Personality and Social Psychology
Review

Similarity and Agreement in Self-and Other Perception: A Meta-Analysis

David A. Kenny and Tessa V. West

The online version of this article can be found at:

Published by:

$SAGE

On behalf of:

Society for Personality and Social Psychology

Additional services and information for *Personality and Social Psychology Review* can be found at:

Email Alerts: http://psr.sagepub.com/cgi/alerts

Subscriptions: http://psr.sagepub.com/subscriptions

Reprints: http://www.sagepub.com/journalsReprints.nav

Permissions: http://www.sagepub.com/journalsPermissions.nav

Citations: http://psr.sagepub.com/content/14/2/196.refs.html

Similarity and Agreement in Self- and Other Perception: A Meta-Analysis

David A. Kenny[1] and Tessa V. West[2]

Abstract

The authors examined the consistency of person perception in two domains: agreement (i.e., do two raters of the same person agree?) and similarity (i.e., does a perceiver view two persons as similar to one another?). In each domain, they compared self-judgments with judgments not involving the self (i.e., self-other agreement vs. consensus, in the case of agreement, and assumed similarity vs. assimilation, in the case of similarity). In a meta-analysis of 24 studies, they examined the effects of several moderating variables on each type of judgment. In general, moderators exerted similar effects irrespective of whether judgments of the self were involved. Group size did have stronger effects on self-other agreement and assumed similarity than on consensus and assimilation. The authors also present evidence that new measures of assumed similarity and self-other agreement using the Social Relations Model seem to be relatively independent of the moderators.

Keywords

person perception, self/identity, individual differences

The fields of social and personality psychology have long been fascinated with the basic question in person perception: Is the process of self-perception fundamentally different from the process of other perception? To date, there has been much theoretical advancement in understanding the ways in which our self- and other perceptions relate. Researchers typically focus on specific questions that relate self- to other perception. For example, following Taylor and Brown (1988), the phenomenon of self-enhancement, at least in Western cultures, is well replicated. People see themselves more positively than they see others (i.e., Festinger's, 1954, social comparison theory), more positively than they are seen by others (i.e., Allport's, 1937, notion of self-insight), and more positively than they see others and are seen by others (Kwan, John, Kenny, Bond, & Robins, 2004; Kwan, John, Robins, & Kuang, 2008). In some cases, perceivers self-verify rather than self-enhance (Swann, 1990).

Whereas self-enhancement typically refers to a mean difference between self-perception and other perception, self-other agreement has been used to examine accuracy of perceptions and is typically studied as a correlation between self- and other perception (Gosling, Ko, Mannarelli, & Morris, 2002; Kenny, 1994; Lee et al., 2009). Self-other comparisons have also been used to examine projection, or *assumed similarity*, that is, the extent to which people judge other individuals to be consistent with how they judge themselves. Assumed similarity has received considerable attention in the domain of close relationships, for values (Murray, Holmes, Bellavia, Griffin, & Dolderman, 2002; Lee et al., 2009) and for day-to-day feelings (Wilhelm &

Perez, 2004), and in the domain of intergroup relations, where assumed similarity is compared for perceptions made of in-group compared with out-group members (for a review, see Robbins & Krueger, 2005).

In addition to comparing self-perception to perceptions of or by others, research has also addressed the relative magnitude of self-other agreement and assumed similarity. Indeed, the question of bias versus accuracy has been examined by comparing the relative amounts of self-other agreement and assumed similarity (Boyes & Fletcher, 2007; Kenny & Acitelli, 2001). Interest in the interplay between bias and accuracy has increased in the past decade (for a review, see Gagne & Lydon, 2004), where scholars have focused on the question of whether bias and accuracy are inversely related processes, that is, as bias increases, does accuracy necessarily decrease?

To date, most theories in person perception focus on one type of self-other comparison. To our knowledge, no one has attempted to examine the much larger omnibus question we initially proposed: Is the process of self-perception fundamentally different from the process of other perception? We believe that to have a more focused examination of this question, it is particularly advantageous to consider two

[1]University of Connecticut, Storrs, USA
[2]New York University, USA

Corresponding Author:
David A. Kenny, University of Connecticut, Department of Psychology, 406 Babbidge Road, Unit 1020, Storrs, CT 06269, USA
Email: david.kenny@uconn.edu

Source of Data / Question	Self-Other	Other-Other
Agreement	Self-Other Agreement	Consensus
Similarity	Assumed Similarity	Assimilation

Figure 1. Agreement and similarity by self-other and other-other in person perception.

fundamental types of person perception processes, namely, agreement and similarity. These two processes can be examined using both self and other as a perceiver. As illustrated in Figure 1, we can examine agreement and similarity for the self and the other. As we shall see, each cell in the figure represents a different interpersonal perception question.

Agreement, in general, refers to the extent to which two perceivers view a particular target the same way. When those two perceivers are not the target, the question is one of *consensus* (Kenny, 1994): Do two perceivers agree about the relative standing of a target? When the target is one of the perceivers, the question becomes *self-other agreement*: Does the target see himself or herself in the same way as he or she is seen by another perceiver? Similarity refers to the extent to which one perceiver sees two targets as similar to one another. When those targets are others, the question has been called *assimilation* (Kenny, 1994): Do perceivers see many targets as similar to one another? When the perceiver is also one of the targets, the question is one of projection, or *assumed similarity*: Does a perceiver see himself or herself as he or she sees another target? When all four types of questions are addressed, we can compare them to each other. For instance, we can examine if self-other agreement is larger or smaller than consensus. It is also possible to measure how different variables predict each question. For instance, we can ask if the factors that determine self-other agreement are the same factors that determine consensus. If they were the same, then that would be evidence that self and other are "interchangeable" processes of judgment.

We use the conceptualization of agreement and similarity presented in Figure 1 as an organizing framework for this article, which has several goals. One, we conduct a meta-analysis to examine self- and other perceptions for agreement and similarity for 24 studies, all of which include self-perceptions, judgments by the self of others, and judgments of the self by others. The context in which person perceptions are made, the variables that individuals make judgments on, and

characteristics of the samples vary greatly from study to study. Two, we argue that to understand how the processes of self- and other perception compare, it is necessary to examine the pattern of effects that a set of variables has on these processes. We develop a statistical model using structural equation modeling (SEM) that allows for a formal test of whether a set of variables operates consistently for self- and other judgments. The model provides an omnibus test of whether self- and other judgments are different for agreement and similarity. Drawing from previous research, we test effects of four predictors and their interactions on agreement and similarity for the 24 studies. Three, we develop a new and potentially better measure of self-other agreement and assumed similarity that is based on the Social Relations Model. Our overarching goal is to provide a unified framework for thinking about the relationship between self- and other perceptions and to understand under what conditions self- and other perceptions are fundamentally different and similar processes. We begin with an overview of past research on moderators of agreement and similarity.

Predictors of Agreement. Initially, we consider three predictors: visibility of the dimension being judged; evaluativeness, the degree to which the trait implies something positive or negative about the target; and the level of acquaintance or closeness between target and perceiver.[1] To date, there have been several theoretical models that address the major predictors of agreement (both self-other and consensus), which map closely onto the predictors that we consider. Funder's (1995) Realistic Accuracy Model (RAM) formalizes four predictors: good judge, good target, good trait, and good information that determines agreement, or what Funder refers to as *accuracy*. These predictors can interact to predict agreement. For example, if good trait interacts with good target, then some traits "stand out" (i.e., are visible) in certain targets, but not in others. In addition, Kenny's (1991) Weighted Average Model (WAM) considers the role of shared meaning systems as a predictor of consensus. To the extent that perceivers agree on what a particular cue means (e.g., physical attractiveness is a cue of extroversion), there should be more consensus in judgments among perceivers. Shared meaning systems in the WAM and good trait in the RAM both suggest that greater consensus and self-other agreement should be found for more visible traits.

Indeed, greater agreement, both consensus and self-other agreement, has been found for traits that are highly visible compared with those that are less visible (Funder & Colvin, 1988; Funder & Dobroth, 1987). Much of this work has focused on which Big Five personality factors are the most visible to perceivers. Overall, Extroversion demonstrates the highest levels of self-other agreement and consensus of the Big Five personality traits (Bernieri, Zuckerman, Koestner, & Rosenthal, 1994; Borkenau & Liebler, 1993; Funder & Colvin, 1988; Funder & Dobroth, 1987; John & Robins, 1993; Kenny, 1994), even at zero acquaintance (Albright, Kenny, & Malloy, 1988).

Evidence also suggests that visibility interacts with closeness, or level of acquaintance, to predict agreement. Neuroticism and Agreeableness have shown much lower levels of agreement when targets are unacquainted with perceivers (Albright et al., 1988; Kenny, 1994), presumably because well-acquainted perceivers have more information about a target that is relevant to the judgment than do unacquainted observers (Funder, 1995). However, an examination of several longitudinal studies reviewed by Kenny, Albright, Malloy, and Kashy (1994) failed to find much support for this hypothesis.

Greater levels of consensus and self-other agreement have also been found for emotions that are highly visible, that is, emotions with clear behavioral cues. Anxiety, for example, can be perceived based on the behaviors of fidgeting, avoiding eye contact, physical distancing, and speech disfluencies (Patterson, 1982), and embarrassment can be perceived based on the behaviors of averted gaze, lowering of the head, face touching, blushing, and nervous smiles (Keltner, 1995). Anxiety and embarrassment have both demonstrated high levels of consensus (Marcus & Wilson, 1996). Self-other agreement, however, is often weaker than consensus for judgments of emotions likely because the target is not privy to the internal cues available to the perceiver (Albright, Forest, & Reiseter, 2001).

Evaluativeness, or the extent to which possessing a trait implies something positive or negative about the target, has also been examined as a predictor of agreement. Evaluativeness does not refer to whether the target is positive or negative based on his or her standing on the trait but, rather, whether the trait being studied implies something positive or negative about the target. Thus, both positive and negative traits are high on evaluativeness, relative to neutral traits.

