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Personality Assessment and Behavioral Prediction at First Impression

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Abstract

Research on person perception has demonstrated high levels of consensus and self-other agreement for judgments of extraversion and conscientiousness. However, the mechanisms whereby assessments of these traits contribute to accuracy in behavioral predictions remain unclear. In this study, two judges rated 34 targets on the Big Five personality factors, and predicted their compliance to offer help in response to a fabricated emergency. Whereas one judge interacted directly with the target, the other judge only observed the interaction. There was consensus on extraversion, conscientiousness, agreeableness, and openness to experience, and self-other agreement on conscientiousness for both judges. Critically, self-reported conscientiousness fully mediated the effect of judged conscientiousness on compliance to offer help, regardless of the nature of the judge-target interaction. These results demonstrate a mechanism whereby judged personality can predict a specific behavioral outcome in initially unacquainted persons.

Keywords: First impression, interpersonal perception, thin slicing, zero acquaintance.

Personality Assessment and Behavioral Prediction at First Impression

Ever since the pioneering work of Norman and Goldberg (1966), personality psychologists have been interested in understanding personality assessment between unacquainted persons. In this literature, *consensus* refers to the degree to which two perceivers rate a target the same way, whereas *self-other agreement* refers to the degree to which a person's self-rating matches the ratings of others.¹ These two constructs have been studied using predominantly two methodologies: zero acquaintance and thin slicing. The *zero acquaintance* approach involves one person observing another (and/or vice versa) with no interaction involved. Studies using this approach have shown that for Big Five factors there is consensus (Kenny, Horner, Kashy, & Chu, 1992) and self-other agreement (Watson, 1989) for extraversion and conscientiousness. The *thin slicing* approach involves participants drawing inferences about a target's personality based on short excerpts of social behavior. Here again, evidence points to consensus (Borkenau & Liebler, 1993) and self-other agreement (Carney, Colvin, & Hall, 2007) for extraversion and conscientiousness. Thus, reliable and valid impressions of a target's standing on these two traits can emerge based on limited information.

However, laypeople are not interested in personality assessment for its own sake. Rather, they tend to be interested in judging others' personalities to the extent that it allows future behavior to be anticipated. For example, in our everyday lives, we are less interested in the extent to which a person is extraverted, and more interested in whether a person assessed as 'extraverted' will behave socially in an upcoming interpersonal

¹ Self-other agreement has sometimes been referred to as *accuracy*, where self-reports of personality are treated as a person's true standings on given traits. This view has been challenged, and therefore we opt to use the term 'self-other agreement' rather than accuracy.

situation. In one of the few studies to investigate this question, Levesque and Kenny (1993) demonstrated that targets who were rated as extraverted by multiple judges under zero acquaintance were also more talkative with partners during subsequent dyadic interactions. This suggests that for extraversion, assessed personality and behavior are correlated. However, the mechanisms that may mediate that relationship remain unclear, not only for extraversion but also for the other Big Five factors.

The aim of the current study was to investigate the mechanism whereby judged conscientiousness leads to accuracy in predicting helping behavior—operationalized as compliance with a request for help (see Method). Previous research has shown that *self-reported* conscientiousness is related to compliance (reviewed in Organ, 1994) and helping behavior (Ladd & Henry, 2000). However, no study has established a link between *judged* conscientiousness and helping behavior. We hypothesized that self-reports of conscientiousness would mediate the effect of judged conscientiousness on helping behavior (Hypothesis 1). In other words, judged conscientiousness should only be an accurate predictor of helping behavior to the extent that it correlates with self-reported conscientiousness, which in turn should drive behavior (see Hogan, 2005).

In addition, previous research has shown that high consensus and self-other agreement for extraversion and conscientiousness may be due to the salience of cues that judges can use to make those assessments, such as facial expressions (e.g., cheerfulness) for extraversion (Borkenau, Brecke, Möttig, & Paelecke, 2009) and neatness and grooming for conscientiousness (Kenny et al., 1992). If that were the case, then the judge interacting with the target may have a predictive advantage because interacting with a target may offer more opportunity to directly observe relevant physical cues. However,

alternatively, it is possible that direct engagement with a target may deplete limited cognitive resources that might otherwise be used toward making assessments (Garrod & Pickering, 2004). According to this view, the judge *not* interacting with the target may have a predictive advantage because she will have more cognitive resources available for personality assessment. Either way, we hypothesized that the mediation discussed above would be moderated by the nature of the contact between the judge and the target (Hypothesis 2). According to null hypothesis, the nature of contact between the judge and the target should have no impact on the mediation discussed above.

