# RELIANCE ON INDIVIDUATING INFORMATION AND STEREOTYPES IN IMPRESSION FORMATION: THE DIAGNOSTICITY AND JUDGMENT TASK MODEL OF PERSON PERCEPTION

By

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#### ABSTRACT OF THE DISSERTATION

Reliance on Individuating Information and Stereotypes in Impression Formation: The

Diagnosticity and Judgment Task Model of Person Perception

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This dissertation proposes and tests the diagnosticity and judgment task model of person perception. This decision tree model of reliance on stereotypes and individuating information in impression formation makes a priori predictions regarding in what situations perceivers will rely on individuating information, in what situations they will rely on stereotypes (i.e., category information), and in what situations they will rely on both sources of information. The central tenet of the model is that the diagnosticity (i.e., relevance, usefulness) of the individuating information and the type of judgment task jointly influence reliance on stereotypes and individuating information in stereotyperelevant target evaluations. In the present research, the model's two main a priori hypotheses were tested: (1) In the presence of highly diagnostic individuating information and category information, perceivers should rely exclusively on individuating information in target evaluations, regardless of the judgment task at hand; and (2) in the presence of somewhat diagnostic information and category information, perceivers should rely exclusively on individuating information in trait ratings, but on stereotypes and individuating information in occupational suitability judgments and

target-relevant predictions. The first hypothesis was supported, but the second was not.

These results are discussed in the context of previous relevant research.

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#### Introduction

As social beings, people constantly evaluate others on both the conscious and the automatic level. Therefore, it is important to understand what sources of information influence our perceptions of other individuals (i.e., *person perception*). In the person perception literature, special emphasis is placed on two sources of information: social category information (e.g., race)—and, subsequently, stereotypes associated with the social category—and individuating information. *Stereotypes* are beliefs about the characteristics of groups and their individual members (Ashmore & Del Boca, 1981)—for example, "Black people have low intelligence" (Devine, 1989; Rubinstein, Jussim, & Stevens, 2018). On the other hand, *individuating information* (i.e., attribute information) is any information about a target other than category information (Kunda & Thagard, 1996; cf. Brewer, 1988)—for example, an individual's IQ score.

In what situations does each type of information play a role in our judgments of other people? This dissertation draws on prior theoretical and empirical literature to provide an account of person perception that discusses several previously unaddressed questions in the literature. Its focus is on the joint importance of the diagnosticity (i.e., relevance, usefulness) of available individuating information and the type of judgment task at hand in determining whether perceivers will rely on individuating information, stereotypes, or both in target evaluations.

Prior theoretical accounts of reliance on stereotypes and individuating information in person perception

**Dual Process Model of Impression Formation.** The first major theory addressing reliance on stereotypes and attribute information in person perception was the

dual process model of impression formation (Brewer, 1988). The central idea in this model is that person perception is either category-based, in which information processing is organized around categories, or attribute-based, in which information processing is organized around target attributes; the two types of processing are not integrated with one another. Another focal argument in this model is that category information takes primacy over attribute information in person perception; category-based processing is the default in person perception and perceivers engage in attribute-based processing only if they are strongly motivated to do so.

Weaknesses. The major weakness of this model is that it does not predict different outcomes for attribute information that varies in its degree of diagnosticity. This is despite prior empirical research that had manipulated the diagnosticity of individuating information and found that reliance on such information depends in part on its diagnosticity (e.g., Futoran & Wyer, 1986; Heilman, 1984; Locksley et al., 1980, Study 2). These studies included highly diagnostic, somewhat diagnostic and, in some cases, nondiagnostic individuating information. In addition, when considered together, previous studies conducted separately that tested the effects of individuating information of different degrees of diagnosticity provide evidence for this claim. These studies found differences across programs of research in studies providing somewhat diagnostic information compared with those providing highly diagnostic information. In the former, stereotype effects were found to substantially influence judgments (e.g., Berndt & Heller, 1986; Dipboye, Fromkin, & Wiback, 1975), while in the latter, stereotypes did not affect judgments (Guttmann, 1984; Major, Carnevale, & Deaux, 1981) or its effects were

diminutive in magnitude (Heneman, 1977). The *dual process* model fails to address this body of previous findings.

Continuum model of impression formation. Fiske & Neuberg's (1990) continuum model of impression formation revolves around a "continuum" of person perception along which lie different possible ways that perceivers use stereotypes and individuating information and ultimately form impressions of others. Category- and attribute-based processing represent the extremes of this continuum, and intermediate kinds of processing lie between these extremes.

Like the *dual process* model, the *continuum* model is a serial model of person perception.

Also in keeping with the *dual process* model, although the *continuum* model describes situations where individuating information influences person perception, a central argument of this theory is that category information dominates attribute information in person perception. In fact, the *continuum* model argues that, after taking into account the characteristics of the individuating information and the category label, people will only rely on individuating information when: (1) cognitive resources needed to pay attention to individuating information are available, and (2) perceivers are motivated to pay attention to the individuating information.

Weaknesses. The continuum model does not specify any conditions under which perceivers rely on both individuating information and stereotypes in person perception and therefore fails to address previous empirical evidence that had demonstrated such findings (e.g., Glick, Zion, & Nelson, 1988; Heilman, 1984; Krueger & Rothbart, 1988, Study 2). In addition, the continuum model does not address differences between various

types of judgment tasks in reliance on individuating information and stereotypes and therefore cannot explain such findings (e.g., Bodenhausen & Wyer, 1985, Study 2; Crawford et al., 2011, Study 2; Glick et al., 1988; Jackson, Sullivan, & Hodge, 1993, Studies 1 & 2; Kobrynowicz & Biernat, 1997, Study 2). Finally, the *continuum* model (and the *dual process* model) assumes that stereotypes are the predominant influence on person perception, and this assumption arguably has subsequently been invalidated; a meta-analysis (discussed below) has shown that individuating information has a far greater influence (Kunda & Thagard, 1996).

Parallel-Constraint-Satisfaction Model of Impression Formation. While the prior models agree that stereotypes dominate person perception and are the default mode of person perception, Kunda & Thagard's (1996) parallel-constraint-satisfaction model of impression formation is agnostic regarding the question of whether stereotypes or individuating information take primacy in person perception; this model argues that neither category- nor attribute-based processing is the default mode of person perception. Also in contrast with prior models, the parallel-constraint-satisfaction (PCS) model is not a serial model of person perception; instead, according to this model, category and attribute information are processed simultaneously, can jointly influence person perception, and can affect each other's interpretation. The model proposes that a nonconscious spreading activation network is the mechanism underlying person perception.

*Meta-analysis*. Within the *PCS* model, Kunda & Thagard present a meta-analysis on the sizes of individuating information and stereotype effects. Their analysis revealed that the average effect size for stereotypes' influence on person perception (r=.25) is far

smaller than the average effect size for individuating information (r=.71). Thus, although the *model* is agnostic regarding whether stereotypes or individuating information take primacy in person perception, the authors conclude from their meta-analysis that overall, individuating information is considerably more powerful, despite the model's ability to account for specific situations where stereotypes take priority. This meta-analysis was ground-breaking because it provided direct evidence against prior models' assertions that stereotypes dominate individuating information in person perception.

Weaknesses. Like the continuum model (Fiske & Neuberg, 1990), the PCS model does not distinguish between highly and somewhat diagnostic individuating information; it distinguishes only between diagnostic and nondiagnostic information. While this was an improvement over the dual process model (Brewer, 1988), there are conceptual and empirical reasons to distinguish between highly diagnostic and somewhat diagnostic individuating information. At the conceptual level, it is not optimal for a perceiver who has a goal of making an accurate judgment to rely on somewhat diagnostic individuating information to the same extent as highly diagnostic information. And empirically, while studies that utilize highly diagnostic individuating information almost unanimously find no stereotype effects (e.g., Baron, Albright, & Malloy, 1995; Bodenhausen & Lichtenstein, 1987; Clark et al., 2009; Crawford et al., 2011; Guttmann, 1984; Heilman, 1984; Kobrynowicz & Biernat, 1997; Krueger & Rothbart, 1988; Linville & Jones, 1980; Locksley, Hepburn, & Ortiz, 1982; Locksley et al., 1980; Madon, Jussim, Keiper, Eccles, Smith, & Palumbo, 1998; Major et al., 1981; Pratto & Bargh, 1991; Rasinski, Crocker, & Hastie, 1985; Rubinstein, Jussim, & Stevens, 2018; cf. Biernat & Manis, 1994; Vrugt & Schabracq, 1996), those that employ somewhat diagnostic individuating information

oftentimes do find stereotype effects (e.g., Crawford et al., 2011; Dipboye, Fromkin, & Wiback, 1975; Glick, Zion, & Nelson, 1988; Heilman, 1984; Nelson, Acker, & Manis, 1996; cf. Pratto & Bargh, 1991). Because it does not address somewhat diagnostic information, the *PCS* model cannot account for these findings.

In addition, although the *PCS* model is the first to discuss the phenomenon in the literature that judgment task format influences stereotype effects in the presence of individuating information and also separately addresses the role of the diagnosticity of individuating information in its effects on person perception, it does not integrate these two phenomena. Instead, the authors imply that the outcomes of various judgment tasks differ given individuating information of *any* degree of diagnosticity. However, their argument may be more accurate in situations where individuating information is somewhat diagnostic (as opposed to highly diagnostic); all of the studies they cited as *not* supporting their judgment task argument employed highly diagnostic individuating information, whereas studies using somewhat diagnostic individuating information consistently lent support to their claim.

**Political person perception (P3) model.** The proposed model will build most closely on the *political person perception (P3) model* (Crawford et al., 2011). The *P3* model is a decision tree model of reliance on individuating information and/or stereotypes in political person perception (Figure 1). This model highlights the role of the diagnosticity and content of available information in determining reliance on stereotypes and/or individuating information.