Drawing from research on self-enhancement (Taylor & Brown, 1988), self-other agreement for traits that are high on evaluativeness should be weaker than self-other agreement for traits that are neutral. Indeed, John and Robins (1993) found that both highly desirable traits (i.e., intelligent and conscientious) and highly undesirable traits (i.e., ignorant and undependable) showed lower levels of self-other agreement than did neutral traits. Closeness may interact with evaluativeness to predict self-other agreement such that higher self-other agreement will be found for traits that are highly evaluative when closeness is also high, given that close partners incorporate the partner into their sense of self (Aron, Aron, Tudor, & Nelson, 1991) and are therefore more likely to be motivated to maintain positive views of the partner in much the same way that they are motivated to maintain positive views of the self. In contrast to self-other agreement, the effect of evaluativeness should be much weaker on consensus, given that perceivers do not have the same motivation for self-enhancement as do targets. In fact, John and Robins (1993) both found that evaluativeness had a weaker effect on consensus than on self-other agreement, and Funder and

Colvin (1988) found that favorability had a stronger effect on self-other agreement than on consensus.

We might think that for less visible traits, greater closeness between targets and perceivers should lead to greater self-other agreement because close others have more and better information on which to base judgments than do strangers and acquaintances. However, a review of the literature reveals a complicated pattern of results for the effect of closeness on self-other agreement. Some evidence indicates a positive linear relationship between closeness and self-other agreement (Bernieri et al., 1994; Biesanz, West, & Millevoi, 2007; Funder & Colvin, 1988; John & Robins, 1993; Kenny, 1994; Ready, Clark, Watson, & Westerhouse, 2000), whereas other research has shown no relationship or an inconsistent relationship (Kenny & Kashy, 1994; Watson, Hubbard, & Wiese, 2000). One difficulty lies in the ways in which closeness has been operationalized. Closeness is a multidimensional construct that has many different definitions that capture both the qualitative and quantitative aspects of it (Starzyk, Holden, Fabrigar, & MacDonald, 2006). Moreover, depending on how it is defined, closeness has differential effects on self- and other perceptions, and indeed, the literature on how closeness influences self- and other perceptions is decidedly mixed. Watson et al. (2000) sought to clear up inconsistencies in closeness findings by defining it in a number of ways. However, the authors found "disappointing" results—closeness, in any form, did not predict self-other agreement.

An alternate explanation for the lack of consistent results is that familiarity or closeness may interact with other variables to predict self-other agreement, and these variables are not measured or their interactions are not tested. As previously mentioned, visibility might interact with closeness. Traits that are highly visible will yield high levels of agreement even among unacquainted perceivers and targets; however, only close others have the information on which to base perceptions of less visible traits (Funder, 1995). Another potential finding is that the closeness × visibility interaction might be moderated by evaluativeness to predict self-other agreement. Specifically, when visibility is low, perceivers who are close to targets in the qualitative sense may achieve the highest levels of self-other agreement, especially when traits are highly evaluative, given the overlap between self and partner that characterizes close relationships (Aron et al., 1991).

Far less attention has been paid to closeness as a predictor of consensus. Kenny and Kashy (1994) found that friends agree more with each other about a target than do acquaintances, not because friends tend to see others in general in similar ways, but because they agree with each other in their judgments of specific targets. According to Kenny and Kashy (1994), three parameters in the WAM (Kenny, 1991) shed light on the underlying causes of agreement among close others: one, friends have shared meaning systems in that they interpret behaviors in the same way; two, friends

communicate with each other about a target; and three, perceivers who are friends witness the same behaviors of the target because they are often together.

Taken together, although evaluativeness and visibility have demonstrated a consistent pattern of results, closeness has demonstrated inconsistent patterns for self-other agreement and consensus. Moreover, the strength and pattern of effects of these variables appear to differ for self-other agreement and consensus, suggesting that the process of agreement differs somewhat for self versus other. Next, we turn to research on visibility, evaluativeness, and closeness as predictors of similarity.

Similarity. Compared to agreement, far less interest has been paid to the process of similarity, the majority of which has been on assumed similarity rather than assimilation. Cronbach (1955) originally proposed the question, Do people see others consistent with how they see themselves? Following Cronbach, assumed similarity has been termed the *false consensus bias* (Ross, Greene, & House, 1977) and *social projection* (Robbins & Krueger, 2005). The finding that perceivers think that others are similar to themselves across a variety of dimensions is well documented in the literature (Gilovich, 1990; Ross et al., 1977).

Of the three predictors introduced in the review of agreement, evaluativeness and closeness have received the most empirical attention as predictors of similarity. When examined interpersonally, the effect of closeness on assumed similarity is straightforward—as closeness increases, so does assumed similarity (Kenny, 1994). Although assumed similarity has been found in studies using unacquainted perceivers (e.g., Beer & Watson, 2008), it tends to be stronger among samples of close others (Kenny, 1994). Moreover, the meta-analysis by Robbins and Krueger (2005) demonstrates that social projection is greater when targets are in-group compared with out-group members, thereby indirectly providing evidence that familiarity, broadly defined as group membership, also predicts assumed similarity.

For evaluativeness, often it is the case that evaluative variables are studied within the context of close relationships, that is, evaluativeness and closeness are confounded. For example, Murray and colleagues have shown that assumed similarity of values, which are highly evaluative, positively predicts relationship satisfaction among romantic couples (Murray et al., 2002; for a review, see Murray, 1999). Recently, Lee et al. (2009) found that well-acquainted persons (i.e., friends, nonspouse romantic partners, spouses, and relatives) assume similarity on two dimensions that most closely capture values, namely, Honesty-Humility and Openness. Lee et al. (2009) found weak evidence for assumed similarity for nonfriend relationships, suggesting that evaluativeness and closeness interact to predict assumed similarity; under low levels of closeness, evaluativeness does not predict assumed similarity, but under high levels of closeness, evaluativeness positively predicts assumed similarity.

For assimilation, there is also some evidence to suggest a positive relationship between assimilation and closeness. The well-documented out-group homogeneity effect, which states that perceivers see targets as more similar to each other when those targets are out-group members than when targets are in-group members (Judd & Park, 1988; Mullen & Hu, 1989; Ostrom & Sedikides, 1992), also provides evidence that closeness, broadly defined as group membership, predicts assimilation.

Visibility has not often been examined as a predictor of either assumed similarity or assimilation, but it can be argued that when perceivers have ample information on which to base a judgment, they should assimilate less and assume less similarity than when they have insufficient information. As argued by Kenny (1994) and others (Dawes, 1990; Funder, Kolar, & Blackman, 1995), in the absence of judgment-relevant information, perceivers (a) rely on their idiosyncratic stereotypes in making perceptions, which would lead to an increase in assimilation, and (b) use the self as a baseline when judging others, which would lead to an increase in assumed similarity. Indeed, Wilhelm and Perrez (2004) found that perceivers assumed the most similarity when they had the least information about how their romantic partners were feeling (i.e., for perceptions made in nonoverlapping social contexts, such as the workplace).

In the next section, we describe an analytic method for testing the degree to which the pattern of effects of a set of predictors is different for self-other agreement and consensus, and for assumed similarity and assimilation.

Testing for Construct Validity

As we have discussed, there are two types of agreement in person perception: agreement between the target and another perceiver (i.e., self-other agreement) and agreement between two perceivers about a third person (i.e., consensus). Moreover, there are two types of similarity in person perception: seeing oneself as similar to another, or assumed similarity, and seeing two others as similar to one another, or assimilation. One goal of this article is to demonstrate an analytical method designed to assess the theoretical question, Are self-other agreement and consensus two fundamentally different processes, and are assimilation and assumed similarity two fundamentally different processes? We address this question by assessing the construct validity (Cronbach & Meehl, 1955) of agreement and similarity, by examining the extent to which a set of variables predicts the two types of agreement and the two types of similarity, respectively. Imagine the case where a set of variables shows a consistent pattern of effects for self-other agreement and consensus. The effects of the variables on both types of agreement are always positive, but they are also always slightly larger for self-other agreement. The results of such an analysis would suggest that the self is not qualitatively a different type of

perceiver than the other because predictors function in a consistent way across the two types of agreement: We need not examine how a set of variables predicts self-other agreement and consensus separately, but rather, we can treat these two types of agreement as indicators of one underlying construct called agreement and examine the effects of the predictor variables on this construct. That is, we start with the null hypothesis that self-other agreement and consensus are one construct, not two. If the data do not support that null hypothesis, we then conclude that self-other agreement and consensus are conceptually distinct. We also conduct a parallel analysis for similarity in which we determine whether assumed similarity and assimilation are one or two constructs.

We illustrate an analytic model that addresses the question of whether the self is a fundamentally different type of perceiver from the other by using SEM. We begin by describing how the model tests whether self-other agreement and consensus are two different processes. For ease of presentation, we restrict our example to agreement, but we note that the same method can be applied to the study of similarity.

Imagine that we measure self-other agreement, denoted as C_1, and consensus, denoted as C_2, and we have many such measures from several different studies. Imagine that we also measure four variables that we believe predict self-other agreement and consensus, denoted as X_1 through X_4. These four variables can be any four variables of theoretical interest, for example, how visible the trait being measured is (X_1), how well acquainted perceivers and targets are (X_2), how evaluative the trait is (X_3), and how large the group is (X_4). We hypothesize that X_1 and X_2 are strong correlates of C_1 and not C_2 and that X_3 and X_4 are strong correlates of C_2 and not C_1. If such were the case, when we regressed both C_1 and C_2 on X_1 through X_4, the two regression equations for observation i would be

$$C_{1i} = a_1X_{1i} + b_1X_{2i} + c_1X_{3i} + d_1X_{4i} + E_{1i}$$
$$C_{2i} = a_2X_{1i} + b_2X_{2i} + c_2X_{3i} + d_2X_{4i} + E_{2i}$$

We would find that a_1, b_1, c_2, and d_2 would be large and a_2, b_2, c_1, and d_2 would be relatively small. If we were to show such a pattern, then we would establish that self-other agreement (C_1) and consensus (C_2) are distinct constructs.

