Information Sampling and Adaptive Cognition

Edited by
KLAUS FIEDLER
University of Heidelberg

PETER JUSLIN
Uppsala University

CAMBRIDGE
UNIVERSITY PRESS

15

Self as Sample

Joachim I. Krueger, Melissa Acevedo,
and Jordan M. Robbins

The popular imagination owes many stimulating images to the science fiction series *Star Trek*. Among the more disturbing ones are the Borg, an alien life form operating "under a collective consciousness, whereby the thoughts of each drone are interconnected with all others in what is referred to as the 'Hive Mind,' eliminating any sense of individuality."[1] The image of the Borg evokes familiar human concerns. For decades, sociologists and social psychologists sought to understand the psychology of the masses or crowds. Crowds came to be feared both for what they could do to others (e.g., lynch them) and for what they could do to the people within them (e.g., lead them toward self-destruction). Members of crowds were thought to be depersonalized as a result of the homogenization of their thoughts and behaviors (Le Bon, 1895).

In modern parlance, the idea that crowds have minds of their own is an argument regarding an emergent property. Emergent properties are irreducible; they cannot be understood with reference to the properties of their constituent elements. Social scientists studying crowds would be wasting their time trying to understand the behavior of the collective from the behavior of a sample of individuals. Nonetheless, this is what F. H. Allport (1924) proposed. He suggested that the analysis of collective behavior should begin with an analysis of individual behavior because "the individual in the crowd behaves just like he would behave alone, *only more so*" (p. 295, emphasis in the original). This view implied that members of a crowd can rely on their own behavioral tendencies to predict collective behavior. They can, in essence, sample their own ideas and inclinations to understand the crowd. Allport thereby suggested that processes of social projection link the experience of individuals with their perceptions of what the group is like or what it is likely to do.

[1] This quote was retrieved from www.locutus.be/locutus.php.

In this chapter, we are concerned with the similarities people see between themselves and others in the group. From the collectivist perspective, perceptions of similarity arise from processes of *self-stereotyping*. Self-stereotyping means that people have well-formed ideas about what the group is like, and under certain circumstances, they expect to be like or act like the typical group member. Like any other type of stereotyping, self-stereotyping is a form of inductive reasoning in which knowledge of the properties of a class is sampled or retrieved from memory, and then applied to specific members of the class.

From the individualist perspective, perceptions of similarity arise from processes of *social projection*. Social projection means that people have well-formed ideas about what they themselves are like and that they generalize their own properties or behaviors to others. Social projection is also a form of inductive reasoning. Here it is the knowledge of specific instances that is generalized to the whole class. When conceptualized as a sequence of sampling and inference, social projection shares much in common with other processes of inference and judgment discussed in this volume. Some of the same questions arise. How, for example, is one to know whether a sample is biased, and how is one to correct for such a bias? In the case of self-based predictions, this question turns out to be difficult to answer because the self constitutes only a sample of one. If such a sample is random, the question of whether it is biased has no answer, much like there is no answer to the question of whether the number six is random when a die is cast only once. Nonetheless, it is possible to approach the question of sample bias in less direct ways, as we shall see.

We first review the history of ideas leading to the self-stereotyping and the social-projection hypotheses. This review is essential because both hypotheses lay claim to explaining perceptions of self-group similarity. Then, we review recent studies with relevant evidence. Thus far, both hypotheses have been examined in relative isolation. When perceptions of similarity are observed, investigators often accept such data as evidence for whichever of the two hypotheses they are inclined to favor. From the outset, we note that a comparative review is not likely to refute one or the other hypothesis conclusively. Rather, the boundary conditions of both may come into focus, and questions for future research may emerge.

COLLECTIVISM AND INDIVIDUALISM IN SOCIAL PSYCHOLOGY

In various continental European philosophies of the nineteenth century, the whole was regarded as more than the sum of its parts. Durkheim's (1901) structural-functional sociology and Wundt's (1920–1929) work on folk psychology reflected this legacy. The Romance school of crowd psychology made the radical assumption that, in a crowd, individual minds are surrendered to the emergent group mind (Le Bon, 1895; Sighele, 1892; de Tarde, 1895). Influential writers such as Freud (1921), McDougall (1920), and Reich (1933) extended and popularized this idea. Elwood (1920) wrote that "all human social groups elaborate what may be called a 'group will' [by acting] to a certain extent as individuals, and develop a sort of individuality or quasi-personality [which] means that each individual must, to some extent, lose his personality in his group" (pp. 114–115). This early definition reveals a conceptual difficulty. Although the group mind was considered a qualitatively distinct and emergent property, it could only be defined metaphorically with recourse to individual minds, which, one might surmise, are easier to understand.

Allport's (1924) critique of the group-mind thesis was influenced by the empiricism of Hume, Locke, and Mill. These philosophers were concerned with the problem of induction. Although they failed to find a logical proof of induction,[2] they justified it pragmatically (Reichenbach, 1951). Induction involves learning from experience. Learners stake their bets for the future on observations they made in the past. In the past this tended to work, and so they expect it to continue to work. In Allport's time, behaviorist models of animal and human learning came to dominate experimental psychology. One way or another, these models were concerned with the learning of covariations: Conditioned stimuli predict unconditioned stimuli, behaviors predict consequences, and so forth. To Allport, the individual stood at the center of analysis, and so it was important to note that the behavior of individuals predicted the behavior of the group.

Over the following decades, the concept of the group mind was questioned by psychologists (Allport, 1962; Asch, 1952; Hofstätter, 1957; Turner et al., 1987), sociologists (Berger & Luckmann, 1966), and philosophers of science (Hayek, 1952; Popper, 1957; Watkins, 1952). Allport's insistence that the individual person be the primary target of analysis was a reflection of his methodological individualism, which Popper described as "the quite unassailable doctrine that we must try to understand all collective phenomena as due to the actions, interactions, aims, hopes, and thoughts of individual men, and as due to traditions created by individual men (Popper, 1957, pp. 157–158). Yet, Allport's (1924) concern that the "ghost [of the group mind] has been exceedingly difficult to lay" (p. 60) was prophetic. Weaker forms of the group-mind hypothesis have been proposed. Their core assumption is that, under certain conditions, the contents of individual minds are shaped by what these individuals *perceive* to be the contents of the group mind. By this conceptual device, a group mind could be brought into play while simultaneously denying its existence.

Questioning the ability of purely individualist theories to account for the complexity of self and social perception, Tajfel & Turner (1986)

[2] As Bertrand Russell humorously remarked, there is a special place in hell reserved for those who thought they did (Russell, 1955).

suggested that people understand themselves not only in terms of their unique and personal attributes but also in terms of their membership in important groups. Turner and collaborators took the idea of group-based self-concepts further. Their theory of self-categorization claims a middle ground between individualism and collectivism by "rejecting both the fallacy of the group mind and the reduction of group life" (Turner et al., 1987, p. 5). Nonetheless, self-categorization theory incorporates the assumption that the collective self enjoys primacy over the individualist self. On the one hand, "the collective self is a precursor to the emergence of a personal self; there would be no personal self in the absence of a higher order 'we' that provides the context for self-other differentiation in terms of person-specific attributes" (Onorato & Turner, 2002, p. 165). On the other hand, the collective self can undo its own creation, the individual self, through the process of depersonalization. "The self can become defined almost exclusively in social identity terms in intergroup contexts" (Onorato & Turner, 2002, p. 162).

