

## Consensus in Personality Judgments at Zero Acquaintance

Linda Albright, David A. Kenny, and Thomas E. Malloy  
University of Connecticut

This research focused on the target effect on a perceiver's judgments of personality when the perceiver and the target are unacquainted. The perceiver was given no opportunity to interact with the target, a condition we refer to as *zero acquaintance*. We reasoned that in order to make personality judgments, perceivers would use the information available to them (physical appearance). Consensus in personality judgments would result, then, from shared stereotypes about particular physical appearance characteristics. Results from three separate studies with 259 subjects supported this hypothesis. On two of the five dimensions (extraversion and conscientiousness) on which subjects rated each other, a significant proportion of variance was due to the stimulus target. Consensus on judgments of extraversion appears to have been largely mediated by judgments of physical attractiveness. Across the three studies there was also evidence that the consensus in judgments on these two dimensions had some validity, in that they correlated with self-judgments on those two dimensions.

If individuals were asked to make judgments about the personality characteristics of individuals with whom they were unacquainted, how much consensus would there be? That is, to what extent would perceivers agree as to where each target stands on a given trait? With no behavioral information on which to make judgments, intuitively we might speculate that consensus should be near zero. If, however, perceivers have access to the physical characteristics of the strangers they are judging, consensus may result from the use of shared stereotypes regarding the personality concomitants of these cues.

Although there are studies that have measured consensus between acquainted individuals (Bourne, 1977; Cleeton & Knight, 1924; Dornbusch, Hastorf, Richardson, Muzzy, & Vreeland, 1965; Funder & Dobroth, 1987; Kenny & La Voie, 1984; Park, 1986), much less attention has been paid to the level of consensus in personality judgments made by perceivers who have never interacted with the target. The context in which perceivers are given no opportunity to interact with targets who are strangers to them (i.e., individuals of whom one has no prior knowledge) is called *zero acquaintance*. Given *zero acquaintance*, any impact of the stimulus target (i.e., consensus among judges) can be attributed primarily to the physical features of the target. Research with acquainted subjects would address the issue of how much the behavior of the target affects perceptions. This study, however, is concerned with the extent to which the

physical features of the stimulus target create consensus in judgments of personality.

Person perception research clearly documents the effect of schematic and stereotypic information on judgments of others (cf. Fiske & Taylor, 1984; Higgins, Herman, & Zanna, 1981; Markus & Zajonc, 1985). On encountering an individual, one is immediately presented with much information about her or him. Physical appearance information such as gender, race, physical attractiveness, and dress style are readily apparent and may accurately or erroneously drive initial perceptions. Consensus in judgments, then, may be created via the use of stereotypes concerning these features. Thus, the consensus studied here originates in an observable physical feature of the stimulus target that activates (cf. Anderson, 1985) cognitive structures (i.e., schemata) shared by many perceivers (i.e., stereotypes).

### Consensus as a Function of Acquaintance

Interest in consensus in the judgments of stimulus targets by perceivers unacquainted with the target has been evident since at least the early part of this century. Cleeton and Knight (1924) had well-acquainted individuals make judgments of each other's personality and intellect and found evidence for consensus. When these same stimulus targets were in the physical presence of judges with whom they were unacquainted, consensus was also observed. They tested the hypothesis that the geometry of facial characteristics would provide cues to perceivers that would, in turn, lead to convergence in judgments. Consensual judgments of personality and intellect, however, were not correlated with the measured geometry of the target's head and face. Clearly then the consensus observed by Cleeton and Knight was determined by some characteristic of the stimulus target that was unmeasured.

Passini and Norman (1966) have also studied consensus in

---

Analyses of these data were supported by NIMH Grant R01MH4029501 to David A. Kenny.

We thank Peter V. Oliver for assisting with the data collection and Debby Kashy for assisting with the analysis.

Correspondence concerning this article should be addressed to Linda Albright, who is now at the Department of Psychology, Westfield State College, Westfield, Massachusetts 01086.

personality judgments at zero acquaintance. They had 12 groups of six to nine unacquainted individuals rate themselves and the other members of their group on five dimensions, each indicated by four scales. These dimensions were extraversion, agreeableness, conscientiousness, emotional stability, and culture. Although Passini and Norman's prime interest was to confirm the factor structure of their set of 20 traits, they also found that the factor structure of the unacquainted individuals' ratings was the same as that found in previous research using highly acquainted individuals (Norman, 1963). Passini and Norman concluded that acquaintance does not alter conceptions of personality structure.

Norman and Goldberg (1966) studied consensus among four samples that varied on degree of acquaintance. Their zero acquaintance sample was the Passini and Norman (1966) sample. Norman and Goldberg found that consensus indexes were lower among unacquainted people than among acquainted people, but were not zero. There was some consensus, then, among the perceivers at zero acquaintance. In addition, Norman and Goldberg found that interrater agreement varied as a function of the dimension being rated. Specifically, they found the greatest interrater agreement on the dimensions of extraversion and conscientiousness.

The early research on accuracy in interpersonal perception also included some studies requiring subjects to make judgments of strangers and acquaintances. Although many of these studies have methodological problems (see Kenny & Albright, 1987), they do support the finding of some agreement or consensus in the ratings of strangers. Taft (1966) had 62 members of a senior undergraduate psychology course select two members of the class to rate, one with whom they were very familiar and one with whom they were very unfamiliar. He found greater accuracy in the judgments of the familiar target person than in the judgments of the unfamiliar target. Even in the latter, however, accuracy was significantly greater than zero. Accuracy was measured by the correspondence between the target's self-ratings and the judge's ratings of the target. Although consensus in ratings of a given target does not imply accuracy, accuracy does imply consensus. The consensus in this case, however, is between self-ratings and other ratings. Cloyd (1977), using a similar paradigm, replicated Taft's finding that accuracy is greater for acquaintances than strangers, but both are better than chance accuracy. Further, both Taft and Cloyd ruled out the possible mediation of accuracy by similarity and assumed similarity (see Gage & Cronbach, 1955).

