations of social behavior* (pp. 204–243). New York: Guilford.
- Fazio, R. H. (1990). Multiple processes by which attitudes guide behaviors: The MODE model as an integrative framework. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 23, pp. 75–109). San Diego, CA: Academic Press.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117–140.
- Fraser, M. W., & Hawkins, J. D. (1984). The social networks of opioid abusers. *International Journal of the Addictions*, 19, 903–917.
- Gerbner, G., Gross, L., Morgan, M., & Signorielli, N. (1994). Growing up with television: The cultivation perspective. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (pp. 17–41). Hillsdale, NJ: Erlbaum.
- Gudykunst, W. B. (1995). Anxiety/uncertainty management (AUM) theory. In R. L. Wiseman (Ed.), *Intercultural communication theory* (pp. 8–58). Thousand Oaks, CA: Sage.
- Hibbard, J. H. (1985). Social ties and health status: An examination of moderating factors. *Health Education Quarterly*, 12, 23–34.
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.
- House, J. S., Landis, K. R., & Umberson, D. (1988). Social relationships and health. *Science*, 241, 540–545.
- Janz, N. K., & Becker, M. H. (1984). The health belief model: A decade later. *Health Education Quarterly*, 11, 1–47.
- Jirojwong, S., & MacLennan, R. (2003). Health beliefs, perceived self-efficacy, and breast self-examination among Thai migrants in Brisbane. *Journal of Advanced Nursing*, 41, 241–249.

- Johnson, B. T., & Eagly, A. H. (1989). The effects of involvement on persuasion: A meta-analysis. *Psychological Bulletin*, *106*, 290–314.
- Jones, E. E., & Gerard, H. B. (1967). *Foundations of social psychology*. New York: Wiley.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1991). Anomalies: The endowment effect, loss aversion, and status quo bias. *Journal of Economic Perspectives*, *5*, 193–206.
- Kahneman, D., & Tversky, A. (1984). Choices, values and frames. *American Psychologist*, *39*, 341–350.
- Kallgren, C. A., Reno, R. R., & Cialdini, R. B. (2000). A focus theory of normative conduct: When norms do and do not affect behavior. *Personality and Social Psychology Bulletin*, *26*, 1002–1012.
- Kandel, D. B. (1973). Adolescent marijuana use: Role of parents and peers. *Science*, *181*, 1067–1069.
- Kitayama, S., & Burnstein, E. (1994). Social influence, persuasion, and group decision making. In S. Shavitt & T. C. Brock (Eds.), *Persuasion: Psychological insights and perspectives* (pp. 175–193). Boston: Allyn & Bacon.
- Kelman, H. C. (1961). Processes of opinion change. *Public Opinion Quarterly*, *25*, 57–78.
- Kincaid, D. L. (2004). From innovation to social norm: Bounded normative influence. *Journal of Health Communication*, *9*, 37–57.
- Lapinski, M. K., & Boster, F. J. (2001). Modeling the ego-defensive function of attitudes. *Communication Monographs*, *68*, 314–324.
- Latane, B., & Darley, J. M. (1968). Group inhibition of bystander intervention in emergencies. *Journal of Personality and Social Psychology*, *10*, 215–221.
- Latane, B., & Nida, S. (1981). Ten years of research on group size and helping. *Psychological Bulletin*, *89*, 308–324.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*, 224–253.
- Mizuno, Y., Kennedy, M., Seals, B., & Myllyluoma, J. (2000). Predictors of teens' attitudes toward condoms: Gender differences in the effects of norms. *Journal of Applied Social Psychology*, *30*, 1381–1395.
- Nabi, R. L., Southwell, B., & Hornik, R. (2002). Predicting intentions versus predicting behaviors: Domestic violence prevention from a theory of reasoned action perspective. *Health Communication*, *14*, 429–449.
- O'Gorman, H. J. (1988). Pluralistic ignorance and reference groups: The case of in-group ignorance. In H. J. O'Gorman (Ed.), *Surveying social life: Papers in honor of Herbert H. Hyman* (pp. 145–173). Middletown, CT: Wesleyan University Press.
- Park, H. S., & Levine, T. R. (1999). The theory of reasoned action and self-construal: Evidence from three cultures. *Communication Monographs*, *66*, 199–218.
- Perkins, H. W., & Berkowitz, A. D. (1986). Perceiving the community norms of alcohol use among students: Some research implications for campus alcohol education programming. *International Journal of the Addictions*, *21*, 961–976.
- Perkins, H. W., & Wechsler, H. (1996). Variation in perceived college drinking norms and its impact on alcohol abuse: A nationwide study. *Journal of Drug Issues*, *26*, 961–974.