SELF-STEREOTYPING

The process leading to depersonalization is self-stereotyping. "Once some specific social identification is salient, a person assigns to self and others the common, typical or representative characteristics that define the group as a whole. [Thus, they come to] perceive themselves as relatively interchangeable with other in-group members" (Brown & Turner, 1981, p. 39). Inasmuch as stereotyping affects perceptions of "self and others," self-perception is not regarded as being unique (Hogg & Abrams, 1988). Indeed, according to a recent review, self-stereotyping is obligatory. "Self-categorization as an in-group member *entails* assimilation of the self to the in-group category prototype and enhances similarity to other in-group members" (Hewstone, Rubin, & Willis, 2002, p. 578, emphasis added).

We hesitate to accept the full force of this claim. The strength of stereotypic inferences tends to be constrained by the amount of individuating or person-specific information available (Krueger & Rothbart, 1988; Locksley et al., 1980). Arguably, such specific information is more readily available with regard to the self than to others (G. W. Allport, 1950; Krueger, 2003). If so, self-stereotyping may be rather difficult to demonstrate. Indeed, self-categorization theory predicts self-stereotyping to occur only under certain conditions.

A PsychInfo search conducted on February 24, 2002, yielded thirty-one relevant entries since 1984. Of these, twelve articles were published in major journals (four in the *Journal of Personality and Social Psychology*, three in the *British Journal of Social Psychology*, two in the *European Journal of Social Psychology*, and one each in the *Personality and Social Psychology Bulletin*,

the *Social Psychology Quaterly*, and *Group Processes & Intergroup Relations*). We set aside studies using a single-item measure of perceived similarity (e.g., Simon, Pantaleo, & Mummendey, 1995; Spears, Doosje, & Ellemers, 1997). Single-item measures tend to be psychometrically labile, yielding only low correlations with multiple-item measures of profile similarity (Krueger & Stanke, 2001; Pickett, Bonner, & Coleman, 2002). Having no content, global measures of perceived similarity cannot capture the "cognitive redefinition of the self – from unique attributes and individual differences to shared social category memberships and associated stereotypes" (Turner et al., 1987, p. 528). Moreover, these measures cannot effectively separate self-stereotyping from social projection.

Our review focuses on studies examining self-stereotyping on specific personality traits. These studies exemplify the three primary conditions under which self-stereotyping is assumed to occur: when a self-category is salient (Hogg & Turner, 1987), when the attributes in question are positive (Biernat, Vescio, & Green, 1996), or when the self-concept is threatened (Pickett et al., 2002).

Category Salience

The salience of social categories is the foundational requirement for self-stereotyping. In a classic study, Hogg & Turner (1987) had male and female participants read a description of a debate in which either one man and one woman or two men and two women argued opposite sides of a controversial issue. Participants were then asked to rate how a typical person of their sex would describe him- or herself. Later, the participants found themselves in the situation they had evaluated. After the debate, they rated themselves "as you see yourself *now*, and not in terms of enduring personality attributes" (p. 329, emphasis in original). Thus, the experimental manipulation was powerful, categorization by sex was salient, and the stereotypes being tapped were situation-specific. In short, participants were forced to self-categorize. Hogg & Turner predicted that postexperimental self-ratings would be more similar to preexperimental stereotype ratings when categorization by gender was salient (i.e., when a pair of men debated a pair of women). A marginally significant trend emerged for positive traits ($r = .22$), but it did not consistently replicate (see also Mussweiler & Bodenhausen, 2002).

Recently, Onotrato & Turner (2004) followed up this work by asking groups of female and male participants to reach consensus on the applicability of various personality traits (e.g., dominance, aggressiveness) to women and men. Participants then tended to endorse traits typical of their gender as being descriptive of themselves. This effect held regardless of whether participants had described their individual selves in primarily feminine of masculine terms during the initial screening phase.

The interpretation of this finding as evidence for self-stereotyping is complicated by two critical design features. First, participants were asked to think of themselves "as a woman [man], and . . . to think about the characteristics you have as a woman [man] compared to men [women]" (Onorato & Turner, 2004, p. 263). This feature demanded rather than tested self-stereotyping. Second, participants were told that "if you think you have each characteristic compared to men [women], please respond by pressing the US key. If you think men [women] have each characteristic in contrast to you, please press the THEM key" (p. 263). This feature confounded judgments of the self with judgments of the ingroup. A woman, for example, could have pressed the US key for the trait of dependence because her self-concept was assimilated to her stereotype of women, or because she indicated her knowledge of that stereotype.

Attribute Valence

Some investigators speculated that self-stereotyping might be limited to either positive or negative attributes. Simon, Glässner-Bayerl, & Stratenwerth (1991) found that, compared with members of the straight majority, gay men were more likely to ascribe negative attributes of the gay stereotype to themselves. Biernat et al. (1996), however, suggested that negative self-stereotyping is paradoxical because the "acceptance of negative stereotypes work[s] against the general goal of self-enhancement" (p. 1,194). Following Hogg & Turner (1987), these authors suggested that self-stereotyping might more readily occur for positive attributes, where there is less of a conflict between accepting a collective self and seeking personal self-enhancement. In an empirical study, sorority women responded to positive and negative attributes that were stereotypic of sororities. As expected, descriptions of proximal in-groups (i.e., own sororities) were more favorable than descriptions of the more general in-group (all sororities) or descriptions of the superordinate in-group (university students). From the point of view of the self-stereotyping hypothesis, it was curious "that in these studies that placed great emphasis on group membership, the self emerged as superior" (Biernat et al., p. 1,206).

The social-projection hypothesis offers an alternative interpretation of the results. This hypothesis makes three critical assumptions: First, most people hold favorable self-images; second, ratings of in-groups are imperfect reflections of people's self-views; third, the strength of projection diminishes as social target groups become larger, more heterogeneous, or otherwise psychologically remote (e.g., out-groups; Krueger & Clement, 1996). These assumptions are sufficient to account for the finding that self-ratings are more favorable than ratings of proximal in-groups, which in turn are more favorable than ratings of more distant in-groups. There is no paradox to be solved nor is there a need to deny negative attributes.

Correlations between self-ratings and group ratings provide a more direct test. If self-stereotyping were selective, similarity correlations should be larger when computed across positive attributes than when computed across negative ones. Analysis of the tabulated average ratings provided by Biernat et al., 1996, (Table 1, p. 1,198) shows, however, that perceptions of similarity were high regardless of attribute valence (for own sorority, both $r = .87$; for all sororities, $r = .63$ [positive] and .66 [negative]; for university students, $r = .78$ [positive] and .66 [negative].[3]

Threat to Self

Following Brewer (1991), Pickett et al. (2002) proposed that self-stereotyping can restore a sense of optimal distinctiveness. According to this view, a person can satisfy the need to belong to a group by seeing him- or herself as a typical member. Likewise, a person can satisfy the need to be unique by seeing both the self and the in-group as differentiated from a salient out-group. To test these ideas, honors students were asked to complete a self-concept inventory. For some, a need for assimilation was activated by telling them that their personal score differed from the average score obtained by honors students. For others, a need for differentiation was activated by telling them that their scores were average. Still others were told that they had scored like the average honors student but different from the general student population. All participants then described themselves on a series of positive trait adjectives, some of which were stereotypical of honors students. As expected, self-descriptions were more stereotypical when a need for assimilation or a need for differentiation was activated ($M[r] = .26$).[4] In a second study, this effect emerged as a trend among participants who were highly identified with the group. In a third study, highly identified sorority women showed a trend of self-stereotyping on positive traits, and significant self-stereotyping on two out of three measures on negative traits. Like the findings reported by Hogg & Turner (1987), these results point to conditions under which self-stereotyping yields perceptions of similarity that cannot be attributed to social projection. Future replications of these findings may lead to firm conclusions as to when and under which conditions self-stereotyping occurs.

