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## Zero Acquaintance: Definitions, Statistical Model, Findings, and Process

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Zero-acquaintance research began with a study by Norman and Goldberg in 1966, using data that were originally published by Passini and Norman (1966). In the study, 12 groups, sizes 6 to 9, were created on the first day of class at the University of Michigan. Students were previously unacquainted and were asked to rate each other “without any information” across a set of variables, which have come to be known as the Big Five personality traits. Given that perceivers had very little information about targets, the expectation was that perceivers would not agree with each other in their perceptions, and that the ratings of personality at zero acquaintance would have little or no validity. Norman and Goldberg (1966) surprisingly found agreement or consensus in the perceptions of personality, and moreover, agreement correlated with self-ratings of the targets’ personality. We think Norman and Goldberg were rather embarrassed by the high levels of consensus and self-other agreement at zero acquaintance. We have heard reports that Norman regretted ever gathering the Passini and Norman data.

The first author of this chapter, David A. Kenny, read the Norman and Goldberg (1966) study in about 1969 and was fascinated by the findings. However, it was not until mid 1980s that Kenny began to research basic questions in interpersonal perception

(Kenny, 1988). It occurred to him that the Norman and Goldberg paper was very relevant because he was interested in how interpersonal perception changed over time, but Kenny had forgotten who had written that paper. That year Kenny was visiting Arizona State and asked Steve West about the paper. He gave him the citation and Kenny reread the paper, nearly 20 years after he had first read the paper. Kenny was fascinated and was eager to replicate the study. He returned to Connecticut and conducted three studies which were eventually published in Albright, Kenny, and Malloy (1988).

Many researchers, especially those in personality, found Albright et al. (1988) troubling. For instance, Paunonen (1991) published a paper in which he discussed “the apparent accuracy of stranger’s ratings” (p. 471). He also referred to perceivers in these studies as “so-called strangers” (p. 472). At that time, the belief was that it took time for people to get to know someone. Acquaintance was viewed as a slow and gradual process, a peeling away of layers of onion (Altman & Taylor, 1973). Albright et al. (1988) were also dubious of the phenomenon and that was why they replicated the phenomenon three times. This book is testimony that there a great deal of information, some of which is valid, in first impressions.

In this chapter, we begin by defining zero acquaintance and compare it to thin slices. We then describe a statistical model for social perception data that is closely tied to many zero-acquaintance research studies. We then review the major findings of zero-acquaintance research. Finally, we briefly discuss the process that leads to accuracy at zero acquaintance.

What is Zero Acquaintance?

The person-perception literature often uses the terms of zero acquaintance, thin slices, and first impressions interchangeably. Explicit distinctions among these types of studies have never been made; for the purposes of our review, we separately define each in turn.

When first impressions are made in everyday contexts, there is typically some interaction between perceiver and target. One common element of both the zero-acquaintance and thin-slices paradigms is that unlike everyday person perceptions, the perceiver does not interact with the target prior to making judgments. However, in many zero-acquaintance studies, perceivers and targets make perceptions while they are face-to-face; there is the possibility of nonverbal dyadic behavior between perceiver and target. For example, the target may directly smile at or make eye contact with the perceiver. Research using controlled procedures (Borkenau & Liebler, 1992; Kenny, Horner, Kashy, & Chu, 1992), such as videotapes of targets where there is no possibility of perceiver-target interaction, has shown essentially the same pattern as those using less controlled procedures.