However, what would we expect if C_1 and C_2 were not distinct constructs? We would expect that the pattern of correlations of X_1 through X_4 would be the same for C_1 as it would be for C_2. What this approach does is determine whether the nomological net (Cronbach & Meehl, 1955) is the same for C_1 and C_2. If such were the case, when we regressed both C_1 and C_2 on X_1 through X_4, we would find for observation i

$$C_{1i} = aX_{1i} + bX_{2i} + cX_{3i} + dX_{4i} + E_{1i}$$
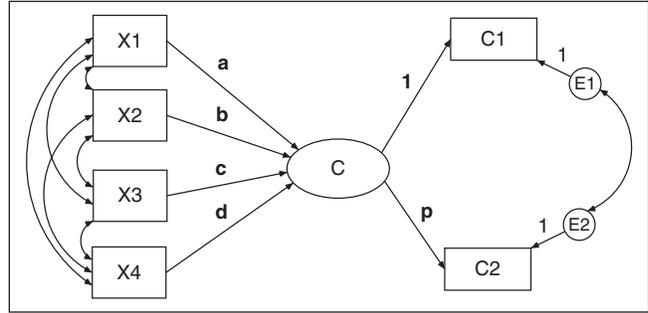$$C_{2i} = paX_{1i} + pbX_{2i} + pcX_{3i} + pdX_{4i} + E_{2i}$$

Figure 2. Structural equation model to test if C_1 and C_2 are distinct constructs.
NOTE: Model assumes that the ratio of effects of each of the four X variables on C_2 to C_1 is the same and equals p.

That is, subject to a scaling constant, p, the effects of the Xs on the two Cs are the same. We note that if we divide C_2 by p, the equation would become

$$C_{2i}/p = aX_{1i} + bX_{2i} + cX_{3i} + dX_{4i} + E_{2i}$$

and so the equations for C_1 and C_2 (divided by p) are identical.

To statistically test such a pattern, we construct an SEM, shown in Figure 2, in which the four X variables predict a single latent variable, denoted as C, which in turn affects C_1 and C_2. In this example, C is the construct of agreement and C_1 and C_2 are the two indicators of agreement, self-other agreement and consensus, respectively. Note that the latent variable C has no disturbance or error term and is called a *composite variable* (Bollen & Lennox, 1991). The model in Figure 2 forces the constraints that $a_2/a_1 = b_2/b_1 = c_2/c_1 = d_2/d_1 = p$ or, stated in words, that the pattern of coefficients of the predictor variables on the two indicators of agreement is the same across all variables. The example model has three degrees of freedom; in general, the degrees of freedom for the construct validity model are the number of X variables minus 1. If the model was misspecified and C_1 and C_2 were distinct constructs instead of two indicators of one construct, then the model in Figure 2 would not fit well. We would need additional, direct paths from X_1 and X_2 to C_1 or paths from X_3 and X_4 to C_2. Note that up to three additional paths can be added because the model has three degrees of freedom.

In this article, we use this SEM[2] strategy to evaluate whether self-other agreement is fundamentally different from consensus and whether assumed similarity is fundamentally different from assimilation, using data from several studies. The X variables are the predictors of visibility, familiarity, evaluativeness, and group size, as well as their interactions; C is similarity or agreement; and C_1 and C_2 are self-other and other-other measures.

To evaluate whether self-other agreement and consensus (and assumed similarity and assimilation) are distinct

constructs, we first test a model where we have X_1 through X_4 predicting only the construct C. If the fit of the model is good, then we conclude that we do not need to include separate additional paths from the predictor variables to the indicators. This would be the case if the pattern of effects of the variables on the two indicators is the same across all variables. If, however, the fit of the model is poor, then we need to consider how the four variables differently affect the two indicators of C. We would need to modify the model by adding direct paths from an X variable to C_1 or C_2. For instance, if visibility affected consensus much more than self-other agreement, as was found by John and Robins (1993), but the other variables predicted self-other agreement and consensus equally well, then an additional path would be needed from visibility to consensus. Such a finding would suggest that the self is a different type of perceiver than the other.

The logic of our strategy is as follows: If the process of judging a person were essentially the same for self and others, then the level of self-other agreement and consensus would be essentially the same. Two others would agree in their perception of a third person as much as would self and other. In addition and more important, the factors that determine self-other agreement would be the same for self-other agreement as for consensus. In essence, agreement is agreement, whether it is self-other agreement or other-other agreement. If, however, visibility or some other factor affected the perception of others more than self-perception, then we would expect that visibility would be a much stronger moderator of consensus than self-other agreement. Moreover, we might expect evaluativeness to be a stronger moderator for self-other agreement (less self-other agreement for highly evaluative traits) than for consensus. Such a pattern would yield a poor fit for our SEM test of construct validity.

Round-Robin Design

If we are to simultaneously examine the four questions of self-other agreement, consensus, assumed similarity, and assimilation, we need to have a design in which a person judges multiple others and multiple others also judge the target person. Moreover, as we have argued above, we wish to compare self-other agreement with consensus and to compare assumed similarity with assimilation. The most straightforward way to obtain such information is to use a round-robin design. In such a design, groups of individuals all judge one another, are judged by one another, and judge the self. Kwan et al. (2004) have shown the utility of using round-robin designs to study self-enhancement. We extend their analysis to the study of assumed similarity and self-other agreement. The Social Relations Model (SRM; Kenny & La Voie, 1984) can be used to examine the data because it allows us to simultaneously estimate the four processes of consensus, self-other agreement, assimilation, and assumed similarity, using a componential approach in which dyadic

perceptions are decomposed into sources of variance. From a componential perspective (Kenny, West, Malloy, & Albright, 2006), the mean of perceivers' judgments is problematic because it contains an additional component: the degree to which a target is perceived in a particular way by the particular perceiver (above and beyond how that target is seen in general), which is not separated out from the average. By performing a componential analysis, the variance associated with components that are not of interest can be measured and removed. A similar logic applies to the perceiver effect when assumed similarity is studied. What we want to know is not how a person sees some others on average but rather how a person sees others in general. By conducting an SRM analysis, we can take a perception and separate it into the different components of mean, perceiver, target, and relationship.

Because the model is abstract, we use a specific example. Imagine that a group of women, one of whom is Irene and another Jane, rate each other on how intelligent they see each other. In the model, the rating of perceiver i of target j in group l is assumed to be

$$X_{ijl} = m + a_{il} + b_{jl} + g_{ijl}.$$

Thus, Irene rates Jane's intelligence. That rating is assumed to be a function of

- m: the average level of rated intelligence across all groups,
- a_{il}: the level of intelligence that Irene sees in the other women in the group,
- b_{jl}: how intelligent Jane is seen to be by other women in the group, and
- g_{ijl}: how particularly intelligent Irene sees Jane to be, above and beyond how intelligent Jane is perceived to be by others and how Irene perceives others.

The parameters of the model are the constant m, three variances of σ_a^2, σ_b^2, σ_g^2, and σ_{ab}, the covariance of a_{il} with b_{ik}, and σ_{gg}, the covariance of g_{ijl} with g_{jil}. We interpret the six SRM parameters as follows:

- m: the grand mean or the average intelligence judgment across perceivers and targets,
- σ_a^2: the extent to which perceivers differ in their average judgment of others' intelligence, which is referred to as the *perceiver variance*,
- σ_b^2: the extent to which the average judgments of targets' intelligence differ, which is referred to as the *target variance*,
- σ_g^2: the extent to which a perceiver's judgment of a target's intelligence differs from how that perceiver views others, and how the target is viewed by others, which is referred to as the *relationship variance*,

σ_{ab}: the covariance between how a perceiver tends to see targets' intelligence (the perceiver effect) and how that perceiver's intelligence is seen by others (the target effect), and

σ_{gg}: the covariance of Irene's unique judgment of Jane's intelligence (Irene's relationship effect) correlated with Jane's unique judgment of Irene's intelligence (Jane's relationship effect).

Target variance can be interpreted as a measure of the agreement between two persons, and perceiver variance can be interpreted as a measure of the perceived similarity of two others. Following Kenny (1994), we refer to the relative target variance as *consensus* and the relative perceiver variance as *assimilation*. To examine assumed similarity, the self-rating is correlated with the perceiver effect, and to examine self-other agreement, the self-rating is correlated with the target effect.

Social Relations Model Applied to Self-Perception.
Kwan et al. (2004) proposed that self-perception can be decomposed using the SRM. They proposed the following decomposition:

$$S_{il} = c + a_{il} + b_{il} + h_{il},$$

where S_{il} is the self-perception of person i in group l, c is the mean of self-perceptions across perceivers and targets, a_{il} and b_{il} are the earlier defined perceiver and target effects, respectively, and h_{il} is the individual difference measure of self-enhancement or effacement. If h_{il} were positive, there would be self-enhancement, and if h_{il} were negative, there would be self-effacement. The above equation presumes that perceiver and target effects have the same effect on self-ratings as they do on the ratings of others. Kenny (1994) proposed a more general equation than the above equation:

$$S_{il} = c + ka_{il} + qb_{il} + h_{il}$$

As can be seen, the difference in this equation from the earlier one is that the perceiver effect now has a weight of k and the target effect has a weight of q. Kwan et al. (2004) have assumed that k and q equal 1, an assumption that we empirically evaluate in our meta-analysis.

Within our model, the parameter q measures the correspondence between how the person is judged by others (the target effect) and how the person views himself or herself. We refer to q as the *self-other agreement parameter*. Note that this measure is similar to the self-other agreement correlation, but for reasons discussed later, we shall see that the two are different.