[3] Participants who were not sorority members (Study 2) yielded no clear correlational picture (sorority: $r = .27$ [positive] and .67 [negative]; students in general: $r = .93$ and .78). These correlations were so high, in part, because of the prior aggregation of ratings across participants. For Study 3, no separate correlations for positive and negative attributes were computed because the means in Table 4 (Biernat et al., 1996, p. 1204) were averages across the salience conditions.

[4] For Study 1, the effect size was estimated by deriving r from t and df (Rosenthal & DiMatteo, 2001, p. 72). For Study 2, the effect sizes could not be estimated because only a p value was reported.

SOCIAL PROJECTION

The social-projection hypothesis suggests that the sampling of self-related evidence precedes and affects inferences about the group. Because this sequence is assumed to involve a causal relation, changes in the former should bring about changes in the latter. We now consider evidence suggesting that self-related knowledge enjoys temporal primacy over group knowledge and that projected self-ratings systematically increase the variability of group ratings.

Response Time

The social-projection hypothesis suggests that self-related knowledge is more accessible than group-related knowledge. Consistent with this view, participants in recent studies made self-ratings faster than group ratings (*M[r]* = .42; Cadinu & De Amicis, 1999; Clement & Krueger, 2000; Krueger & Stanke, 2001). In other studies, response latencies were examined separately for those stimulus items for which self-ratings or group ratings were the same (i.e., matched) and those for which they were different (i.e., mismatched). Here, matched responses were made faster than mismatched responses (Coats et al., 2000; Smith, Coats, & Walling, 1999; Smith & Henry, 1996). This effect has been taken to mean that self-images merge with perceptions of the group (Onorato & Turner, 2002; Tropp & Wright, 2001).

Cadinu & De Amicis (1999) examined response latencies as a function of both the target of judgment (self versus group) and the type of item (matched versus mismatched responses). This full-design analysis revealed that responses were faster for self than for group, and faster for matched than for mismatched items. [See Figure 15.1 for a replication with data from Krueger & Stanke (2001); data from Clement & Krueger (2000) also yielded the same pattern.] The matched traits are those on which self-group similarities are perceived. Because the latencies of self-ratings remained shorter than the latencies of group ratings for this subset of items, it seems that group ratings were matched with self-ratings rather than vice versa. The shorter latencies of group ratings on matched items than on mismatched items suggested that self-ratings facilitated group ratings when similarities were perceived (Dunning & Hayes, 1996; Mussweiler & Bodenhausen, 2002).

To test the facilitation hypothesis further, the order of self- and group ratings was varied in one study, and participants also made nonsocial control ratings about the traits (e.g., "Does the trait word contain the letter S?"; Clement & Krueger, 2000). The facilitative effect of self-ratings on group ratings was the degree to which group ratings were sped up when preceded by self-ratings instead of control ratings; the facilitative effect of group ratings was the degree to which self-ratings were sped up when preceded

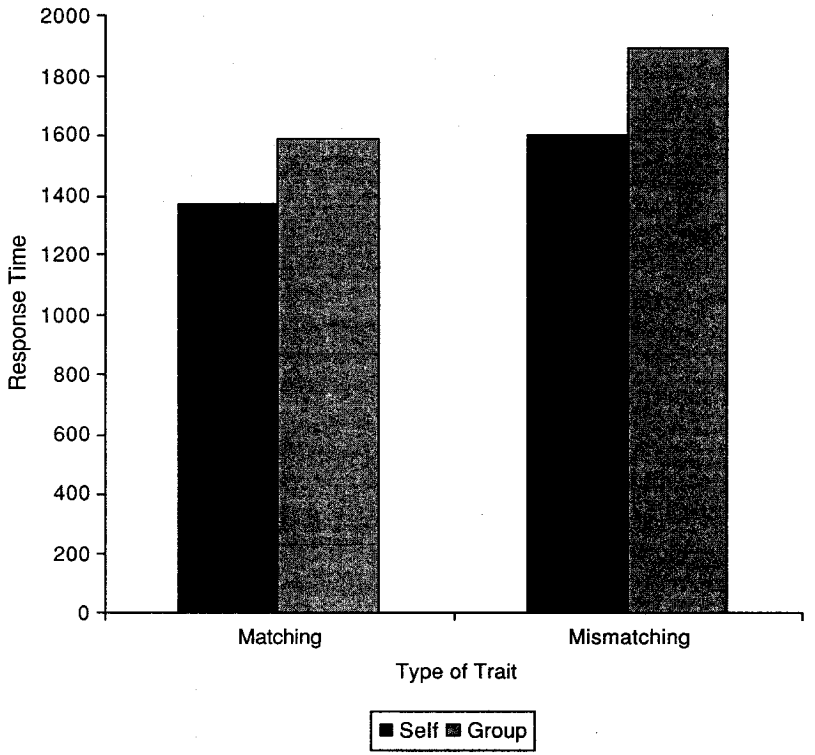


FIGURE 15.1. Response times in milliseconds for self-ratings and group ratings on matching and mismatching traits (calculated from Krueger & Stanke, 2001).

by group ratings instead of control ratings. Both facilitation effects were observed, but the facilitative effect of self-ratings was larger than the facilitative effect of group ratings (r = .16). Self-reports also revealed that participants experienced less difficulty when rating the self than when rating the group (r = .62), and that they felt more confident about the accuracy of their self-ratings (r = .57). In addition, participants described themselves with greater consistency over time than they described groups (r = .48; Krueger & Stanke, 2001).

Response Variability

Another way to state the social-projection hypothesis is to say that the variability of group ratings reflects, in part, the variability of self-ratings. If people did not project, one source of variability for group ratings would be disabled, and group ratings should become more homogeneous (Dawes, McTavish, & Shaklee, 1977).

To test this hypothesis, we analyzed data from two studies, in which participants made twenty self-ratings and consensus estimates (in percent) for an in-group or an out-group created in the laboratory (Acevedo & Krueger, unpublished; Clement & Krueger, 2002). Across thirteen experimental conditions, the idiographic projection correlations, computed between self-ratings and group estimates, were larger for the in-group ($M[r] = .47$) than for the out-group ($M[r] = .11$). This is a common and expected finding (see discussion below). When examining the standard deviations of the estimates, which were computed for each participant separately, we found that in-group estimates ($M[SD] = 23.38$) were indeed more variable than out-group estimates ($M[SD] = 21.77$, $p = .02$). For a second test of the hypothesis, we correlated the standard deviations of the estimates with the participants' projection coefficients. When participants made estimates about in-groups, these correlations were positive ($M[r] = .27$). In other words, individuals who projected more also generated more variable consensus estimates. The variability of estimates for out-groups was unrelated to individual differences in projection ($M[r] = .05$), perhaps because the overall level of projection was low.

As consensus estimates become more variable, they tend to become more extreme. As estimates depart from the 50% mark, they imply greater perceived group homogeneity for a particular attribute. When the variability of the estimates across attributes is at its largest (i.e., when only estimates of 0% or 100% are made), the assumed variability of the group on any particular attribute is zero. Inasmuch as social projection is selectively addressed to in-groups, it can contribute to perceptions of in-group homogeneity. Perceiving groups as homogeneous is also a facet of stereotyping. Self-categorization theory suggests that, under certain conditions, in-groups are perceived to be more homogeneous than out-groups (Haslam, Oakes, & Turner, 1996). The present analysis shows, however, that projection can yield the same effect in the absence of stereotypes.