Strengths and weaknesses. The P3 model's advantage over prior models is that, in contrast with these prior models, it makes clear a priori predictions regarding the

contributions of individuating information and stereotypes in person perception. In addition, it is the only model to address the role of somewhat diagnostic individuating information in person perception.

One weakness of the *P3* model is the fact that its scope is very limited; it exclusively applies to political person perception. In addition, the *P3* model ignores the previously demonstrated phenomenon that reliance on individuating information and/or stereotypes depends on the type of judgment task at hand (reviewed by Kunda & Thagard, 1996). The proposed model builds on the *P3* model's strengths and also addresses its limitations by adapting the *P3* model to describe person perception in general rather than political person perception and by addressing the differences between various types of judgment tasks in perceivers' reliance on stereotypes and/or individuating information.

#### The Diagnosticity and Judgment Task Model of Person Perception

This dissertation proposes the *diagnosticity and judgment task (DJT)* model of person perception, which builds upon the strengths of prior models and addresses many of their limitations to fill several important theoretical gaps in the person perception literature. First, most past models (Brewer, 1988; Fiske & Neuberg, 1990; Kunda & Thagard, 1996) ignore the distinction between somewhat and highly diagnostic individuating information despite important conceptual and empirical reasons to draw this distinction (discussed above). Although the *P3* model does address somewhat diagnostic information, a general model of person perception that includes somewhat diagnostic individuating information has yet to be proposed because the *P3* model is limited to political person perception.

Second, although prior models have separately addressed the roles of the diagnosticity of individuating information (e.g., Crawford et al., 2011; Kunda & Thagard, 1996) and the type of judgment task at hand (Kunda & Thagard, 1996) in determining reliance on stereotypes and/or individuating information, previous models do not consider the joint influence of these situational factors. It is important to do so because trends in past empirical research suggest that such consideration is warranted (discussed above).

Further, no past models of *general* person perception have made a priori predictions regarding when perceivers rely on individuating information and/or stereotypes in person perception. The *P3* model makes such predictions but is exclusively relevant to political person perception. Due to their lack of a priori hypotheses, none of the past models of general person perception discussed above are falsifiable.

The proposed model addresses all of these issues by making falsifiable a priori predictions regarding reliance on stereotypes and individuating information in person perception. Unlike prior models, these predictions jointly take into account the diagnosticity of the individuating information and the type of judgment task at hand, and explicitly distinguish between highly and somewhat diagnostic individuating information. Finally, in keeping with the *PCS* model (Kunda & Thagard, 1996) and the *P3* model (Crawford et al., 2011), but unlike the *continuum* model (Fiske & Neuberg, 1990) and the *dual process* model (Brewer, 1988), the *DJT* model does not assume that reliance on stereotypes is the default mode of person perception. However, it should be noted that, due to the specificity of the *DJT* model, there are many studies of reliance on stereotypes

and individuating information that the model does not address (see Appendix A for a complete list of excluded studies, and for reasons for these exclusions).

#### **Key definitions and concepts**

Defining individuating information. All definitions of individuating information agree that information suggesting that an individual does not conform to a group stereotype is individuating information (e.g., Brewer, 1988; Fiske & Neuberg, 1990; Kunda & Thagard, 1996). For instance, according to this definition, finding out that a Black student scored a 1500 on his SATs is individuating information because it runs counter to the stereotype that Black people have low intelligence (e.g., Devine, 1989; Rubinstein et al., 2018). However, the *DJT* model adopts Kunda & Thagard's (1996) definition of individuating information as "any information about an individual other than category information" because, unlike other definitions (e.g., Brewer, 1988), it allows for the possibility that individuating information can be stereotype-consistent. For instance, if a perceiver learns that a Black student scored a 900 on his SATs, this would be consistent with the stereotype, but is still individuating information because it is not true of all Black people.

**Defining levels of diagnosticity.** The *DJT* model focuses on *subjective* rather than *objective* diagnosticity. In other words, it relies on perceivers' own evaluations of how diagnostic individuating information is.

Highly diagnostic individuating information is evaluated by perceivers as highly relevant to or useful for an evaluation. For example, if perceivers are asked to predict the likelihood that John is a doctor, highly diagnostic individuating information might consist of being apprised that John was a pre-med major in college. Somewhat diagnostic

individuating information is evaluated by perceivers as somewhat relevant to or useful for an evaluation. Continuing with the previous example, somewhat diagnostic information might consist of being informed that John was a physics major in college; while it suggests an aptitude for science, physics does not play a central role in medicine.

Nondiagnostic individuating information is evaluated by perceivers as not at all relevant or useful to the present evaluation; in the same example, knowing that John ate a sandwich the previous day might comprise nondiagnostic individuating information.

Types and groupings of judgment tasks. For conceptual and empirically-based reasons (discussed later in the Introduction), the *DJT* model distinguishes between trait ratings (TRs) on the one hand and occupational suitability judgments (OSJs) and target-relevant predictions (TRPs) on the other hand. These three types of judgment tasks are the focus of the model because, together, they comprise the majority of the person perception literature.

As defined by the model, in TR tasks, perceivers evaluate the target on stereotype-relevant traits using Likert-type scales. OSJs are career- or education-related evaluations that involve judgments of the target's suitability for jobs or educational positions (e.g., college student) that require stereotype-relevant capabilities. TRPs involve the perceiver making stereotype-relevant predictions about the target— oftentimes, but not always, about the target's future behavior. Sometimes OSJs and TRPs are combined into occupation- or academics-related predictions (e.g., predicted GPA), but since these two types of judgments are predicted to—and have been shown to—result in the same outcomes, these situations are of no concern.

**Defining an effect of individuating information on person perception.** For the purpose of this dissertation, an individuating information effect is conceptualized as perceivers' reliance on individuating information in evaluating an individual when the content, diagnosticity, valence, and/or presence or absence of the individuating information varies in some way between- or within-subjects<sup>1</sup>.

Compared with studies that exclusively manipulate the presence or absence of individuating information, studies that manipulate the content, diagnosticity, or valence of the individuating information provide a stronger empirical test for individuating information effects because there is variation in the actual individuating information; in studies where the presence or absence of individuating information is manipulated, there are no changes in the actual individuating information. However, studies manipulating the presence or absence of individuating information are nonetheless useful for assessing reliance on individuating information in person perception because changes in evaluations caused by the individuating information, compared with reliance on group stereotypes, can be established.

**Defining an effect of stereotypes on person perception.** In this dissertation, a stereotype effect is the extent to which perceivers rely on stereotypes (i.e., category information, target group) when target category varies between- or within-subjects.

#### **Model conditions**

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<sup>&</sup>lt;sup>1</sup> Between- or within-subjects variation must be present because there can be no statistical "effect" without such variation. Because the model's predictions all relate to both individuating information *and* stereotype effects, studies that hold individuating information and/or target group constant (see Appendix A) are not cited in the context of the model's a priori hypotheses despite the abundance of such studies in the person perception literature; in these types of studies, one or both types of "effects" cannot be demonstrated from a statistical standpoint.

The *DJT* model is intended to apply only when the following conditions are met: (1) perceivers have adequate cognitive resources to attend to both category and individuating information, and (2) there are no special motivational influences. Prior research has shown that when cognitively busy (e.g., Clark et al., 2009, Study 2; Macrae, Hewstone, & Griffiths, 1993; Pendry & Macrae, 1994) and under information overload (e.g., Pratto & Bargh, 1991) perceivers rely on stereotypes to a greater extent. Further, different motivations can lead to reliance on different sources of information in person perception (e.g., Fiske & Neuberg, 1990). These circumstances are not addressed by the *DJT* model.

#### **Model description**

The *DJT* model is a decision tree model consisting of four potential decision nodes. Each perceiver is faced with three decisions (Figure 2). In Decision 1, perceivers evaluate whether the individuating information at hand is highly diagnostic. The model predicts that, if it is, perceivers will exclusively rely on it in target evaluations regardless of the judgment task. This prediction is consistent with prior empirical research finding this generally to be the case for TRs on the one hand (Baron, Albright, & Malloy, 1995, Studies 1 & 2; Bodenhausen & Lichtenstein, 1987; Crawford et al., 2011, Study 2; Dipboye & Wiley, 1977; Kobrynowicz & Biernat, 1997, Study 2; Linville & Jones, 1980, Study 2; Madon et al., 1998; Major, Carnevale, & Deaux, 1981, Studies 1 & 2; Rubinstein, et al., 2018, Studies 1, 2 & 3; cf. Vrugt & Schabracq, 1996) and for TRPs and OSJs on the other hand (Beckett & Park, 1995; Bodenhausen & Lichtenstein, 1987; Crawford et al., 2011, Study 2; Dipboye & Wiley, 1977; Guttmann, 1984; Heilman, 1984; Heneman, 1977; Jackson et al., 1993, Studies 1 & 2; Krueger & Rothbart, 1988,

Studies 2 & 3; Locksley et al., 1980; Locksley, Hepburn, & Ortiz, 1982; Rasinski et al., 1985; Rubinstein et al., 2018, Studies 1, 2 & 3; cf. Kobrynowicz & Biernat, 1997, Studies 2 & 3; Krueger & Rothbart, Study 1). As reviewed above, prior theories generally address either the diagnosticity or judgment task component of this hypothesis (with the exception being the *PCS* model, which discussed each separately).