If q were greater than 1, the target effect would be weighted more heavily in self-ratings than in ratings of others; this might indicate that the self has a special insight into who he or she really is and that others can only partially see the "real" person (Kenny, 1994). The self would then be a better informant than other perceivers because the self agrees more with any one other perceiver than the perceivers agree with each other. For example, the correlation[3] between Irene's self-perception of her own intelligence and Jane's judgment of her intelligence is greater than the correlation between Jane's and Linda's perception of Irene's intelligence. Alternatively, the value of q might exactly equal 1. In this case, Irene and Jane would agree to the same extent as Jane and Linda with each other. In this case, the self would be as good an informant as others. It is also possible that q would be less than 1 but greater than 0. In this case, Jane and Linda agree more with each other than they agree with Irene. If q were 0, then there would be no self-other agreement. It is even theoretically possible that q might be negative if self-perceptions were in the opposite direction from how others see him or her. Following along the lines of John and Robins (1993), it might be the case for some traits (e.g., humility and paranoia) that self and others have opposite views.

Within the SRM framework, we can examine the parameter k, the degree to which the perceiver effect from the ratings of others is reflected in the ratings of self. We refer to this parameter as the *assumed similarity parameter*. Again, this value is related to but different from the assumed similarity correlation. Recall that the perceiver effect represents how a perceiver generally sees others and can be viewed as a personal stereotype that the perceiver has about others, or the degree to which perceptions are in the eye of the beholder. If k is nonzero, then how perceivers see others, the perceiver effect, is reflected in how they see themselves. For example, Irene's tendency to see others in the group as intelligent is reflected in her self-perception in which she sees herself as intelligent. If Irene tends to see others in general as intelligent, then she also sees herself as intelligent. Considering the possible values for k, if it were to equal 1, then the perceiver effect would be weighted equally in self-perceptions and the perceptions of others. Thus, the perceiver effect has the very same effect on the ratings of self and others. If the process of self-perception were the same as the process of other perception, we would expect values of k to equal 1. In this case, the idiosyncratic tendencies that individuals have in perceiving others are also reflected in perceiving themselves. There are, however, other possibilities. For example, the degree to which Irene sees others as intelligent may be unrelated to her self-perception of intelligence, making k zero. An intermediate possibility is that how Irene sees others relates somewhat to how Irene sees herself, making k greater than zero but less than 1. It is even possible that we might see the self more extremely than we see others (k greater than 1): Irene might see others in general as intelligent and see herself as even more intelligent. Finally, it is even possible for contrast effects to occur that would make k negative: Irene might see others as intelligent but does not see herself at all as intelligent.

The assumed similarity parameter, *k*, and the self-other agreement parameter, *q*, are weights that are empirically estimated. There needs to be sufficient variance in the perceiver effect to examine the assumed similarity parameter, and there needs to be sufficient variance in the target effect to examine the self-other agreement parameter. The parameters *k* and *q* can be viewed as arising from a theoretical multiple regression analysis in which the perceiver and target effects are the predictors and self-perception is the criterion.

Almost always in person-perception research, both assumed similarity and self-other agreement are measured as correlations.[4] A correlational measure (i.e., the correlation between self-perceptions and perceptions made by others and of others) has several problems. First, it ignores the potential correlation between the perceiver and target effects or σ_{ab}, which can be problematic. Second, correlations are attenuated by the finite number of perceivers or targets. Third, correlational measures can be affected by the size of the variances of various components. We consider each of the problems in turn.

Consider the ratings of leadership that group members make of each other. Imagine that the correlation between the perceiver effect and the target effect were negative: People who were seen as leaders by others do not see others as leaders. If we were to measure assumed similarity as a correlation, we would likely underestimate it because there is a negative indirect effect: Those who see others as leaders would not be seen as leaders, and not being seen as a leader would lead to lower self-perceptions of leadership. Ideally, when either the perceiver or target effect is correlated with self-ratings, the other effect should be statistically controlled.

Second, correlations are attenuated by the finite number of raters. That is, in computing the correlations, we average over either targets or perceivers. The reliability of that average depends on the number of raters.

Third, the presence of other sources of variance can affect the size of the correlations. Consider, for instance, if there were large individual differences in self-enhancement and so the variance of the *g* term was large. Such a large variance would lower both assumed similarity and self-other agreement correlations, but it would not affect *k* and *q*. A more subtle problem is that the self-other agreement correlation is related to target variance (i.e., consensus) and the assumed similarity correlation is related to perceiver variance (i.e., assimilation). For instance, to the extent to which there is greater consensus, there can be a greater self-other agreement correlation. Because *k* and *q* are regression coefficients, they would not be related to these variances.

One goal of the article is to compare the performance of *k* and *q* to their correlational counterparts. Although these parameters are considerably more difficult to compute and to interpret than their correlational counterparts, there may be advantages to using them to study self-other agreement and assumed similarity. A theoretical major advantage of *k* and *q*, unlike assumed similarity and self-other agreement correlations, is that *k* and *q* control for each other; they do not depend on the number of perceivers or targets, and they presumably depend less on the perceiver and target variances. We shall test whether this theoretical advantage is a real advantage.

The Present Analysis

There are several goals of this article. The overarching goal is to systematically examine whether the self is a fundamentally different type of perceiver than the other. Using the SRM, we measure self-other agreement and assumed similarity and their counterparts of consensus and assimilation (see Figure 1) using 118 variables from 24 round-robin studies. We compare the relative size of each and then we correlate self-other agreement with consensus and assumed similarity with assimilation. Next, we apply our method to evaluate construct validity to examine the pattern of effects of four predictors of theoretical and empirical interest on agreement and similarity. Unlike many other examinations of this topic, it is important that we include interactions of these predictors as well as allow for nonlinear effects. The goal of this analysis was not to concentrate on how any particular variable predicts agreement or similarity but, rather, on how the pattern of the effects is consistent for the two indicators of agreement and similarity. By doing so, we can determine whether self-other agreement, as well as assumed similarity and assimilation, are fundamentally different. Finally, we extend our analysis of the SRM to examine *k* and *q*, two parameters that may provide theoretical insight into whether the self is a different type of perceiver than the other.

Method

We conducted a literature search for round-robin studies in which persons judged one another and themselves. To be able to measure self-other agreement and assumed similarity, studies needed to have both consensus in judgments of targets and assimilation in a perceiver's judgments of the targets. For a variable to be included in the study, both perceiver and target needed to explain at least 10% of the total variance in the ratings of others. We located 24 studies with 118 variables[5] and 2,992 participants who met these criteria. The list of these studies and a brief description of each is contained in Table 1.

From each of these studies, we could measure self-other agreement, assumed similarity, consensus, and assimilation. There is an important technical issue in the measurement of self-other agreement and assumed similarity. In studies of self-other agreement, researchers typically (e.g., Gosling et al., 2002) correlate a self-judgment with the mean rating of *n* perceivers. We refer to such a correlation as a 1 (one self) with *n* (the number of perceivers) correlation. Because the studies that we examined vary in the number of perceivers (from 3 to 22),

Table 1. Summary of 24 Studies

Study	N[a]	V[b]	D[c]	Context
Albright et al. (1988), Study 3	44	8	66	classroom
Anderson & Kilduff (2009)	164	11	246	laboratory problem solving group
Anderson et al. (2006), Study 2	432	6	648	laboratory problem solving group
Dabbs & Ruback (1984)	80	7	200	laboratory group getting acquainted
Dabbs et al. (1987)	80	4	200	laboratory problem solving group
Kashy (1988)	136	5	476	laboratory groups playing a trivia game
Kenny (1992)	84	3	166	zero acquaintance
Kenny et al. (1992), Study 3	70	5	114	classroom
Kenny et al. (1996)	92	7	138	fraternity members
Levesque (1990)	142	2	324	mock juries
Mahaffey & Marcus (2006)	63	3	175	therapy group for sex offenders
Malloy & Albright (1990)	84	5	126	dormitory
Malloy & Janowski (1992)	68	5	201	laboratory problem solving groups
Marcus & Leatherwood (1998)	188	1	282	zero acquaintance
Marcus & Lehman (2002)	200	1	300	zero acquaintance
Marcus et al. (2000)	86	1	424	real juries
Marcus & Miller (1999)	207	2	1215	groups with members doing something embarrassing
Marcus & Wilson (1996)	128	2	192	groups with members doing something embarrassing
Montgomery (1984)	128	7	222	laboratory group discussing personal issues over time
Park & Judd (1989), Study 1	71	13	283	laboratory group over time
Park et al. (1997)	97	7	258	dormitory
Ruback et al. (1984)	80	5	200	laboratory problem solving group
Shechtman & Kenny (1994)	154	4	492	groups of education students
West & Kenny (2008)	107	4	253	groups with members discussing a breakup

a. Number of participants.
b. Number of variables.
c. Number of dyads.

we should not use this method because presumably studies with more perceivers would yield large correlations due to the greater reliability of judgments based on more perceivers. For the purposes of our meta-analysis, we need to have the number of perceivers constant across studies. We decide to use an infinite number of perceivers; for instance, when we report the correlation between self and others, we are using a theoretical average of a very large number of others.[6]

To measure agreement between two people, we used the proportion of target variance, which measures the agreement between two perceivers about the same target. In a parallel fashion, to measure the extent to which a perceiver sees targets as similar, we used the proportion of perceiver variance, which measures the consistency in perception by one perceiver of two targets. Both of these proportions of variance can be viewed as one-with-one correlations (Kenny et al., 1994), and to obtain the one-with-infinity correlations, we need to compute the square root of these proportions.

To measure k and q, we used the procedure discussed in Kenny (1994). Using the variance-covariance matrix of self- and other ratings, it is possible to regress self-ratings on the perceiver and target effects. The parameters k and q are from this theoretical regression analysis.

A major focus in this article is on the effects of predictors of these person perception processes. The prior literature has indicated three different theoretical moderators: visibility, evaluativeness, and closeness. Visibility refers to whether others have sufficient information to be able to make the judgment. This factor has been given other names, such as observable, behavioral, clarity or lack of ambiguity, and external (Funder & Dobroth, 1987; Kenrick & Stringfield, 1980; Rothbart & Park, 1986). The issue is not whether the perceivers believe that they have sufficient information but, rather, whether they actually do.