Self-categorization theory further assumes that self-stereotyping "makes sense only if people are assumed to share similar mental representations" (Turner & Onorato, 1999, p. 26).[5] In other words, the group ratings made by different observers should be highly intercorrelated. We identified a data set in which this condition was met and asked whether social projection could still be identified. Data came from 174 Brown University students who rated themselves and their fellow collegiates on a series of twelve personality-descriptive terms (Robbins & Krueger, unpublished). The idiographic correlations between self- and group ratings were in the typical range ($M[r] = .47$). We then computed the average group rating for each trait as an index of the group's autostereotype. This stereotype was held with considerable consensus, as suggested by the correlations between these averages and individual respondents' group ratings ($M[r] = .76$). We then isolated the unique component of perceived self-group similarity by computing the correlations between self- and group ratings while controlling for the average group ratings (Kenny & Winquist, 2001). The result ($M[r] = .22$) suggested that perceptions of self-group similarity went beyond the shared component of the social stereotype. We suspect that this unique idiographic component of perceived similarity was the result of projection. In line with the variability hypothesis discussed in the foregoing, we submit that when people who differ in their personal self-descriptions project to the group, the variability of their group ratings systematically increases and covaries with their self-ratings. The more this happens, the weaker the social or consensual nature of the group stereotype will become (Ames, 2004).

[5] Without shared stereotypes, the meaning of depersonalization dissolves. If, for example, Per holds an idiosyncratic stereotype of Swedes, his self-image remains unique even with a massive increase in self-stereotyping. Per may be depersonalized in his own mind, but not in the estimation of others. Thus, the effect is not a collective one, though it should be, according to self-categorization theory.

SAMPLING THE SELF IN THE LABORATORY

Most studies on perceived self-group similarities are correlational, thus allowing only indirect assessments of the relative contributions of stereotyping and projection. Experimental procedures permit more direct tests when participants learn new information about themselves or about others. Early work on the effects of arbitrary feedback to the self was interpreted as showing an illusion of uniqueness, or a perception of *dissimilarity*. In what became known as the Barnum effect, participants accept personality feedback as highly accurate when in fact the presented sketch is of the generic one-size-fits-all variety (Forer, 1949). Compared with participants who only read the sketch, but who are not led to believe that it describes them, recipients estimate that the sketch is descriptive of a larger segment of the population (Clement & Krueger, 2002). They thus do not feel particularly unique. Once a new piece of personal information is attached to the self-concept, it tends to be projected to others (Agostinelli et al., 1992; Schimel, Greenberg, & Martens, 2003).

The inverse effect has, however, also been found. One of the recurring themes of social-psychological theory and research is that the self-concept is not monolithic but is responsive to social influence. Classic work by Asch (1956) and Sherif (1936) attests to the malleability of individuals' responses when in the presence of others whose responses they witnessed. By a variety of processes, group settings increase the homogeneity of behavior so that the responses of individual group members become intercorrelated. The changes in individuals' responses are, however, rather modest and perceptions of others remain anchored on the self-concept even

when a considerable amount of sampling information has accumulated (Alicke & Largo, 1995; Krueger & Clement, 1994; Kulig, 2000).

When a lot of information is available about the probability of a certain trait or behavior in a group, it can – and should – be used to predict what a sampled individual is like. Statistically, it is less uncertain to predict the features of an individual from knowledge of the feature's distribution in the group than vice versa (Dawes, 1990). Because of this asymmetry, evidence for processes such as self-stereotyping or conformity should be easier to obtain than evidence for social projection. When, however, both types of inference are examined in the same study, inferences from the self to the group tend to be stronger than the reverse. The processes accounting for this difference appear to be egocentric because there is no comparable difference in the strength of the inferences when information about some other individual group member is involved (Cadinu & Rothbart, 1996).

In a complex experiment reported by Brewer and Weber (1994), participants were categorized into laboratory groups of different sizes, and each was shown a video clip of either an academically competent or incompetent student. When the incompetent student belonged to the minority group, members of that group rated themselves less favorably compared with the baseline ratings of participants who belonged to no group. When the incompetent student belonged to the majority, members of that group rated themselves more favorably. These findings were consistent with the idea that people seek optimal levels of distinctiveness. For the purpose of the present analysis, it is instructive to also consider the ratings of the videotaped student. Changes in these ratings were more than twice as large as changes in the self-ratings. Regardless of their majority–minority status, participants rated the incompetent in-group student more positively, and thus more similar to themselves, than did participants who belonged to a different group or to no group at all.[6]

In experiments on perceptions of similarity, sampling information is, by definition, not random. The question of whether people overuse self-related sample information or underuse other-related information still awaits a conclusive answer (Engelmann & Strobel, 2000). There is, however, an emerging literature with studies in which participants are deliberately exposed to a sample of self-related information that is known to be biased. Here, people either do not recognize the nature of the bias or they are unable to correct it. These phenomena of egocentric overprojection are variously known as the "spotlight effect" or the "illusion of transparency" (Gilovich & Savitsky, 1999). Their common denominator is that the target person's attention is focused on an emotionally significant aspect of the self. In the case of the spotlight effect, this might be an embarrassing piece

[6] No separate means were reported for the competent in-group target.

of clothing; in the case of the illusion of transparency, it might be a state of stage fright. Either way, participants overestimate the degree to which an audience detects or denigrates the source of the person's own anguish.

Overprojection occurs when self-related information is biased in the sense that it is not drawn from the same sampling space as the audience's judgments that it is meant to predict. When the self's perspective involves unique visual information or access to private emotional cues, it is not interchangeable with the perspective of an audience. To perceive strong similarities between the audience's and one's own responses is, in a sense, a case of overprojection to a social group that does not include the self. This raises the general question of how and under what conditions social categorization moderates the strength of social projection.

SOCIAL CATEGORIZATION

Any account of sampling and inference needs to address the question of how the sampled information is related to the population about which inferences are made. The standard ideal is to specify a population first (e.g., all eligible voters) and then draw a random sample from it. When this ideal is met, the standard errors of the sample statistics are inversely related to sample size, and their validity converges on their reliability. Often, however, inferences need to be drawn about populations that have not been sampled. Most psychological research is conducted with undergraduate students, and most biomedical research is conducted with a small number of animal species. Yet, findings are generalized to other categories of humans or animals. On the one hand, it is recognized that the samples are biased with regard to these other target categories; on the other hand, certain a priori beliefs or other empirical data suggest that the sampled and unsampled categories are sufficiently similar to justify cross-category inferences.

In social perception, people assess the similarities between themselves and groups to which they belong (in-groups) and between themselves and groups to which they do not belong (out-groups). Both the social-projection hypothesis and the self-stereotyping hypothesis suggest that people see greater similarities between themselves and in-groups than between themselves and out-groups. To discriminate between the two hypotheses, it is useful to consider different kinds of category used in this research area.

In correlational studies, participants are grouped according to existing memberships in various social categories, such as race, gender, or academic affiliation. In experimental studies, participants are grouped according to controlled feedback they receive in the laboratory. Feedback often consists of scores presumably obtained on some test or task. This information is arbitrary, and the resulting groups are considered "minimal" (Rabbie & Horwitz, 1969; Tajfel et al., 1971). Compared with real social

groups, minimal groups have two important properties: They do not comprise any preexisting social stereotypes that group members might use to "tune" their self-concepts, and there is no reason to believe that these groups differ in anything but their labels. Information sampled from one group might as well be generalized to the other.

A recent meta-analysis revealed that perceptions of similarity are stronger for minimal than for real in-groups ($M[r] = .57$ and .40, Robbins & Krueger, 2005). Projection can operate where self-stereotyping is blocked (i.e., in minimal groups). If self-stereotyping were a potent source of perceived similarities, correlations should be larger when real groups are involved. The attenuation of similarity correlations in real groups is also consistent with general processes of sampling and inference. In real social categories, people come across other group members whose attributes or behaviors may differ from their own. Taking this information into account, they make predictions that are less egocentric than their predictions in the laboratory where no other sampling information exists.