If the individuating information at hand is not highly diagnostic, perceivers proceed to Decision 2, where they decide whether the information is somewhat diagnostic or nondiagnostic. If it is nondiagnostic, perceivers move to Decision 3b, where they determine whether there is a stereotype that is relevant to the judgment. If not, the model predicts that perceivers will respond randomly regardless of the type of judgment task due to a lack of available relevant information. But if the individuating information is nondiagnostic and there *is* a relevant stereotype, the model predicts exclusive reliance on the stereotype regardless of the type of judgment task. Past data support this prediction (e.g., Hilton & Fein, 1989; Krueger & Rothbart, 1988; Locksley et al., 1980, Study 2). Further, if the only relevant available information is category information, perceivers' only choices are to use that information or to respond randomly. Given people's desire to make valid judgments (e.g., Eagly & Chaiken, 1993; Fiske & Neuberg, 1990), in such cases reliance on category information is superior to random responding from a logical perspective.

Returning to Decision 2, if the perceiver decides that the information is somewhat diagnostic, he or she proceeds to Decision 3a: Judgment task format. Here, the two possibilities are TRs on the one hand and OSJs and TRPs on the other. Consistent with past empirical evidence (Glick, Zion, & Nelson, 1988; Jackson & Cash, 1985; Linville &

Jones, 1980, Study 2; McKirnan, Smith, & Hamayan, 1983; Pratto & Bargh, 1991), the model predicts that when perceivers are given somewhat diagnostic individuating information and category information, perceivers will rely exclusively on the individuating information in TRs. In contrast, the model predicts that TRPs and OSJs given somewhat diagnostic individuating information and category information will be influenced both by stereotypes and individuating information. This hypothesis is generally supported by past empirical evidence (Crawford et al., 2011, Study 2; Dipboye et al., 1975; Glick et al., 1988; Heilman, 1984; Nelson, Acker, & Manis, 1996, Studies 1 & 2; cf. Pratto & Bargh, 1991).

#### **Judgment complexity**

Despite the strong trends demonstrated in past literature, the underlying reasons for these trends is unclear. First, what can explain the discrepancies among the various types of judgment tasks in reliance on stereotypes and/or somewhat diagnostic individuating information? Second, why do perceivers tend to rely exclusively on highly diagnostic individuating information regardless of the judgment task while there seems to be variation among the types of judgment tasks in perceivers' reliance on stereotypes and somewhat diagnostic individuating information?

Although this dissertation did not address processes underlying target evaluations and no past empirical literature directly addresses these two questions, one potential mechanism is the overall judgment complexity. Past research has demonstrated that when faced with a social judgment that is more complex in nature, perceivers tend to rely at least in part on stereotypes in their judgments, potentially to simplify the judgment (e.g., Bodenhausen & Lichtenstein, 1987); since stereotypes are heuristics (e.g.,

Bodenhausen & Wyer, 1985), they allow perceivers to exert less cognitive effort when making judgments.

In the context of the *DJT* model, overall judgment complexity can emerge from two potential sources: the diagnosticity of the individuating information and the type of judgment task at hand. To determine the overall judgment complexity, one must jointly consider both potential sources of complexity.

First, judgments made in the presence of somewhat diagnostic individuating information are likely more complex than those made given highly diagnostic information, regardless of the format of the judgment task. According to Campbell's typology of complex tasks, one source of task complexity is uncertain connections between the desired outcome and the steps taken to achieve this outcome (Campbell, 1988). Using this criterion, regardless of the type of judgment task, evaluations involving somewhat diagnostic individuating information arguably are more complex than those involving highly diagnostic individuating information due to the indirect and therefore uncertain connection between the evaluation (the outcome) and the somewhat diagnostic individuating information (which must be used to achieve the outcome).

The type of judgment task at hand also contributes to the overall judgment complexity. In TRs, perceivers simply answer questions about the contents of their impressions of targets. In contrast, in TRPs, perceivers must first form an impression and then take the extra step of making predictions based on this impression. In fact, according to Tversky & Kahneman (1974), the mere act of predicting a future act involves uncertainty and complexity. Similarly, OSJs also are arguably more complex than TRs; when making an OSJ, perceivers must consider not only the category and individuating

information, but also the *nature of the job* because they must determine how well the target fits with the job. Thus, there may be more components involved with TRPs and OSJs compared with TRs, and with a greater number of factors in the judgment task, there is increased task complexity (e.g., Byström, 2002). In sum, regardless of the diagnosticity of the individuating information at hand, OSJs and TRPs may be more complex tasks than TRs.

Taking all of this into consideration, when a perceiver is tasked with an OSJ or TRP and the individuating information is somewhat diagnostic, complexity arises both from the type of judgment task and from the diagnosticity of the individuating information. This is the only situation in past literature in which perceivers consistently rely on both stereotypes and individuating information in evaluating others (discussed above). In all other evaluative scenarios, complexity arises either exclusively from the type of judgment task (in OSJs or TRPs given highly diagnostic individuating information), exclusively from the diagnosticity of the information (in TRs given somewhat diagnostic information), or is not present at all (in TRs in the presence of highly diagnostic individuating information). In all of these other situations, perceivers tend to rely exclusively on individuating information (see Table 1 for a summary of this argument). Given that increased judgment complexity tends to lead to greater stereotype reliance (e.g., Bodenhausen & Lichtenstein, 1987), the dual sources of complexity involved in TRPs and OSJs given somewhat diagnostic individuating information may explain why perceivers usually rely in part on stereotypes when making such judgments despite relying exclusively on individuating information in all of the other situations.

#### The Present Research<sup>2</sup>

The goal of the present research is to test the *DJT* model's most important hypotheses—those that address reliance on highly and somewhat diagnostic individuating information and stereotypes in person perception. Given the model's emphasis on subjective diagnosticity rather than objective diagnosticity, it was imperative that all stimulus information be rigorously pilot tested. Therefore, Studies 1a-1c were a series of pilot tests that aimed to find appropriate stimulus information and dependent measures for subsequent studies. Study 2 employed TRs and OSJs to test the prediction that, given category information and highly diagnostic individuating information, perceivers would rely exclusively on the individuating information in both types of judgment tasks. Studies 3a and 3b tested the hypothesis that, when perceivers are provided with somewhat diagnostic individuating information and category information, stereotypes will influence judgments on TRPs, but not on TRs.

The category information dimension that was chosen to be manipulated was target gender. This was because the traditional distinction between communal traits, which are considered to be more feminine, and agentic traits, which are considered to be more masculine (e.g., Rudman & Glick, 1999, 2001), easily generate many attributes that are exact opposites (e.g., passive/assertive; cooperative/competitive). This facilitates development of bipolar trait scales with trait anchors of the opposite gender type. Target gender was also selected because of the abundance of literature that aims to explain particular gender stereotypes (e.g., social role theory; Eagly, 1987) and ramifications for

<sup>&</sup>lt;sup>2</sup> The studies that were performed deviated from those proposed in the dissertation proposal in several ways that are not mentioned in-text. Please refer to Appendix B for complete information.

violating these stereotypes (e.g., backlash theory; Rudman, Moss-Racusin, & Phelan, 2014; Rudman, 1998).

#### Study 1a

Study 1a represented the first stage of pilot testing. The aim of this study was to establish which gender stereotypes are most strongly endorsed in the Rutgers student population.

#### Method

**Design.** This study had a within-subjects design; participants were asked about both the masculinity and femininity of each trait.

**Participants.** A power analysis using a desired effect size of d = .35 indicated that the necessary sample size was 52. The targeted effect size of d = .35 was chosen based on research examining gender stereotype accuracy where perceived gender differences were measured (Swim, 1994). In that research, the mean effect size for perceived gender differences was d = .46. For Study 1a, this figure was lowered to d = .35 to obtain a conservative sample size estimate.

Data were collected from 100 History of Psychology students who received extra credit in exchange for participating. Data from one participant were discarded because data for half of the dependent measures were missing. Data from three more participants were discarded due to at least one failed attention check. The final sample size was 96 (see Table 2 for demographic characteristics of samples for all three pilot studies).

Measures. The measure of gender stereotypes compiled 34 attributes from the Bem Sex Role Inventory (BSRI; Bem, 1974), from Williams & Best's (1982) investigation of gender-typed traits, and from Rudman & Glick's (1999) descriptors reflecting communality and agency. Attributes from the BSRI were chosen on the basis of their generality (e.g., very narrow attributes such as "does not use harsh language"

were eliminated). Attributes were selected from Williams & Best (1982) by choosing those that were most strongly gender-typed<sup>3</sup>. To bring additional, more modern attributes into the composite measure, Rudman & Glick's (1999) descriptors reflecting communality and agency were added. Responses for each trait were on separate 1-5 Likert-type unipolar scales of masculinity and femininity (e.g., "Not at all masculine" to "Very masculine"). This way, participants were not forced to characterize a trait as exclusively masculine or feminine, which would be the case on a bipolar scale<sup>4</sup> (see Appendix C for complete measure). Demographic items (Appendix D) and attention checks (Appendix E) were also administered.

#### Results

Single sample t-tests measured whether means for the given descriptors differed from the low points of the masculinity and femininity scales, which represented gender neutrality. The intended use of this data was to select the items from both measures that were (1) perceived as at least moderately masculine or feminine (as indicated by effect size, Cohen's d), and (2) not considered masculine and feminine.

I found that, while the means for all traits differed from the low anchors of the gender type scale consistent with the stereotype (i.e., the perceived femininity scale for feminine traits and the perceived masculinity scale for masculine traits) to a large extent, Ms > 3.40, ts > 21.77, ps < .001, ds > 2.22, the means for all traits also differed from the low anchors of the gender type scale that was *inconsistent* with the stereotype (i.e., the perceived masculinity scale for the feminine traits and the perceived femininity scale for

<sup>&</sup>lt;sup>3</sup> As indicated by scores less than 350 or greater than 650 on a gender stereotypicality index; on the index, a score of 500 indicates gender neutrality, and the range of scores was 192-790.

<sup>&</sup>lt;sup>4</sup> Other measures were administered but are not reported because they were for a study that was included in the proposal but, with the permission of the Committee, not conducted.

the masculine traits), Ms > 2.40, ts > 13.57, ps < .001, ds > 1.39 (see Table 3 for full results). Thus, surprisingly, all traits were considered both masculine and feminine despite abundant previous literature finding otherwise (e.g., Bem, 1974; Williams & Best, 1982).

