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Social Comparison and Influence in Groups

DONELSON R. FORSYTH

Kathi Hudson worried that members of Operation Rescue, a pro-life group, were engaged in illegal activities that would limit women's rights. So she infiltrated the group to spy on their procedures and activities. Two years later she abandoned her pro-choice attitudes and became a born-again Christian. Tobias Schneebaum (1969), a painter from New York City, encountered a tribe called the Akaramas when visiting Peru. For 6 months he lived with them, adopting their customs so completely that he joined them in attacks on neighboring tribes and cannibalistic rituals. David Moore joined a new-age group interested in personal development, religion, and space travel. He gradually adopted the group's standards as his own, to the point that he believed that a passing comet was actually a spacecraft sent to collect his consciousness. He and 38 other members of the group (Heaven's Gate) tried to board the ship by committing suicide.

Although people generally believe that their actions reflect only their personal desires and inclinations, the empirical evidence suggests otherwise. Newcomb (1943), after examining students' attitudes over a 4-year period, concluded their attitudes changed to match those of their classmates at college. Asch (1955) confirmed that individuals change their judgments to match the opinions, judgments, or actions of the people around them. Milgram's (1963) studies of obedience offer suggestive evidence of the limits—or absence of limits—of social influence pressure. Moscovici (1994) found that a group member who steadfastly defends a contrarian view can change the opinions of other group members. Latané and his colleagues discovered that as group members interact over time their attitudes change in predictable ways, for people generally shift to agree with the majority unless they are spatially separated from others (Latané & L'Herrou, 1996). In all these studies individuals' beliefs and self-appraisals were shaped and reshaped by the groups to which they belonged.

But what is the source of the group's power over its members? Do groups intimidate their members? Threaten them? Offer them irresistible rewards? This chapter assumes that the

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influence of a group on its members is subtle rather than intrusive, for it is rooted in the principle of comparison: Individuals evaluate the accuracy of their beliefs and gauge the quality of their personal attributes by comparing themselves to other individuals. The pro-choice advocate who interacts with people who are utterly opposed to abortion cannot forget that everyone in the group thinks the beliefs she holds are not just wrong but immoral. The explorer who lives with a tribe that has no taboo against cannibalism performs such rituals without considering how the members of other societies might judge him. Cult members believe that the leader's plans are reasonable ones, even though they seem outlandish to non-members. In such instances group members change, not because they are pressured directly by others, but because they implicitly formulate and revise their opinions and beliefs and identify their strengths, assets, weaknesses, and liabilities by comparing themselves to specific individuals in their group, to a generalized conception of the average group member, or to members of other groups.

This chapter is a reminder of social comparison theory's foundations in group processes rather than an extension of social comparison to groups. Social comparison research and theory, by tradition, stress individualistic, psychological purposes of comparison, such as satisfying basic drives, defining and enhancing the self, and alleviating distress or anxiety; but Festinger (1954) used the theory to explain shifts in members' opinions, elevated motivation and competition among members, opinion debates, and the rejection of dissenters in groups (Allen & Wilder, 1977; Goethals & Darley, 1987; Singer, 1981; Turner, 1991; Wheeler, 1991). This chapter revisits the theory's roots in groups before sampling some of the roles played by comparisonlike mechanisms in contemporary accounts of group dynamics.

EARLY STUDIES OF COMPARISON IN GROUPS

People are influenced in substantial ways by other people. This assumption, although the cornerstone of social psychology, flies in the face of much of Western thought. Do people depend on others or are they self-reliant? Are they autonomous individualists or enmeshed in complex networks of relationships? Are they group centered or relatively independent? Early studies, such as Sherif's 1936 (1966) experimental study of norms, Newcomb's 1943 "Bennington Study," and Hyman's 1942 (1980) analysis of reference groups, not only provided evidence of the people's social nature and the consequences of this interdependence, but also suggested that much of this interdependence is rooted in social comparison processes.

Norms as Comparison Standards

The theoretical impact of a study is not always related to its external validity. Some of the most important studies in this field, despite using volunteer subjects working on inconsequential tasks in laboratory settings, have nonetheless substantially influenced subsequent theory and research by reliably producing important social events in controlled settings, by breaking down and identifying the components of complex social processes, or by confirming or disconfirming some previously untested assumption of a theory or model (Mook, 1983).

Sherif's 1936 study of norms is one such study, for even though he studied groups working in artificial circumstances he verified one of social psychology's fundamental assumptions: "when external surroundings lack stable, orderly reference points, the individuals caught in the ensuing experience of uncertainty mutually contribute to each other a mode of orderliness to establish their own orderly pattern" (1966, pp. xii-xiii). Sherif, following a

tradition established by Durkheim (1897/1966), Sumner (1906), Cooley (1909), Moore (1921), Thrasher (1927), and Shaw (1930), argued that "rules, customs, values, and other sorts of norms" develop, inevitably, whenever people "come together in a situation that lasts for any considerable time" (1966, p. 3). If a group of people find themselves in an unstructured, ambiguous situation where they have no reference point to define their expectations, perceptions, or activities, they spontaneously seek out information from others in the group. Sherif did not think that the group members grudgingly conform to the judgments of others, but rather they use the information contained in other's responses to revise their own opinions and beliefs.

Sherif decided that the autokinetic effect provided an ideal opportunity to study this normative process. This effect occurs when individuals seated in a totally darkened room mistakenly believe that a fixed pinpoint of light is moving. Sherif found that over the course of 100 judgment trials most people establish their own idiosyncratic average estimates, which usually varied from 1 to 10 inches. But when he asked dyads and triads to make judgments, their personal estimates blended with those of other group members until a consensus was reached. In most cases the group's final appraisals reflected an averaging of individual's judgments, such that members who initially believed that the dot was moving relatively large distances (8 to 10 inches) revised their estimates downward, and those judges who reported little or no movement when alone "saw" slightly more movement when making judgments in groups.

Sherif's work verified the operation of social comparison processes under controlled conditions. Although his theoretical framework maintained that the influence he observed was caused by the development of distance norms in the groups he studied, these normative processes were sustained by comparative processes. Individuals were not just acquiescing to the group's decisions, but instead were spontaneously revising their estimates so as to reduce the discrepancy between themselves and others:

Each compares his judgments with the others, consciously or unconsciously seeking interpersonal support in establishing secure boundaries and reference points where none existed before. This process is one of mutual seeking and mutual support, and not a question of succumbing to or resisting suggestions. (Sherif, 1966, p. xii)

Sherif also documented the relative stability of the changes created by comparison-induced influence. When he dismantled the groups and put participants back in the room by themselves, their judgments followed the pattern established by the group rather than the pattern they displayed as individuals. This carryover effect convinced Sherif that he had documented the development of a norm rather than a momentary shift in judgment resulting from group pressure. Subsequent researchers verified this internalization process by putting a confederate in each three-member group. The confederate deflected the group's consensus upward by consistently overestimating the distance moved before he was replaced with a new, naive subject. The remaining group members still relied on the exaggerated norm, however, and so this newest addition to the group gradually adapted to the higher standard. The researchers continued to replace group members with new subjects, but new members continued to shift their estimates in the direction of the group norm. This arbitrary group norm disappeared eventually, but in most cases the more reasonable norm did not develop until group membership had changed five or six times (Jacobs & Campbell, 1961; MacNeil & Sherif, 1976; Pollis, Montgomery, & Smith, 1975).