The meta-analytic data also showed that perceptions of similarity are weaker for minimal than for real out-groups ($M[r] = .10$ and .15). Again, the modest correlation for real out-group targets is consistent with the idea that people have *some* relevant sampling information even though they tend to be less familiar with out-groups than with in-groups (Fiedler, 2000; Linville, Fischer, & Salovey, 1989). The puzzle is why perceptions of similarity are so low for minimal out-groups. Here, people do not appear to "overproject" as they do in the case of the spotlight effect and the illusion of transparency. Instead, they appear to take the view of a conservative scientist who refrains from generalizing findings to unsampled populations. Because, however, they are asked to make *some* predictions as part of the experimental protocol, research participants oblige, but their predictions remain independent of the self-related sampling information they possess.

Many social-psychological theories assume that various cognitive or motivational processes contribute to the perception of intergroup differences. Social-identity theory and self-categorization theory stress the psychological need to differentiate the in-group from the out-group (Tajfel & Turner, 1986); optimal-distinctiveness theory assumes that out-groups are actively contrasted away from the self and the in-group (Brewer, 1991). The asymmetry between projection to in-groups and out-groups offers a different view, suggesting that in-groups and out-groups are perceived differently even in the absence of any specific comparative process.

Figure 15.2 shows two arrangements of the relevant trivariate relationships. In the left panel, the correlations between self-ratings (S) and group ratings (IG and OG, respectively, for in-groups and out-groups) are set to values that approximate empirical findings. Assuming that people make

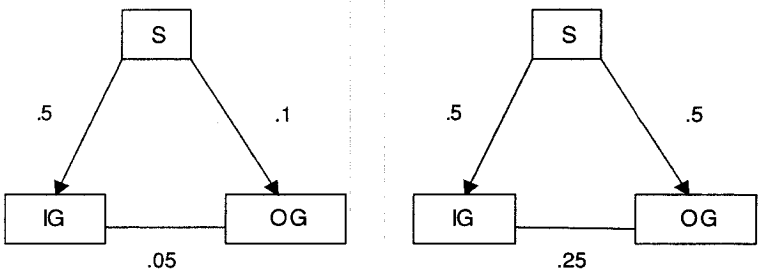


FIGURE 15.2. Asymmetric (left) versus symmetric (right) projection to in-groups and out-groups.

no direct assessment of in-group–out-group similarity, the correlation between the two sets of group ratings is the product of the two projection correlations. The low value of this correlation indicates the near independence of in-group and out-group perceptions. In contrast, the right panel shows that in-groups and out-groups would appear to be rather similar if projection to the two groups were equally strong. As social projection becomes more asymmetrical, perceptions of intergroup differences emerge more strongly.

A PROJECTION MODEL OF IN-GROUP BIAS

Since Sumner's (1906) speculations about the ubiquity of ethnocentrism, empirical work has consistently shown that people hold more favorable images of their in-groups than of out-groups. Many, but not all, out-groups are seen as neither positive nor negative, making the bias one of in-group favoritism rather than out-group derogation (Brewer, 1999). To explain in-group bias from a collectivist point of view, Turner & Onorato (1999) emphasized the role of motivation, suggesting that there is "a *psychological requirement* that relevant in-groups compare favorably with relevant out-groups . . . a *motivation* producing a *drive* for in-group superiority [and] *pressures* for intergroup differentiation" (p. 18, emphases added). How this might happen in minimal groups is not clear. Here, it is necessary to assume that people treat minimal groups as if they were real, that is, as if they offered platforms for enduring and meaningful social identities, and as if they were endowed with behavioral norms or social stereotypes.

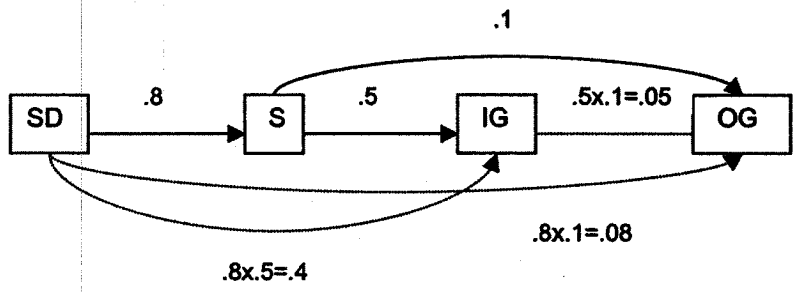
The ability of asymmetric social projection to yield perceptions of intergroup differences has an important consequence for how favorably in-groups and out-groups are described. Social projection accounts for in-group bias by using assumptions of inductive reasoning and self-love. The inductive assumption is that people project more to in-groups than to out-groups (i.e., $r_{S,IG} > r_{S,OG}$). The self-love assumption is that most people rate positive attributes as being more descriptive of themselves than negative

attributes, that is, the correlation between self-ratings and ratings of the attributes' social desirability, $r_{S,SD}$, is high (Krueger, 1998).

When no other systematic relationships are assumed, an estimate of in-group bias can be derived as follows. The perceived favorability of the in-group is the product of the favorability of the self and projection to the in-group (i.e., $r_{IG,SD} = r_{S,SD}r_{S,IG}$). Analogously, the perceived favorability of the out-group is the product of the favorability of the self and projection to the out-group (i.e., $r_{OG,SD} = r_{S,SD}r_{S,OG}$). In-group bias is the difference between the perceived favorability of the in-group and the perceived favorability of the out-group (i.e., $r_{IG,SD} - r_{OG,SD}$). It is useful to examine how the difference between in-group judgments and out-group judgments is correlated with attribute desirability. In-group bias is present if the in-group is rated more highly than the out-group inasmuch as the attribute in question is desirable (i.e., if $r_{IG-OG,SD} > 0$). This difference-score correlation can be computed as the ratio of overall in-group favoritism (i.e., $r_{IG,SD} - r_{OG,SD}$) over a term expressing the complement of intergroup differentiation (i.e., $\sqrt{2[1 - r_{IG,OG}]}$). For simplicity of exposition, it is assumed that all variables are standardized (for unstandardized variables see Asendorpf & Ostendorf, 1998).

Figure 15.3 represents this account of in-group favoritism. The top panel diagrams the associations among the four input variables (i.e., ratings of desirability, self, in-group, and out-group). Direct paths are shown as solid lines; indirect or mediated paths are shown as dashed lines. The three input correlations approximate empirical values (i.e., $r_{S,SD} = .8$, $r_{S,IG} = .5$, and $r_{S,OG} = .1$). The bottom panel shows the predictions of the model as a set of regression lines. Self-ratings, in-group ratings, and out-group ratings are regressed on attribute desirability, with the slope being steepest for self-ratings and flattest for out-group ratings. Thus, in-group-favoritism is strongest for the most desirable and the most undesirable attributes. The model also suggests that perceived differences between self and in-group are greatest for evaluatively extreme attributes. This latter prediction differs from the self-categorization perspective, which assumes that in-group favoritism and depersonalization go hand in hand.