Therefore, to determine which traits were most strongly gender-typed, I performed a series of paired samples t-tests to determine the particular traits which were perceived to differ in the extent of their masculinity and femininity. All but two of these tests were significant, ts > 2.98, ps < .01, ds > 0.30 (see Table 4 for full results). Therefore, I selected the traits that yielded the largest effect sizes (ds > .70) to use in the next phase of pilot testing. There were 23 of these traits.

#### Study 1b

In Study 1b, the diagnosticity of several of the most strongly gendered traits found in Study 1a was measured with respect to (1) other strongly gendered traits of that gender type identified by Study 1a, and (2) a variety of behaviors. This diagnosticity information was meant to identify appropriate traits and behaviors for use in subsequent studies as trait ratings (Studies 2 and 3) and target-relevant predictions (Study 3), respectively, and to develop stimulus materials for Study 3. In addition, the diagnosticity of stimulus *behaviors* with respect to gendered traits was measured to identify appropriate behavioral stimulus information for Study 2.

#### Method

**Design.** This study had a one-way (target gender: male vs. female) between-subjects design.

**Participants.** Using a targeted effect size of d = .4, a power analysis indicated that 200 participants would be needed. This effect size was chosen because it roughly corresponds to an r of .21, which is the average effect size in all of social psychology (Richard, Bond, & Stokes-Zoota, 2003). The average effect size in all of social psychology was selected rather than a domain-specific effect size because previous research has not established effects relevant to the diagnosticity of particular traits and behaviors with regard to one another.

Anticipating data loss, data were collected from 325 Social Psychology students, who received extra credit in exchange for their participation. Data from 97 participants were discarded due to failure of at least one attention check, leaving a final sample size of 228 (See Table 2 for demographic characteristics).

**Measures.** This study included two sets of subjective diagnosticity measures, both of which were administered on Qualtrics. Participants also completed demographic items (Appendix D) and attention checks (Appendix E).

Diagnosticity of behavioral stimulus information. One diagnosticity measure in this study consisted of trait ratings that evaluated how well stimulus behaviors conveyed gendered personality traits. This information was needed to develop stimulus materials for Study 2, in which participants were provided with behavioral information about job applicants that was meant to clearly convey that the applicant was characterized by a trait. In this measure, participants completed trait ratings after being provided with a series of stimulus behaviors in the presence of gender information (e.g., "How assertive or passive is a woman who engages in the following behaviors," followed by a list of passive and assertive behaviors; Appendix F). Target gender information was manipulated between-subjects.

Behaviors were tested that were intended to be highly diagnostic of one of six traits: assertive, passive, acts as a leader, acts as a follower, compassionate, and uncompassionate. These six traits consisted of three sets of two traits that (1) were opposites of one another (e.g., assertive/passive) and (2) included one masculine trait (e.g., assertiveness) and one feminine trait (e.g., passiveness). Three traits (assertive, acts as a leader, and compassionate) were considered "targeted" traits, and three were considered "opposite" traits. This distinction was based on which of the two traits would be emphasized in a job advertisement in Study 2; the targeted traits would be those emphasized by the job advertisement.

Because the targeted traits and opposite traits were opposites of one another, for each set of traits (e.g., assertive/passive), there were two sets of five stimulus behaviors that were evaluated: one set intended to convey the targeted trait (e.g., assertiveness; "continuing to speak when interrupted by a peer") and the other set meant to convey the opposite trait (e.g., passiveness; "stops speaking when interrupted by a peer").

Perceived assertiveness and passiveness were measured on a bipolar 7-point trait scale ranging from "very passive" to "very assertive." Perceptions of acting as a follower versus acting as a leader were measured on a bipolar 7-point trait scale ranging from "very much acts as a follower" to "very much acts as a leader." The extent to which targets were perceived as compassionate versus uncompassionate was evaluated on a bipolar 7-point trait scale ranging from "very uncompassionate" to "very compassionate."

Diagnosticity of trait stimulus information. The other set of measures in Study

1b evaluated the perceived diagnosticity of (1) five masculine and three feminine

stimulus traits with respect to other traits of the same gender type (from here forth

referred to as the "trait-trait diagnosticity measure"; Appendix G), and (2) four masculine
and two feminine stimulus traits with respect to a variety of behaviors (referred to as the

"trait-behavior diagnosticity measure"; Appendix H). In the trait-trait diagnosticity

measure and the trait-behavior diagnosticity measure, a stimulus trait was presented, and
a series of traits or behaviors (respectively) of the same gender type was listed for

participants to make diagnosticity (i.e., relevance) evaluations (e.g., a list of masculine

traits followed the question, "If you know that a man is athletic, how relevant or

irrelevant is that information to evaluating whether he possesses each of the following

personality traits?"; a list of masculine behaviors followed the question, "How relevant or

and dependent measure traits in the trait-trait diagnosticity measure were the feminine or the masculine traits identified by Study 1a to be most strongly gender typed. The behaviors used as dependent measures in the trait-behavior diagnosticity measure were intended to exemplify some of these traits. For feminine stimulus traits, only feminine dependent measure traits and behaviors were included, and for masculine stimulus traits, only masculine dependent measure traits and behaviors were included. Diagnosticity was measured in the presence of target gender (i.e., category) information, which was manipulated between-subjects

The relevance items employed unipolar 1-5 Likert-type scales. On these scales, a response of 1 represented nondiagnosticity (e.g., "Completely irrelevant to being a competitive woman"), a response of 3 represented an assessment that the information was somewhat diagnostic (e.g., "Somewhat relevant to being a competitive woman"), and 5 represented an evaluation that the information was highly diagnostic (e.g., "highly relevant to being a competitive woman"). The other points on the scale were not labelled to maintain the precise nature of the three categories of diagnosticity: nondiagnostic, somewhat diagnostic, and highly diagnostic information. Thus, the five-point scale was chosen instead of a seven-point scale because, while both five- and seven-point unipolar scales have greater validity for unipolar response scales than do shorter or longer scales (e.g., Krosnick & Fabrigar, 1997), using a five-point scale resulted in fewer unlabeled response options.

## **Results**

Criteria for levels of diagnosticity. In the dissertation proposal, it was written that highly diagnostic information would need to meet two criteria: (1) It should not differ significantly from the high anchor of the diagnosticity scale, which was 5, and (2) it should differ from the next closest point on the scale, which was 4. However, the data showed that all diagnosticity evaluations differed significantly from 5. Therefore, the criteria were relaxed to include all traits and behaviors that were significantly greater than 4.

Similarly, originally, the proposed criteria for traits to be considered somewhat diagnostic individuating information were that (1) the mean diagnosticity rating should not differ significantly from 3 (the midpoint of the scale, labelled "somewhat relevant"), and (2) the mean diagnosticity evaluations should differ from 2 or from 4 (the two next-closest points on the scale). However, after performing these analyses, these criteria had to be relaxed because, using these rules, no usable behaviors or traits were found that met the additional requirements for selection (discussed below). Thus, a trait was considered "somewhat diagnostic" of another trait or a behavior if the mean diagnosticity rating fell between 2.5 and 3.5.

Gender differences. In addition, I planned to eliminate traits and behaviors for which there were gender differences in perceived diagnosticity. However, because there was a dearth of traits and behaviors that met the other requirements necessary for selection, this criterion was eliminated (see Table 5 for target gender difference results for traits and behaviors that were selected).

## Results for use in Study 2.

Stimulus behavior diagnosticity. As discussed above, one goal of this study was to identify behaviors that were considered highly diagnostic of gendered traits for use as stimulus behavioral information in Study 2. In the stimulus behavior diagnosticity measure, trait ratings for the five assertive behaviors were summed to form a scale ( $\alpha$  = .77), as were the five passive behaviors ( $\alpha$  = .79), the five "acts as a leader" behaviors ( $\alpha$  = .81), the five "acts as a follower" behaviors ( $\alpha$  = .79), the five compassionate behaviors ( $\alpha$  = .87), and the five uncompassionate behaviors ( $\alpha$  = .69).

A series of paired-samples *t*-tests compared these trait scales to determine which sets of behaviors were the most strongly diagnostic of the traits. The comparisons were grouped together on the dimension of whether the traits were considered "targeted" traits (which, again, were those that were candidates for being emphasized in a job advertisement in Study 2; assertive, acts as a leader, and compassionate) or "opposite" traits (which were the opposites of the targeted traits; passive, acts as a follower, and uncompassionate).

In comparisons of the behaviors meant to illustrate targeted traits, the assertive behaviors were found to be more diagnostic of assertiveness, M = 27.44, SD = 3.86, than leader-like behaviors were diagnostic of acting like a leader, M = 26.42, SD = 4.21, t(222) = 3.00, p = .003, d = .20. In addition, compassionate behaviors were found to be more diagnostic of compassion, M = 31.57, SD = 3.83, than assertive behaviors were diagnostic of assertiveness, t(223) = 13.05, p < .001, d = .87. Thus, compassionate behaviors were deemed the most diagnostic of these three sets of behaviors.

When the sets of behaviors meant to convey opposite traits were compared, passive behaviors, M = 12.24, SD = 4.47, were more diagnostic of passiveness than

follower-like behaviors were diagnostic of acting as a follower, M = 13.53, SD = 4.47, t(222) = 4.18, p < .001, d = .28. In addition, passive behaviors were considered more diagnostic of passiveness than uncompassionate behaviors were considered diagnostic of a lack of compassion, M = 18.23, SD = 3.71, t(221) = 13.91, p < .001, d = 1.11. Thus, passive behaviors were considered the most diagnostic of these three sets of behaviors.