We opted to test our hypotheses under a more ‘naturalistic’ condition than zero acquaintance or thin slicing. Specifically, when first impressions are made in everyday contexts, they are typically not made under zero acquaintance or thin slice conditions, but occur under conditions of *short-term acquaintance*, wherein the judge and target interact for a brief period—usually less than an hour (Kenny, Albright, Malloy, & Kashy, 1994). Furthermore, unlike many zero acquaintance studies in which participants are aware that they also are being rated (e.g., round robin designs), we focused on predicting the behavior of targets who were unaware of being assessed. We therefore employed a ‘classic design’ in which each participant was either a judge or a target (Kenny & Albright, 1987), combined with deception to ensure that targets were unaware of being assessed.

Method

Participants

Thirty-four female undergraduates from the University of Toronto volunteered to participate in this study. We recruited females to avoid possible gender differences that exist in the ability to assess personality (e.g., Ambady, Hallahan, & Rosenthal, 1995).

Materials and Procedure²

The experiment was conducted in a lab consisting of three separate but interconnected rooms. Upon arrival in the lab, the participant entered the reception room and was greeted by one of two female confederates (Confederate 1). Confederate 1 introduced herself as a research assistant, administered an Informed Consent form, and informed the participant that she would be asked to complete a series of self-report measures of personality on a computer. During this phase, the second confederate (Confederate 2) sat inside the computer booth in the main lab area, which is where the participant would eventually complete the self-report measures. Once the participant completed the forms, Confederate 1 entered the main lab area to ask Confederate 2 whether the experimental setup was ready, and was informed that due to a technical problem the computer would need to undergo a “hard reboot,” requiring several minutes. This exchange was clearly audible to the participant in the reception room (ascertained during piloting). Confederate 1 re-entered the reception room to inform the participant about this problem, and that the experiment would start approximately 10-15 minutes later than expected. The participant was reassured that because the self-report measures were designed to take 30 minutes to complete, she would nevertheless finish on time (i.e., within one hour). All participants agreed to wait to complete the study.

² Due to the intricacy of the procedure implemented for this study, the methodology was piloted in full on thirteen participants before beginning data collection.

In fact, the computer did not have a technical problem. This deception was incorporated into the design to create a 10-minute opportunity for Confederate 1 to interact with the participant in the form of a semi-structured interview. As soon as the participant's verbal agreement to complete the experiment was received, Confederate 1 asked that the participant move into the main lab area. Upon entering the lab, the participant could clearly see Confederate 2 ostensibly attempting to reboot the computer. The participant was instructed to sit on a chair next to a table. Confederate 1 took the remaining chair and engaged the participant in a semi-structured interview in the form of a conversation between previously unacquainted persons (described below). Once Confederate 1 and the participant were both seated, Confederate 2 was not visible to them, although she had a clear view of the pair from the computer booth within the lab through a one-way mirror.

The interview. The semi-structured interview between Confederate 1 and the participant was designed to last 10 minutes (as measured by Confederate 2 using a stopwatch). The point of entry into the conversation was a discussion of the unexpected computer problem, including questions about the participant's level of past experience with computer problems. Confederate 1 then inquired about current university life, stating an interest to return to study at the university following a brief hiatus. The participant was asked about her major, courses, professors, and recommendations for possible classes in psychology. At some point in the conversation the difficult parking situation on campus was discussed, at which time Confederate 1 raised her concern about getting a ticket or possibly even having her car towed. This topic was injected as a prime for the solicitation of help (i.e., the target behavior) later.

The structure of the interview was guided by three main principles. First, Confederate 1 was trained by one of the experimenters (OV) to follow a specified path of questions—in the form of a branching tree—that could sustain the conversation for 10 minutes. However, although some questions were necessarily asked, Confederate 1 was given some flexibility to add other conversational components to sustain the dialogue. Second, care was taken to ensure that the participant did not feel interrogated. Rather, the interaction was to be experienced as natural, and as a chance encounter with a stranger. Third, the content of the questions used by Confederate 1 was guided by the personality assessments that needed to be made later. In other words, Confederate 1 was instructed to pay attention to the content of the participant's verbalizations so that they could later assess the factors of extraversion (e.g., is she talkative?), emotional stability (e.g., is she upset?), agreeableness (e.g., does she appear friendly?), conscientiousness (e.g., does she appear reliable?), and openness to experience (e.g., is she enrolled in a diversity of classes?).