To examine some predictions of the projection model, we conducted a study with minimal groups. Following an ostensible testing procedure, some participants were told that according to their cognitive style, they belonged to the category of "grounders," whereas others learned that they did not belong to this group. Perceptions of self-group similarity and desirability were computed from subsequent ratings of a set of personality-inventory statements (e.g., "I like poetry"; see Krueger & Clement, 1996). The idiographic correlations between group ratings and desirability ratings showed the expected in-group bias ($M[r] = .30$ and .04, for in-groups and out-groups, respectively). The asymmetry in the projection coefficients, however, surpassed the size of the in-group bias. The correlations between



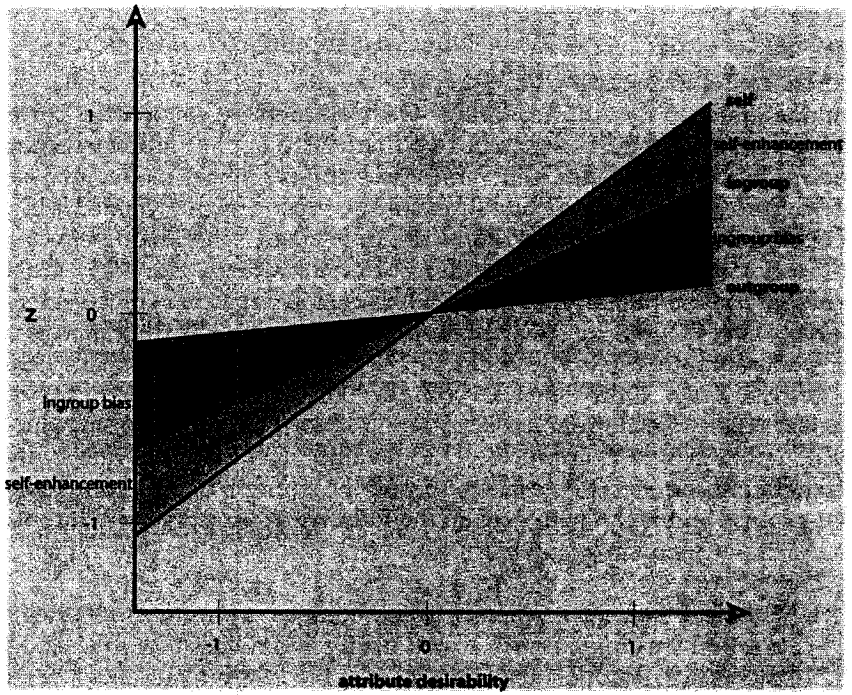


FIGURE 15.3. From asymmetric projection to in-group bias: The hypothesized flow of inferences (top) and the resulting differences in regressiveness scaled as z scores (bottom).

self-ratings and group ratings were much larger for the in-group ($M[r] = .71$) than for the out-group perspective ($M[r] = .05$). This pattern suggested that asymmetric projection could more effectively account for in-group bias than vice versa.

Table 15.1 presents a partitioning of the variance of the group ratings. The unique effect of self-ratings on group ratings was captured by

TABLE 15.1. *Predicting Group Ratings from Self- and Desirability Ratings: Variance Accounted for and Standard Deviations (in Parentheses)*

	In-group	Out-group
	r^2 (*SD*)	r^2 (*SD*)
Total Variance (Multiple *r*)	.52 (.22)	.23 (.22)
Effect of Self: *r*(self, group.[desirability])^2	.38 (.22)	.16 (.20)
Effect of Desirability: *r*(desirability, group.[self])^2	.04 (.04)	.07 (.11)
Shared Variance[a]	.10 (.15)	.003 (.05)

[a] The shared variance is the difference between the r^2 in the top row and the sum of the r^2 in the two center rows.

semipartial correlations controlling desirability ratings. Conversely, the unique effect of desirability ratings was captured by semipartial correlations controlling self-ratings. A two (Perspective: in-group versus out-group) by two (Predictor: self versus desirability) mixed-model analysis of variance with repeated measures on the second factor yielded a significant interaction, with $F(1, 84) = 24.23$, $p < .001$. The unique effect of self was larger for in-group than for out-group ratings, $F(1, 84) = 48.04$, whereas the unique effect of desirability was low regardless of the raters' perspective, $F(1, 84) = 1.26$. In-group bias was thus mostly a matter of egocentrism rather than ethnocentrism (see also Cadinu & Rothbart, 1996; Chen & Kenrick, 2002; Otten & Wentura, 2001; or Otten, 2002a,b, for reviews). The projection model of in-group favoritism requires only three basic relationships as input (i.e., the favorability of the self-image, the strength of projection to the in-group, and the strength of projection to the out-group), and it can help explain the following four pervasive findings in the literature on in-group bias.

1. *Cross-categorization*: When two dichotomous means of social categorization are crossed, such as nationality and religion, people's judgments are most positive about the double in-group and most negative about the double out-group (see Migdal, Hewstone, & Mullen, 1998, for a review and meta-analysis). The social-projection hypothesis predicts this result because a double in-group should receive the full benefit of projection, whereas groups that are in-groups according to one means of categorization and out-groups according to the other should receive less. Double out-groups should be seen as the least appropriate target of projection.
2. *Recategorization*: One way of eliminating in-group bias is to eliminate categorization altogether (Gaertner et al., 2001). The projection model states that changes in categorization beget changes in perceived similarity. People who gain membership in one group while losing membership in another increase their projection to the new in-group while decreasing projection to the old in-group (Clement & Krueger, 2002). If, as this pattern suggests, projection is mainly a question of inclusion of others into the same social category, then others who join the in-group become targets of projection for people's positive self-concepts.
3. *Group size*: Members of minority groups show greater in-group bias than members of majority groups (Mullen, Brown, & Smith, 1992). Being a member of a minority group is a more salient experience and engenders higher levels of identification than being a member of a majority group (Leonardelli & Brewer, 2001). It may, however, be sufficient to assume that the strength of projection increases as groups become smaller. Although group size alone does not matter from the perspective of pure induction (Dawes, 1989), small groups also tend to be more homogeneous than large groups. Thus, inferences based on small samples tend to be less uncertain.
4. *Discrimination*: A central aim of social identity and self-categorization theories is to explain why people discriminate against out-groups. Both theories assume that preferential treatment of in-group members can occur in the absence of any rational assessment of individual self-interest. In contrast, Rabbie, Schot, & Visser (1989) proposed that people favor others inasmuch as they expect reciprocal benefits (see Gaertner & Insko, 2000, for empirical evidence). To the extent that people expect their actions to be reciprocated, they may rationally choose to bestow benefits onto others. As such projective expectations of reciprocity come to mind more readily when the other person is a member of the in-group instead of the out-group, a discriminatory behavioral gap opens (Acevedo & Krueger, 2004; Yamagishi & Kiyonari, 2000).[7]

CONCLUSION

In this chapter, we explored the processes underlying perceptions of self-group similarities. From a sampling-and-inference perspective, the hypotheses of self-stereotyping and social projection offer different accounts for such perceptions. Whereas the idea of self-stereotyping focuses on how different in-groups come to be salient sampling spaces for inferences about the self, the idea of social projection focuses on the sampling of self-related information, and on how this information is generalized to available in-groups.

[7] Tajfel originally speculated that participants "would assume others to behave as they themselves did, and that this assumption would in turn affect their behavior" (Tajfel et al., 1971, p. 175). This projective idea was subsequently no longer emphasized in theories of social identity or self-categorization.

As we noted at the outset, it was not expected that one hypothesis would entirely prevail to the exclusion of the other. Although at present, the social-projection hypothesis appears to be better supported by empirical data, the self-stereotyping hypothesis is too compelling to be discarded. The self-concept is, after all, responsive to real and perceived social influences, as well as perceptual contrast and assimilation effects (Mussweiler, 2003). A practical recommendation for future research is to develop experimental designs aimed at further clarification of the boundary conditions of either hypothesis and at shedding more light on how processes of self-stereotyping and social projection may complement each other.

Proponents of self-categorization theory recently offered the same recommendation (Onorato & Turner, 2004). At the same time, however, these authors noted that "depersonalization involves introjection [i.e., the assimilation of the self-concept to the group stereotype] and projection" (p. 275). Both mechanisms are "aspects of the same process of assigning group-level characteristics to self and others as the ingroup-outgroup level of self-categorization becomes salient" (p. 275). We worry that this formulation rather insulates the concept of depersonalization from empirical challenge, making self-categorization theory appear to be true a priori.