Given these results, the candidate sets of behaviors were narrowed to compassionate/uncompassionate behaviors and to passive/assertive behaviors. To determine which was superior, the mean absolute value of the deviation from 20, the summed scale midpoint, was computed for the assertive, M = 7.86, SD = 4.02, and uncompassionate, M = 2.90, SD = 2.89, behaviors, and these deviations were compared. Assertive behaviors deviated more from the midpoint than did uncompassionate behaviors, t(223) = 16.07, p < .001. Thus, they were considered more diagnostic of assertiveness than uncompassionate behaviors were considered diagnostic of a lack of compassion. Therefore, assertiveness/passivity was selected as the trait dimension to manipulate in Study 2. All 4 passive behaviors that were used in Study 2 differed from the scale midpoint in perceived passivity, Ms < 2.74, ts > 12.35, ps < .001, ds > 0.97, and all four assertive behaviors that were selected differed from the scale midpoint in perceived assertiveness, Ms > 5.07, ts(226) > 12.35, ps < .001, ds > 0.81 (see Table 6).

Highly diagnostic stimulus trait information. Having selected assertiveness/passivity as the trait dimension to manipulate in Study 2 using stimulus behaviors, in the trait-trait diagnosticity analyses for Study 2, the goal was to identify gendered traits for which assertiveness was considered highly diagnostic. This was done to identify appropriate trait rating items for Study 2.

The diagnosticity evaluations of assertiveness with regard to two other masculine traits were found to be significantly above 4 on the diagnosticity scale: "acts as a leader," M = 4.27, SD = .87, t(227) = 4.66, p < .001, d = 0.31, and "confident," M = 4.31, SD = .92, t(227) = 5.13, p < .001, d = 0.34. These dependent measure traits were selected for use as the trait rating items in Study 2.

## Results for use in Studies 3a and 3b.

Somewhat diagnostic stimulus trait information. Another goal of Study 1c was to identify two masculine and two feminine stimulus traits that were considered somewhat diagnostic of additional gendered traits and behaviors. Both masculine and both feminine stimulus traits had to be somewhat diagnostic with respect to the *same* other masculine and feminine traits and behaviors (respectively). This information was used to develop trait ratings and target-relevant predictions for Study 3.

Because fewer stimulus traits were expected to be somewhat diagnostic with respect to behaviors than to other traits, the first step in narrowing the pool of candidate stimulus traits for the trait ratings was to identify the stimulus traits with the highest number of behaviors that met the criterion of having diagnosticity ratings between 2.5 and 3.5. These stimulus traits are the focus of the diagnosticity analyses reported below.

*Masculine traits and behaviors*. The masculine stimulus traits that were considered somewhat diagnostic of the largest number of behaviors were competitiveness and boastfulness. For competitiveness, three behaviors had diagnosticity ratings between 2.5 and 3.5. All differed significantly from 3, ts > 3.06, ps < .01, ds > .70, and from 4, ts > 2.35, ps < .03, ds > .16. For boastfulness, two behaviors had diagnosticity ratings between 2.5 and 3.5. One did not significantly differ from 3, t(227) = 0.93, p = .35 and

differed significantly from 2, t(227) = 10.26, p < .001, d = .68. The other differed significantly both from 3 and from 2, ts(226) > 4.47, ps < .001, ds > 0.30 (see Tables 7 and 8).

Despite finding these behaviors that met the revised criteria for being considered somewhat diagnostic, only one of the behaviors was considered somewhat diagnostic with respect to *both* competitiveness and boastfulness ("continues speaking when interrupted by a peer"). Therefore, further pilot testing (Study 1c) was needed to identify an additional behavior for which the stimulus traits competitiveness and boastfulness were *both* considered somewhat diagnostic.

In addition, the mean diagnosticity evaluations for competitiveness with regard to three other masculine traits fell between 2.5 and 3.5: athletic, assertive, and egotistical. The means for two of these traits (assertive and athletic) differed significantly from 3, ts > 4.89, ps < .001, ds > .32, and from 4, ts > 6.49, ps < .001, ds > .43. Mean diagnosticity evaluations for boastfulness with regard to three other masculine traits fell between 2.5 and 3.5: assertive, aggressive, and athletic. These means all differed significantly from 3, ts > 3.69, ps < .001, ds > .24, and from 4, ts > 6.48, ps < .001, ds > 0.50 (see Tables 9 and 10). Because the dependent measures were required to be the same for both masculine stimulus traits, assertive and athletic were selected as the trait rating dependent measures for Study 3. When averaged, the mean diagnosticity evaluation for each pair of evaluations (e.g., boastful/assertive and competitive/assertive) fell between 2.5 and 3.5.

Feminine traits. Cooperativeness was found to be somewhat diagnostic with respect to six additional feminine traits and shyness was considered somewhat diagnostic of eight additional feminine traits. For cooperativeness, two means did not differ from 3,

ts(226) < 1.16, ns, and four did differ from 3, ts > 3.92, ps < .001, ds > .26. All six means differed from 4, ts > 8.04, ps < .001, ds > 0.53. For shyness, all but one mean differed from 3, ts > 2.29, ds > 0.15, and all means differed from 4, ts > 7.46, ps < .001, ds > 0.49 (see Tables 11 and 12).

Somewhat diagnostic behaviors were not found for either cooperativeness or shyness; all means fell outside of the 2.5-3.5 criterion. In the assessments of the relevance of shyness to the behaviors, all evaluations were substantially out of the range representing somewhat diagnostic information; deviations from this range were at least .41 points on the relevance scale. However, for cooperativeness, the deviation of two behaviors from the "somewhat diagnostic" range was slight (maximum deviation of .11). Thus, in the next pilot test (Study 1c), traits and behaviors for cooperativeness, but not shyness, were expanded upon to identify traits and behaviors for which this trait was considered somewhat diagnostic.

Behaviors highly relevant to stimulus traits. Another goal of Study 1b was to identify appropriate behaviors to use in Study 3 stimulus materials, which were target descriptions that included a personality trait and several behaviors diagnostic of that trait. Therefore, in addition to behaviors expected to be somewhat relevant to each stimulus trait, I also included in the trait-behavior diagnosticity measure behaviors expected to be highly relevant to each stimulus trait. According to the criterion of a mean relevance score that was significantly greater than 4, one behavior, "Brags to [his/her] colleagues about a promotion", was considered highly relevant to boastfulness, M = 4.61, SD = .81, t(227) = 11.48, p < .001, d = 75. No behaviors were considered highly relevant to competitiveness (all means were lower than 4, so no t-tests were performed). One

behavior, "prefers to work in teams," was considered highly relevant to cooperativeness, M = 4.66, SD = .79, t(225) = 12.62, d = 0.84. Because not enough behaviors were found to provide adequate target descriptions in Study 3, more pilot testing was needed to identify additional behaviors to use for this purpose.

## Study 1c

Study 1c was not included in the dissertation proposal but was run because Study 1b did not identify all of the stimulus and dependent measure information necessary for the main studies. Thus, the aim of Study 1c was to collect the additional information necessary for the main studies by (1) identifying additional behaviors highly relevant to boastfulness, competitiveness, cooperativeness, and a second female-typed trait, (2) finding one behavior for which *both* competitiveness and boastfulness were considered somewhat diagnostic, and (3) identifying two behaviors for which *both* cooperativeness and another female-typed trait were considered somewhat diagnostic.

#### Method

**Design.** This study had a one-way (target gender: male vs. female) between-subjects design.

Participants. Because the dependent measures for Study 2 would be taken from both Studies 1b and 1c, I aimed to obtain a sample size for Study 1c that was approximately equal to Study 1b even though between-subjects analyses were not planned. Therefore, data were collected from 316 participants (data from 325 participants were collected for Study 1c). 40 were discarded due to at least one failed attention check and 3 were discarded because they completed less than 50% of the dependent measures. This left a final sample size of 273. 38 of these participants were from the General Psychology Human Subjects Pool, and the remainder were students in General Psychology and Social Psychology classes who participated in exchange for extra credit (see Table 2 for sample demographic characteristics).

Measures. This study included diagnosticity measures similar to the trait stimulus information diagnosticity measures in Study 1c (i.e., the trait-trait and trait-behavior diagnosticity measures). However, "home-oriented" was added as a stimulus trait based on abundant previous literature indicating that domesticity is associated with women (e.g., Eagly, 1987; Wood & Eagly, 2002). Home-oriented was the only stimulus trait for which participants made both trait-trait and trait-behavior diagnosticity evaluations; for the other stimulus traits (boastful, competitive, and cooperative), participants only made trait-behavior diagnosticity evaluations. The trait-trait diagnosticity evaluations for home-orientation included five of the six traits for which cooperativeness was found to be somewhat diagnostic in Study 1b. All measures were completed on Qualtrics. (See Appendix I for Study 1c trait-trait diagnosticity measure and Appendix J for Study 1c trait-behavior diagnosticity measure.)

## **Results**

Highly diagnostic trait stimulus information. One aim of this study was to establish behaviors highly relevant to the stimulus traits of competitiveness, boastfulness, cooperativeness, and home-orientation using the trait-behavior diagnosticity measure. These behaviors would be used in descriptions of targets who were described by Study 3a and 3b stimulus information as possessing these traits. I originally aimed to find 3 behaviors that were highly relevant to each trait. However, the largest number of behaviors highly relevant to any of the traits was two, so I instead sought to identify two highly relevant behaviors for each trait.

The standard that was used for high diagnosticity in Study 1b was that the relevance evaluation should be significantly greater than 4. For the trait of home-

orientation, two behaviors met this criterion, "attends all of [his/her] kids' sports games," M = 4.18, SD = 1.04, t(272) = 2.79, p = .006, 95%  $CI_{\rm difference} = 0.05-0.30$ , d = 0.17, and "spends most of [his/her] free time with [his/her] family," M = 4.36, SD = 1.05, t(272) = 5.64,  $CI_{\rm difference} = 0.23-0.48$ , d = 0.34. Therefore, these two behaviors were used in the description of the target as home-oriented in Study 3a.