The key feature of a thin-slices study, as the name suggests, is that information that is communicated is brief and in some cases degraded (e.g., content-filtered audio). The key feature of a zero-acquaintance study is that the information given to perceivers is presumably unrelated to the judgment task. We realize that the phrase “presumably unrelated” is somewhat vague and open to interpretation. In addition, when information that is hypothesized to be “presumably unrelated” leads to valid personality judgments, researchers no longer consider such information as “unrelated.” For example, Rentfrow and Gosling (2006) had perceivers infer targets’ personality from target-reported musical

preferences. Perceivers listened to lists of songs that targets reported, and then made ratings of the Big Five personality factors. The appeal of Rentfrow and Gosling (2006) is that musical preferences are not intuitively predictable cues of personality characteristics. However, when Rentfrow and Gosling (2006) found evidence for consensus and accuracy of personality based on such preferences, future person-perception researchers would likely consider music preferences as indicators of personality characteristics. Gosling and others have also conducted studies in which “presumably irrelevant” cues to personality are found in offices, bedrooms (Gosling, Ko, Mannarelli, & Morris, 2002), and even handshakes (Chaplin, Phillips, Brown, Clanton, & Stein, 2000).

It is important to note that given our definitions, some zero-acquaintance studies also qualify as thin-slices studies. For instance, in Ambady, Hallahan, and Conner (1999), perceivers judged sexual orientation after watching brief videos clips of gestures, or stills of targets. Ambady et al. (1999) can be considered both a zero-acquaintance and a thin slices study because the perceivers did not interact with targets, the information is presumably not directly related to judgments, and perceivers are only given brief snippets of behaviors. However, the study by Ambady and Rosenthal (1993) where perceivers view short video clips is a thin-slices study but not a zero-acquaintance study because perceivers are given relevant information, but only a little bit.

The most typical zero-acquaintance paradigm, following the Norman and Goldberg (1966) study, involves face-to-face judgments. Groups of strangers are formed from classes or as part of an experiment (DiPilato, West, & Chartier, 1988), and most zero-acquaintance studies instruct participants not to speak, although some do (Borkenau & Liebler, 1992; Levesque & Kenny, 1993). Several studies have used video materials,

one as early as 1938 by Estes. In addition, there are a myriad of studies that involve photo judgments that qualify as zero-acquaintance studies given our definition. However, space precludes our reviewing these studies and we therefore refer the reader to Zebrowitz and Collins (1997) for a review of perceptions based on photographs.

#### Using the Social Relations Model to Study Zero Acquaintance

Several studies have examined perceptions made at zero-acquaintance using Kenny and La Voie's (1984) Social Relations Model (SRM), which is a two-way random effects analysis of variance model. Imagine a study in which multiple perceivers make ratings of multiple targets at zero-acquaintance, as was the case in Norman and Goldberg (1966). This design is referred to as a *round-robin design*. Consider the perception that Irene has of Jane. Irene's perception can be decomposed into the following four components:

$$\begin{aligned} \text{Irene's Perception of Jane} &= \text{Group Mean} + \text{Irene's Perceiver Effect} \\ &+ \text{Jane's Target Effect} \\ &+ \text{Relationship Effect of Irene toward Jane} \end{aligned}$$

The mean refers to how people generally see others on the trait in question; the perceiver to how Irene generally sees others; the target to how Jane is generally seen by others; and the relationship to how Irene uniquely sees Jane, above and beyond how Irene sees others, and how Jane is seen by others. The relationship effect can be viewed as the interaction of perceiver and target.

In most zero-acquaintance and more generally first-impression studies, the key component of a Social Relations Analysis is the target effect, which assesses the degree to which a target is perceived consistently across perceivers. Reliable target variance

indicates that perceivers agree on their ratings of targets (i.e., there is consensus in perceptions of targets), and such perceptions vary from target to target. For example, perceivers agree that Jane is outgoing, and that Irene is shy.