Sherif (1966) also noted, but could not completely explain, his subjects' lack of insight into the influence process. A few individuals recognized that they were amending their

judgments to take into account the others' judgments, but most were not aware that they were influenced or that the group was converging on a single distance norm: "the majority of the subjects reported not only that their minds were made up as to the judgment they were going to give before the others spoke, but that they were not influenced by the others in the group" (1966, p. 108). He likened this insensitivity to other perceptual illusions, in which individuals are certain that the evidence of their senses is accurate, even when they are repeatedly mistaken in their perceptions.

Normative Pressure in Groups: The Bennington Study

When Sherif was documenting the emergence of consensus in small groups of strangers, Newcomb was studying shifts in college students' political attitudes at Bennington College. Newcomb was intrigued by the dramatic shifts in public opinions in the 1930s when many Americans changed to endorse more liberal, progressive political opinions symbolized by the New Deal. Newcomb believed that these opinion shifts must be tied to changes in the opinions of the groups to which individuals belonged, and he sought to document these influence processes in the women at Bennington College. Newcomb, as a member of the faculty, could not help but recognize the impressive change in students' opinions during the course of their studies. Most came from politically conservative New England families who endorsed Alfred M. Landon, the Republican candidate, rather than Franklin D. Roosevelt, a Democrat, in the 1936 presidential election. Most of the first-year students at Bennington shared the attitudes of their families, for 62% preferred the Landon to Roosevelt. The juniors and seniors, however, were much less conservative in their political beliefs, with only 15% endorsing the Republican candidate (Newcomb, 1943). In explanation, Newcomb suggested that the students' unwittingly changed their beliefs to match the college community's standards. Even though they came from families with conservative attitudes, the college community supported mainly liberal attitudes, and Newcomb hypothesized that many Bennington women shifted their attitudes in response to this peer group pressure.

Newcomb, like Sherif, based his explanation on one fundamental assumption: Individuals evaluate their attitudes by comparing themselves to other members of their group. He gathered indirect evidence of this comparison process by asking students to describe their own political opinions as well as estimate the political beliefs of first-year students, juniors-seniors, and faculty at the college. His measures of political beliefs revealed that 34% of the first-year students were politically conservative, but this percentage was 20% and 10% for the juniors-seniors and faculty, respectively. The women also were relatively accurate when estimating the opinions of these groups, particularly when they were evaluating their own groups. Seniors estimated that 61%, 30%, and 21% of the first-year students, juniors-seniors, and faculty were conservative, thereby overestimating conservatism by 27%, 10%, and 11%. First-year students' same estimates were 52%, 43%, and 39%, thereby overestimating conservatism by 18%, 23%, and 29%. Thus, the first-year students tended to overestimate the conservatism of the seniors and the seniors underestimated first-year students' liberalism.

But why did the relatively conservative first-year students adopt the liberal attitudes of another group of students (the seniors)? Newcomb found evidence that the first-year students tended to accept the seniors as their "frame of reference" rather than their own class. He asked each student to indicate if, on a series of items, their opinion matched the opinion of their classmates. Overall, the women showed an "amazing tendency to assume that their own attitude responses correspond to those of the majority of their classmates" (Newcomb, 1943, p. 49). This tendency was much greater for seniors, however. They felt their opinions were shared by the majority of their classmates (fellow seniors) 76% of the time. First-year students,

in contrast, only felt that they agreed with other first-year students for 52% of the items. These same students also felt that their attitudes corresponded to seniors' attitudes 64% of the time. Seniors, in contrast, were much more likely to feel that their opinions were different from those expressed by the first-year students.

Newcomb felt that the opinion shifts that he documented occurred because liberal individuals had more influence on opinions than conservative members. This greater influence was due, in part, to the dominant values of the college, where the faculty were known for their liberal, and even radical, viewpoints. The more popular students tended to be the more liberal students, and those who shifted to become more liberal themselves tended to be (1) "both capable and desirous of cordial relations with the fellow community members" (1943, p. 149), (2) more frequently chosen by others as friendly, and (3) a more cohesive subgroup than the conservative students. Individuals who did not become more liberal tended to express negative attitudes toward the college community or they were very family oriented. Newcomb and his colleagues later summarized these findings by stressing the "*informational environment* of the community and the *status structure* embedded in that environment" (Alwin, Cohen, & Newcomb, 1991, p. 52, italics in original).

Reference Groups as Comparative Baselines

Newcomb did not use the term "reference group" in his 1943 analysis, but his findings are consistent with the idea that people use groups or social aggregates as standards or frames of reference when evaluating their abilities, attitudes, or beliefs (Hyman, 1960). Any group can function as a reference group, including those that are actually statistical aggregations of noninteracting individuals, imaginary groups, or even groups that deny the individual membership (Singer, 1981). When students first enrolled at Bennington their family was their reference group, so their attitudes matched their families' attitudes. The longer students remained at Bennington, however, the more their attitudes changed to match the attitudes of their new reference group, the rest of the college population.

Roper (1940) first introduced the idea of a reference group by suggesting that individuals' perceptions of their own status depends on where they stand in relationship to other people. For example, a man who earns \$40,000 may feel very affluent if he lives in a community where most people earn only \$20,000, but this same individual will feel relatively impoverished if living in an exclusive, high-dollar suburb. Hyman (1942/1980), however, is generally credited with launching the systematic study of reference groups. At about the same time that Newcomb was completing his analysis of the Bennington findings, Hyman was exploring some of the psychological and sociological factors that determine people's evaluations of their status in society. He based his analysis on Lewin's (1935) general discussion of the impact of social groups on individual's judgments and perceptions. Lewin maintained that the group, like the ground in a figure-ground relationship, influences members' perceptions and judgments but remains relatively unnoticed. Because people belong to many groups, their perceptions vary as their membership in these groups become more or less salient.