For the remaining traits, none of the tested behaviors met this criterion for high diagnosticity. Therefore, the criterion was lowered to behaviors with relevance evaluations that did not significantly differ from 4. For the trait of cooperativeness, "readily compromises to end conflicts with friends," M = 3.94, SD = 1.17, t(233) = 0.72, p = .47, met this criterion. Therefore, this behavior, along with "prefers to work in teams," piloted in Study 1b, was used to elaborate on the description of the target as cooperative in Study 3a.

Similarly, for the trait of competitiveness, "gets upset when [s/he] loses when [s/he] plays sports," M = 3.85, SD = 1.33, and "applies for a lot of awards at work," M = 4.03, SD = 1.12, did not differ significantly from 4, t(234) = 1.72, p = .087, and t(272) = .487, p = .63, respectively. These two behaviors therefore were used to illustrate the trait of competitiveness in the target descriptions in Study 3b.

For the trait of boastfulness, no behaviors were found that had relevance ratings that did not differ significantly from 4. Therefore, items were added onto Study 2 to identify behaviors highly relevant to boastfulness. The two behaviors viewed as most highly relevant to boastfulness in this other sample were "Shows off [his/her] new sports car even to distant acquaintances, M = 4.47, SD = 0.82, and "Likes to tell people that [s/he] makes a lot of money," M = 4.76, SD = 0.54. Both of these means were

significantly above 4, t(90) = 5.49, p < .001, d = 0.57, and t(90) = 13.29, p < .001, d = 1.41, respectively. These behaviors therefore were used to portray the target as boastful in Study 3b.

**Somewhat diagnostic trait stimulus information.** The next goal of Study 1c was to identify traits and behaviors for which stimulus traits were considered somewhat diagnostic.

*Traits.* In the trait-trait diagnosticity analyses, the aim was to find traits for which home orientation was considered somewhat diagnostic, for which cooperativeness had also been considered somewhat diagnostic in Study 1b. Home orientation was considered somewhat diagnostic with respect to two of the five traits for which cooperativeness was considered somewhat diagnostic: "sensitive," M = 3.37, SD = 1.22, and "emotional," M = 3.13, SD = 1.22. Therefore, these two traits were selected as the trait ratings for Study 3a.

Behaviors. In the behavior diagnosticity analyses, the goals were twofold: (1) Identify one behavior for which both competitiveness and boastfulness were both somewhat diagnostic, and (2) find two behaviors for which cooperativeness and home orientation were both considered somewhat diagnostic. I identified two behaviors for which competitiveness and boastfulness were both considered somewhat diagnostic (i.e., those that had mean diagnosticity evaluations ranging from 2.5-3.5). To determine which of these behaviors was more squarely "somewhat diagnostic" (and therefore should be used in Study 3b as a TRP), I first computed the absolute value of the deviation from three for the relevance rating of each behavior with respect to boastfulness and competitiveness. I averaged each of these sets of two deviation scores and selected the

behavior for which there was the smallest average deviation. The average deviation from three for "tells off a peer who offends [him/her]" was 0.15 and the average deviation from three for "interrupts others who are speaking" was 0.38. Therefore, the former behavior was used as a TRP in Study 3b (see Tables 7 and 8 for all evaluations).

The same procedure was followed for the four behaviors for which both cooperativeness and home orientation were considered somewhat diagnostic; the two with the smallest average absolute deviations from three were chosen to use as TRPs in Study 3a. These two behaviors were "encourages a depressed friend to seek treatment," with a mean absolute deviation from three of 0.29, and "comforts a stranger who is visibly upset," which had a mean absolute deviation from three of 0.24 (see Tables 13 and 14 for all evaluations).

## Study 2

Study 2 was designed to test the branch of the *DJT* model that makes predictions relevant to highly diagnostic individuating information. In this study, participants evaluated two male or two female job applicants about whom highly diagnostic individuating information was available and completed TRs and OSJs. I hypothesized that, given highly diagnostic individuating information and category information, perceivers would rely exclusively on highly diagnostic individuating information in TRs and OSJs.

Although there is a plethora of empirical evidence establishing that perceivers rely exclusively on individuating information in such judgments, there is only a small amount of previous literature that has employed *both* types of judgment tasks and found this effect (Dipboye & Wiley, 1977; Rubinstein et al., 2018); in another study (Kobrynowicz & Biernat, 1997, Study 2), perceivers given category and highly diagnostic individuating information relied on individuating information for TRs, but on both sources of information in TRPs<sup>5,6</sup>.

#### Method

**Experimental design**. This study employed a 2 (target gender: male vs. female) X 2 (trait information: masculine vs. feminine) X 2 (order of judgment: TR first vs. OSJ first) mixed-model design. Trait information was the within-subjects factor.

<sup>&</sup>lt;sup>5</sup> Jackson et al. (1993, Study 2) employed both TRPs (which are interchangeable with OSJs according to the DJT model) and TRs in evaluations involving what they claimed to be highly diagnostic individuating information. However, this claim could not be verified because the actual traits used in the TRs were not specified and no diagnosticity data were available. Therefore, only results for their TRPs are considered in this dissertation.

<sup>&</sup>lt;sup>6</sup> Although Kobrynowicz & Biernat (1997) used TRPs rather than OSJs, TRPs and OSJs are interchangeable according to the DJT model.

**Participants**. According to a power analysis<sup>7</sup>, a sample size of N = 84 was needed. In the power analysis, a desired effect size of f = .25, a correlation among repeated measures of  $r = .30^8$ , and 80% power were specified. The targeted effect size of f = .25 was used because a meta-analysis of stereotype effects in studies that examine reliance on individuating information and stereotypes in person perception revealed that the average stereotype effect in such studies was r = .25, which translates to f = .25 (Kunda & Thagard, 1996). Stereotype effects were not hypothesized, but this effect size was specified to allow for the possibility of a significant stereotype effect that is average in size in comparison with those obtained in similar studies.

Participants were 113 students in Adolescent Development and History of Psychology classes. Data from 22 participants were discarded due to failed attention checks<sup>9</sup>. This left a final sample of 91 participants, 70 of whom were female. 33 participants were White, 21 were Asian or Asian-American, 15 were Black, 14 were Latino or Hispanic, 5 were biracial or multiracial, and 2 identified with another racial group. Participants' mean age was 21.42 years. There were 70 politically liberal participants in the sample, 15 moderates, 9 conservatives, and 17 participants who did not identify with a political ideology.

**Stimulus materials.** Participants were provided with a job description that emphasized the desirability of assertiveness—a male-typed trait (e.g., Rudman & Glick,

<sup>7</sup> This power analysis was performed without the order of judgment factor because I anticipated dropping this factor from the main analysis if, as anticipated, there were no significant effects involving order of judgment task.

<sup>&</sup>lt;sup>8</sup> A previous study (Rubinstein, Jussim, & Stevens, 2018, Study 3) with the same design found an average correlation among repeated measures of r = .17. This figure was raised to r = .3 to allow for a conservative estimate.

<sup>&</sup>lt;sup>9</sup> Data were also analyzed with these participants included. Because in some cases results differed from the sample that excluded these participants, the analyses are reported with these participants excluded. See Table 15 for results with all participants included.

2001; see Appendix K for job description). In accordance with some past similar studies (e.g., Dipboye & Wiley, 1977; Heilman, 1984), a female-consistent job description was not included as a counterbalance to avoid overcomplicating the study's design. Resume information suggested that the applicants were similarly, moderately qualified (see Appendix K for resume information).

The highly diagnostic information consisted of transcripts of the applicants' job interviews. In the transcripts, the applicants answered questions relevant to the trait dimension of assertiveness/passivity. One applicant gave responses found by Study 1b to be indicative of an assertive personality (e.g., in response to the interviewer's question, "What do you do if a peer says something offensive to you?" the target replied, "I'd let them know that I found what they said offensive—it's important to stand up for yourself"), and the other gave responses that the pilot data showed were illustrative of a passive personality (e.g., in response to the interviewer asking, "What do you do if a peer says something offensive to you?" the target replied, "I probably would not say anything-it's best not to cause conflict"; see Appendix K for full transcripts). The questions were identical in both conditions; only interviewees' responses varied.

# Measures. 10

*Trait ratings*. The trait dimensions on which targets were evaluated were passive/assertive, acts like a follower/acts like a leader, and unconfident/confident (Appendix L). As discussed above, Study 1b showed that assertiveness was highly diagnostic with regard to the latter two traits. Response scales were 1 (e.g., "Very passive") to 7 (e.g., "Very assertive") Likert-type scales.

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<sup>&</sup>lt;sup>10</sup> The Political Correctness scale (Jussim et al., 2018) was also administered but was not used in the analyses.

Occupational suitability judgments. The two OSJ items were "How bad or good of a candidate is [the target] for the position at Sealman's?" and "If you were the person in charge of hiring at Sealman's, how unlikely or likely would you be to hire [the target]"? The response scales were 1 (Very bad, Very unlikely) to 7 (Very good, Very likely) Likert-type scales (Appendix L).

Instructional Manipulation Checks. The study employed Instructional Manipulation Checks (IMCs; Oppenheimer, Meyvis, & Davidenko, 2009) to ensure that participants were reading the questions (e.g., "Please respond to this item by selecting '5").

Information manipulation checks. Recall for information provided about targets in the interview transcript and for the content of the job description was measured to ensure that participants attended to and processed it. Data from participants who did not accurately recall (or pay attention to) the fact that the company was seeking an assertive employee were discarded.

**Suspicion checks**. Participants were asked what the purpose of the study was to ensure that they did not suspect its true nature (see Appendix E for all manipulation and suspicion checks used in all studies).