Personality assessment. After the 10 minutes had elapsed, Confederate 2 informed Confederate 1 that the computer had rebooted. Confederate 1 apologized for the delay, and led the participant to the computer booth. Confederate 1 informed the participant that she would now complete the self-report measures, and instructed her to exit the booth whenever the task had been completed. Confederate 2 then started the computer program and left the booth, leaving the door ajar. The program administered the Big Five Inventory (John, Donahue, & Kentle, 1991). It followed this with a lengthy and irrelevant 200-item personality questionnaire which was administered to ensure that the participant would not be able to complete the task before the scripted interruption

time—precisely at the end of the hour. Note that at no time did Confederate 2 interact directly with the participant.

While the participant was engaged in the task, the two confederates sat in separate rooms and completed the Big Five Inventory to assess the participant. In addition, both confederates predicted whether the participant would engage in the predetermined target behavior by checking the box next to ‘*I predict that this participant will consent to offer help*’ or ‘*I predict that this participant will decline to offer help.*’ The confederates also indicated how confident they were in their judgment using a scale ranging from 1 (not at all) to 7 (extremely).

Target behavior. Once Confederate 1 had completed her assessments of the participant, she simulated a phone call from her friend calling to report that her car was being towed by campus police. Acting audibly distressed, Confederate 1 rushed to report this information to Confederate 2 in the main lab area, and to inform her that she had to leave immediately to remedy the situation. Confederate 2 then asked about some of the lab equipment that was in the car, and was told by Confederate 1 that “we will deal with that later.” Confederate 1 then hurriedly exited the lab. Everything that transpired from the initiation of the phone call until the departure of Confederate 1 was clearly audible to the participant in the booth (ascertained during piloting).

At the end of the hour, Confederate 2 interrupted the participant and informed her of the reason the experimenter left suddenly.³ Confederate 2 then indicated her concern about the equipment that was in the car, and her intent to leave immediately to make sure

³ It was likely that this would be believable to the participant because, in the course of the interview, Confederate 1 had informed the participant that, because of her hiatus from school, she was unfamiliar with current campus parking regulations, and that she was somewhat concerned about whether she could park where she had.

the equipment was brought back to the lab. She then asked whether the participant would be willing to stay in the lab to help the next participant, scheduled to arrive shortly. She explained that the participant would have to welcome the next participant into the lab and administer the Informed Consent form and the information sheet. The request was carefully worded such that the participant was given a choice of two options—to accept or to decline to offer help. Confederate 2 terminated the experiment as soon as the participant chose one of the options. The experiment ended with a “funnel interview” to determine whether the participant was aware of the hypotheses or the deception employed in the experiment. Participants were then thanked and debriefed.

Results

The funnel interview indicated that none of the participants was aware of the hypotheses or the deception. Therefore, data from all participants were included in the analyses.

The assignment of the two confederates to the two roles was counterbalanced across participants. The coefficient alpha for inter-rater reliability of personality ratings for Big Five factors across the two confederates (hereafter referred to as *judges*) was 0.77. To calculate consensus and self-other agreement we employed correlations (see Kenny et al., 1994). Specifically, we report participant-based correlations that are averaged across participants, rather are item-based correlations that are averaged across items. Table 1 shows these correlations for consensus judgment and for self-other agreement calculated for each judge (and the targets) separately. As can be seen from Table 1, there was consensus between the two judges on all Big Five factors except neuroticism. For Judge 1 there was self-other agreement for extraversion and

conscientiousness, while for Judge 2 there was self-other agreement for conscientiousness, but disagreement on openness.

Twenty-nine participants offered help (73.5%). Judge 1 predicted the behavior of twenty-two participants accurately (65%), whereas Judge 2 predicted the behavior of nineteen participants accurately (56%). The judges did not differ in the accuracy of their behavioral predictions, $\chi^2(1) = 3.82$, ns. Furthermore, binary logistic regressions demonstrated that confidence was unrelated to accuracy of behavioral predictions for Judge 1 ($\beta = .04$, ns) or Judge 2 ($\beta = -.20$, ns).