Hyman applied Lewin's analysis to people's estimates of their social standing, or status. Status, Hyman noted, is a relational attribute, for it can only be defined by comparing one's accomplishments to other's accomplishments. When Hyman asked his respondents if they ever thought about the standing relative to others, over 80% of his respondents reported that they thought about their relative superiority in at least one of the following domains: economic, intellectual, social, physical appearance, cultural, athletic, prestige, character, political, sexual, religious, self-esteem, and general achievements. Hyman suspected that many of the remaining subjects also thought about their status but were not willing to admit it.

Hyman asked his respondents to identify the individuals and groups they used as reference points in determining their status evaluations in these various domains. He discovered that whereas some individuals compared themselves to actual groups, such as friends, neighbors, work groups, and their families, others used general social categories such as race, occupation, or socioeconomic class. Some individuals used a single reference group across all the domains. For example, one woman who worked as a nurse evaluated her economic, intellectual, and social standing by estimating where she stood relative to other women who were nurses. Most people, however, used multiple reference groups, particularly when shifting from one domain to another. Some individuals also identified subgroups within a larger reference group, like one individual who evaluated his intellectual achievements relative to all academic people, but to social scientists in particular.

In 1950, Merton and Kitt (1950) used the concept of reference groups to reexamine Stouffer and associates' studies of the adjustment of soldiers to military life summarized in *The American Soldier* (Stouffer et al., 1949a; Stouffer, Suchman, DeVinney, Star, & Williams, 1949b). They noted that, in many cases, the men defined their attitudes about the military, combat, and themselves by gathering information from the squads to which they were assigned. New recruits, for example, often described themselves as "ready for battle," whereas few veterans reported any enthusiasm about combat. But when new recruits were transferred into established combat squads, they quickly lost their fervor. The men's attitudes and satisfactions also were shaped by comparison groups that they did not belong to, yet used as the basis for defining the relative quality of their current situation; what Merton and Kitt called nonmembership reference groups. Anticipating the distinction between upward and downward social comparison, the researchers discovered that soldiers who suffered the most—those who had fewer promotions, who experienced racial discrimination, those assigned overseas, and those serving in the front lines of battle—were not necessarily the most dissatisfied. Rather, those individuals who felt their privations were greater than others were more likely to respond negatively to their military service. For example, a married man "comparing himself with his unmarried associates in the Army" felt dissatisfied, but not so much as a married man "comparing himself with his married civilian friends" (Stouffer et al., 1949b, p. 125). Similarly, African-American soldiers often responded more positively to army life than Anglo-American soldiers, because "Relative to most Negro civilians whom he saw in southern towns, the Negro soldier had a position of comparative wealth and dignity" (Stouffer et al., 1949b, p. 563). Merton and Kitt concluded that if individuals compare themselves to a group that is outperforming their group, they will experience dissatisfaction, but should they compare themselves to a group facing even greater hardship, then they will report more satisfaction with their own circumstances.

Studies of reference groups foreshadowed contemporary interest in such processes as social identity, upward and downward social comparison, referent power, and social categorization and stimulated applications to "problems of mental illness, formal organization, marketing and public relations, mass communications, acculturation, political behavior, consumer behavior, labor relations, and juvenile delinquency, as well as to opinion formation" (Hyman & Singer, 1968, p. 7). Singer (1981) offers a comprehensive overview of this work.

Conformity in Small Groups

Other investigators continued to refine the concept of reference groups, but social psychological researchers were more influenced by Kelley's 1952 paper, "Two Functions of Reference Groups." In that paper Kelley drew a distinction between the normative function of

reference groups and the comparative function of such groups, and suggested that prior researchers had not always distinguished between these two functions. Newcomb's Bennington study (1943), for example, illustrated the normative function of a reference group. This highly cohesive, isolated group developed a relatively well-accepted set of social standards, which many members of the community accepted as their own. It functioned as a positive reference group for most members, for they were motivated to assimilate the values of the group to secure their acceptance by the group. In some cases, though, a group may function as a negative reference group. Individuals may adopt standards that conflict with those of the group to ensure their differentiation from that group.

Hyman's (1942/1980) original studies of reference groups, in contrast, focused on their comparative functions. Hyman discovered that people did not derive their values from their reference groups, but instead used them as baselines to inform their appraisals of their prosperity. Kelley (1952, p. 412) writes, "A group functions as a comparison reference group for an individual to the extent that the behavior, attitudes, circumstances, or other characteristics of its members represent standards or comparison points which he uses in making judgments and evaluations." Deutsch and Gerard (1955), Thibaut and Strickland (1956), and Jones and Gerard (1967) offer similar distinctions, and Shibusani (1955) suggests a tripartite division: normative groups (groups whose norms and outlooks are accepted by the individual), comparative groups (groups that serve as reference points for comparisons and contrasts, particularly about personal qualities), and aspired groups (groups the individual wishes to join or maintain his membership in). Shibusani suggested that the term "reference group" should apply only to comparative groups.

This distinction explains the two types of reactions Asch (1952, 1955) observed in his studies of conformity. Asch, in his pioneering work on conformity in small, temporary groups, arranged for a single naive subject to make simple judgments about the lengths of lines in the presence of his trained confederates who deliberately made mistakes on 12 of the 18 trials. Asch's subjects frequently conformed, even though the task was very simple and the pressures to agree with others were relatively minimal. Yet, on further review, Asch discovered that the groups influenced members both by providing them with a standard judgment that was accepted by all other members and by providing subjects with information about the correctness of their original line choices. Thus, some of Asch's subjects conformed because of informational influence: They thought they were mistaken in their personal judgment and decided the group was correct. Others, though, were responding to normative pressures: they merely went along with the majority, even though they thought the majority was making a mistake.

Deutsch and Gerard (1955) confirmed and extended Kelley's distinction in their study of normative social influence and informational social influence. They defined normative influence as "an influence to conform with the positive expectations of another," with positive expectations described as "expectations whose fulfillment by another leads to or reinforces positive rather than negative feelings, and whose nonfulfillment leads to the opposite, to alienation rather than solidarity" (p. 629). Informational social influence, like Kelley's comparative function, occurs when individuals "accept information obtained from another as *evidence* about reality" (Deutsch & Gerard, 1955, p. 629, italics in original).