### Consensus and Physical Appearance

The direct impact of physical appearance characteristics such as youthfulness (Berry & McArthur, 1986), attire (Conner, Nagasawa, & Peters, 1975), and facial attractiveness (Berscheid & Walster, 1974; Brunswik, 1956; Dion, Berscheid, & Walster, 1972; McArthur, 1982; Miller, 1970) on person perception has received much empirical attention. Berry and McArthur's (1986) research on "baby-faced" males indicates that these men are judged to be less strong and independent than nonyouthful men. Attire has been found to affect first impressions (Conner et al., 1975) as well as employee hiring recommendations (Forsthe, Drake, & Cox, 1985).

The physical attractiveness research overwhelmingly indicates that a target individual's facial attractiveness affects perceptions of him or her on a variety of personality traits. For the most part, attractive individuals are judged to hold more socially desirable personality traits than physically unattractive individuals (Dion et al., 1972). The attractiveness research suggests that this physical characteristic of individuals may produce a ubiquitous positivity or halo bias that drives perceptions on a vast array of characteristics, although there are exceptions (Dermer & Thiel, 1975).

Although most research on youthfulness, attire, and physical attractiveness has used a method that differs from our own in that still photos are used as opposed to actual physical presence, the judgments in both are made on the basis of no prior acquaintance. Thus, the effect of physically observable stimulus qualities on trait judgments is of prime interest in both approaches.

### Present Research

The purpose of the present research was to assess the consensus in judgments of targets at zero acquaintance by using the physical presence paradigm. Past research led us to expect consensus in personality judgments. The attractiveness research (cf. Brunswik, 1956; Dion et al., 1972) provided the hypothesis that this consensus at zero acquaintance may be determined by the target's physical attractiveness. Yet the attractiveness research generally studies consensus within the photo-target paradigm, whereas we used a physical presence paradigm.

Photographic stimuli and actual physical presence are differing methods of stimulus presentation for studying consensus of person perceptions at zero acquaintance. Each has advantages and disadvantages. Using photographs increases experimental control over the information available to the perceiver (i.e., behavioral cues), but may have limited generalizability. Actual physical presence, conversely, decreases control over available information, but is certainly representative of the process of making judgments of strangers.

In the studies we conducted, subjects in groups of four to six were requested to make ratings of themselves and each other on personality dimensions. Although we anticipated a significant amount of perceiver agreement or consensus in judgments of each target, we did not, however, expect significant correlations between self-judgments and strangers' consensual judgments. That is, because self and others have different information bases (i.e., knowledge of self-behavior vs. knowledge of physical appearance), we did not expect self-judgments to correlate with others' consensual judgments.

Further, we were interested in studying the mechanism for the agreement. That is, if people do converge in their ratings of a given target, what types of cues are they using? Given no opportunity to interact, judges must use observable characteristics from which stereotypic inferences are made. Thus, we were interested in specifying the information on which the agreement is based. With no opportunity for prior interaction or previous knowledge of the target, the possible cues leading to consensus are limited. We attempted to measure perceptions of the potentially important appearance cues that determine personality judgments.

To control for the various methodological artifacts (i.e., stereotype accuracy) present in dyadic data (Cronbach, 1955, 1958; Kenny & Albright, 1987), a round-robin design (Warner, Kenny, & Stoto, 1979) was used. The Social Relations Model (Kenny & La Voie, 1984; Malloy & Kenny, 1986) was used to analyze the data.

The current research includes three separate studies. Study 1 and Study 2 are methodologically equivalent; subjects in both studies rated themselves and the members of their group on the same dimensions using exactly the same procedure. The personality dimensions used in these two studies were from Norman (1963). One scale from each of the five dimensions (i.e., factors) was selected. These two studies were designed to test the hypothesis that consensus in judgments would emerge at zero acquaintance.

Study 3, which includes four separate data sets, used the same dimensions as Studies 1 and 2, but an additional scale from each of the dimensions was used in order to measure these factors more precisely. Study 3 also contained judgments of four physical appearance variables that each subject made of the other members of his or her group. This study was designed to test the hypothesis that specific physical appearance factors would drive these initial perceptions. These variables were chosen on the basis of observability and on the basis of relevance to the particular subject population. They were physical attractiveness, formality of dress style, neatness of attire, and perceived age (i.e., young-old).

## Method

### Subjects

Subjects in Study 1 were 57 students enrolled in a social psychology course at a small, selective private college. Subjects in Study 2 were 33 students enrolled in a research methods class at a public state university. Although methodologically equivalent, the subject samples were quite heterogeneous. Study 3 contained four separate data sets. Subjects were 169 students from two different state universities who were enrolled in one of three social psychology courses and an experimental psychology course. Participation in the study was on a voluntary basis. All members of each class agreed to participate.