To test our hypothesis that self-reported conscientiousness would mediate the effect of judged conscientiousness on compliance to offer help (Hypothesis 1), we first determined whether or not judged conscientiousness was a significant predictor of compliance to offer help. A binary logistic regression confirmed higher judged conscientiousness was related to compliance to offer help, $\beta = 0.77$, Wald = 6.59, $p < .05$. We then examined the mediator properties of self-reported conscientiousness by determining its relationships to both judged conscientiousness and compliance to offer help, and by examining the revised relationship between judged conscientiousness and compliance to offer help when self-rated conscientiousness was included as a mediator. As shown in Figure 1, judged conscientiousness predicted self-reported conscientiousness such that higher judged conscientiousness was related to higher self-reported conscientiousness; self-reported conscientiousness predicted compliance to offer help such that higher self-reported conscientiousness predicted compliance; and, when controlling for self-reported conscientiousness, the effect of judged conscientiousness on compliance to offer help was significantly attenuated (Sobel-test $z = -2.02$, $p < .05$).

Given that the effect of judged conscientiousness on compliance to offer help was no longer significant after controlling for self-reported conscientiousness, self-reported conscientiousness is a full mediator of this relationship.

We tested Hypothesis 2 using the methods developed by Preacher, Rucker, and Hayes (2007) for moderated mediation. Specifically, using their SPSS macro, we tested the three relevant moderated mediation models (i.e., 2, 3, and 5) and found that, contrary to Hypothesis 2, the nature of the contact (direct vs. observational) did not moderate the predictor-mediator or the mediator-criterion relation.

Discussion

The novel contribution of our study was demonstrating a mechanism whereby judged personality can predict a specific behavioral outcome in initially unacquainted persons. Specifically, our results demonstrated that self-reported conscientiousness fully mediated the link between judged conscientiousness and compliance to offer help (Figure 1). Thus, judged conscientiousness is an accurate predictor of compliance to offer help to the extent that it correlates with self-reported conscientiousness, which in turn drives compliance to offer help. This result underscores the role of relevant traits (e.g., conscientiousness) as drivers of behavior (e.g., compliance), and the importance of personality judgments as windows into self-reported standings on those traits.

Interestingly, the type of contact with the target (direct vs. observational) did not moderate the observed mediation effect. Assuming that the two confederates had access to the same information emitted by the target, this suggests that direct engagement with a target does not lead to improved assessment of personality or behavioral prediction. This consideration is relevant in cases where personality assessment or behavioral prediction

must occur using recorded material (e.g., interviews). To the extent that the content is not degraded, there may be no loss of assessment and/or predictive power. Equally, this result suggests that direct engagement with a target does not limit assessment ability due to the depletion of cognitive resources that might otherwise have been focused on making judgments (Garrod & Pickering, 2004), or interfere with the assessment of an individual's willingness to help. Our evidence does not suggest these processes are not occurring, only that they are not significantly affecting personality assessment or behavioral prediction.

Finally, conscientiousness emerged as the only trait for which there was significant self-other agreement for both judges (Table 1). Given that both judges were aware of the target behavior in advance, this suggests that judges may be able to 'tune their antennas' toward detection of relevant personality cues given advance knowledge about behaviors of interest. The extent to which judges can adapt the way in which they utilize behavioral information in their judgments deserves more attention. The answer to this question should help us understand not only more about the personality judgment process in general, but also more about how people use judgments within their social context to predict behavior. To explore this question, future studies should investigate the generalizability of our findings among other personality-behavior pairings.

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Table 1

Consensus and self-other agreement in personality rating

Comparison	Big-5 Trait				
	E	A	C	N	O
<i>Consensus</i>					
Judge 1 (direct) – Judge 2 (observational)	.67***	.49**	.59***	.32	.50**
<i>Self-Other Agreement</i>					
Judge 1 (direct) – Target self-report	.42*	.33	.41*	.12	.28
Judge 2 (observation) – Target self-report	.30	.28	.41*	-.01	-.37*

Note. E = Extraversion, A = Agreeableness, C = Conscientiousness, N = Neuroticism, O

= Openness to Experience. * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 1. Beta values for the mediator model of the effect of judged conscientiousness on compliance to offer help (standard errors in parentheses).