Not all researchers who are interested in consensus of perceptions at zero acquaintance use the SRM as a statistical model. When targets are rated by multiple perceivers, the average of perceivers' judgments is sometimes used to obtain a measure of consensus (e.g., Gosling et al., 2002). While an average is generally not problematic, from an SRM perspective there are three issues worth discussing. First, the mean rating is an estimate of the target effect, not the actual target effect, because it contains an additional variance component measured by the SRM, the relationship effect. Relationship variance assesses the idiosyncratic perceptions that perceivers have of targets, controlling for both the target and the perceiver effects. Second, because the mean perception of a target contains the relationship effect, it is necessary to compute the reliability, or the degree of consensus in ratings of a target. For many studies, a conventional reliability measure, such as Cronbach's alpha, can be computed. We strongly recommend that researchers report the reliability of the target effect. Additionally, following the advice of Norman and Goldberg (1966), we urge that researchers also report the extent to which two perceivers agree with each other, which is analogous to the inter-item correlation. Third, for specialized designs, such as the round-robin design in which perceivers serve also as targets, the mean across perceivers is a biased measure of the target effect and more complicated methods are needed to adjust for such biases (see Kenny, 1994).

In most studies of first impressions, researchers use a criterion variable to estimate the target's actual standing on a trait. We can examine accuracy as the correlation between the target effect and the criterion measure. Many researchers treat self-judgments as the criterion variable, yet in several studies (e.g., Gosling et al., 2002), multiple informants provide information about the target and so the degree of consensus of highly acquainted others then serves as the criterion measure. When there are multiple informants, we can again perform an SRM decomposition of the criterion measure. The same issues that we raised about the measurement of judgment also apply to the criterion.

Very typically, studies report the correlation between the estimated target effect of the judgment with the estimated target effect on the criterion. For example, we can correlate the target effect in strangers' perceptions of Jane's intelligence (i.e., the degree to which everyone perceives Jane as intelligent at zero-acquaintance) with the target effect in well acquainted others' perceptions of Jane's intelligence. We denote that correlation as  $r_{nm}$  because there are  $n$  perceivers and  $m$  informants per target which gives the correlation between estimated target effects. We can represent the correlation between the theoretical target effects as  $r_{\infty\infty}$ , which represent the correlation between estimated target effects if there were a large number of judges. To estimate  $r_{\infty\infty}$ , we would divide  $r_{nm}$  by the square root of the product of the reliabilities of the judgment and the criterion. The correlation  $r_{\infty\infty}$  is said to be *corrected for attenuation* and it would be larger than  $r_{nm}$ . It estimates the correlation between the two means if there were an infinite number of perceivers and informants. The other correlation is the correlation between a single perceiver and a single informant or  $r_{11}$ . That correlation would equal  $r_{\infty\infty}$  times the square root of the reliability of a single perceiver times the reliability of a

single perceiver. The reliability of a single perceiver (informant) is the same as the correlation between two perceivers (informants). Note that  $r_{11}$  would be much smaller than the value  $r_{nm}$ .

It is very possible that  $r_{\infty\infty}$  can be relatively large whereas  $r_{11}$  can be very small. For instance, a very typical value for  $r$  in zero-acquaintance and thin slices studies is .39 (Ambady & Rosenthal, 1992). If we assume the reliability for perceptions is .85 and for the criterion is .80, the value of  $r_{\infty\infty}$  would be an impressive .473. However, the typical value of the reliability of a single judge and a single informant is only .25, making  $r_{11}$  equal to only .118. Note the two correlations of .473 and .118 differ by a factor of four.

### Findings

Thus far, we have provided a definition of zero acquaintance. In addition, we have examined one statistical model that can be used to examine perceptions at zero acquaintance, the Social Relations Model. Here, we review the major findings of zero-acquaintance research. Although our review is structured around findings that are typically discussed in studies that use the SRM, we have included in our review studies that did not utilize that model. We begin with the discussion of agreement among perceivers of a target; we examine consensus or agreement between perceivers' judgments and self-other agreement or agreement between the perceivers' judgment and the target's self-judgment. We then discuss different forms of accuracy in perception. Next we examine how perceptions made at zero acquaintance can be extended to the study of metaperceptions, or perceptions that individuals have of the perceptions that perceivers make of them. Finally, we consider the stability of zero-acquaintance perceptions.