### Procedure

At the beginning of the first or second class session,<sup>1</sup> subjects were told that a study was to be conducted that would yield data they would be using over the course of the semester. Participation was on a voluntary basis. Subjects were then told that the study entailed forming small groups and rating each of the group members on various traits. We used two different strategies to form groups of unacquainted subjects. The first procedure entailed having the subjects form groups themselves with the constraint that they have no previous acquaintance with or knowledge of each other. They were instructed to form groups quietly. Because our six samples were large groups of people (33 to 57) who were for the most part unacquainted with each other, the procedure was accomplished relatively efficiently. The second procedure entailed random assignment of subjects to groups. Once the groups were formed, any prior acquaintance between group members was ascertained. Of the total of 55 groups (across the three studies) only two switches had to be made in group composition in order to attain zero acquaintance within all groups. Results did not differ depending on which procedure

Table 1  
*The Round-Robin Design*

| Perceiver | Target |   |   |   |   |
|-----------|--------|---|---|---|---|
|           | A      | B | C | D | E |
| A         | s      | x | x | x | x |
| B         | x      | s | x | x | x |
| C         | x      | x | s | x | x |
| D         | x      | x | x | s | x |
| E         | x      | x | x | x | s |

Note. An x indicates a rating of a target; s, a self-rating.

was used. The number and size of the groups depended on the class size; no groups could contain less than four members.

Once the groups had been formed, each member was assigned a code letter (A, B, C, or D) as a means of identification. Group members were assured that their ratings would be confidential and were requested to make their ratings privately. Subjects were then given the forms on which to make their ratings. They rated each member of their group (by code letter), including themselves, on 7-point scales on each of 5 traits. The 5 traits were selected from the Norman (1963) factors, which contain 20 traits with five factors. One trait was chosen from each factor. The traits (and factors) were sociable (extraversion), good-natured (agreeableness), responsible (conscientiousness), calm (emotional stability), and intellectual (culture). Study 3 contains an additional trait from each factor, and four physical appearance dimensions, which were physical attractiveness, formality and neatness of dress style, and perceived age. Subjects reported their gender in all studies.

### Design and Analysis

Table 1 presents a schematic representation of the round-robin design with a 5-person (A through E) group. In a round-robin design multiple perceivers judge multiple targets, and subjects serve as both perceiver and target. Generally, a study must contain multiple groups (i.e., multiple replications of the design). The essential structure of the round-robin design is similar to a two-way random effects analysis of variance model with the factors being perceiver and target.

A social relations analysis of the data was performed using the computer program SOREMO (Kenny, 1987). This analysis is based on the Social Relations Model (Kenny & La Voie, 1984; Malloy & Kenny, 1986) and partitions the variance on each dimension into three sources that we refer to as perceiver, target, and relationship. The perceiver variance refers to the way a perceiver tends to view others. Do some perceivers tend to rate targets high, whereas others tend to rate others low? To the extent that this occurs there will be perceiver variance. Considering the trait of intelligence, do some individuals tend to see others as very intelligent, whereas others tend to see others as unintelligent? The magnitude of the perceiver variance indicates the perceivers' consistencies in their ratings across targets.

Target variance refers to the way an individual tends to be seen across perceivers. Similarly, are some targets generally seen as high on a trait, whereas others are seen as low? Again, to the extent that this pattern emerges in the data, there will be target variance. Are some targets seen

<sup>1</sup> Analyses were conducted to see whether conducting the study on the first versus the second day had an effect on the results. Across the six studies, two were conducted on Day 1 and four on Day 2. These analyses showed no systematic differences in the results as a function of this factor.

Table 2  
*Study 1 and Study 2: Relative Proportion of Variance*

| Trait        | Perceiver |         | Target  |         | Relationship/error |         |
|--------------|-----------|---------|---------|---------|--------------------|---------|
|              | Study 1   | Study 2 | Study 1 | Study 2 | Study 1            | Study 2 |
| Sociable     | .07       | .15*    | .41*    | .35*    | .52                | .50     |
| Good-natured | .06       | .53     | .00     | .03     | .94                | .44     |
| Responsible  | .22*      | .53*    | .27*    | .10*    | .51                | .37     |
| Calm         | .19       | .46*    | .12     | .00     | .69                | .54     |
| Intellectual | .32*      | .13     | .20*    | .03     | .48                | .84     |

\*  $p < .05$ .

as intelligent, whereas others are seen as unintelligent? The magnitude of the target variance indicates the consistency in the ratings of targets made by different perceivers. The relationship effect refers to a perceiver's unique perception of a particular target. The relationship variance is the variance in the data over and above the perceiver and the target variance.

The relationship effect is directional. If a perceiver rates a target as uniquely intelligent, that target may or may not reciprocate and rate that perceiver as uniquely intelligent. However, because in a round-robin design each subject is both a perceiver and a target, we can assess the degree to which the unique perception that A has of B matches the unique perception B has of A. To the extent that this matching occurs in the group, there is dyadic reciprocity in judgments. In the present study, however, we expected no dyadic reciprocity because the group members were unacquainted.

A social relations analysis provides a partitioning of the variance in the data into the components discussed. The absolute variance due to each component is given, as well as the percentage accounted for by each component relative to the other components. The components are presumed to be random-effect estimates that generalize to the population the samples represent. In the present study we are primarily interested in the relative contribution to the variance by the target: the relative target variance. What proportion of the variance in judgments of responsibility, for example, is due to the target? The magnitude of the target variance is an indication of the magnitude of agreement or consensus in the personality perceptions. If self-ratings are obtained, a social relations analysis also provides estimates of the degree to which there is correspondence between how one sees oneself and how one is seen by others. This is given by the self-target correlation.

A series of  $t$  tests of significance is provided for each of the components and for each of the self-target correlations. The unit of analysis for the significance tests is *group* for the variance components and *individual within group* for correlations of the target component with self-ratings or gender.

## Results

Results from the three studies are described separately, and then all are compared with the Norman and Goldberg (1966) results. Statistically based inferences were made at the .05 significance level. In Study 1 and Study 2 no significance tests are presented for the relationship components because they contain the error component. Only with multiple replications over time or multiple indicators can the relationship and error components be separated.