References

Acevedo, M., & Krueger, J. I. (unpublished). *Differential social projection accounts for ingroup bias in the minimal group paradigm*. Brown University.

Acevedo, M., & Krueger, J. I. (2004). Two egocentric sources of the decision to vote: The voter's illusion and the belief in personal relevance. *Political Psychology, 25*, 115–134.

Agostinelli, G., Sherman, S. J., Presson, C. C., & Chassin, L. (1992). Self-protection and self-enhancement biases in estimates of population prevalence. *Personality and Social Psychology Bulletin, 18*, 631–642.

Alicke, M. D., & Largo, E. (1995). The role of the self in the false consensus effect. *Journal of Experimental Social Psychology, 31*, 28–47.

Allport, F. H. (1924). The group fallacy in relation to social science. *Journal of Abnormal and Social Psychology, 19*, 60–73.

Allport, F. H. (1962). A structuronomic conception of behavior: Individual and collective. I. Structural theory and the master problem of social psychology. *Journal of Abnormal and Social Psychology, 64*, 3–30.

Allport, G. W. (1950). *The nature of personality*. Cambridge, MA: Addison-Wesley.

Ames, D. R. (2004). Inside the Mind Reader's Tool Kit: Projection and Stereotyping in Mental State Inference. *Journal of Personality and Social Psychology, 87*, 340–353.

Asendorpf, J. B., & Ostendorf, F. (1998). Is self-enhancement healthy? Conceptual, psychometric, and empirical analysis. *Journal of Personality and Social Psychology, 74*, 955–966.

Asch, S. E. (1952). *Social psychology*. New York: Prentice-Hall.

Asch, S. E. (1956). Studies of independence and conformity: I. A minority of one against a unanimous majority. *Psychological Monographs* 70.

Berger, P. L., & Luckmann, T. (1966). *The social construction of reality*. Garden City, NY: Doubleday.

Biernat, M., Vescio, T. K., & Green, M. L. (1996). Selective self-stereotyping. *Journal of Personality and Social Psychology, 71*, 1194–1209.

Brewer, M. B. (1991). The social self: On being the same and different at the same time. *Personality and Social Psychology Bulletin, 17*, 475–482.

Brewer, M. B. (1999). The psychology of prejudice: Ingroup love or out-group hate? *Journal of Social Issues, 55*, 429–444.

Brewer, M. B., & Weber, J. G. (1994). Self-evaluation effects of interpersonal versus intergroup social comparison. *Journal of Personality and Social Psychology, 66*, 268–275.

Brown, R. J., & Turner, J. C. (1981). Interpersonal and intergroup behaviour. In J. C. Turner & H. Giles (Eds.), *Intergroup behaviour* (pp. 33–65). Oxford: Blackwell.

Cadinu, M. R., & De Amicis, L. (1999). The relationship between the self and the ingroup: When having a common conception helps. *Swiss Journal of Psychology, 58*, 226–232.

Cadinu, M. R., & Rothbart, M. (1996). Self-anchoring and differentiation processes in the minimal group setting. *Journal of Personality and Social Psychology, 70*, 661–677.

Chen, F. F., & Kenrick, D. T. (2002). Repulsion or attraction? Group membership and assumed attitude similarity. *Journal of Personality and Social Psychology, 83*, 111–125.

Clement, R. W., & Krueger, J. (2000). The primacy of self-referent information in perceptions of social consensus. *British Journal of Social Psychology, 39*, 279–299.

Clement, R. W., & Krueger, J. (2002). Social categorization moderates social projection. *Journal of Experimental Social Psychology, 38*, 219–231.

Coats, S., Smith, E. E., Claypool, H. M., & Banner, M. J. (2000). Overlapping mental representations of self and in-group: Reaction time evidence and its relationship with explicit measures of group identification. *Journal of Experimental Social Psychology, 36*, 304–315.

Dawes, R. M. (1989). Statistical criteria for establishing a truly false consensus effect. *Journal of Experimental Social Psychology, 25*, 1–17.

Dawes, R. M. (1990). The potential nonfalsity of the false consensus effect. In R. M. Hogarth (Ed.), *Insights in decision making: A tribute to Hillel J. Einhorn* (pp. 179–199). Chicago: University of Chicago Press.

Dawes, R. M., McTavish, J., & Shaklee, H. (1977). Behavior, communication, and assumptions about other people's behavior in a commons dilemma situation. *Journal of Personality and Social Psychology, 35*, 1–11.

de Tarde, G. (1895). *Les lois de l'imitation; étude sociologique*. Paris: Alcan.

Dunning, D., & Hayes, A. F. (1996). Evidence for egocentric comparison in social judgment. *Journal of Personality and Social Psychology, 71*, 862–871.

Durkheim, E. (1901). *Les règles de la méthode sociologique*. Paris: Alcan.

Elwood, C. A. (1920). *An introduction to social psychology*. New York: Appleton.

Engelmann, D., & Strobel, M. (2000). The false consensus effect disappears when representative information and monetary incentives are given. *Experimental Economics, 3*, 241–260.

Fiedler, K. (2000). Beware of samples! A cognitive-ecological sampling approach to judgment biases. *Psychological Review, 107*, 659–676.

Forer, B. R. (1949). The fallacy of personal validation: A classroom demonstration of gullibility. *Journal of Abnormal and Social Psychology, 44*, 118–123.

Freud, S. (1921). *Massenpsychologie und Ich-Analyse*. Vienna: Internationaler Psychoanalytischer Verlag.

Gaertner, L., & Insko, C. (2000). Intergroup discrimination in the minimal group paradigm: Categorization, reciprocation, or both? *Journal of Personality and Social Psychology, 79*, 77–94.

Gaertner, S. L., Mann, J., Murrell, A., & Dovidio, J. F. (2001). Reducing intergroup bias: The benefits of recategorization. In M. A. Hogg & Abrams, D. (Eds.), *Intergroup relations: Essential readings* (pp. 356–369). Philadelphia: Psychology Press.

Gilovich, T., & Savitsky, K. (1999). The spotlight effect and the illusion of transparency: Egocentric assessments of how we are seen by others. *Current Directions in Psychological Science, 8*, 165–168.

Haslam, S. A., Oakes, P. J., & Turner, J. C. (1996). Social identity, self-categorization, and the perceived homogeneity of ingroups and out-groups: The interaction between social motivation and cognition. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition*, Vol. 3: *The interpersonal context* (pp. 182–222). New York: Guilford.

Hayek, F. A. v. (1952). *The counter revolution in science*. Chicago: University of Chicago Press.

Hewstone, M., Rubin, M., & Willis, H. (2002). Intergroup bias. *Annual Review of Psychology, 53*, 575–604.

Hofstätter, P. R. (1957). *Gruppendynamik. Die Kritik der Massenpsychologie*. Hamburg: Rowohlt.

Hogg, M. A., & Abrams, D. (1988). *Social identifications: A social psychology of intergroup relations and group processes*. London: Routledge.

Hogg, M. A., & Turner, J. C. (1987). Intergroup behaviour, self-stereotyping and the salience of social categories. *British Journal of Social Psychology, 26*, 325–340.

Kenny, D. A., & Winquist, L. (2001). The measurement of interpersonal sensitivity: Consideration of design, components, and unit of analysis. In J. Hall & F. Bernieri (Eds.), *Interpersonal sensitivity: Theory and measurement* (pp. 265–302). Englewood Cliffs, NJ: Lawrence Erlbaum.

Krueger, J. (1998). Enhancement bias in the description of self and others. *Personality and Social Psychology Bulletin, 24*, 505–516.

Krueger, J. I. (2003). Return of the ego – self-referent information as a filter for social prediction: Comment on Karniol (2003). *Psychological Review, 110*, 585–590.