*Consensus*

Beginning with Norman and Goldberg (1966), zero-acquaintance research initially concentrated on agreement of personality measures using the Big Five. The level of consensus in personality is theoretically relevant to personality psychologists, where there has been debate in the degree to which consistency in targets' traits is predictive of behavior (e.g., Kenrick & Funder, 1988). In a review of studies that examined consensus of perceptions at zero acquaintance, Kenny, Albright, Malloy, and Kashy (1994) presented the results of 9 zero acquaintance studies. In 7 of the 9 studies, perceptions were made using a round-robin design where individuals in small groups all made perceptions of each other. In these studies, targets and perceivers potentially engaged in nonverbal interaction when perceptions were made. For example, in Albright, Kenny, and Malloy (1988), participants who were previously unacquainted were placed into groups from 4 to 6. Individuals then made perceptions of all group members (i.e., all participants were both perceivers and targets) across the Big Five personality factors. The majority of studies in Kenny et al.'s (1994) review used a research paradigm which was the same as used by Albright et al. (1988). Across the 9 studies, consensus was highest for perceptions of Extraversion; nearly 30 percent of the variance in perceptions was attributed to the target effect. Conscientiousness demonstrated the next highest level of consensus; around 15 percent of the variance was attributed to the target effect. Small levels of consensus were found for Emotional Stability, Culture, and Agreeableness.

In one study reviewed by Kenny et al. (1994), judges made perceptions of videotaped targets (Kenny, Horner, Kashy, & Chu, 1992). As argued by Paunonen (1991) and Kenny et al. (1992), some nonverbal communication between targets and perceivers

likely occurred during zero acquaintance studies that use a design where perceivers and targets make perceptions face-to-face. In order to control for the possibility that consensus was driven by nonverbal communication between targets and perceivers, in Study 1 of Kenny et al. (1992), targets were videotaped without their knowledge while waiting for the experimenter to enter the room. A set of judges later viewed portions of the videos during which the target faced the camera. Results of Study 1 in Kenny et al. (1992) were consistent with those found in Kenny et al.'s (1994) review. The authors found that 22 percent of the variance in perceptions of Extraversion is due to the target, and 13 percent of the variance in perceptions of Conscientiousness was due to the target.

In Borkeu and Liebler (1992), perceivers also made judgments based on videos of targets. Targets were videotaped while sitting down at a table and reading a script about the weather. Borkeu and Liebler (1992) were primarily interested in how the varying amount of content that judges had on which to base perceptions influenced consensus at zero acquaintance. Judges were assigned to make perceptions of personality in one of four conditions: They watched the complete tape with both audio and visual information, listened to an audio clip only, viewed a silent video, or viewed a still photo derived from the videotape. Consensus, especially for Emotional Stability, was lowest in the still condition. Interestingly, consensus was not systematically lower across traits in the audio only or the video only conditions compared to the condition where perceivers received both audio and video information. This result is consistent with thin-slices research, which indicates that perceivers need very limited information on which to base perceptions of targets (Ambady, Hallahan, & Rosenthal, 1995).

An additional refinement present in the Borkenau and Liebler (1992) study is the use of a community sample for the targets instead of college students. They found nearly three times the level of consensus found in the studies reviewed by Kenny et al. (1992). Thus, with a more representative sample of targets, the levels of consensus are higher.

Recent research has expanded the study of perceptions made at zero acquaintance from using cues provided directly by the target, to perceptions of personality not based on face-to-face interactions. Gosling and colleagues have examined perceptions of personality based on bedrooms, offices, and recently, musical preferences. In Gosling, Ko, Mannarelli, and Morris (2002), groups of perceivers made ratings of targets' personality on the Big Five after they examined the bedrooms and offices of targets. All photographs of targets were removed prior to judges entering the rooms. In addition, targets and judges never interacted. The authors found that for perceptions based on offices, consensus was largest for perceptions of Openness (roughly comparable to Culture in Kenny et al., 1994), followed by Conscientiousness and Extraversion. Agreeableness showed some consensus, and the least amount of consensus was found for Emotional Stability. For perceptions made based on bedrooms, results were consistent with perceptions of the targets' offices. Consensus was highest for Openness and Conscientiousness, followed by Extraversion and Agreeableness; little consensus was found for Emotional Stability.