When presenting correlations with target effects, traits with low or near zero target variances are not considered. Variables with trivial target variances often produce anomalous (i.e., out

of range) correlations, which are meaningless. These anomalies occur because the Social Relations Model is a random-effects model (see Malloy & Kenny, 1986, and Miller & Kenny, 1986).

### *Study 1 and Study 2*

The relative variance partitioning for each of the five traits for Study 1 is given in Table 2. This study contained 12 groups of 4 to 5 people, a total of 57 individuals. Two subjects were dropped from the analysis because of a misunderstanding in the rating directions. Each used only the endpoints (i.e., 1 and 7) of the scale.

As seen in Table 2, there is significant perceiver variance on the traits responsible and intellectual. Significant target variance was observed on the traits sociable, responsible, and intellectual. The most robust target variance was on the trait sociable, with 41% of the variance in judgments of this trait being accounted for by the target. Thus, there was a considerable amount of agreement in the perceptions of the targets' sociability. The target accounted for 27% and 20% of the variance on judgments of responsibility and intellectual, respectively.

Table 2 also shows the relative variance partitioning for Study 2. The subjects in this study consisted of seven groups and a total of 33 individuals. There were 4 to 5 people in each group. Significant perceiver variance emerged on the traits sociable, responsible, and calm. Significant target variance emerged on the traits sociable and responsible, and accounted for 35% and 10% of the variance, respectively.

### *Study 3*

The relative variance partitioning for Study 3 is shown in Table 3. Study 3, as described earlier, contains two indicators for each of the Norman factors. There was a total of 36 four- to six-person groups. Statistically significant perceiver variance emerged on all of the traits. Their magnitudes vary, but are highest on the traits good-natured and cooperative, which indicate the construct agreeableness. Reliable target variance emerged on the traits sociable (25%), talkative (28%), good-natured (4%), responsible (11%), fussy (12%), composed (16%), and imaginative (8%). Target effects for the traits good-natured, cooperative, calm, composed, intellectual, and imaginative are generally low and indicate that the target had little impact on these judg-

Table 3  
Study 3: Relative Proportion of Variance

| Trait        | Perceiver | Target | Relationship/error |
|--------------|-----------|--------|--------------------|
| Sociable     | .28*      | .25*   | .47                |
| Talkative    | .14*      | .28*   | .58                |
| Good-natured | .46*      | .04*   | .50                |
| Cooperative  | .51*      | .03    | .46                |
| Responsible  | .36*      | .11*   | .53                |
| Fussy        | .23*      | .12*   | .65                |
| Calm         | .19*      | .05    | .76                |
| Composed     | .25*      | .16*   | .59                |
| Intellectual | .39*      | .06    | .55                |
| Imaginative  | .32*      | .08*   | .60                |

\*  $p < .05$ .

ments, although good-natured, composed, and imaginative did reach statistical significance.

Interestingly, the pattern of variance partitioning is generally similar for traits indicating the same construct. This further validates the factor structure of this set of traits. One exception is the variance partitioning for calm and composed, the two scales for the dimension emotional stability. The target variance for calm is 5% and nonsignificant, whereas the relative target variance for composed is 16% and statistically reliable.<sup>2</sup>

Because multiple indicators of each construct were obtained in this study, relationship variance was partitioned from error variance. Table 4 shows the percentage of perceiver, target, and relationship variances of the *stable* construct variance.<sup>3</sup> One can readily see from Table 4 the lower relative relationship variances once the relationship component has been separated from error. At the construct level, the target accounts for 20% of the variance in extraversion and 10% of the variance in conscientiousness. Interestingly, these target effects are independent, the correlation being only  $-.11$ .

Four physical appearance judgments were measured in Study 3. The relative variance partitioning for these variables is shown in Table 5. Reliable target variance emerged on all the appearance variables, the target accounting for 27% of the variance on attractive, 17% of the variance on formality of dress, 19% on neatness of attire, and 8% on perceived age. Reliable perceiver variances were associated with all of the variables and were quite high. Interestingly, the perceiver effects for these relatively observable traits are generally higher than those for the personality traits. Also shown in Table 5 are the self-target correlations for the physical appearance variables. These correlations indicate that to a small to moderate extent, how individ-

Table 4  
Study 3: Relative Proportion of Variance of Constructs

| Trait               | Perceiver | Target | Relationship | Error |
|---------------------|-----------|--------|--------------|-------|
| Extraversion        | .04       | .20    | .28          | .48   |
| Agreeableness       | .28       | .03    | .17          | .52   |
| Conscientiousness   | .04       | .10    | .01          | .85   |
| Emotional stability | .11       | .09    | .16          | .64   |
| Culture             | .19       | .00    | .02          | .79   |

Table 5  
Study 3: Relative Proportion of Variance,  
Physical Appearance Variables

| Variable         | Perceiver | Target | Relationship/<br>error | Self-target<br>correlation |
|------------------|-----------|--------|------------------------|----------------------------|
| Attractive       | .33*      | .27*   | .40                    | .23*                       |
| Formally dressed | .47*      | .17*   | .36                    | .35*                       |
| Neatly dressed   | .53*      | .19*   | .28                    | .43*                       |
| Young            | .74*      | .08*   | .18                    | .25*                       |

\*  $p < .05$ .

uals were seen by others was related to how they saw themselves. The low self-target correlation for physical attractiveness replicates the finding of others (Patzer, 1985).