Closeness refers to the relationship between the judge and target and has alternately been called familiarity or acquaintance. Closeness has a quantitative sense if we view it as the amount of time the judge has spent observing the target. Closeness has a qualitative sense if we consider the intimacy of the relationship between the target and judge. In the studies included in the meta-analysis, level of acquaintance ranged from zero-acquaintance to well-acquainted group members. We therefore refer to the closeness measure as *familiarity*, as it is more appropriate in the present context than is closeness.

Finally, evaluativeness refers to whether the judgment has implications for whether the person is good or bad. This definition contrasts evaluativeness with neutrality. That is, if the trait is not evaluative, it does not say something good or bad about the target.

To obtain reliable measures of visibility, familiarity, and evaluativeness, we adopted the following strategy. We wrote an extended description of each study that detailed the context in which ratings were made. As an example, for the Shechtman and Kenny (1994) study, we wrote the following study description:

> Strangers in groups of size 5 to 10 were in a two-hour discussion. All participants were females in a teacher training program in Israel. Over the two hours, they were involved in four activities. First, people introduced themselves and got acquainted. Second, they discussed a controversial topic. Third, they were asked to make a simulated committee decision. Finally, members gave each other feedback on their performance.

We gave the study descriptions and variable names to four judges, knowledgeable in the area of interpersonal perception. The judges then independently rated the 118 variables from the 24 studies from 0 (*not at all*) to 1 (*completely*)[7] on the following dimensions: visibility (Do others have sufficient information to be able to make a valid judgment of the target?), evaluativeness (the extent to which the variable tells us something about the desirability of the target or if the variable itself is either desirable or undesirable), and familiarity (Is the relationship between judge and target close?).

The reliability of judgment was acceptable, being .81 for visibility, .98 for familiarity, and .82 for evaluativeness. The means (with standard deviations) for the three moderators are 0.75 (0.19), 0.17 (0.21), and 0.56 (0.25), respectively. Recall that all scales can vary from zero to one. We can see that for familiarity, the mean level is rather low, indicating that in most studies, the participants were not very close. This is more of a measure that compares little or no acquaintance to people who have relatively low levels of acquaintance. In fact, in more than half of the studies, participants were acquainted for only 1 hour or less. Finally, we note that the average group size is 5.77 (*SD* = 1.94).

Results

We begin by examining the self-other agreement and assumed similarity correlations,[8] as well as their relationship with assimilation and consensus. We then turn our attention to the method for testing construct validity in Figure 2 to determine if the moderators of self-other agreement are the same for consensus and the moderators of assumed similarity are the same for assimilation. Last, we examine the relationship between the SRM parameters, *k* and *q*, and self-other agreement and assumed similarity, as well as how each are determined by the moderators. For all of these analyses, we have 118 correlations taken from 24 studies.

Self-Other Agreement and Assumed Similarity Correlations. Near the bottom of Table 2 are the means for assumed

Table 2. Correlations and Descriptive Statistics for Measures of Agreement and Similarity (*N* = 118)

	(1)	(2)	(3)	(4)	(5)	(6)
Assumed similarity (1)	1.000					
Self-other agreement (2)	0.031	1.000				
Assimilation (3)	0.398*	−0.346*	1.000			
Consensus (4)	−0.149	0.609*	−0.574*	1.000		
k (5)	0.686*	0.063	0.014	−0.042	1.000	
q (6)	−0.114	0.652*	−0.238*	0.150	0.237*	1.000
M	0.419	0.395	0.474	0.519	0.787	0.642
SD	0.208	0.224	0.094	0.125	0.404	0.565

*$p < .05$.

similarity, self-other agreement, assimilation, and consensus (*k* and *q* are discussed in a later section). As previously discussed, these are "one with infinity" correlations. For instance, consensus refers to the correlation between how one person sees the target with how many (i.e., an infinite number of perceivers) see the target. In the row for *M*, the mean levels of both assimilation and consensus are higher than for self-other agreement and assumed similarity, respectively.[9] Statistically, the difference is significant for both (*p* < .001 for agreement and *p* = .003 for similarity). We note that in two studies conducted by John and Robins (1993), they too found that consensus is greater than self-other agreement. To our knowledge, our analysis is the first to show that assimilation tends to be greater than assumed similarity.

We also correlated the measures of agreement and similarity. We first examine the correlations for two measures of agreement, that is, the correlation between self-other agreement and consensus. There is a relatively strong correlation between the two, .609, a result that was also found in John and Robins (1993), Funder and Colvin (1988), and Funder and Dobroth (1987). As far as we know, we are the first to present the correlation between assumed similarity and assimilation. As seen in Table 2, there is a healthy correlation, .398, which is not as large as the .609 correlation is for two measures of agreement. We also note that self-other agreement and assumed similarity do not correlate, *r* = .031.

In summary, we find that consensus is greater than self-other agreement and assimilation is greater than assumed similarity. We also find that the two types of agreement and the two types of similarity do correlate. Thus, in studies where we find high levels of consensus (assimilation), we also find high levels of self-other agreement (assumed similarity). Finally, we find that self-other agreement and assumed similarity are essentially independent.

Predictors of Agreement and Similarity. We next examine the effects of the predictors on the measures of agreement and similarity. We consider three earlier described predictors: visibility, evaluativeness, and familiarity. Not directly

considered in the literature, but a predictor that was discovered in our preliminary analyses, is group size or the average number of persons per group. Participants were members of either a living group, laboratory group, or classroom group. In an initial set of analyses, we conducted hierarchical multiple regression analyses to allow for all possible interactions between the four predictors on agreement and similarity. Agreement was defined as the sum of self-other agreement and consensus and similarity was defined as the sum of assumed similarity and assimilation. By conducting these analyses, we would determine the specific predictors of agreement and similarity; then, we conducted the test of construct validity to determine whether these predictors are of the same relative magnitude for the two different types of agreement and similarity. We centered all predictors. We first discuss our analyses for agreement and then similarity.

We first considered the possibility that the effects of the moderators may be nonlinear; for instance, the effect of familiarity might increase as the level of familiarity increases (i.e., the effect of familiarity accelerates). Scatterplots and statistical analyses suggested the square root data transformation for two of the moderators, group size and familiarity. The new mean for familiarity is 0.346 and for group size is 2.372.

Agreement. We begin by determining what predicts agreement in general. We then turn to the construct validity analyses to examine if determinants are the same for self-other agreement and consensus. We conducted a hierarchical multiple regression analysis, treating the sum of self-other agreement and consensus as the outcome variable, and we did not find any evidence of four-way interactions. We did, however, find evidence of two statistically significant three-way interactions. They were a visibility × familiarity × group size interaction and a visibility × evaluativeness × group size interaction. As we previously stated, we found two three-way interactions, both of which involved the earlier described visibility × group size interaction. We find that, in general, there is a positive effect of visibility on agreement. However, this effect is very weak when group sizes are large and either members are familiar or evaluativeness is low. We also found evidence for one two-way interaction of visibility × group size: Visibility had a stronger effect when group sizes were smaller. For instance, the effect of visibility was 0.463 when group size was 4, but it was only 0.061 when group size was 8. We also obtained the following main effects: more visibility and less familiarity lead to more agreement. There was a marginally significant effect of group size such that greater agreement was found among smaller groups.

The resulting model contains 11 predictors of agreement: 4 main effects and 7 interactions. Using these 11 variables, we used the method to test construct validity that we described earlier and presented in Figure 2. We constructed an SEM in which the 11 predictors, the 4 main effects and 7 interactions, affected a general agreement construct that

Table 3. Analysis of Self-Other and Other-Other Agreement as a Function of the Moderators: Regression Coefficients

	Consensus	Self-Other Agreement	*p* Value for Coefficients Being Different
Visibility (V)	0.270*	0.296*	.825
Familiarity (F)	−0.230*	−0.312*	.332
Evaluativeness (E)	−0.064	0.007	.321
Group size (N)	−0.031	−0.097	.177
V × F	−0.052	−0.734	.173
V × E	−0.182	−0.610	.228
V × N	−0.221	−0.749*	.037
F × N	−0.403*	−0.232	.511
E × N	−0.039	−0.154	.543
V × F × N	−1.881*	−3.476*	.214
V × E × N	1.262*	2.189†	.380

†$p < .10$. *$p < .05$.

has two indicators: self-other agreement and consensus. The model in Figure 2 tests the theoretically relevant hypothesis that the predictors of self-other agreement are the same (i.e., proportional) as consensus.

We first tested whether the 11 paths were identical. When we fit this model, we obtained good fit, $\chi^2(10) = 10.12$, $p = .430$, indicating that the moderators had parallel effects on self-other agreement and consensus. We re-estimated the model using multiple regression for each of the predictors to consensus and self-other agreement, and we present in Table 3 the regression coefficients from these two regression equations. Table 3 also gives the results of a significance test of whether the two coefficients of a given predictor are statistically different.[10] We see that only 1 effect out of 11 is statistically significantly different, the visibility × group size interaction. We find that the interaction is present in self-other agreement but not at all present for consensus. For self-other agreement, we find that visibility has a strong effect in small groups and almost no effect in larger groups. For instance, when there are just four persons in the group, the effect of visibility on self-other agreement is 0.574, but when there are eight persons in the group, the effect of visibility declines to –0.046.

In the SEM validity run, we computed *p*, the relative effect of the moderators on consensus versus self-other agreement. That is, *p* statistically tests whether the strength of the effect of the moderators is the same for consensus versus self-other agreement. We did allow for the visibility × group interaction to be different. We found that, taken together, the moderators have a somewhat stronger effect on self-other agreement, but not statistically so. Therefore, we could not reject the null hypothesis that the effect of the moderators was the same for self-other agreement and consensus, except for the earlier mentioned visibility × group size interaction.

In sum, patterns of moderation for consensus and self-other agreement appear to be quite similar. We do see that group size does interact with visibility for self-other agreement, but not consensus. However, this is the only difference out of the 11 tested.