Deutsch and Gerard (1955) contrasted these two forms of influence in an Asch-type conformity situation where naive subjects made judgments about the length of lines in the presence of confederates who made deliberate and obvious errors. They sought to separate informational influence from normative influence across a series of experimental variations. In one condition both sources of influence were high, for like the Asch paradigm subjects made

their judgments when seated face-to-face with others. In a second condition subjects were sequestered in booths and the choices they made were communicated to others mechanically rather than orally. In other conditions subjects recorded their judgments on a sheet of paper that only they would see (self-commitment), on a sheet of paper that they had to sign (public commitment), or on a "magic pad" (a pad that was erased by lifting up the plastic covering) that was erased after each trial (magic pad self-commitment). They suggested that these commitment conditions would create a second form of normative influence, in which members would feel compelled to be "true to themselves" by not expressing opinions that they personally did not believe. As they predicted, the number of errors was greatest in the face-to-face groups, since informational and normative pressures were high. Conformity dropped when subjects were in small booths that protected their anonymity. Findings from the commitment conditions moreover suggested that commitment to one's choices reduces conformity, particularly for unambiguous problems. From Deutsch and Gerard (1955, p. 634):

in the Magic Pad variation the normative influences to conform to one's own judgment had to be sustained by the S himself. Normative influences from the S's self (to be, in a sense, true to himself) were undoubtedly also operating in the noncommitment variation. What the Magic Pad did was to prevent the S from distorting his recollection of his independent judgment after being exposed to the judgments of the others. ... The behavior of writing one's judgment down on the Magic Pad makes the original decision less tentative and less subject to change.

The distinction between normative and informational influence continues to be a central theme in studies of social influence, but like all dichotomies the division between groups as sources of information and groups as sources of normative pressure is too simplistic (Forsyth, 1999; Raven, 1992). Turner (1991, p. 147), for example, argues that "informational influence is socially mediated and normative" and "that norms about preferences and values are informative about appropriate, correct beliefs." He suggests that the distinction is actually referring to the source of change: in "others," in the case of normative influence, or in the "self," in the case of informational influence. Forsyth (1999) also focuses on the source of the change when drawing a distinction between informational, normative, and interpersonal influence. Informational influence produces change through persuasion and other cognitive operations, normative information produces change by making salient relevant situational and personal norms, and interpersonal influence works by creating social pressures, such as threats, promises, withholding of reinforcers, and so on. French and Raven (1959) expand this list to six bases of influence: reward, punishment, legitimate, referent, expert, and informational. These various conceptualizations, despite their differences, agree that influence includes both cognitive, informational, and psychological elements *and* interpersonal, normative, interpersonal elements.

Social Communication and Comparison in Groups

Researchers and theorists, up until Festinger's 1954 publication of his theory of social comparison, examined comparative processes in groups, but they did not focus exclusively on comparison per se. Sherif (1966), for example, maintained that norms result from a comparative process that diminishes once the norm is set in place; as group members compare themselves to others a social standard emerges, which individuals then use as a reference point. Newcomb (1943) explored the consequences of this comparative process by finding that new group members will change their attitudes to match the majority's outlook in his Bennington Study, but he did not discuss comparison processes. Similarly, Hyman (1942/1980) addressed comparison processes directly in his analysis of reference groups, but he focused on how people select targets for comparison rather than the interpersonal consequences of that

comparison process. Even though these early researchers did not actually use the term “social comparison,” the processes that they studied fundamentally depended on the individuals’ perceptions of the skills, abilities, and attitudes of the people around them.

In 1954, Festinger’s pulled together these various theoretical threads and empirical findings in his theory of social comparison. In that theory he argued that individuals have a fundamental need for accuracy and cognitive clarity, which they satisfy by seeking out information about the accuracy of their opinions and the adequacy of their abilities by comparing themselves to others. The theory (eventually) sired various programs of research into self-evaluation and self-enhancement processes, but as Allen and Wilder (1977) note, it also served to summarize Festinger’s early work into the complex dynamics that occur when members of small groups share information about their personal opinions and attitudes. These studies, which provide a backdrop to the 1954 theory, are reviewed briefly below.

The Westgate Study. Festinger developed social comparison theory in the heyday of group dynamics, long before the self, attributions, heuristics, and other cognitive mechanisms captured researchers’ attention. As Cartwright (1979) writes in his historical analysis of the field, social psychology after World War II was very much a group-focused social psychology, with major advances in studies of group cohesiveness, leadership, productivity, conformity, and social-comparison-like processes. Much of this group-oriented emphasis resulted from Lewin’s influence on the developing discipline, for he assumed that individuals cannot be understood apart from the small face-to-face groups to which they belong. Indeed, Lewin’s Research Center for Group Dynamics, which he founded at MIT, was the site of Festinger, Schachter, and Back’s 1950 study of Westgate and Westgate West (Festinger, 1980).

Festinger, Schachter, and Back (1950, p. 7) were convinced that “groups have power over their members. They exert influence on their attitudes, on their behavior, and even on the kinds of activities in which their members engage.” But what is the source of this influence? To answer this question they surveyed the residents of Westgate and Westgate West, two housing developments filled, at random, with students and their families. These two projects offered Festinger and colleagues (1950) an excellent opportunity to not only study group formation, but also the “relatively subtle influences which are exerted during the normal communication process among members of a group” (p. 7).

The Westgate studies confirmed Festinger’s suspicions about the role propinquity plays in determining the formation of relationships among members. Residents reported the closest relationships with those who they encountered frequently during the course of the day, due to the close proximity of their mailboxes or residences. But Festinger et al. (1950) also discovered that the group members’ attitudes closely paralleled these spontaneously emerging interpersonal networks, such that “within each of these small face-to-face groups, group standards” developed that defined members’ opinions on various attitudinal issues. Moreover, “each group exerted strong influences on its members to conform to its standards,” and the effectiveness of the group in swaying its members “depended to a major extent on how cohesive the small social group was” (Festinger et al., 1950, p. 11). Festinger believed that some of this influence resulted from residents’ conformity to the group’s attitudinal norms—normative influence—but much of the influence was also rooted in social comparison:

The hypothesis may be advanced that the “social reality” upon which an opinion or attitude rests for its justification is the degree to which the individual perceives that this opinion or attitude is shared by others. An opinion or attitude that is not reinforced by others of the same opinion will become unstable generally. There are not usually compelling facts which can unequivocally settle the question of which attitude is wrong and which is right in connection with social opinions and attitudes as there are in the

case of what might be called "facts." If a person driving a car down a street is told by his companion that the street ends in a dead end, this piece of information may be easily checked against physical "reality." ... The situation with regard to social opinions and attitudes is quite different, however. Here there is no such "physical reality" against which to check. (Festinger et al., 1950, pp. 168-169)

Festinger discovered that residents, during their daily interaction, discussed attitudinal issues and thereby gained information about the consensus of opinion within their groups and the relative uniqueness of their attitudes. Individuals who expressed deviant attitudes tended to be individuals who, due to isolation from others, could not engage in this comparative process or misinterpreted the distribution of attitudes within their groups. But those closely connected by friendship or membership in a clique shared "a common fund of information about a variety of matters.... they will know and they will not know many of the same things" (p. 167).