Subjects were requested to make these judgments of their group members so that we could ascertain the basis on which there was agreement in the personality judgments. To accomplish this, we computed correlations between the target effects in the personality judgments and the target effects on the physical appearance variables. Again, traits with little target variance were not considered. Thus, we computed the correlations between target effects on the constructs extraversion and conscientiousness and target effects on the four appearance variables. Table 6 shows these appearance-trait judgment correlations. Significance tests are not available for these construct-level correlations. The criterion for statistical significance for these correlations was that the correlations between both indicators and the particular appearance variable be statistically reliable. If both indicators were not reliably correlated with the particular variable, the construct-level correlation was considered nonsignificant.

It can be seen from Table 6 that the target effects on the extraversion construct are highly correlated with target effects in physical attractiveness ( $r = .74, p < .05$ ). Thus, it appears that the primary basis for the consensus in the judgment of extraversion is the judgment of physical attractiveness. Those who were perceived by the group as attractive were perceived as extraverted. The target effect on sociable was uncorrelated with the target effect on all other physical appearance variables. The basis for the convergence in the conscientiousness judgments is also clear. The highest correlations for conscientiousness are with dress style: formal versus informal and neat versus sloppy, at .76 and .73, respectively ( $p < .05$ ). The target effect on conscientiousness was uncorrelated with the target effect on physical attractiveness ( $-.03$ ) and was correlated with young ( $-.46$ ), but

<sup>2</sup> The other anchor on this scale was *excitable* (i.e., excitable-composed). Because this trait did show a negative correlation with the extraversion factor, we believe composed may be an indicator of both emotional stability and extraversion. There is evidence supporting this view in Tupes and Christal (1961), as reported by Passini and Norman (1966).

<sup>3</sup> Currently there is no provision for significance tests at the construct level within SOREMO (Kenny, 1987). However, given the large number of subjects (169), dyads (318), and groups (36) in Study 3, we felt that we could adopt a conservative strategy.

Table 6  
*Study 3: Correlations Between Target Effects in Extraversion and Conscientious and Target Effects in the Physical Appearance Variables*

| Physical appearance traits | Extraversion | Conscientiousness |
|----------------------------|--------------|-------------------|
| Attractive                 | .74*         | -.03              |
| Formally dressed           | .05          | .76*              |
| Neatly dressed             | .11          | .73*              |
| Young                      | -.11         | -.46              |

\* Significant at  $p < .05$ .

was not statistically reliable. Although it makes sense that dress style determines target effects on judgments of conscientiousness, this hypothesis needs further study.

#### *Norman and Goldberg (1966)*

Given the similarities in the Passini and Norman (1966) study and our three studies, we compared our results with those of Norman and Goldberg (1966). Table 7 shows the relative target variances for the four samples. The Norman and Goldberg estimates are not target variances but estimates of interrater agreement, and can be interpreted as variances. The results of our three studies are consistent with each other, as well as with Norman and Goldberg. Across the four samples, both extraversion and conscientiousness are associated with a fair amount of interrater agreement or consensus. The constructs of agreeableness, emotional stability, and culture consistently show little or no interrater agreement.<sup>4</sup> It is clear from these four studies that under the condition of zero acquaintance people do agree on how sociable and conscientious individuals are.

Table 8 shows the self-target correlations for our three studies and for Norman and Goldberg (1966). Self-target correlations for Study 1 were significant on the traits sociable and responsi-

Table 7  
*Relative Target Variances*

| Trait        | Sample                         |         |         |         |
|--------------|--------------------------------|---------|---------|---------|
|              | Norman & Goldberg <sup>a</sup> | Study 1 | Study 2 | Study 3 |
| Sociable     | .24                            | .41*    | .35*    | .25*    |
| Talkative    | .18                            | —       | —       | .28*    |
| Good-natured | .05                            | .00     | .03     | .04*    |
| Cooperative  | .04                            | —       | —       | .03     |
| Responsible  | .17                            | .27*    | .10*    | .11*    |
| Fussy        | .15                            | —       | —       | .12*    |
| Calm         | .07                            | .12     | .00     | .05     |
| Composed     | .05                            | —       | —       | .16*    |
| Intellectual | .11                            | .20*    | .03     | .06     |
| Imaginative  | .09                            | —       | —       | .08*    |

Note. Dashes signify data not collected.

<sup>a</sup> Estimates for Norman and Goldberg (1966) are not target variances, but rather estimates of interrater agreement for which no significance tests were available.

\*  $p < .05$ .

Table 8  
*Self-Target Correlations*

| Trait        | Sample                         |         |         |         |
|--------------|--------------------------------|---------|---------|---------|
|              | Norman & Goldberg <sup>a</sup> | Study 1 | Study 2 | Study 3 |
| Sociable     | .38*                           | .44*    | .33     | .21*    |
| Good-natured | .15                            | .00     | -.23    | -.16    |
| Responsible  | .34*                           | .52*    | .52     | .35*    |
| Calm         | .02                            | .01     | .00     | .34     |
| Intellectual | .32*                           | -.19    | .82     | .07     |

<sup>a</sup> Norman and Goldberg (1966) correlations represent factor-level correlations between self-rating and peer rating.

\*  $p < .05$ .

ble, at .44 and .52, respectively. Thus, on these two traits perceptions of strangers were correlated with self-perceptions and, surprisingly, to a considerable degree. In Study 2, the self-target correlations for sociable and responsible were .33 and .52, respectively, but were not statistically significant. The self-target correlation for intellectual appears substantial at .82, but the variance due to target on this trait is only 3% and unreliable. Thus, this correlation is not meaningful. The self-target correlations in Study 3 for sociable and responsible are .21 and .35, respectively, and are statistically significant.