- Prentice, D. A., & Miller, D. T. (1996). Pluralistic ignorance and the perpetuation of social norms by unwitting actors. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology: Vol. 28* (pp. 161–209). New York: Academic Press.
- Real, K., & Rimal, R. N. (2002, November). Friends talk to friends about drinking: Examining the role of communication in alcohol use by college students. Paper presented at the annual conference of the National Communication Association, New Orleans, LA.
- Reno, R. R., Cialdini, R. B., Kallgren, C. A. (1993). The transsituational influence of social norms. *Journal of Personality & Social Psychology*, *64*, 104–112.
- Rimal, R. N., & Real, K. (2003). Understanding the influence of perceived norms on behaviors. *Communication Theory*, *13*, 184–203.
- Rimal, R. N., & Real, K. (in press). How behaviors are influenced by perceived norms: A test of the theory of normative social behavior. *Communication Research*.
- Rimal, R. N., Real, K., & Morrison, D. (2004, May). *Expanding the theory of normative influences: The role of ambiguity and identity*. Paper presented at the annual conference of the International Communication Association, New Orleans, LA.
- Rogers, R. W. (1975). A protection motivation theory of fear appeals and attitude change. *Journal of Psychology*, *91*, 93–114.
- Rogers, E. M. (1995). *Diffusion of innovations*. (4th ed.). New York: Free Press.
- Rosenstock, I. M. (1974). The health belief model: Origins and correlates. *Health Education Monographs*, *2*, 336–353.

- Ross, L., Bierbrauer, G., & Hoffman, S. (1976). The role of attribution processes in conformity and dissent: Revising the Asch situation. *American Psychologist*, 31, 148–157.
- Ross, L., Greene, D., & House, P. (1977). The “false consensus effect”: An egocentric bias in social perception and attribution processes. *Journal of Experimental Social Psychology*, 13, 279–301.
- Seeman, M., Seeman, T., & Sayles, M. (1985). Social networks and health status: A longitudinal analysis. *Social Psychology Quarterly*, 48, 237–248.
- Sheeran, P., & Taylor, S. (1999). Predicting intentions to use condoms: A meta-analysis and comparison of the theory of reasoned action and the theory of planned behavior. *Journal of Applied Social Psychology*, 29, 1624–1675.
- Sherif, M. (1935). *The psychology of social norms*. New York: Harper & Row.
- Sherif, M., & Hovland, C. I. (1961). *Social judgment: Assimilation and contrast effects in communication and attitude change*. New Haven, CT: Yale University Press.
- Sherif, C. W., Kelly, M., Rodgers, H. L., Sarup, G., & Tittler, B. I. (1973). Personal involvement, social judgment, and action. *Journal of Personality and Social Psychology*, 27, 311–328.
- Snyder, M. (1974). The self-monitoring of expressive behavior. *Journal of Personality and Social Psychology*, 30, 526–537.
- Suls, J., & Wan, C. K. (1987). In search of the false-uniqueness phenomenon: Fear and estimates of social consensus. *Journal of Personality and Social Psychology*, 52, 211–217.
- Sutton, S., McVey, D., & Glanz, A. A. (1999). Comparative test of the theory of reasoned action and the theory of planned behavior in the prediction of condom use intentions in a national sample of English young people. *Health Psychology*, 18, 72–81.
- Trafimow, D., & Finlay, K. A. (2001). The relationship between normatively versus attitudinally controlled people and normatively versus attitudinally controlled behaviors. *Social Science Journal*, 38, 203–216.
- Trafimow, D., & Fishbein, M. (1994). The moderating effect of behavior type on the subjective norm-behavior relationship. *Journal of Social Psychology*, 134, 755–763.
- Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review*, 96, 506–520.
- Unger, J. L., Rohrbach, L. A., Howard-Pitney, B., Ritt-Olsen, A., & Mouttapa, M. (2001). Peer influences and susceptibility to smoking among California adolescents. *Substance Use and Misuse*, 36, 551–571.
- Valente, T. W. (1994). *Network models of the diffusion of innovations*. Cresskill, NJ: Hampton Press.
- Wechsler, H., Nelson, T. F., Lee, J. E., Seibring, M., Lewis, C., & Keeling, R. P. (2003). Perception and reality: A national evaluation of social norms marketing interventions to reduce college students' heavy alcohol use. *Journal of Studies on Alcohol*, 64, 484–494.
- Wilder, D. A. (1990). Some determinants of the persuasive power of in-groups and out-groups: Organization of information and attributions of independence. *Journal of Personality and Social Psychology*, 59, 1202–1213.
- Woods, W. J., Dille, J. W., Lihath, T., Sabatino, J., Adler, B., & Rinaldi, J. (1999). Name based reporting of HIV-positive test results as a deterrent to testing. *American Journal of Public Health*, 88, 1097–1100.