Communication Pressures in Small Groups. Festinger and his colleagues explored some of the implications of the Westgate and Westgate West findings in a series of laboratory studies and dissertation projects (Back, 1951; Festinger, Gerard, Hymovitch, Kelley, & Raven, 1952; Festinger & Thibaut, 1951; Festinger, Torrey, & Willerman, 1954; Gerard, 1953; Hoffman, Festinger, & Lawrence, 1954; Schachter, 1951). These projects tested Festinger's (1950) "informal social communication" theory, which argued that people in groups—particularly cohesive groups—will gradually drift toward uniformity of opinion over time. His theory suggests that when individuals find that they disagree with their group, they can (1) communicate with one another until the discrepancy is resolved; (2) change their opinion to match the views expressed by the majority of the members; or (3) minimize the group's relevance as a reference point by leaving the group, rejecting disagreeing group members or avoiding information that suggests members disagree. Which of these reactions will occur depends on the cohesiveness of the group, the nature of the attitudinal issue under discussion, and the goals of the group.

All these studies assume group members engage in social comparison, but they focus more on the interpersonal dynamics that this comparative process stimulates. Festinger and Thibaut (1951), for example, studied the impact of persuasive messages on people who disagreed with the majority of the group members. They carefully measured the persuasive messages members of small groups sent to each other, after manipulating the stress on the group to reach consensus, members' knowledge of the issues the group was discussing, and their perceptions of the group's diversity. Festinger and Thibaut reasoned that these three variables should act in concert to increase communication with people who hold extreme opinions. When the group members felt compelled to reach agreement, then they would be more likely to locate and influence people who held opposing views. Members also would feel more confident in influencing others when they were secure in their beliefs, so they also should give rather than accept influence. Members of heterogeneous groups also would be more likely to recognize the need to communicate their opinions to others, and so would likely communicate at a higher rate. (Festinger and Thibaut, however, manipulated diversity by telling some groups that the members varied considerably in terms of their expertise. Hence, this manipulation also may have influenced communication patterns by convincing members of the supposed heterogeneous groups that others would be more accepting of influence, since they were less capable.) These predictions were all confirmed, but Festinger and Thibaut also noted that these pressures usually resulted in the outliers changing at a higher rate; but if they did not change, then they were rejected by the group members. Festinger et al. (1952) extended these results by discovering that people who have beliefs and opinions that differ to a great extent from others withdraw from the group before the group has an opportunity to reject them.

Schachter (1951) studied the intensity of communication efforts with a disagreeing group member in his dissertation. He planted three kinds of confederates in a number of all-male discussion groups. The "deviant" always disagreed with the majority. The "slider" disagreed initially, but conformed over the course of the discussion. The "mode" consistently agreed with the majority. Schachter also manipulated the groups' cohesiveness, and asked groups to discuss a topic that was either relevant or irrelevant to group's stated purpose. He discovered that the group members initially communicated with the mode, deviant, and slider at equal rates, but once they became aware of the deviant and slider's disagreement, communication centered on these two. When the slider capitulated to the group's consensus, then the interaction shifted to the deviant alone. This concentrated communication lasted until the end of the session in all but one type of group: cohesive groups working on an issue that was relevant to the group goals in which members developed a negative attitude toward the deviant. In such groups communication with the deviant dropped precipitously, evidence that group had reached consensus by excluding him (Berkowitz, 1971; Levine, 1980).

COMPARISON IN GROUPS: CONTEMPORARY APPLICATIONS

Even though early social psychologists did not explicitly use the term "social comparison," they nonetheless frequently investigated processes that were fundamentally driven by comparisonlike processes. Festinger and colleagues recognized the impact of comparison processes on groups, and they carried out an impressive series of studies of the postcomparison group processes framed around the question: Once members discover that other people hold differing opinions, when do they try to persuade them, when do they change themselves, and when do they reject dissenters? Festinger stressed group processes to such an extent in his work that he was chosen to author the groups chapter for the *Annual Review of Psychology* in 1955.

Given this historical context, it is not surprising that many group researchers and theorists, when they encounter an anomalous finding or perplexing bit of group behavior, offer explanations that refer to the principle of comparison. Few directly test the theory's assumptions in their studies, but their theoretical conceptualizations rely on it so much that, to paraphrase Arrowood (1978), social comparison theory is everyone's second favorite explanation of group processes. Here we consider but a sample of the theoretical analyses that rely in part on social comparison to explain group-level processes.

Group Formation

Schachter (1959), in his classic analysis of affiliation, took Festinger's (1950, 1954) theories of social communication and comparison one step farther by suggesting that individuals, when in need of information, will seek out others so that they can determine whether their views are "correct," "valid," and "proper" (Festinger, 1950, p. 272). He tested this idea by leading his subjects to think that they were going to receive a series of electric shocks. He discovered that 63% of the women who were told the shocks would be very painful (high-anxiety condition) preferred to await their turn with other people, but that only 33% of those told the shocks would be hardly noticeable chose to wait with others (low-anxiety condition). Schachter maintained that these differences in affiliation reflected participant's need for information and the satiation of that need through social comparison processes, and he summarized his findings with the phrase "misery loves company" (see Chapter 15, this volume).

Contemporary analyses continue to stress the informational value of joining with others in groups, but add additional functions served by groups, such as esteem, social support, identity, the opportunity to influence others, and self-exploration (Deaux, Reid, Mizrahi, & Cotting, 1999; Helgeson & Michelson, 1995; Wright & Forsyth, 1997). Many of these alternative functions are sustained, in part, by social comparison processes. Social identity theory, for example, stresses the value of achieving a collective identity based on categorizing oneself as a group member. These categorization and identification processes that are posited by the theory, however, assume that members compare themselves to the prototypical group member and compare their own group to other groups (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987; see Chapter 19, this volume).

Studies of downward and upward comparison also confirm the self-esteem building and threatening consequences of comparisons with groups and group members whose performance, adjustment, skills, abilities, or aptitudes are relatively superior or inferior. When group members compare themselves to members who are experiencing even more severe hardships or are failing to cope well with their problems, members' sense of victimization decreases and their self-esteem increases (Gibbons & Gerrard, 1989; Wood, Taylor, & Lichtman, 1985). When they compare themselves to people who are coping effectively with their problems, this upward social comparison helps members identify ways to improve their own situation and promotes their feelings of hope (Buunk, 1995; Snyder, Cheavens, & Sympson, 1997). But upward comparison can also undermine self-esteem. Wheeler and Miyake (1992), for example, asked students to keep track of the people they compared themselves to over a 2-week period; they found that students reported feeling depressed and discouraged when they associated with superior people. Taylor, Falke, Shoptaw, and Lichtman (1986) suggest that self-help groups, or support groups, that include people who are coping extraordinarily well with their illness can make other members feel as though their coping efforts are inadequate.