**Demographics.** Participants provided their age, gender, race, and political ideology (Appendix D).

**Procedure.** All stimuli and measures were administered online using Qualtrics. Participants were provided with the job description, reviewed two applicants' resumes (two men or two women), and read transcripts of their job interviews. One target gave responses indicative of a passive personality, and the other responded in a way that

indicated assertiveness. Immediately after reviewing information about each applicant, participants first completed information manipulation checks. Next, depending on the judgment task order condition, they completed either TRs of that applicant followed by OSJs, or OSJs of that applicant followed by TRs. After they made all target evaluations they completed the demographic items and suspicion checks. IMCs were embedded throughout the dependent measures.

## **Results and Discussion**

## **Preliminary Analyses**

Reliability analyses were performed separately for the trait ratings for assertive targets and the trait ratings for passive targets. Trait ratings for passive targets demonstrated good reliability,  $\alpha = .76$ . However, trait ratings for assertive targets did not demonstrate adequate reliability,  $\alpha = .51$ . Therefore, separate analyses were performed for each pair of trait ratings (i.e., assertiveness of passive and assertive targets, confidence of passive and assertive targets, etc.).

In addition, correlations were run between the two OSJs for passive targets and the two OSJs for assertive targets. Both of these sets of judgments were strongly correlated, rs(90) = .83 and .63, respectively. Therefore, the OSJs for passive targets were combined to form an OSJ scale for passive targets, and the OSJs for assertive targets were combined to form an OSJ scale for assertive targets (see Table 16 for correlations among all Study 2 dependent measures).

## **Operationalizing individuating information effects**

To statistically operationalize the model's conceptual definition of an effect of individuating information on person perception (specified in the Introduction), there are

three types of statistical effects that are potentially relevant. The first is a main effect of individuating information where cell means are consistent with the individuating information. The second is a category information main effect showing that the cell means are in the *opposite* direction as the stereotype (i.e., a contrast effect; e.g., Jussim, Coleman, & Lerch, 1987). Because the means are in the opposite direction as would be expected given reliance on stereotypes, this type of stereotype main effect actually demonstrates reliance on *individuating information*; the influence of individuating information on target evaluations was so strong that it overrode stereotypic judgments. The third type occurs within an interaction. In this type of effect, individuating information influences person perception to a greater extent for one target group than for the other.

# **Operationalizing stereotype effects**

In parallel with an individuating information effect, the statistical operationalization of a stereotype effect is (a) a main effect of target group in a stereotype-consistent direction, or (b) an interaction indicating that target gender has a greater influence on person perception in one individuating information condition than in the other.

## Main analyses

The main hypothesis in Study 2 was that perceivers would rely exclusively on highly diagnostic individuating information in both TRs and OSJs; thus, there should be individuating information effects, but no stereotype effects, on both judgment tasks. A series of 2 (target gender: male vs. female) X 2 (trait information: masculine vs. feminine) X 2 (order of judgment: TR first vs. OSJ first) mixed-model ANOVAs was

used to test this prediction. In these ANOVAs, trait information was the within-subjects factor. One ANOVA was performed on the assertiveness trait ratings, another was conducted on the acts as a leader trait ratings, a third was performed on the confident trait ratings, and a final ANOVA was conducted on the OSJ scales.

Results were consistent with the hypothesis of exclusive reliance on highly diagnostic individuating information on all judgment tasks. Perceivers relied heavily on individuating information in all evaluations, all Fs > 234.69, ps < .001,  $\eta s > .76$  (see Table 17 for all Study 2 ANOVA results and Table 18 for Study 2 main effect means, standard deviations, and 95% confidence intervals). There were no significant main effects or interactions involving target gender, all Fs < 1.82, ps > .18, indicating that there were no stereotype effects. Although there were significant trait information X judgment task order interactions in the confidence TRs, F(1, 87) = 4.16, p = .04,  $\eta = .09$ , and on OSJs, F(1, 87) = 5.53, p = .02,  $\eta = .12$ , the nature of these interactions did not undermine the conclusion that perceivers relied exclusively on highly diagnostic individuating information in person perception.

**Summary.** In this study, participants relied exclusively on individuating information for all trait ratings and for occupational suitability judgments. This supported the DJT model's prediction of exclusive reliance on highly diagnostic individuating information in trait ratings and occupational suitability judgments. In addition, the average individuating information effect size in this study was r = .82. Thus, the average effect sizes for individuating information found by previous metaanalyses (Kunda & Thagard, 1996; r = .71) and reviews (Jussim, 2012; r = .70) were approximately replicated.

## Studies 3a and 3b

Studies 3a and 3b examined the branch of the *DJT* model that makes predictions regarding reliance on somewhat diagnostic individuating information and stereotypes in person perception. I predicted that, when provided with both category information and somewhat diagnostic individuating information, participants would rely exclusively on the individuating information in TRs, but on both stereotypes and individuating information in TRPs. Study 3a tested this prediction using a feminine individuating information versus no individuating information manipulation, and Study 3b tested this hypothesis using a masculine individuating information versus no individuating information manipulation.

## Study 3a

## Method

**Experimental design.** This study had a 2 (target gender: male vs. female) X 2 (individuating information: feminine individuating information vs. no information) X 2 (order of evaluations: TRs first vs. TRPs first) mixed-model design. Target gender was the within-subjects factor.

**Participants.** According to a power analysis specifying 80% power, a correlation among repeated measures of  $r = .2^{11}$ , and a desired effect size of f = .25 (the average stereotype effect size in studies examining reliance on individuating information and stereotypes in person perception; Kunda & Thagard, 1996), a sample size of 54 was necessary<sup>12</sup>. A sample of 86 Mechanical Turk Workers was collected in anticipation of data loss. Participants who failed manipulation checks (n = 19) were excluded from this sample before being paid and are not included in the figure of 86. Participants who completed the survey in less than 4 minutes (n = 12) were discarded<sup>13,14</sup>. This left a final sample size of N = 74, 51 of whom were male. There were 57 White participants, 6 Black participants, 5 Asian or Asian-American participants, 3 Latino or Hispanic participants, and 3 participants of more than one racial background. The mean age was

<sup>&</sup>lt;sup>11</sup> This low number was used because stereotype effects are anticipated on TRPs, and the repeated measures factor is target gender; if a stereotype effect emerged, correlations among repeated measures would likely be low.

<sup>&</sup>lt;sup>12</sup> This power analysis was conducted without the order of evaluations factor because I planned to drop this factor from the analysis if, as anticipated, there were no order effects.

<sup>&</sup>lt;sup>13</sup> 4 minutes was selected as a cutoff for both Studies 3a and 3b because it was deemed the minimum time it might take for participants to respond to the survey thoughtfully, and also because using this cutoff resulted in removing the fastest 10-15% of completion times.

<sup>&</sup>lt;sup>14</sup> Analyses were run with and without these fast responders included. Results for Study 3a were different with them included, so results are reported from data excluding these participants. Specifically, there was a significant interaction involving judgment order when these participants were included that was nonsignificant when they were excluded (see Table 19 for ANOVA results including fast responders).

35.64 years. There were 41 politically liberal participants, 17 moderates, and 16 conservatives.

Stimulus materials. In the feminine individuating information condition, participants reviewed brief written descriptions of one male and one female target. These critical stimulus descriptions were interspersed among several filler descriptions (see Appendix M for critical and filler descriptions). The critical descriptions included (1) stereotype-relevant feminine trait information (either that the target was home-oriented or cooperative) established by Studies 1b and 1c to be somewhat relevant to the dependent measure judgments, and (2) behavioral information that was highly relevant to these traits. For example, "John is a very cooperative person. For instance, he readily makes compromises to end conflicts with friends and prefers to work in teams." The filler descriptions were parallel in structure to the critical descriptions, but portrayed targets in terms of traits that were gender-neutral. In the no information condition, there were no stimulus descriptions.

## Measures.

Trait ratings. Participants evaluated the critical targets on 7-point Likert-type scales that measured perceptions of emotionality (1 represented "Very unemotional" and 7 was labelled "Very emotional") and sensitivity (1 represented "Very insensitive" and 7 was labelled "Very sensitive"). Both cooperativeness and home-orientation were determined by the pilot tests to be somewhat diagnostic with respect to these two traits.

In the feminine individuating information condition, participants answered these questions as they related to the targets about whom they had read a description items (e.g., "How unemotional or emotional a person is Jennifer?"). In the no individuating

information condition, they responded to these items as they related to "the average man" and "the average woman" (Appendix N).

Target-relevant predictions. Participants made TRPs about either the stimulus targets (in the feminine information condition) or about the average man or woman (in the no information condition). These TRPs were the behaviors for which cooperativeness and home-orientation were both evaluated as somewhat diagnostic in the pilot studies (e.g., "How unlikely or likely is Jennifer to comfort a stranger who is visibly upset?"). The response scale for both items was a Likert-type scale ranging from 1 (Very unlikely) to 7 (Very likely; Appendix N).

Political Correctness. The Political Correctness Scale (PC scale; Jussim et al.,2018) was administered in this study to measure politically correct responding (Appendix O).

Attention checks. A series of attention checks was also included in this study (Appendix E). If participants failed any of these checks, the study was terminated before they were paid.

**Demographics.** Demographics items included age, gender, race, and political ideology (Appendix D).

**Procedure.** Participants reviewed filler target descriptions, followed by critical target descriptions, and finally another filler target description. After reading each description, participants made TRs and TRPs. Judgment task order was counterbalanced. In the critical evaluations, the female target was always evaluated first to avoid overcomplicating the study design. After all evaluations were complete, participants completed the PC scale and demographic items.