Our data are generally consistent with those of Norman and Goldberg (1966). The Norman and Goldberg correlations are factor-level correlations, and thus are more reliable than our single-indicator level correlations. However, the Norman and Goldberg estimates are not component correlations, but rather are mere correlations between self-rating and peer's rating. Across our three studies there was generally low target variance on the agreeableness, emotional stability, and culture dimensions (except in Study 1 on intellectual and Study 3 on composed), and so these correlations are not considered. The self-target correlations on sociable and responsible are generally consistent across the four samples, and show a small to moderate correlation between the self-rating and the target effect on sociable, and a moderate self-target correlation on responsible. On the basis of the four samples, then, it appears that the consensus in judgments of sociability and responsibility has some validity.

#### *Gender Effects*

Gender was another cue available to perceivers in this context. Analyses designed to test for gender effects showed a high correlation between gender and the target effect on conscientiousness ( $r = .64, p < .05$  in Study 3). Thus, women were generally seen as more conscientious. Conscientiousness was the only dimension for which both scales correlated with gender. However, gender was correlated with the target effect on good-natured at .49 ( $p < .05$ ), and the target effect on imaginative at

<sup>4</sup> There is significant target variance for culture in Study 1 and a trend for consensus on this factor in the Passini and Norman (1966) data. Perhaps consensus emerges in groups in which intelligence is highly valued.

.42 ( $p < .05$ ) in Study 3. Overall, then, although the results are somewhat unclear on the agreeableness and culture dimensions, the data indicate that gender does not determine initial perceptions of extraversion and emotional stability, but does seem to influence perceptions of conscientiousness.

### Discussion

The current research focused on consensus in personality judgments in a face-to-face context among individuals at zero acquaintance. We reasoned that in the zero-acquaintance situation, perceptions would be driven by the physical appearance information of the target stimulus. Thus, the consensus observed was a function of shared beliefs about the personality correlates of physical appearance characteristics.

#### *Consensus in Judgments of Sociability and Responsibility*

The most reliable and robust finding across the three studies was the effect due to the target on the traits sociable and responsible. What makes this result even more impressive is the consistency of our observations with those of Norman and Goldberg (1966) who collected their data more than 20 years ago. Despite heterogeneity in methodology (e.g., group formation based on random assignment vs. zero acquaintance), results were fairly consistent across the six samples comprising 55 groups. On average, across the three studies the target accounted for 34% of the variance on judgments of sociability and 16% of the variance on judgments of responsibility. At first glance, these results are perplexing. Intuitively, one might not expect any consensus in personality judgments of individuals who are completely unacquainted and who have never interacted. However, our data strongly indicate that, at least on certain traits, judgments made by unacquainted persons are to some extent consistent across perceivers. This result is consistent with other social perception research that yields evidence for consensus in a zero-acquaintance, physical presence paradigm (Cleeton & Knight, 1924).

Across the studies the traits sociable and responsible had a significant amount of target variance, whereas the traits good-natured, calm, and intellectual did not consistently show target variance. Thus, the results differed dramatically depending on which trait was being judged. This pattern is interesting because all the judgments should have been equally difficult to make, as the judgments were made at zero acquaintance. What makes these traits different? Funder and Dobroth (1987) found a similar effect for extraversion in their study of differences between traits in amount of consensus. In their study, subjects were rated by acquaintances on the 100 items of the California Q-Sort. They found that the traits perceived as most easily visible tended to have the highest consensus, and further, that these traits tended to be positively related to the factor extraversion. The fact that this effect occurs with both acquainted and unacquainted subjects perhaps suggests that the subjective visibility and the magnitude of consensus associated with sociability is in part due to perceivers' use of physical appearance cues and associated stereotypes. The issue remains open, however, as to why there are shared stereotypes for some traits, such as sociable, but not for others.

Further, evidence emerged in these studies that the consensual judgments have some validity. The average self-target correlation across the three studies was .33 for sociable and .46 for responsible. Thus, there is less consensus in judgments of responsibility than in judgments of sociability, but the consensus on the former seemed to have more validity. We do not claim, however, that these correlations indicate accuracy, although there is evidence for the validity of self-judgments in some contexts (Schrauger & Osberg, 1981). In this study one should consider that when making self-judgments, individuals did have self-observation on which to base their judgment, and these judgments correlated with perceptions by strangers.

There are two studies we know of that treated perceptions of individuals well-acquainted with a target as a validity criterion against which to compare judgments by strangers (Brunswick, 1956; Cleeton & Knight, 1924). The Cleeton and Knight study showed high levels of acquaintance-stranger agreement, whereas the Brunswick study showed more modest agreement. In the Brunswick study, only judgments of the target's attractiveness made by well-acquainted persons correlated with strangers' judgments of the target.

Given that the group members were unacquainted and had little or no opportunity to observe the behavior of the people they were rating, the next question becomes, on what was the consensus based. The primary basis for consensus in judgments of sociability seems to have been physical attractiveness. The correlation between the target effect on sociable and the target effect on attractiveness was .74. Judgments of responsibility seem to have been determined in part by the targets' formality and neatness of dress style. Two other factors, however, could possibly have determined the consensus in judgments of sociability: prior exposure to targets' behavior and nonverbal behavior.

One might argue that subjects had prior opportunities to observe the targets' sociability. The subjects may have observed the targets before the class, during the class, or during the interval in which groups were formed. During any of these times the subjects may have seen the targets engage in interpersonal behavior. We see this explanation as unlikely for two reasons. One reason is methodological: For exposure to some targets talking or interacting to have created significant target variance, those "sociable" targets would have to have been represented in each or at least most of the groups. Had we broken up each of the classes into a few groups that were large in size, this would be plausible. In fact, however, we divided the classes into many groups that were small in size. Second, we attempted to reduce and even eliminate interaction while forming the groups. The plausibility of the second factor, nonverbal behavior, is considered in the next section.