Because these negative consequences of upward comparison appear to be greatest when comparisons involve attributes or skills that are central to individuals self-definitions (Lockwood & Kunda, 1997), individuals may deliberately avoid joining groups that include people who outperform them in spheres they consider to be personally important. Extending Tesser, Campbell, and their associates's self-evaluation maintenance (SEM) model to groups suggests that ideal groupmates perform worse on tasks that other members think are important but very well on tasks that other members do not think are important. Such associates provide members with targets for downward social comparison, and by drawing attention to their association with them, members bask in the glory of their accomplishments in areas that do not interest them (Tesser, 1988, 1991; Tesser & Campbell, 1983; Tesser, Campbell, & Smith, 1984). Indeed, Winkel and Renssen (1998) report that individuals may not understand the comparison needs of the fellow group members, and so too frequently provide them with upward social comparison information ("The same thing happened to Ed, but he's doing fine now") rather than downward social comparison information ("You are doing so much better than Ed").

Social Influence and Social Comparison

As early theorists like Asch (1955) and Kelley (1952) noted, people sometimes conform, not because they are pressured by others or because they are loathe to deviate from the group's norms, but because they discover new information about a situation by observing others' responses. When individuals face ambiguous situations or see others acting in unexpected ways, they undertake a systematic analysis of their position to determine whether it requires revision. If this review reveals additional information relevant to their opinions, then they

revise those opinions, not because they buckle under social pressure but because the data gathered from social sources provide them with a new interpretation (Allen & Wilder, 1977).

Majority Influence and Social Comparison. Mackie (1987) investigated the cognitive foundations of conformity in groups by leading her subjects to believe that they were part of a small minority that disagreed with the majority on such matters as foreign policy and juvenile justice. After her subjects listened to members of both the minority and the majority argue their positions, Mackie asked them to record their thoughts and reactions. These thoughts, when analyzed, revealed that the subjects recalled more thoughts that were consistent with the arguments offered by those who disagreed with them, particularly when they were members of the minority. Mackie also found that people who process the majority's message more extensively also changed their opinions more than those who did not process the message (De Dreu & De Vries, 1996; Trost, Maass, & Kenrick, 1992).

Allen and Wilder (1980) argued that exposure to others' positions, in addition to stimulating thoughtful analysis of available evidence, also can cause group members to reinterpret, or cognitively restructure, key aspects of the issue (Allen & Wilder, 1980; Tindale, Smith, Thomas, Filkins, & Sheffey, 1996; Wood, Pool, Leck, & Purvis, 1996). They documented this restructuring by asking subjects to define the meaning of certain phrases in a series of statements. Each statement was accompanied by information about the opinions of a previous group of participants, and subjects' interpretations of the phrases were influenced by this information about opinions. If, for example, the subjects were shown the item, "I would never go out of my way to help another person," and then they learned that a four-person group had unanimously agreed with the statement, subjects interpreted the phrase "go out of my way" to mean "risk my life" rather than "be inconvenienced" (Allen & Wilder, 1980, p. 1118). In such situations people who spend more time thinking about the issues are the ones who conform more (Campbell, Tesser, & Faurey, 1986).

Social comparison also generates conformity by capitalizing on group members' willingness to use heuristics when they process information gathered in social situations. Although Festinger (1954) assumed that social comparison serves the need for accurate information about the correctness of one's opinions when cognitive resources are limited or the motivation to do the cognitive work necessary to weigh the information available is minimal, people use heuristics to generate decisions efficiently and rapidly (Baker & Petty, 1994; Peterson & Nemeth, 1996; Wood et al., 1996). When individuals are in groups and social comparison processes convince members that most of the group members are in agreement, then such heuristics as "majority rules" will prompt them to accept the majority's viewpoint (Chen, Schechter, & Chaiken, 1996). As a result, when people are asked why they changed their opinions in conformity situations, they rarely admit that others influenced them, for these changes were driven by hard-to-access heuristic thought rather than systematic thought (Buehler & Griffin, 1994; Griffin & Buehler, 1993).

Minority Influence and Social Comparison. Researchers, in the years since Festinger and colleagues (1950) demonstrated that groups tend to become more attitudinally homogeneous over time, have sought to explain why some groups change to agree with the minority's position. This work was stimulated in large part by Moscovici's (1994) studies of the impact of a consistent minority on a majority. Moscovici argued that minorities influence majorities by creating "cognitive conflicts" that challenge the status quo of the group by calling for a reevaluation of issues at hand. Such a minority undermines the majority's certainty and forces the group to seek out new social comparison information. When a minority is present, groups

take longer to reach their conclusions and they are more likely to consider multiple perspectives when drawing conclusions (Peterson & Nemeth, 1996).

Nemeth and Wachtler (1983) examined minority influence by having people work a series of puzzles alone, in groups, or in groups with a consistent minority. When people worked alone, their solutions were not very creative, and when they worked in a group, they usually just picked the solution favored by the majority. But when a minority of two confederates argued for a nonobvious solution, the group's solution was more creative. The group did not necessarily accept the minority's proposal, but the minority did stimulate reevaluation of the original answer. Other research suggests that minorities are the most influential when they adopt a consistent behavioral style and offer compelling arguments and the majority is uncertain of the correctness of its position (Witte, 1994). Minorities become less influential when the other members of the group redefine the boundaries of the group so that the minority is thought to be a member of the out-group (Alvaro & Crano, 1997). All these factors influence the impact of minorities by changing their value as sources of social comparison. Just as the individual who hears that eight other people favor position X is likely to reconsider her decision to favor Y, exposure to two individuals who consistently and enthusiastically argue that Z is the correct choice stimulates cognitive reevaluation of the available information. If the minority's viewpoint is a reasonably one, the group may shift to adopt it; but if the majority continue to favor an alternative, then the communication pressures that Festinger (1955) identified will likely be brought to bear on the dissenters.

This comparison process may lead to immediate change, but as Moscovici (1994) argues in many cases the impact of the minority on the majority emerges only over time. His dual-process model of minority influence argues that individuals who are part of the group's majority rarely review the arguments that support their position. But when they discover, through social comparison, that someone in the group disagrees with them, they must devote more cognitive resources to their position. This review may not lead to change immediately, but it may cause members to change their positions at a later time or on a related task (Moscovici, Lage, & Naffrechoux, 1969).

Collective Information Processing

Festinger's (1950) early studies of communication in groups argued that such communication is functional, for it creates channels through which information flows among members. Similarly, recent studies of groups making decisions suggest that groups, when faced with a problem in need of solution, use discussion as a vehicle for gathering social comparison information. Indeed, many procedures used by groups to control discussion—rules of discussion (such as Robert's Rules of Order), voting, round-robin presentations like the nominal group technique, secret ballots, and straw polls—deliberately augment or suppress the collection of social comparison information (Hinsz, Tindale, & Vollrath, 1997; Kerr, MacCoun, & Kramer, 1996).