Rentfrow and Gosling (2006) examined perceptions of personality based on music preferences. Targets gave lists of their top ten favorite songs; several perceivers then made personality ratings using the 44 item Big Five Inventory (John & Srivastava, 1999) of each target after listening to the songs. The authors ensured that perceivers had no

contact with the targets. Because perceivers and targets did not rate each other, consensus was computed as the intraclass correlation between the eight judges (Shrout & Fleiss, 1979). Perceptions of Openness to Experience, Conscientiousness, and Agreeableness showed the strongest consensus, followed by Extraversion. Consistent with Kenny et al. (1994), the least amount of consensus was found for perceptions of Emotional Stability.

Evidence indicates that consensus is consistently found at zero acquaintance, using a variety of methodological approaches to studying such perceptions. Early work in the area used round-robin designs where perceivers and targets all made perceptions of each other face-to-face, based on Norman and Goldberg's (1966) paradigm. Recent work has demonstrated how consensus is found for perceptions of videotaped targets, targets' living spaces, and even their musical preferences. Thus, personality is evident in a variety of contexts, even at zero acquaintance. Overall, consensus is largest for perceptions of Extraversion and Conscientiousness, and smallest for perceptions of Emotional Stability. It has been argued that consensus is highest for levels of Extraversion at zero acquaintance because Extraversion and Conscientiousness correlate highly with cues of physical appearance. In particular, Albright et al. (1998) found that perceptions of Extraversion correlated significantly with perceptions of attractiveness, and perceptions of Conscientiousness correlated highly with perceptions of how neatly and formally dressed targets were. Physical appearance cues are readily available cues utilized in face-to-face perception making. However, in Gosling and colleagues' work, perceivers never observed the targets. Thus, perceptions of personality for which high consensus is consistently found cannot be solely explained by physical appearance cues.

There have been relatively few studies that have examined consensus at zero acquaintance in non-Western cultures. Albright, Malloy, Dong, Kenny, Fang, Winquist, and Yu (1997) studied zero acquaintance in China. They showed somewhat lower consensus for Extraversion, but higher levels of consensus for the other factors.

### *Self-other Agreement*

In addition to consensus, one area of research that has attracted zero-acquaintance researchers in general and personality researchers in particular is the degree to which targets' self-judgments agree with the perceptions that strangers make of them. Perhaps the most surprising result in Norman and Goldberg (1966) was the finding that ratings of targets at zero acquaintance correlated with targets' self-ratings. The authors found that perceiver ratings of Extraversion (i.e., Sociable), Conscientiousness (i.e., Responsible) and Culture (i.e., Intellectual) all correlated positively with targets' self-ratings. Norman and Goldberg (1966) did not examine perceptions using a componential approach; self-other correlations are correlations between self-ratings and mean peer ratings.

When an SRM analysis of perception data is performed, self-other agreement is assessed as the correlation between the target effect and self-perception. Albright et al. (1988) used the SRM, and found results consistent with Norman and Goldberg (1966). Self-target correlations for Extraversion and Conscientiousness were statistically reliable. Kenny, Horner, Kashy, and Chu (1992) found somewhat consistent results with Albright et al. (1988). In studies 2 and 3 of Kenny et al. (1992), self-target correlations were substantial for Extraversion and Conscientiousness (.33 and .62 respectively). However, in Study 1, self-target correlations were essentially zero. Recall that in Study 1 of Kenny et al. (1992), perceivers made ratings based on short video clips of targets. Studies 2 and

3 used the same paradigm as Albright et al. (1988), where targets and perceivers were face-to-face when making perceptions. However, Borkenau and Liebler (1992) did find reliable self-other agreement, especially for Extraversion, when videotape information was presented. In addition, Rentfrow and Gosling (2006) also found that self-other agreement is relatively high for Extraversion, and perceptions were based on music preferences, where there was no possibility of interaction between targets and perceivers.