Similarity. Consistent with the strategy for agreement, we first conducted a hierarchical multiple regression analysis where assumed similarity and assimilation were summed and treated as the outcome variable, and we did not find any evidence of any three- and four-way interactions. We did find evidence for 2 two-way interactions. First, there was an evaluativeness × visibility effect. For this effect, the negative effect of visibility on similarity (i.e., greater visibility, less similarity) is weaker when the variable is high in evaluativeness. Second, there was a familiarity × group size effect. There is little or no effect of familiarity when groups are large, but when groups are small (e.g., $n = 4$), familiarity leads to less similarity. We also found evidence for two of the four main effects: Low visibility and smaller group size lead to more similarity.

We used the method to test for construct validity that we described earlier in Figure 2, to determine if the paths were the same for assumed similarity and assimilation. We constructed a model in which the six predictors (i.e., the four main effects and two interactions) affected a general similarity construct, which in turn affected assumed similarity and assimilation. When we estimated this model, we obtained a poor fit, $\chi^2(5) = 17.48$, $p = .004$. As we shall see in Table 4, the one predictor that is different for assimilation and assumed similarity is group size. When we allowed this variable to be different, we obtained an acceptable fit, $\chi^2(4) = 6.73$, $p = .151$.

In Table 4, we present the regression coefficients for each of the predictors to assumed similarity and assimilation, which are from separate multiple regression analyses of the two variables. Although the coefficients appear to differ for assumed similarity and assimilation, statistically they are pretty consistent across the two types of similarity. In terms of main effects, we see that greater visibility lowers similarity (both assumed similarity and assimilation). It is somewhat surprising that evaluativeness lowers similarity when visibility is low. Effects for familiarity and evaluativeness are weaker and somewhat inconsistent for the two measures of similarity, although the differences are not statistically significant. The one effect that is different is group size. We see that group size has a much stronger negative effect on assumed similarity than on assimilation. Thus, we find that as group size increases, assumed similarity decreases; however, we do not see this effect for assimilation, and the difference in the effects between assumed similarity and assimilation is statistically significant.

There were two interactions for similarity. The evaluativeness × visibility interaction indicates that when evaluativeness is low (one standard deviation below the mean), visibility

Table 4. Analysis of Assimilation and Assumed Similarity as a Function of the Moderators: Regression Coefficients

	Assimilation	Assumed Similarity	*p* Value for Coefficients Being Different
Visibility (V)	−.129*	−.235*	.253
Familiarity (F)	.022	−.032	.507
Evaluativeness (E)	.033	−.074	.136
Group size (N)	−.015	−.192*	> .001
V × E	.501*	.579	.822
F × N	.341*	.715*	.118

*$p < .05$.

has an even stronger negative effect on similarity, −0.38 for assumed similarity and −0.25 for assimilation, such that greater visibility leads to less similarity. However, when evaluativeness is high (one standard deviation above the mean), visibility has relatively little effect on similarity, −0.09 for assumed similarity and 0.00 for assimilation. We also found that the effect of group size was moderated by familiarity. When group members were more familiar, increasing the group's size led to greater similarity. Both of these interactions were stronger for assumed similarity than assimilation, but neither of these differences was statistically significant.

Parallel to the analysis for agreement, in the SEM validity run, we computed *p*, the relative effect that the moderators have on assimilation versus assumed similarity. We found that although the moderators have a somewhat stronger effect on assumed similarity than on similarity, we could not reject the null hypothesis that the effect of the moderators was the same for the two measures of similarity. Thus, we conclude that the moderators have essentially the same effect for assumed similarity as assimilation, with the one exception that group size has a stronger effect on assumed similarity.

SRM Parameters k and q. We now turn our attention to the SRM parameters of *k* and *q*. Recall that *k* is a measure of assumed similarity and *q* a measure of self-other agreement, and both are derived from a theoretical multiple regression analysis in which the perceiver and target effects are used to predict self-ratings. The parameter *k* is the weight of the perceiver effect in self-perception and *q* is the weight of the target effect in that regression equation. These *k* and *q* values are estimated for each variable in each of the 21 studies, a total of 118 times.

We first correlated *k* and *q* with the assumed similarity and self-other agreement correlations. As seen in Table 2, these correlations are quite strong, .686 and .652, respectively. We also note that *k* and *q* do not correlate with assimilation and consensus, whereas assumed similarity and self-other agreement do. We note that if we correlate *k* with assumed similarity but partial out assimilation, the correlation rises to .742; if we correlate *q* with self-other agreement

and partial out consensus, the correlation between the two rises to .715. The correlational evidence suggests that k and q provide measures of assumed similarity and self-other agreement, uncontaminated by perceiver and target variances.

We also see in Table 2 that the average values of k and q are less than one but greater than zero, and these results are statistically significant (ps < .001). We can therefore conclude that for q, two perceivers agree more with each other about a target than that target agrees with any one perceiver. For k, the tendency to see others in a consistent way is reflected less in the perception of the self than in the perception of others. Given that k is greater than zero, the tendency to see the self in a consistent way with seeing others in general does exist, but it is not equally reflected in perceptions of the self and of others. Thus, it does not seem reasonable to presume that they each equal one, as was done in Kwan et al. (2004). Finally, we note that k and q modestly and positively relate with each other (r = .237).

We next examined the ability of the moderator variables to predict k and q. For q, we did not find any statistically significant effects, and for k, the assumed similarity parameter, we found only one statistically significant effect: the effect of group size. The parameter k was smaller in larger sized groups. So for instance, k equals .892 for four-person groups and .653 for eight-person groups. We note that, earlier, when we compared assumed similarity and assimilation, the only difference was also group size. Thus, it appears to be the case that the processes of self- and other perception for similarity are the same when the number of "others" that the target perceived is small.

Discussion

We conducted the first ever meta-analysis of SRM results and we focused on the question of the differences between self-perception and the perception of others. We reasoned that if there were no differences, then self-other agreement should act like consensus and assumed similarity should act like assimilation. Stated differently, agreement about or similarity in the perceptions of two people should behave the same if those two people are two other people or one of the two is the self. We found that both agreement and similarity were lower when the self was one of the perceivers. This result replicated earlier findings of several investigators for agreement and extends them to similarity. We also found appreciable correlations between self-other agreement and consensus, as others have, and between assumed similarity and assimilation, which perhaps has not been studied before. We found little or no correlation between the two.

There are several pieces of evidence that self-perception and the perception of others are not very different. First, we find appreciable correlations between self-other agreement and consensus and between assumed similarity and assimilation. Thus, if others agree, then the self and another other

would also agree, and if the perceiver tends to see others as similar, he or she would see the other as similar to the self. Second, although we find statistically significant different effects of the predictors when the self is one of the perceivers versus when the self is not, there is evidence that in large part the patterns of effects are the same for self- and other perception. For similarity, the only effect that differed is group size, which had stronger effects on assumed similarity. For agreement, 10 of the 11 effects of the moderators are essentially the same for both self-other agreement and consensus. Thus, at first glance, Bem's (1972) original suggestion that the process of self-perception is consistent with the process of other perception of others has some validity. Moreover, Funder's (1995) use of self-other agreement and consensus as interchangeable in RAM, under some conditions, is not problematic.

However, we do find differences. We found that mean levels of assimilation and consensus are higher than are the mean levels of self-other agreement and assumed similarity, suggesting that overall levels of agreement and similarity are higher when the self is not a perceiver. We find for similarity, group size has a stronger effect for assumed similarity than for assimilation, and for agreement, group size interacts with visibility to affect self-other agreement but not consensus.

Specific Effects of the Predictors. We focused on four predictors: visibility, familiarity, evaluativeness, and group size. In this section, we consider each of them.

Visibility is perhaps one of the most studied variables in research on interpersonal perception. As expected, we find that for agreement, greater visibility leads to more agreement, and equally so for self-other agreement and consensus. For similarity, we find that with greater visibility, there is less assumed similarity and assimilation. These effects for similarity, although hardly surprising, have not to our knowledge been previously shown. Perhaps, when perceivers have more information about the target, they need not use the self as a way of judging the target. Given that, in general, familiarity was very low in most the studies we included, we can presume that the assumed similarity that we have found does not reflect any motivation that perceivers have to see themselves consistent with how they see others, as is the case when high levels of assumed similarity are found (in particular, perceptions of values) using close others (e.g., Murray et al., 2002). As stated previously, assumed similarity, therefore, likely reflects a lack-of-information effect whereby perceivers are using themselves as a baseline to base perceptions of others (Kenny, 1994). When traits are highly visible, perceivers need not rely on the self to base their perceptions of others. For self-other agreement, we found that visibility has three statistically significant or marginally significant interactions, two of which were significant for consensus. It is evident that the effects of visibility on consensus and self-other agreement are nuanced in similar ways, with one exception: Group size interacts with visibility for self-other

agreement but not consensus. However, as previously noted, this is the only difference out of 11 tested.

For familiarity, it is surprising that we did find that greater familiarity led to less consensus and self-other agreement, which may be reflecting greater usage of shared stereotypes in the perception of others in that situation (Biesanz et al., 2007; Kenny, 1991). However, there are several important caveats in interpreting the generalizability of this effect. First, the average level of familiarity in the studies that we reviewed is very low. In most of the studies that we have included in the meta-analysis, participants were not well acquainted, and in more than half of the studies, participants were acquainted for only 1 hour or less. Second, we have conducted a cross-sectional study of familiarity. It is important to note that when Kenny et al. (1994) studied the relationship between consensus and acquaintance, they obtained very different results when they used longitudinal comparisons versus cross-sectional comparisons. Moreover, in none of the studies included in our meta-analysis were all of the perceivers and targets close in the qualitative sense, for example, studies of close friends, romantic partners, or family members.

We found that the effects of evaluativeness (and interactions of evaluativeness with other variables) were parallel for assumed similarity and assimilation and for self-other agreement and consensus, suggesting that self-perception is no more attuned to evaluation than is other perception. This finding is quite surprising, as work in the domain of attribution theory would suggest that evaluation would have a stronger effect on self-other agreement and assumed similarity than on consensus and assimilation, as perception of the self is more sensitive to evaluation than is other perception.