Jury Decisions. Juries, by design, free members from comparison pressures. They meet for a limited period of time in a highly formal setting and members are cautioned not to engage in any discussion of the case before they begin deliberations. Indeed, as Hastie, Penrod, and Pennington (1983) note, many juries move toward their final verdict cautiously. These evidence-driven juries deliberate by first reviewing the evidence available, and only then try to create a coherent story that accounts for the questioned events.

Hastie and colleagues, however, also identified a second type of jury: one that engages in

social comparison as the first stage of deliberation. They call such juries verdict driven, for members "advocate only one verdict at a time," and they cite evidence to support their preferred interpretation. The deliberation also tends to contain "many statements of verdict preferences and frequent pollings" (1983, p. 163).

This striving for social comparison information speeds up the deliberation process, for verdict-driven juries needed only 63% of the time an evidence jury uses to make its decision (Hastie et al., 1983). The discussion in such juries also tends to be less rigorous and fails to a degree to tie the evidence presented during the trial to the legal specifications of the charges. The two types of juries, though, do not differ consistently in the verdicts they favor.

Oversampling Shared Information. Stasser and colleagues have discovered that groups' reliance on social comparison to reach agreement on decisions has one negative consequence: groups spend too much of their discussion time examining shared information—details two or more of the group members know in common—rather than unshared information (Stasser, 1992; Stasser, Taylor, & Hanna, 1989; Wittenbaum & Stasser, 1996). This bias, although not always calamitous, can cause the group to make an incorrect decision if the full disclosure of all information would yield the correct solution, whereas the disclosure of only shared information yields an incorrect decision.

This tendency to oversample shared information reflects, in part, the dual functions of social comparison identified by Kelley (1952). As a means of acquiring data, discussions help individuals process the information they need to make good decisions. But as a form of normative influence, discussions give members the chance to influence each others' opinions on the issue. Discussing unshared information may be informationally useful, but discussing shared information helps the group reach consensus on the matter. Indeed, group members who anticipate a group discussion implicitly focus on information that they know others possess, instead of concentrating on information that only they possess (Wittenbaum, Stasser, & Merry, 1996); and they discuss shared information first and only later get to unshared information (Larson, Foster-Fishman, & Keys, 1994).

Consensus Estimation and Pluralistic Ignorance. Just as oversampling shared information can lead group members to make errors, too little social comparison can cause group members to misinterpret the amount of consensus present in their groups. Janis (1982), in his insightful analysis of groupthink, argues that many disastrous decisions are caused by group members' assumption of consensus when consensus does not, in fact, exist. In his case studies of groups that made disastrous decisions he repeatedly discovered that the members seemed to agree so completely that they only went through the motions of debate. Members' retrospective accounts usually revealed that many of the group's members had grave doubts about the decisions being made, but they short-circuited social comparison processes by not expressing their misgivings during the meetings. In such settings Janis (1982, p. 39) believes group members play up "areas of convergence in their thinking, at the expense of fully exploring divergences that might disrupt the apparent unity of the group."

Miller and McFarland (1991, p. 287) review empirical studies of the conceptually similar process known as pluralistic ignorance: "a state characterized by the belief that one's private thoughts, feelings, and behavior are different from those of others, even though one's public behavior is identical." They trace this concept back to Allport (Katz & Allport, 1928), who used the term to explain instances in which a substantial proportion of a group privately disagrees with a group decision, practice, or standard, yet the unpopular element remains firmly entrenched in the group. Latané and Darley (1970) use this concept to explain why

bystanders sometimes mistakenly interpret an emergency as a nonemergency. Although the individual witness feels that something is wrong, he or she misinterprets the nonreaction of others as evidence that no help in fact is required. This misinterpretation could be corrected if individuals share their interpretation of the situation rather than only relying on others behavior as evidence of the nature of the problem.

Attitude Polarization and Comparison. Researchers in the 1960s, after intensive analysis of the tendency for groups to make riskier decisions than individuals, concluded that the so-called risky-shift was part of a larger, more general process. When people discuss issues in groups, they tend to make more extreme decisions than would be suggested by the average of their individual judgments. Discussion, rather than subduing and moderating, polarizes: Judgments made after group discussion are more extreme in the same direction as the average of individual judgments made prior to discussion (Myers & Lamm, 1976).

Researchers initially argued that this polarization process occurs because people in groups feel less responsible for their decisions and are overly influenced by risk-prone leaders. In time, however, they recognized that the shift is likely a comparative processes (Isenberg, 1986). When people make decisions individually, they have no way to determine whether they are risk averse or risk takers. But when group members make choices together, they use others as an index of their risk-taking tendencies (Goethals & Zanna, 1979; Myers, 1978). Polarization occurs because group members, through discussion, discover the group's norm, or average, degree of risk, and they stake claim to a position that exceeds that norm in whatever direction the majority of the members endorse (usually risk). As Brown (1974, p. 469) explains, "To be virtuous ... is to be different from the mean—in the right direction and to the right degree." Polarization may also occur because the presence of more risky (or more cautious) individuals "releases" the individual group member from normative constraints in the group, so that they feel free to express more extreme opinions (Pruitt, 1971). Social comparison theory also explains why just knowing the positions of the other people in the groups, and not the reasons behind these opinions, is sometimes sufficient to produce polarization (Blascovich, Ginsburg, & Howe, 1975).

An alternative explanation of group polarization—persuasive arguments theory (Vinokur & Burnstein, 1974, 1978)—focuses on informational influence rather than interpersonal and normative influence. This theory assumes that individuals base their decisions on the number and persuasiveness of the arguments that they have for and against each position. If, for example, a group generates more arguments favoring a risky choice than a cautious choice during discussions, then the group will polarize. And groups can, in most cases, generate more arguments that support the position endorsed by the majority of the group or the position that is most consistent with dominant social values, in part because members may be more willing to express arguments that are consistent with social norms. In all likelihood, then, polarization processes are sustained by comparison processes that not only provide members with additional cognitive information, but also help them determine whether their views are "correct," "valid," and "proper" (Festinger, 1950, p. 272).

Social Loafing and Comparison

Ringelmann (1913), a French agricultural engineer, was the first researcher to document the loss of productivity in groups working on collective tasks. Even though groups generally outperform individuals, they rarely reach their full potential. Inadequate coordination of effort explains part of this productivity loss, but much of the loss is caused by social loafing: People

do not work quite so hard in groups. This loss of motivation is sustained, in part, by members' tendency to compare their contributions. Group members may want to do their share to help the group reach its goals, but they do not want to do more than their share. So they compare their contributions to those of others, and reduce their effort so that it matches the average rate. Loafing increases when this comparative process convinces group members that their co-workers are holding back. Hence, groups loaf less when they are confident that others are also working hard, when individual contributions are known, and when a standard can be used to evaluate performance (see Karau & Williams, 1993).