Self-other agreement for perceptions of other Big Five factors is consistently small to essentially zero in zero-acquaintance research. Recall that consensus for perceptions of Emotional Stability, in particular, is especially low. When there is not sufficient variance in an SRM component, in this case, the target effect, the correlation between the target effect and self-perceptions cannot be examined. In general, perceptions that demonstrate highest levels of consensus almost always demonstrate highest levels of self-other agreement.

We need to realize that self-other agreement does not necessarily imply accuracy for two different reasons. First, targets may wish to communicate their self-image to perceivers but that self-image may be false. For example, a target may believe he or she is athletic and he or she might communicate that self-image by wearing sweats, a headband, and running shoes, yet the target may actually not be athletic. Second, people might use the same false stereotype in the ratings of self and others.

### *Target Accuracy*

There has been much debate among person perception researchers on how to appropriately measure accuracy of perceptions, specifically, in defining the criterion measure for accuracy (e.g., Funder & Colvin, 1988). Some researchers define accuracy as

the correlation between self-perception and consensus (e.g., Blackman & Funder, 1998). Although self-perceptions are the clear criterion for accuracy in some contexts (e.g., sexual orientation), in perceptions of general personality traits, there are additional criteria that can be considered. For example, researchers have defined accuracy as the correlation between peer ratings and observer ratings, or inter-judge agreement (Funder, 1987). However, as discussed by Funder and Colvin (1988), consensus of peer ratings does not necessarily imply accuracy. Peers may agree with each other, but they may be inaccurate if agreement is based on shared stereotypes between perceivers.

An additional approach is to define the criterion for accuracy as the combined perceptions of self and peer (e.g., Gosling et al., 2002). In examining the degree of accuracy of perceptions of personality based on bedrooms and offices, Gosling et al. (2002) created a combined score of the perceptions of close acquaintances and self-ratings (the average correlation between peer and self reports was .40), and then correlated the combined ratings with the perceptions of strangers. For perceptions based on offices, accuracy was highest for ratings of Openness, followed by Extraversion, Conscientiousness, and Emotional Stability. Judgments of Agreeableness were not accurate. For perceptions based on bedrooms, accuracy was highest for Openness, followed by Conscientiousness and Emotional Stability. Accuracy was significant but weaker for Extraversion and Agreeableness.

Perhaps the least controversial criterion measure for accuracy of personality traits is behavior. Although not all personality traits map clearly onto behaviors, accuracy for perceptions of Extraversion can be examined by correlating perceptions with a behavioral measure of Extraversion. Levesque and Kenny (1993) instructed participants to first

complete personality ratings at zero acquaintance, in groups of four. Participants were then asked to make behavioral predictions for each of the targets, both when the target interacted with the perceiver herself, and when the target interacted with others in general. Perceptions were made for talking, voice animation, gazing, smiling, nervousness, gesturing, and body lean. Participants then took turns engaging in five-minute unstructured dyadic conversations, while being videotaped. The tapes were then coded by outside observers for the behaviors of talking, voice animation, gazing, smiling, nervousness, gesturing, and body lean. Results indicated significant generalized accuracy (but not dyadic accuracy) for perceptions of Extraversion for all of the behavioral predictions. Perceivers were able to accurately predict how targets would behave with others in general, but not with others in particular. Self-ratings of personality also correlated very highly with actual behaviors during interaction.

In sum, evidence indicates that perceptions at zero acquaintance do map onto behaviors, and that zero-acquaintance perceptions reliably correlate with perceptions that well-acquainted individuals make of targets. We next discuss a different form of accuracy, meta-accuracy of perceptions at zero acquaintance.