The final variable that we studied was group size, which was included as only a methodological variable. Although we do find interactions, it is important that we find lower levels of assumed similarity in larger groups. One cognitive explanation is that in large groups, perceivers distinguish between themselves from the group as a whole, thereby forming "me" versus "them" categories. An alternate explanation is that in large groups, subgrouping occurred. Perceivers would divide the large group into two subgroups: members like me (i.e., in-group) and members different from me (i.e., out-group). They would then see themselves as similar to members of their subgroup and dissimilar to the members of another subgroup. The net effect is less assumed similarity overall. However, subgrouping should also lead to less assimilation, which we do not find. In fact, the effect of group size on assimilation was nearly zero.

The SRM Parameters: k and q. One of the goals of this article is to evaluate two understudied measures of assumed similarity and self-other agreement based on the SRM. These measures, called k and q, were originally proposed by Kenny (1994), but to date there has not been any detailed investigation of their performance.

We found that k and q substantially correlated with their simpler, but perhaps problematic, correlational counterparts. Moreover, when we controlled for consensus and assimilation, the correlations became larger. This suggests that k and q are less contaminated by assimilation and consensus. We also found that moderators of the SRM parameters were predicted by only one of the moderators, k with group size. There is then good evidence that k and q can be viewed as purer measures of assumed similarity and self-other agreement, whereas the correlational measures more closely parallel assimilation and consensus.

Kwan et al. (2004) presumed that these two parameters equal one when they recommended subtracting the perceiver and target effects from the self-perception to obtain a measure of self-enhancement. It is interesting that such a practice presumes that self-other agreement and consensus are two different forms of agreement and that assumed similarity and assimilation are two different forms of similarity. We tested whether k and q were in fact one in our meta-analysis, and our findings show that, on average, both k and q are less than one. Thus, consistent with the means, there is less similarity and agreement when the self is a perceiver.

These SRM measures do have limitations. As we have mentioned, they are complicated and not nearly as simple to compute as a correlation coefficient. Moreover, if a round-robin design is not used, but rather a one-with-many design (Kenny, Kashy, & Cook, 2006) is used, these parameters cannot be computed.

General Implications for Interpersonal Perception. Normally, we think of accuracy and bias as opposite ends of one continuum. However, very often, empirically we find that accuracy and bias co-occur (Boyes & Fletcher, 2007; Gagne & Lydon, 2004; Murray, 1999). Especially in studies of close relationships, perceivers who have the greatest investment in the relationship are the most biased. We have found that assumed similarity and self-other agreement are not negatively correlated and, in fact, k and q are positively correlated, albeit at low levels.

It is quite surprising that we also find that familiarity has a negative effect on both self-other agreement and consensus. Further research should examine whether this effect holds under truly high levels of closeness, such as between good friends, family members, or romantic partners. In close relationships, there are motivational factors that drive accuracy and assumed similarity (Murray, 1999) that are not as theoretically relevant in the study of acquaintance relationships.

Conclusion

We used 24 different data sets with 118 variables to study agreement and similarity. Although we believe there are some important advantages when our approach is used, we hasten to add that in many cases, standard, non-SRM approaches can lead to valid information (Kenny, West, et al., 2006). For instance, if the interest is the comparison

between how a person views himself or herself and how he or she views others, as is typical in social projection studies, simple mean differences are appropriate. Our approach represents an alternate and complementary approach, not a replacement of more traditional methods.

There are several key limitations to our meta-analysis. As we have mentioned earlier, for our analysis of closeness, we would have benefited from conducting a longitudinal analysis and from including studies with more qualitatively close targets and perceivers. Second, because we have limited ourselves to round-robin studies, we could not compare in-group with out-group judgments. Third, almost all of the participants in our studies were college students from the United States. Fourth, we did not investigate within-group moderators such as the mental health of the participants, racial or gender composition of groups, or status differences between group members. Fifth, although our focus was on moderators of similarity and agreement that have received the most theoretical and empirical attention in past research, there are other important moderators that we did not consider. Specifically, there are likely important differences in the content of perceptions that are not captured by evaluativeness and visibility that predict agreement and similarity. For example, perceptions can be interpersonal or intrapersonal in nature, and they can be state or trait judgments. Specific content features that were not captured in this meta-analysis may interact with the moderators we examined to predict similarity and agreement in interesting and important ways.

These limitations notwithstanding, in sum, we have developed a very thorough and formal approach to test the comparison of self and others. The model and the statistical analysis are complicated, but the issue necessitates these complications. As our results show, the method can yield important insights into the fundamental differences in the two types of ratings. More than 30 years ago, Bem (1972) made the radical suggestion that self-judgments and judgments of others operated in much the same way. We now have a formal model that can be estimated and we can now test Bem's hypothesis in a complex and interesting way.

Acknowledgments

Declaration of Conflicting Interests

Financial Disclosure/Funding

Notes

1. Because we conducted a meta-analysis of variables in study, characteristics of the perceivers and the targets that vary within a study cannot be studied as predictors. Thus, predictors such as mental health cannot be studied.
2. Alternatively, we could use a canonical correlation analysis to accomplish this analysis. We would treat C_1 and C_2 as one set of variables and the X variables as the other set. If C_1 and C_2 are not distinct constructs, then the second canonical correlation would be zero.
3. The correlations would be equal after equating for other differences in the model. That is, k would equal 1 and the relationship variances for self- and other ratings are equal. More technically, when $q = 1$, the covariance of self-other would equal the covariance of other with other.
4. In studies of social projection, effects are often measured as the mean difference. This mean difference measure could be easily converted to a correlation.
5. For three studies, the samples were split in half. In Marcus and Leatherwood (1998) and Marcus and Lehman (2002), we had separate results for men and women, and in Marcus and Wilson (1996), we had separate results for two experimental conditions. For these three studies, we averaged results across the two sets of analyses.
6. The reader might wonder why we did not use just one target or one-with-one correlations. That strategy is not possible, because in Social Relations Model studies, the correlation with one target is not defined.
7. In actuality, the ratings were made on a 1 to 7 scale and were transformed to 0 to 1 for the analysis.
8. We considered transforming the correlations using the Fisher's z transformation. Although that transformation is appropriate for a raw correlation, we used disattenuated correlations, and so we did not think that this transformation was appropriate.
9. Because we had an inclusion criterion that the perceiver and target variances had to be at least 10%, we were worried that that might have artificially raised the means for consensus and assimilation. We conducted an analysis that examined the smaller values of consensus and assimilation (relative variances between 10% and 20%). We still found that consensus was greater than self-other agreement and that assimilation was greater than assumed similarity. Thus, we do not think that our inclusion criteria biased our results.
10. To test whether the paths from the predictors to self-other agreement and consensus significantly differed, we used structural equation modeling and constrained the paths for the given predictor to be equal to each other. For example, to test whether the path from visibility to consensus was statistically different from the path from visibility to self-other agreement, all paths were allowed to be free except these two paths, which were set to be equal. The p value from the one degree of freedom chi-square test of the model is presented in Tables 3 and 4.

References

References marked with an asterisk indicate studies included in the meta-analysis.

Albright, L., Forest, C., & Reiseter, K. (2001). Acting, behaving, and the selfless basis of metaperception. *Journal of Personality and Social Psychology*, *81*, 910-921.

*Albright, L., Kenny, D. A., & Malloy, T. E. (1988). Consensus in personality judgments at zero acquaintance. *Journal of Personality and Social Psychology*, *55*, 387-395.

Allport, G. W. (1937). The functional autonomy of motives. *American Journal of Psychology*, *50*, 141-156.

*Anderson, C., & Kilduff, G. J. (2009). Why do dominant personalities attain influence in face-to-face groups? The competence-signaling effects of trait dominance. *Journal of Personality and Social Psychology*, *96*, 491-503.

*Anderson, C., Srivastava, S., Beer, J. S., Spataro, S. E., & Chatman, J. E. (2006). Knowing your place: Self-perceptions of status in social groups. *Journal of Personality and Social Psychology*, *91*, 1094-1110.

Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. *Journal of Personality and Social Psychology*, *60*, 241-253.

Beer, A., & Watson, D. (2008). Personality judgment at zero acquaintance: Agreement, assumed similarity, and implicit simplicity. *Journal of Personality Assessment*, *90*, 250-260.

Bem, D. J. (1972). Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6, pp. 1-62). New York: Academic Press.

Bernieri, F. J., Zuckerman, M., Koestner, R., & Rosenthal, R. (1994). Measuring person perception accuracy: Another look at self-other agreement. *Personality and Social Psychology Bulletin*, *20*, 367-378.

Biesanz, J. C., West, S. G., & Millevoi, A. (2007). What do you learn about someone over time? The relationship between length of acquaintance and consensus and self-other agreement in judgments of personality. *Journal of Personality and Social Psychology*, *92*, 119-135.

Bollen, K. A., & Lennox, R. (1991). Conventional wisdom on measurement: A structural equation perspective. *Psychological Bulletin*, *110*, 305-314.

Borkenau, P., & Liebler, A. (1993). Consensus and self-other agreement for trait inferences from minimal information. *Journal of Personality*, *61*, 477-496.

Boyes, A. D., & Fletcher, G.J.O. (2007). Metaperceptions of bias in intimate relationships. *Journal of Personality and Social Psychology*, *92*, 286-306.

Cronbach, L. J. (1955). Processes affecting scores on "understanding of others" and "assumed similarity." *Psychological Bulletin*, *52*, 177-193.

Cronbach, L. J., & Meehl, P. (1955). Construct validity in psychological tests. *Psychological Bulletin*, *52*(4), 281-302.

*Dabbs, J. M., Jr., & Ruback, R. B. (1984). Vocal patterns in male and female groups. *Personality and Social Psychology Bulletin*, *10*, 518-525.

*Dabbs, J. M., Ruback, R. B., & Evans, M. S. (1987). Group-talk: Patterns of sound and silence in group conversation. In A. W. Siegman & S. Feldstein (Eds.), *Nonverbal behavior and communication* (2nd ed., pp. 501-520). Hillsdale, NJ: Lawrence Erlbaum.