#### *Covariation of Attractiveness and Sociability*

The physical attractiveness effect on judgments of sociability present in our data is not entirely surprising. In her work on physical attractiveness stereotyping, Dion (1986) stated that "physically attractive persons are judged more positively than physically unattractive individuals on various traits, especially those reflecting social competence and interpersonal ease" (p. 8). However, it is interesting to note that this attractiveness ste-

reotype did not occur across all traits. In fact, across the 10 traits, attractiveness was correlated with only 3: sociable, talkative, and good-natured. The studies on physical attractiveness have concluded that attractiveness leads to a general positivity effect, in that personality traits as a whole are rated on the socially desirable end of the scale. Our data contradict this general halo bias with respect to attractiveness. It may be, however, that judgments based on photographs are more susceptible to a halo bias.

The correlation of the target effects on attractiveness and sociability could be due to an attractiveness stereotype (i.e., attractive people are sociable) or to some third (unmeasured) variable that influences both the judgment of sociability and attractiveness. For example, nonverbal information such as eye contact, smiling, and posture were available to perceivers, which plausibly could influence judgments of attractiveness and sociability. However, because these variables are dyadic, we feel it is unlikely that they explain our results. For instance it would be impossible for only one "eye contactor" to be in a group; it takes two people to make eye contact. Similarly, smiling tends to occur at the dyadic level; generally, one does not simply sit and smile. One smiles at someone. Only if these variables occurred at the individual level would they be confounded with the target effects observed. Posture, however, certainly would occur at the individual level and therefore cannot be ruled out. However, why posture would correlate with perceived attractiveness is not clear. Overall, the hypothesis that perceived attractiveness determined perceived sociability seems most plausible.

Evidence exists that attractive individuals may be more sociable than less attractive individuals, and may engage in more social interaction. For example, Goldman and Lewis (1977) found that even when interaction was limited to a blind, anonymous telephone call, physically attractive persons were rated as more likable and more socially skillful. Adams (1977) directly stated that the attractiveness stereotype may in large part be true. Also, Reis et al. (1982) had subjects varying in attractiveness keep daily records of behavior. They found that attractive men reported having spent more time in social interaction with women than did unattractive men, but found no differences between attractive and unattractive women in quantity of interaction. However, attractiveness related to quality of social interaction for both women and men. Thus, there is some evidence in the literature that suggests that attractiveness and sociability covary, and that attractiveness drives the covariation. If in fact attractive individuals are more social, then our results reflect perceivers' sensitivity to this covariation as a result of learning and experience. This would also explain the self-target correlation on sociability.

### *Origin of the Self-Target Correlation*

Recall that the self-target correlation indexes the degree to which self-perception and perceptions by others covary. We find a generally consistent pattern of self-target correlations on the variables sociable and responsible in our studies that replicates Norman and Goldberg's (1966) results. This means that there is self-other agreement in judgments of these traits. How might this agreement emerge? There are at least three explanations for

self-other agreement on perceptions of personality. First, it is possible that these personality characteristics are real, known to one's self, and perceptible by others with whom one has not interacted through attractiveness, which is correlated with sociability. One possible explanation for a true covariation between attractiveness and sociability is self-fulfilling prophecy. If people believe that attractive individuals are sociable, they may actually elicit sociable behavior from attractive people, which then confirms their hypothesis. A second possible explanation is that self-target correlations are due to a shared stereotype. If individuals share the same set of associated beliefs (e.g., attractive people are sociable), then this belief will cause both the self-judgment and the target effect, resulting in strong self-target correlation. A third possibility is that the self-target correlation is due to an effective self-presentation strategy. Imagine, for example, an individual who characteristically strives to present a sociable image to the world and usually succeeds in this quest. Given these conditions, a strong self-target correlation would be expected on those dimensions characterized by effective self-presentation.

In conclusion, this series of studies suggests several issues for future research. Our subjects made judgments of each other only at zero acquaintance. It would be interesting to know if these judgments would persevere with increasing acquaintance, or whether more behaviorally based information would override these appearance-based judgments. Do individuals seen as sociable at zero acquaintance continue to be seen as sociable with increasing acquaintance? There is also a need for research to isolate the causal order of the observed covariation of attractiveness and sociability. Finally, the origin of the self-target correlation offers great possibilities for continued research.

### References

- Adams, G. R. (1977). Physical attractiveness research: Toward a developmental social psychology of beauty. *Human Development, 20*, 217-239.
- Anderson, J. R. (1985). *Cognitive psychology and its implications* (2nd ed.). New York: Freeman.
- Berry, D. S., & McArthur, L. Z. (1986). Perceiving character in faces: The impact of age-related craniofacial changes on social perception. *Psychological Bulletin, 100*, 3-18.
- Berscheid, E., & Walster, E. (1974). Physical attractiveness. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 7, pp. 158-215). New York: Academic Press.
- Bourne, E. (1977). Can we describe an individual's personality? Agreement on stereotype versus individual attributes. *Journal of Personality and Social Psychology, 35*, 863-872.
- Brunswick, E. (1956). *Perception and the representative design of psychological experiments*. Berkeley: University of California Press.
- Cleaton, G. U., & Knight, F. B. (1924). Validity of character judgments based on external criteria. *Journal of Applied Psychology, 8*, 215-231.
- Cloyd, L. (1977). Effect of acquaintanceship on accuracy of person perception. *Perceptual and Motor Skills, 44*, 819-826.
- Conner, B. H., Nagasawa, R. H., & Peters, K. (1975). Person and costume: Effects on the formation of first impressions. *Home Economics Research Journal, 4*, 32-41.
- Cronbach, L. J. (1955). Processes affecting scores on "understanding of others" and "assumed similarity." *Psychological Bulletin, 52*, 177-193.
- Cronbach, L. J. (1958). Proposals leading to analytic treatment of social