### *Meta-Accuracy*

A key interest in the field of interpersonal perception is the study of metaperceptions, or the perceptions that individuals think that others make of them (Kenny, 1994; Laing, Phillipson, & Lee, 1966). In some first impressions contexts, for example, in job interviews and first dates, meta-accuracy is of strong interest. In zero-acquaintance studies, metaperceptions are understudied because presumably, targets have little information on which to metaperceive. In zero acquaintance studies where

perceivers are provided with video-tapes or photographs of perceivers, targets have no information about particular perceivers on which to base metaperceptions. It is likely that when targets make metaperceptions of strangers, they rely heavily on two sources of information: Feedback they have received from outside of the laboratory on their standing on a trait, and self-perceptions. Previous work has found a consistently high correlation between self-perception and metaperception (Kenny & DePaulo, 1993).

Marcus and Miller (2003) examined metaperceptions of physical attractiveness using a round robin design with groups of men and women strangers.<sup>1</sup> The authors were primarily interested in the degree to which consensus and meta-accuracy are moderated by gender of the target and the perceiver. The authors found statistically reliable self-other agreement for perceptions of physical attractiveness for both male and female targets and perceivers. Thus, men's self-judgments agreed with how attractive they were perceived by both men and women, and women's self-judgments also agreed with how attractive they were viewed by men and women. Self-judgments are also highly correlated with metaperceptions. Women who considered themselves to be attractive believed that they were consistently viewed as attractive by most people, and those who considered themselves as unattractive believed they were consistently viewed as unattractive by most people. In addition, the authors found a considerable degree of generalized meta-accuracy (i.e., perceivers knew how attractive others viewed them in general). Thus, there is evidence that meta-accuracy can be achieved at zero-acquaintance. Next, we turn to an example of metaperceptions of personality measures.

Jung (2006), as reported in Kenny and West (2007), examined perceptions and metaperceptions of personality using a Korean sample of students. Using the Albright et

al. (1988) paradigm, participants each rated each other, themselves, and made metaperceptions on 20 personality traits. Jung found statistically significant generalized meta-accuracy for the traits Bold, Sloppy, Intelligent, Sincere, and Tough, with the average correlation being .42. As expected, there was little or no evidence of dyadic meta-accuracy, the average correlation being .03. Self-other agreement was found for perceptions of Bold and Tough. This study provides evidence that meta-accuracy is not always driven by self-perception, at least in a non-Western context. Although self-other agreement was found for two of the variables for which meta-accuracy was found, it was not found for the other three.

### *Stability of Perceptions*

There is common belief that first impressions are lasting impressions. Within the SRM, we can measure the stability of the target and the relationship effect. The stability of the target refers to extent to which the consensual part of the first impression is stable. The stability of the relationship effect refers to the stability of unique or idiosyncratic impressions of the target. It would seem reasonable that both components are stable with the target being more stable than the relationship.

In Table 1, we present the results from Kenny et al. (1992), as well as the results from one additional study. We see that the target effect is very stable, averaging to .77, and most of the stabilities are statistically different from zero. The relationship correlations are much weaker and only one of five is statistically different from zero. The following conclusion across the three studies seems warranted, despite the fact that we have limited data: Judgments at zero acquaintance that are consensual tend to be very stable after the perceivers have interacted with the targets. However, relationship or

idiosyncratic perceptions at zero acquaintance are not very stable. Thus, first impressions are lasting impressions only when they are consensual.

Likely some relational judgments might be more stable than others. For instance, we have not examined affect, or liking. Previous studies have shown that affect is highly relational. We might expect that first impression affective relational judgments are more stable than trait judgments. We also think it likely that for perceivers who are judging targets towards whom they have stereotypes, relational stabilities might be much stronger. For instance, in judgments of negatively evaluated outgroup members, it might be reasonable to expect strong stability in relational perceptions.

#### Process

The findings of consensus, self-other agreement, and target accuracy of first impressions are all quite surprising. The primary way that the researchers have attempted to understand these results has been to use the Brunswik (1956) lens model. In that model, a set of cues are presumed to explain the covariation between the judgment and the criterion. For instance, judges of intelligence use the cue of wearing glasses which might be a valid cue of actual intelligence.