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.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, *7*, 117-140.

Funder, D. C. (1995). On the accuracy of personality judgment: A realistic approach. *Psychological Review*, *102*, 652-670.

Funder, D. C., & Colvin, C. R. (1988). Friends and strangers: Acquaintanceship, agreement, and the accuracy of personality judgment. *Journal of Personality and Social Psychology*, *55*, 149-158.

Funder, D. C., & Dobroth, K. M. (1987). Differences between traits: Properties associated with interjudge agreement. *Journal of Personality and Social Psychology*, *52*, 409-418.

Funder, D. C., Kolar, D. C., & Blackman, M. C. (1995). Agreement among judges of personality: Interpersonal relations, similarity, and acquaintanceship. *Journal of Personality and Social Psychology*, *69*, 623-634.

Gagne, F. M., & Lydon, J. E. (2004). Bias and accuracy in close relationships: An integrative review. *Personality and Social Psychology Review*, *8*, 322-338.

Gilovich, T. (1990). Differential construal and the false consensus effect. *Journal of Personality and Social Psychology*, *59*, 623-634.

Gosling, S. D., Ko, S. J., Mannarelli, T., & Morris, M. E. (2002). A room with a cue: Judgments of personality based on offices and bedrooms. *Journal of Personality and Social Psychology*, *82*, 379-398.

John, O. P., & Robins, R. W. (1993). Determinants of interjudge agreement on personality traits: The Big Five domains, observability, evaluativeness, and the unique perspective of the self. *Journal of Personality*, *61*, 521-551.

Judd, C. M., & Park, B. (1988). Out-group homogeneity: Judgments of variability at the individual and group levels. *Journal of Personality and Social Psychology*, *54*, 778-788.

*Kashy, D. A. (1988). *Intergroup processes: A social relations perspective*. Unpublished master's thesis, University of Connecticut, Storrs, CT.

Keltner, D. (1995). Signs of appeasement: Evidence for the distinct displays of embarrassment. *Journal of Personality and Social Psychology*, *68*, 441-454.

Kenny, D. A. (1991). A general model of consensus and accuracy in interpersonal perception. *Psychological Review*, *98*, 155-163.

*Kenny, D. A. (1992). [Unpublished data]. University of Connecticut.

Kenny, D. A. (1994). *Interpersonal perception: A social relations analysis*. New York: Guilford.

Kenny, D. A., & Acitelli, L. K. (2001). Accuracy and bias in the perception of the partner in a close relationship. *Journal of Personality and Social Psychology*, *80*, 439-448.

Kenny, D. A., Albright, L., Malloy, T. E., & Kashy, D. A. (1994). Consensus in interpersonal perception: Acquaintance and the Big Five. *Psychological Bulletin*, *116*, 245-258.

*Kenny, D. A., Horner, C., Kashy, D. A., & Chu, L. (1992). Consensus at zero acquaintance: Replication, behavioral cues, and stability. *Journal of Personality and Social Psychology*, *62*, 88-97.

Kenny, D. A., & Kashy, D. A. (1994). Enhanced co-orientation in the perception of friends: A social relations analysis. *Journal of Personality and Social Psychology*, *67*, 1024-1033.

Kenny, D. A., Kashy, D. A., & Cook, W. (2006). *The analysis of dyadic data*. New York: Guilford.

*Kenny, D. A., Kieffer, S. C., Smith, J. A., Ceplenski, P., & Kulo, J. (1996). Circumscribed accuracy among well-acquainted individuals. *Journal of Experimental Social Psychology*, *32*, 1-12.

Kenny, D. A., & La Voie, L. (1984). The Social Relations Model. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 18, pp. 142-182). San Diego: Academic.

Kenny, D. A., West, T. V., Malloy, T., & Albright, L. (2006). Componential analysis of interpersonal perception data. *Personality and Social Psychology Review*, *10*, 282-294.

Kenrick, D. T., & Stringfield, D. O. (1980). Personality traits and the eye of the beholder: Crossing some traditional philosophical boundaries in the search for consistency in all of the people. *Psychological Review*, *87*, 88-104.

Kwan, V. S. Y., John, O. P., Kenny, D. A., Bond, M. H., & Robins, R. W. (2004). Reconceptualizing individual differences in self-enhancement bias: An interpersonal approach. *Psychological Review*, *111*, 94-110.

Kwan, V. S. Y., John, O. P., Robins, R. W., & Kuang, L. L. (2008). Conceptualizing and assessing self-enhancement bias: A componential approach. *Journal of Personality and Social Psychology*, *94*, 1062-1077.

Lee, K., Ashton, M. C., Pozzebon, J. A., Visser, B. A., Bourdage, J. S., & Ogunfowora, B. (2009). Similarity and assumed similarity in personality reports of well-acquainted persons. *Journal of Personality and Social Psychology*, *96*, 460-472.

*Levesque, M. (1990). [Unpublished data]. University of Connecticut.

*Mahaffey, K. J., & Marcus, D. M. (2006). Interpersonal perception of psychopathy: A social relations analysis. *Journal of Social and Clinical Psychology*, *25*, 53-74.

*Malloy, T. E., & Albright, L. (1990). Interpersonal perception in a social context. *Journal of Personality and Social Psychology*, *58*, 419-428.

*Malloy, T. E., & Janowski, C. L. (1992). Perceptions and meta-perceptions of leadership: Components, accuracy, and dispositional correlates. *Personality and Social Psychology Bulletin*, *18*, 700-708.

*Marcus, D. K., & Leatherwood, J. C. (1998). The interpersonal circle at zero acquaintance: A social relations analysis. *Journal of Research in Personality*, *32*, 297-313.

*Marcus, D. K., & Lehman, S. J. (2002). Are there sex differences in interpersonal perception at zero acquaintance? A social relations analysis. *Journal of Research in Personality*, *36*, 190-207.

*Marcus, D. K., Lyons, P. M., Jr., & Guyton, M. R. (2000). Studying perceptions of juror influence in vivo: A social relations analysis. *Law and Human Behavior*, *24*, 173-186.

*Marcus, D. K., & Miller, R. S. (1999). The perception of «live» embarrassment: A social relations analysis of class presentations. *Cognition & Emotion*, *13*, 105-117.

*Marcus, D. K., & Wilson, J. R. (1996). Interpersonal perception of social anxiety: A social relations analysis. *Journal of Social and Clinical Psychology*, *15*, 471-487.

*Montgomery, B. (1984). Individual differences and relational interdependencies in social interaction. *Human Communication Research*, *11*, 33-60.

Mullen, B., & Hu, L. (1989). Perceptions of ingroup and outgroup variability: A meta-analytic integration. *Basic and Applied Social Psychology*, *10*, 233-252.

Murray, S. L. (1999). The quest for conviction: Motivated cognition in romantic relationships. *Psychological Inquiry*, *10*, 23-34.

Murray, S. L., Holmes, J. G., Bellavia, G., Griffin, D. W., & Dolderman, D. (2002). Kindred spirits? The benefits of egocentrism in close relationships. *Journal of Personality and Social Psychology*, *82*, 563-581.

Ostrom, T. M., & Sedikides, C. (1992). Out-group homogeneity effects in natural and minimal groups. *Psychological Bulletin*, *112*, 536-552.

*Park, B., & Judd, C. M. (1989). Agreement on initial impressions: Differences due to perceivers, trait dimensions, and target behaviors. *Journal of Personality and Social Psychology*, *56*, 493-505.

*Park, B., Kraus, S., & Ryan, C. S. (1997). Longitudinal changes in consensus as a function of acquaintance and agreement in liking. *Journal of Personality and Social Psychology*, *72*, 604-616.

Patterson, M. L. (1982). A sequential functional-model of nonverbal exchange. *Psychological Review*, *89*, 231-249.

Ready, R. E., Clark, L. A., Watson, D., & Westerhouse, K. (2000). Self- and peer-reported personality: Agreement, trait ratability, and the "self-based heuristic." *Journal of Research in Personality*, *34*, 208-224.

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.

Ross, L., Greene, D., & House, P. (1977). The false consensus effect: An egocentric bias in social perception and attributional processes. *Journal of Experimental Social Psychology*, *13*, 279-301.

Rothbart, M., & Park, B. (1986). On the confirmability and disconfirmability of trait concepts. *Journal of Personality and Social Psychology*, *50*, 131-142.

*Ruback, R. B., Dabbs, J. M., Jr., & Hopper, C. H. (1984). The process of brainstorming: An analysis with individual and group vocal parameters. *Journal of Personality and Social Psychology*, *47*, 558-567.

*Shechtman, Z., & Kenny, D. A. (1994). Meta-perception accuracy: An Israeli study. *Journal of Basic and Applied Social Psychology*, *15*, 451-465.

Starzyk, K. B., Holden, R. R., Fabrigar, L. R., & MacDonald, T. K. (2006). The personal acquaintance measure: A tool for appraising one's acquaintance with any person. *Journal of Personality and Social Psychology*, *90*, 833-847.

Swann, W. B., Jr. (1990). To be adored or to be known: The interplay of self enhancement and self-verification. In R. M. Sorrentino & E. T. Higgins (Eds.), *Foundations of social behavior* (Vol. 2, pp. 408-448). New York: Guilford.

Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, *103*, 193-210.

Watson, D., Hubbard, B., & Wiese, D. (2000). Self-other agreement in personality and affectivity: The role of acquaintanceship, trait visibility, and assumed similarity. *Journal of Personality and Social Psychology*, *78*, 546-558.

*West, T. V., & Kenny, D. A. (2008). *Do they all feel alike? Examining assimilation in perceptions of emotion: A social relations analysis approach*. Unpublished paper, New York University.

Wilhelm, P., & Perrez, M. (2004). How is my partner feeling in different daily-life settings? Accuracy of spouses' judgments about their partner's feelings at work and at home. *Social Indicators Research*, *67*, 183-246.