Krueger, J., & Clement, R. W. (1994). The truly false consensus effect: An ineradicable and egocentric bias in social perception. *Journal of Personality and Social Psychology, 67*, 596–610.

Krueger, J., & Clement, R. W. (1996). Inferring category characteristics from sample characteristics: Inductive reasoning and social projection. *Journal of Experimental Psychology: General, 125*, 52–68.

Krueger, J., & Rothbart, M. (1988). Use of categorical and individuating information in making inferences about personality. *Journal of Personality and Social Psychology, 55*, 187–195.

Krueger, J., & Stanke, D. (2001). The role of self-referent and other-referent knowledge in perceptions of group characteristics. *Personality and Social Psychology Bulletin, 27*, 878–888.

Kulig, J. W. (2000). Effects of forced exposure to a hypothetical population on false consensus. *Personality and Social Psychology Bulletin, 26*, 629–636.

Le Bon, G. (1895). *Psychologie des foules*. Paris: Alcan.

Leonardelli, G. J., & Brewer, M. B. (2001). Minority and majority discrimination: When and why? *Journal of Experimental Social Psychology, 37*, 468–485.

Linville, P. W., Fischer, G. W., & Salovey, P. (1989). Perceived distributions of the characteristics of in-group and out-group members: Empirical evidence and a computer simulation. *Journal of Personality and Social Psychology, 57*, 165–188.

Locksley, A., Borgida, E., Brekke, N., & Hepburn, C. (1980). Sex stereotypes and social judgment. *Journal of Personality and Social Psychology, 39*, 821–831.

McDougall, W. (1920). *The group mind, a sketch of the principles of collective psychology, with some attempt to apply them to the interpretation of national life and character*. New York: Putnam.

Migdal, M., Hewstone, M., & Mullen, B. (1998). The effects of crossed categorization on intergroup evaluations: A meta-analysis. *British Journal of Social Psychology, 37*, 303–324.

Mullen, B., Brown, R., & Smith, C. (1992). Ingroup bias as a function of salience, relevance, and status: An integration. *European Journal of Social Psychology, 22*, 103–122.

Mussweiler, T. (2003). Comparison processes in social judgment: Mechanisms and consequences. *Psychological Review, 110*, 472–489.

Mussweiler, T., & Bodenhausen, G. V. (2002). I know you are, but what am I? Self-evaluative consequences of judging in-group and out-group members. *Journal of Personality and Social Psychology, 82*, 19–32.

Onorato, R. S., & Turner, J. C. (2002). Challenging the primacy of the personal self: The case for depersonalized self-conception. In Y. Kashima, M. Foddy, & M. J. Platow (Eds.), *Self and identity: Personal, social, and symbolic* (pp. 145–178). Mahwah, NJ: Lawrence Erlbaum.

Onorato, R. S., & Turner, J. C. (2004). Fluidity of the self-concept: the shift from personal to social identity. *European Journal of Social Psychology, 34*, 257–278.

Otten, S. (2002a). "Me" and "us" or "us" and "them"? – The self as heuristic for defining novel ingroups. In: W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology* (Vol. 13, pp. 1–33). Philadelphia: Psychology Press.

Otten, S. (2002b). I am positive and so are we: The self as a determinant of favoritism toward novel ingroups. In J. P. Forgas & K. D. Williams (Eds.), *The social self: Cognitive, interpersonal, and intergroup perspectives* (pp. 273–291. New York: Psychology Press.

Otten, S., & Wentura, D. (2001). Self-anchoring and in-group favoritism: An individual profiles analysis. *Journal of Experimental Social Psychology, 37*, 525–532.

Pickett, C. L., Bonner, B. L., & Coleman, J. M. (2002). Motivated self-stereotyping: Heightened assimilation and differentiation needs result in increased levels of positive and negative self-stereotyping. *Journal of Personality and Social Psychology, 82*, 543–562.

Popper, K. R. (1957). *The poverty of historicism*. New York: Harper & Row.

Rabbie, J. M., & Horwitz, M. (1969). Arousal of ingroup–out-group bias by a chance win or loss. *Journal of Personality and Social Psychology, 13*, 269–277.

Rabbie, J. M., Schot, J. C., Visser, L. (1989). Social identity theory: A conceptual and empirical critique from the perspective of a behavioral interaction model. *European Journal of Social Psychology, 19*, 171–202.

Reich, W. (1933). *Massenpsychologie des Faschismus*. Copenhagen: Verlag für Sexualpolitik.

Reichenbach, H. (1951). *The rise of scientific philosophy*. Berkeley: University of California Press.

Robbins, J. M., & Krueger, J. I. (unpublished). *Social projection among ethnic majorities and minorities*. Brown University.

Robbins, J. M., & Krueger, J. I. (2005). Social projection to ingroups and outgroups: A review and meta-analysis. *Personality and Social Psychology Review, 9*, 32–47.

Rosenthal, R., & DiMatteo, M. R. (2001). Meta-analysis: Recent developments in quantitative methods for literature reviews. *Annual Review of Psychology, 52*, 59–82.

Russell, B. (1955). *Nightmares of eminent persons*. New York: Simon & Schuster.

Schimel, J., Greenberg, J., & Martens, A. (2003). Evidence that projection of a feared trait can serve a defensive function. *Personality and Social Psychology Bulletin, 29*, 969–979.

Sherif, M. (1936). *The psychology of social norms*. New York: Harper.

Sighele, S. (1892). *La foule criminelle: Essai de psychologie collective*. Paris: Alcan.

Simon, B., Glässner-Bayerl, B., & Stratenwerth, I. (1991). Stereotyping and self-stereotyping in a natural intergroup context: The case of heterosexual and homosexual men. *Social Psychology Quarterly, 54*, 252–266.

Simon, B., Pantaleo, G., & Mummendey, A. (1995). Unique individual or interchangeable group member? The accentuation of intragroup differences versus similarities as an indicator of the individual self versus the collective self. *Journal of Personality and Social Psychology, 69*, 106–119.

Smith, E. R., Coats, S., & Walling, D. (1999). Overlapping mental representations of self, in-group, and partner: Further response time evidence and a connectionist model. *Personality and Social Psychology Bulletin, 25*, 873–882.

Smith, E. R., & Henry, S. (1996). An in-group becomes part of the self: Response time evidence. *Personality and Social Psychology Bulletin, 22*, 635–642.

Spears, R., & Doosje, B., & Ellemers, N. (1997). Self-stereotyping in the face of threats to group status and distinctiveness: The role of group identification. *Personality and Social Psychology Bulletin, 23*, 538–553.

Sumner, W. G. (1906). *Folkways*. Boston: Ginn.

Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behavior. *European Journal of Social Psychology, 1*, 1–39.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Chicago: Nelson-Hall.

Tropp, L. R., & Wright, S. C. (2001). Ingroup identification as the inclusion of ingroup in the self. *Personality and Social Psychology Bulletin, 27*, 585–600.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford: Blackwell.

Turner, J. C., & Onorato, R. S. (1999). Social identity, personality, and the self-concept: A self-categorization perspective. In T. R. Tyler, R. M. Kramer, & O. P. John (Eds.), *The psychology of the social self* (pp. 11–46). Mahwah, NJ: Lawrence Erlbaum.

Watkins, J. W. N. (1952). Ideal types and historical explanation. *British Journal for the Philosphy of Science, 3*, 22–43.

Wundt, W. M. (1920). 1929 *Völkerpsychologie. Eine Untersuchung der Entwicklungsgesetze von Sprache, Mythus und Sitte*. Leipzig: Engelmann.

Yamagishi, T., & Kiyonari, T. (2000). The group as the container of generalized reciprocity. *Social Psychology Quarterly, 63*, 116–132.