The same productivity-limiting processes explain the relatively poor performance of brainstorming groups, for social comparison processes conspire to lower standards for performance when generating ideas. Although undercontributors are challenged to reach the pace established by others, overcontributors tend to reduce their contributions to match the group's mediocre standards. This *social matching effect* tends to lower performance levels overall, but it can be minimized by increasing feelings of competition among members (Brown & Paulus, 1996; Paulus & Dzindolet, 1993; Seta, Seta, & Donaldson, 1991). Social matching also undermines productivity in groups working via computers (Paulus, Larey, Putman, Leggett, & Roland, 1996). Researchers controlled how much information was exchanged among participants with three types of displays. Some subjects saw only their own ideas, others gained access to all the group's ideas at the end of the session, and still others were shown a continuously updated list of ideas generated by the group members. Group members who could monitor others' idea production in real time—they could see each new idea as it was posted rather than waiting for a summary at the session's end—displayed social matching. Their rate of idea generation decreased during the course of the session to match the production rates of the other group members (Roy, Gauvin, & Limayem, 1996)

Studies of Normative Influence

Social comparison—of the more normative than informational variety—also influences the transmission of religious, economic, moral, political, and interpersonal beliefs in groups. Conceptually extending Newcomb's (1943) Bennington Study, Crandall (1988) found that eating disorders, such as excessive dieting, binging, and purging, are supported by group norms. The college women he studied who did not purge began to purge when they joined a sorority in which the most popular members purge. And which women were the most popular in these groups? Those women who purged at the rate established by the group's norms.

Fisher (Fisher, 1988; Fisher & Fisher, 1993) also links healthy and unhealthy behavioral tendencies to comparison-based processes. Even though people recognize the consequences of unprotected sex, they rarely take steps that will reduce their vulnerability to AIDS and other sexually transmitted diseases. Indeed, people often claim that the threat of AIDS has made them more cautious when it comes to sex, but self-reports of change do not always correspond to behavioral changes. Fisher, in explaining this gap between health attitudes and healthy behaviors, notes that social norms do not support preventive behaviors. Norms of many college campuses are either silent on the issue of condom use or openly antagonistic. Norms may even encourage some risk-increasing behaviors by sanctioning casual relationships and promoting the value of risk. Some social groups may embrace a risky practice to such a degree that the individual risks ostracism by breaking the norm.

Prentice and Miller (1993) describe a related cycle of normative influence in their study of alcohol abuse on a college campus. Most of the students who participated in their study endorsed a personal norm against overindulgence, but they believed that their campus's norms

encouraged heavy alcohol consumption. The men responded to this normative influence by gradually internalizing the misperceived norm. They began to drink more the longer they stayed at the school. The women, in contrast, responded by distancing themselves from their university and its norms about drinking (Prentice & Miller, 1993).

Normative influence also can be used to promote healthy, prosocial behaviors. Fisher (1988), for example, has developed an extensive educational program designed to change people's perceptions of norms related to sexual conduct. Similarly, Cialdini and colleagues have used normative social influence to increase pro-environment actions (Cialdini, Kallgren, & Reno, 1991; Cialdini, Reno, & Kallgren, 1990). In their field studies of littering they distinguish between *descriptive norms* and *injunctive norms*. Descriptive norms promote informational influence, for they define what most people would do, feel, or think in a particular situation. Injunctive norms, in contrast, promote normative influence by including an evaluative component. "Most people don't litter" is a descriptive norm, whereas "Harming the environment is wrong" is injunctive. Cialdini contrasted these two forms of influence in a field study of subjects getting into their cars. Subjects encountered a confederate either in the lot where their car was parked or on the path leading to the parking lot. In the descriptive norm condition the confederate dropped a bag of trash into a garbage can. In the injunctive norm condition the confederate picked up a piece of litter and disposed of it in the garbage can. In the control condition the confederate merely walked by the subject. When subjects reached their car, they found a handbill under their windshield wipers. Descriptive norms were nearly as influential as injunctive norms, but their impact wore off rapidly. If the encounter between the subject and the confederate occurred in the parking lot only 17% of the subjects in the descriptive norm condition littered. This percentage jumped to 36%, however, if the confederate's litter-conscious actions had occurred on the path leading to the lot. In contrast, the injunctive norm became more powerful over time. No one who saw the confederate pick up litter on the path leading to the lot littered (Reno, Cialdini, & Kallgren, 1993, study 3).

This distinction between descriptive and injunctive norms is consistent with Festinger's (1950) original insights. As he noted, social comparison lets people determine whether their conclusions are accurate ("correct"), whether their perceptions are veridical ("valid"), and whether their actions are moral ("proper"). Additional research is needed to determine the role that comparison processes play in determining moral thought, judgment, and action, for as Miller and Prentice (1996, p. 799) note, "there is nothing either good or bad but comparison makes it so."

Social Comparison as Group Process

Social comparison theory argues that people, by comparing themselves to others, can satisfy a profusion of personal motives (Helgeson & Michelson, 1995). They can, as Festinger (1954) originally noted, erase their self-uncertainties by comparing their beliefs and abilities to others. People also can raise their self-esteem by comparing themselves to worse-off others (Wills, 1991), buoy up their hopes through comparison with high achievers (Major, Testa, & Bylsma, 1991), and reassure themselves by comparing themselves to people who are not worried (Affleck & Tennen, 1991). They can even confirm their sense of uniqueness by discovering their views are relatively unique ones (Goethals, Messick, & Allison, 1991) or downplay their idiosyncrasies by recognizing they are shared by many others (Gross & Miller, 1997).

But social comparison theory is as much a theory about group dynamics as it is a theory about individual's perceptions of their opinions and abilities. The theory springs from studies

of small, interacting groups, for Festinger used the principle of comparison to explain why groups tend to be homogeneous with respect to attitudes and values. It remains a central tenet in studies of reference groups' power to sway the attitudes of their members. The principle of comparison also has informed researchers' and theorists' analyses of group formation, affiliation, social identity, majority influence, minority influence, group discussion, polarization, social loafing, brainstorming, and the transmission of beliefs and values from groups to individuals. Indeed, this chapter, by only sampling the ways that researchers and theorists have used the concept of comparison to explain the behavior of individuals in group contexts, underestimates the impact of the concept. Given its importance as an explanatory concept, perhaps the theory should be elevated from number 2 to number 1: from "everyone's second favorite" theory of group processes to "everyone's favorite theory."

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