- perception scores. In R. Tagiuri & L. Petrullo (Eds.), *Person perception and interpersonal behavior* (pp. 353-379). Stanford, CA: Stanford University Press.
- Dermer, M., & Thiel, D. L. (1975). When beauty may fail. *Journal of Personality and Social Psychology*, 31, 1168-1176.
- Dion, K. K. (1986). Stereotyping based on physical attractiveness: Issues and conceptual perspectives. In C. P. Herman, M. P. Zanna, & E. T. Higgins (Eds.), *Physical appearance, stigma, and social behavior: The Ontario symposium* (Vol. 3, pp. 7-21). Hillsdale, NJ: Erlbaum.
- Dion, K. K., Berscheid, E., & Walster, E. (1972). What is beautiful is good. *Journal of Personality and Social Psychology*, 24, 285-290.
- Dornbusch, S. M., Hastorf, A. H., Richardson, S. A., Muzzy, R. E., & Vreeland, R. S. (1965). The perceiver and the perceived: Their relative influence on categories of interpersonal perception. *Journal of Personality and Social Psychology*, 1, 434-440.
- Fiske, S. T., & Taylor, S. E. (1984). *Social cognition*. Reading, MA: Addison-Wesley.
- Forsythe, S., Drake, M. F., & Cox, C. E. (1985). Influence of applicant's dress on interviewer's selection decisions. *Journal of Applied Psychology*, 70, 374-378.
- Funder, D. C., & Dornbusch, K. M. (1987). Differences between traits: Properties associated with interjudge agreement. *Journal of Personality and Social Psychology*, 52, 409-418.
- Gage, N. L., & Cronbach, L. J. (1955). Conceptual and methodological problems in interpersonal perception. *Psychological Review*, 62, 411-422.
- Goldman, W., & Lewis, P. (1977). Beautiful is good: Evidence that the physically attractive are more socially skillful. *Journal of Experimental Social Psychology*, 13, 125-130.
- Higgins, E. T., Herman, C. P., & Zanna, M. P. (Eds.). (1981). *Social cognition: The Ontario symposium* (Vol. 1). Hillsdale, NJ: Erlbaum.
- Kenny, D. A. (1987). *SOREMO: A FORTRAN program for round robin data structures*. Unpublished manuscript, University of Connecticut, Storrs.
- Kenny, D. A., & Albright, L. (1987). Accuracy in interpersonal perception: A social relations analysis. *Psychological Bulletin*, 102, 390-402.
- 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). Orlando, FL: Academic Press.
- Malloy, T. E., & Kenny, D. A. (1986). The Social Relations Model: An integrative method for personality research. *Journal of Personality*, 54, 199-225.
- Markus, H., & Zajonc, R. B. (1985). The cognitive perspective in social psychology. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology* (3rd ed., Vol. 1, pp. 137-230). New York: Random House.
- McArthur, L. Z. (1982). Judging a book by its cover: A cognitive analysis of the relationship between physical appearance and stereotyping. In A. Hastorf & A. Isen (Eds.), *Cognitive social psychology* (pp. 149-211). New York: Elsevier.
- Miller, A. (1970). Role of physical attractiveness in impression formation. *Psychonomic Science*, 19, 241-243.
- Miller, L. C., & Kenny, D. A. (1986). Reciprocity of self-disclosure at the individual and dyadic levels: A social relations analysis. *Journal of Personality and Social Psychology*, 50, 713-719.
- Norman, W. T. (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. *Journal of Abnormal and Social Psychology*, 66, 574-583.
- Norman, W. T., & Goldberg, L. R. (1966). Raters, ratees, and randomness in personality structure. *Journal of Personality and Social Psychology*, 4, 681-691.
- Park, B. (1986). A method for studying the development of impressions of real people. *Journal of Personality and Social Psychology*, 51, 907-917.
- Passini, F. T., & Norman, W. T. (1966). A universal conception of personality structure? *Journal of Personality and Social Psychology*, 4, 44-49.
- Patzner, G. L. (1985). *The physical attractiveness phenomena*. New York: Plenum Press.
- Reis, H. T., Wheeler, L., Spiegel, N., Kernis, M. H., Nezelek, J., & Perri, M. (1982). Physical attractiveness in social interaction: II. Why does appearance affect social experience? *Journal of Personality and Social Psychology*, 43, 979-996.
- Schrauger, J. S., & Osberg, T. M. (1981). The relative accuracy of self-predictions and judgments by others in psychological assessment. *Psychological Bulletin*, 90, 322-351.
- Taft, R. (1966). Accuracy of empathetic judgments of acquaintances and strangers. *Journal of Personality and Social Psychology*, 3, 600-604.
- Tupes, E. C., & Christal, R. E. (1961). Recurrent personality factors based on trait ratings. *USAF ASD Technical Report* (No. 61-67).
- Warner, R., Kenny, D. A., & Stoto, M. (1979). A new round robin analysis of variance for social interaction data. *Journal of Personality and Social Psychology*, 37, 1742-1757.

Received July 1, 1987

Revision received March 16, 1988

Accepted March 23, 1988 ■