In the zero-acquaintance literature, a key focus has been on stereotypes as possible cues given that relatively few target behaviors are observed. Because stereotypes are often consensually held, the finding of consensus at zero-acquaintance is hardly surprising. Norman and Goldberg (1966) argued that much of consensus is due to stereotypes. To the extent to which there are consensual judgments at zero acquaintance implies that to some extent stereotypes have a kernel of truth (Lee, Jussim, & McCauley, 1995). We should realize that stereotypes may be true, not because they are true but

rather because people believe them to be true, for example, the self-fulfilling prophecy. It would seem possible that some stereotypes actually reflect the opposite of reality. For instance, in judging how talkative someone would be in group, people might use the stereotype that women are more talkative than are men. Yet the data show that when gender neutral topics are discussed in groups, men actually tend to talk much more in groups than do women (Dovidio, Brown, Heltman, Ellyson, & Keating, 1988).

We have some concerns about the use of the lens model that we wish to discuss. First, we believe that the process of perception is much more complex than what occurs in the lens model. Perceivers' first impressions are determined by a multitude of pieces of information about the target's appearance and behavior. That information is viewed differently by different perceivers. Consider physical attractiveness, which might be seen as a cue in the lens model. It is a mistake to think there is a universally perceived cue of physical attractiveness that perceivers use in making perceptions. People disagree about physical attractiveness about as much as they agree (Hönekopp, 2006). Second, just because a cue seems to be effective in a Brunswik analysis does not necessarily mean that perceivers are actually using that cue. They could be using something very different that is correlated with cue. For instance, Pizzi, Blair, and Judd (2005) have shown that court judges are biased in giving sentences to defendants not so much by race per se but rather by faces with Afrocentric features.

### Conclusion

Several topics have been understudied in the zero-acquaintance literature. Although there is extensive literature on the perception of personality, there have been

fewer studies on the perception in other domains, for example, emotions. We also think the literature would benefit by a more controlled and focus study of stereotypes.

We have given very little attention to individual differences in perception, in particular, what types of perceivers are more accurate at zero acquaintance. The topic has received attention beginning with Estes (1938) and continuing to Ambady, Hallahan, and Rosenthal (1995). Paunonen (1991) even claimed accuracy at zero-acquaintance is due to a few perceivers being accurate. Our own view, initially articulated in Kenny and Albright (1987), is that individual differences in interpersonal perception are fairly weak. It would seem that at zero-acquaintance individual differences might be particularly small because the process is often automatic and requires little cognitive processing.

Our approach emphasizes a statistical model of interpersonal perception, the SRM. Most other researchers employ relatively simpler statistical methods, e.g., correlating of means. In part the reluctance to adopt the SRM is the requirement of specialized software. However, given the recent advances of multilevel modeling, it is now possible to estimate the SRM using conventional software, such as SAS and Amos. We believe that more researchers will start using the SRM given this change.

This book is testimony to the scientific importance of first impressions. One can make a case that in the last 20 years, the field of person perception has learned more about perception of targets in the first few minutes than about perception of targets in remaining years of acquaintance.

Table 1

## Stability of the Target and Relationship Effect

Study	Trait	Component	Stability
Kenny et al. (1992), Study 2	Extraversion	Target	.89*
		Relationship	.23
Kenny et al. (1992), Study 3	Extraversion	Target	.72*
		Relationship	.19
Albright et al. (1988) Study 1	Extraversion	Target	.72
		Relationship	.10 <sup>a</sup>
	Conscientiousness	Target	.81*
		Relationship	.20 <sup>a</sup>
	Culture	Target	.71
		Relationship	.25* <sup>a</sup>

<sup>a</sup>Correlation without error variance removed.

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## Footnotes

<sup>1</sup>One could argue that the Marcus and Miller (2003) study is not at zero acquaintance, because perceivers do have sufficient information to judge physical attractiveness. Nonetheless, we include the study because there are so few studies of metaperception at zero acquaintance.