#### **Results and Discussion**

**Preliminary analyses.** Four correlational analyses were performed for the two TRs for female targets, r(72) = .38, p = .001, the two TRPs for female targets, r(72) = .56, p < .001, the two TRs for male targets, r(72) = .61, p < .001, and the two TRPs for male targets r(72) = .61, p < .001. Because all of the correlations were at least moderate in magnitude, these pairs of measures were combined to form four scales: a female TR scale, a male TR scale, a female TRP scale, and a male TRP scale (see Table 20 for correlations among all Study 3a main dependent measures).

In addition, difference scores were computed between TRs of male targets and female targets, and between TRPs for male and female targets. Correlational analyses were performed between PC scores and each difference score (which represented gender stereotype effects). PC scores did not correlate with these difference scores, |rs|(36) < .07, ps > .69.

Main analyses. There were two components to the hypothesis tested in Study 3a: (1) perceivers would rely exclusively on somewhat diagnostic individuating information in trait ratings, and (2) perceivers would rely on both somewhat diagnostic individuating information and stereotypes in TRPs. To test this hypothesis, two 2 (target gender: male vs. female) X 2 (individuating information: feminine information vs. no information) X 2 (order of judgment task: TRs first vs. TRPs first) mixed-model ANOVAs were performed on target evaluations: one on trait ratings and the other on TRPs. Target gender was the within-subjects factor.

Consistent with the hypothesis, there were individuating information effects in both types of judgment tasks; both ANOVAs revealed main effects of individuating

information, Fs > 53.69, ps < .001,  $\eta s > .39$  (see Table 21 for full Study 3a ANOVA results and Table 22 for main effect means, standard deviations, and 95% confidence intervals), indicating that targets were evaluated as more characterized by feminine traits or likely to engage in feminine behaviors when somewhat diagnostic feminine individuating information was provided than when no individuating information was provided. Significant race of target main effects were expected (due to the inclusion of the no information condition) and found on both measures, Fs > 18.77, p < .001,  $\eta s > .30$ As expected, there also were significant individuating information X target gender interactions for both dependent measures,  $F_s > 16.93$ ,  $p_s < .001$ ,  $\eta_s > .24$  (see Table 23 for interaction cell means, standard deviations, and 95% confidence intervals). However, the nature of these interactions ran directly opposite to the hypothesis of stereotype effects in TRPs but not TRs in the presence of somewhat diagnostic individuating information; stereotype effects were found on TRs in the presence of somewhat diagnostic individuating information, t(37) = 2.47, p = .02, r = .38, but not on TRPs, t(37)= 0.62, p = .54.

In addition, in TRs there was a significant individuating information X order of judgment task interaction, F(1, 70) = 7.58, p < .01,  $\eta = .15$ . However, this order effect had no bearing on the hypothesis of individuating information effects in TRs because there were individuating information effects in both the trait rating first condition, t(36) = 7.18, p < .001, r = .77, and in the TRP first condition, t(36) = 3.25, p < .01, r = .48.

**Summary.** Taken together, the results of Study 3a ran directly counter to the prediction of stereotype effects on TRPs, but not on TRs, in the presence of somewhat diagnostic individuating information; instead, there were stereotypes in TRs, but not in

TRPs. It is also noteworthy that the individuating information effects in both judgment tasks ( $r_{\text{TraitRating}} = .42$ ,  $r_{\text{TRP}} = .48$ ) were substantially smaller than r = .71, the average individuating information effect found in a previous meta-analysis (Kunda & Thagard, 1996). This is likely because the individuating information provided in the present study was somewhat diagnostic, whereas the meta-analysis included individuating information of all levels of diagnosticity. The average magnitude of the target gender main effects (r = .18) was similar to the average stereotype effect found in the meta-analysis (r = .25).

# Study 3b

Study 3b was identical to Study 3a except that instead of feminine individuating information, masculine information was provided. Accordingly, the trait ratings measured perceptions of masculine traits, and TRPs were made for masculine behaviors.

## Method

**Experimental design.** This study had a 2 (target gender: male vs. female) X 2 (individuating information: masculine information vs. no information) X 2 (order of evaluations: TRs first vs. TRPs first) mixed-model design. Target gender was the withinsubjects factor.

**Participants.** As in Study 3a, a sample size of 54 was necessary (based on the same power analysis). A sample of 88 Mechanical Turk Workers was collected in anticipation of data loss. Participants who failed manipulation checks (n = 38) were excluded from this sample before being paid and are not included in the figure of 88. Data were analyzed with and without participants who responded in less than 4 minutes (n = 12). Because results were unchanged across these analyses, these participants are included in the results reported below.

In the sample of N = 88, 44 participants were female. There were 71 White participants, 5 Black participants, 4 Asian or Asian-American participants, 5 Latino or Hispanic participants, and 3 participants of more than one racial background. The mean age was 36.86 years. The sample consisted of 51 liberal participants, 16 moderates, and 21 conservative participants.

**Stimulus materials.** The stimulus materials in Study 3b were the same in format as those used in Study 3a. However, in the individuating information condition,

masculine traits (boastfulness or competitiveness) and corresponding behavioral information were provided in the target descriptions instead of feminine information. For example, "Jennifer is a very boastful person. For instance, she likes to tell people that she makes a lot of money and showed off her new sports car even to distant acquaintances" (see Appendix P for all target descriptions).

#### Measures.

Trait ratings. Participants evaluated the critical targets on 7-point Likert-type scales that measured perceptions of athleticism (1 represented "Very unathletic" and 7 was labelled "Very athletic") and assertiveness (1 represented "Very passive" and 7 was labelled "Very assertive"; Appendix Q). Studies 1b and 1c showed that both boastfulness and competitiveness were somewhat diagnostic of these two traits. As in Study 3a, in the masculine individuating information condition, perceivers made these evaluations as they related to the targets about whom they had been provided stimulus information, whereas in the no information condition, they evaluated "the average man" and "the average woman."

Target-relevant predictions. TRPs were behaviors for which boastfulness and competitiveness were both evaluated as somewhat diagnostic (e.g., "How likely or unlikely is John to continue speaking when he is interrupted?"). The response scale for both items was a Likert-type scale ranging from 1 (Very unlikely) to 7 (Very likely; Appendix Q). In the no information condition, targets were "the average man" and "the average woman," and in the masculine information condition, the targets from the critical stimulus descriptions were evaluated.

**Political Correctness.** The PC scale (Jussim et al., 2018) was administered in this study (Appendix O).

Attention checks. Attention checks were identical to those used in Study 3a (see Appendix E).

**Demographics.** Demographic items were identical to those used in Study 3a (Appendix D).

**Procedure.** The procedure for Study 3b was identical to that in Study 3a.

## **Results and discussion**

**Preliminary analyses.** Correlational analyses were performed between the two trait ratings of female targets, r(86) = .42, p < .001, the two trait ratings of male targets, r(86) = .35, p = .001, the two TRPs for female targets, r(86) = .65, p < .001, and the two TRPs for male targets, r(86) = .62, p < .001. The two sets of TRPs were combined into a male TRP scale and a female TRP scale. However, the two trait ratings were kept separate in the ANOVAs despite moderate correlations because I subsequently found that results differed for the two traits (see below; see Table 24 for correlations among main dependent measures).

Difference scores were computed that represented the difference between female and male target TRs and between female and male target TRPs. Correlational analyses were performed between each of these difference scores and PC scale scores. This correlation was nonsignificant for TRPs, r(38) = .17, p = .30, and marginally significant for TRs, r(38) = .31, p = .053. The direction of this correlation showed that there was a trend toward less stereotype bias with higher PC scores.

**Main analyses.** The main analyses were a series of 2 (target gender: male vs. female) X 2 (individuating information: masculine information vs. no information) X 2 (order of judgment task: TRs first vs. TRPs first) mixed-model ANOVAs. Target gender was the within-subjects factor. One ANOVA was performed on the athleticism trait ratings, a second was performed on the assertiveness trait ratings, and a third was performed on the TRPs. These analyses tested the hypothesis that perceivers would rely exclusively on individuating information in TRs, but on both individuating information and stereotypes in TRPs. Because there were no significant effects involving order of judgment task, Fs < 3.61, ps > .06, this factor was dropped in the analyses reported below.

Consistent with the prediction that individuating information would influence evaluations on both types of judgments, all ANOVAs revealed significant individuating information effects, Fs(1, 86) > 39.93, ps < .001,  $\eta s > .53$  (see Table 25 for full Study 3b ANOVA results and Table 26 for main effect means, standard deviations, and 95% confidence intervals), showing that targets were perceived as more characterized by masculine traits and more likely to engage in masculine behaviors in the presence of somewhat diagnostic masculine information than in the absence of individuating information. Target gender main effects were nonsignificant in judgments of athleticism and on TRPs, Fs(1, 86) < 1.70, ps > .20. However, in assertiveness ratings, male targets were evaluated as more assertive than female targets, F(1, 86) = 46.38, p < .001,  $\eta = .53$ .

As expected, all main effects were qualified by significant target gender X individuating information interactions, Fs(1, 86) > 5.80, ps < .02,  $\eta s > .21$  (see Table 27 for cell means, standard deviations, and 95% confidence intervals). For assertiveness

TRs and for TRPs, this interaction showed stereotype effects in the no information condition, ts(39) > 3.34, ps > 002, rs > .47, but not in the individuating information condition, ts(43) < 1.73, ps < .09. The finding of no stereotype effects on either judgment task disconfirmed the hypothesis of exclusive reliance on somewhat diagnostic individuating information in TRPs, but reliance on stereotypes and individuating information in TRPs.

Another unexpected finding was that no stereotype effects were found in the no information condition for athleticism TRs, t(39) = 1.90, p = .07. Therefore, the hypothesis could not be tested using evaluations of athleticism; a stereotype must exist in order for it to influence judgments.

Summary. Considered as a whole, the results of Study 3b were different from Study 3a in that no stereotype effects were found in the presence of somewhat diagnostic individuating information on either type of judgment task. However, these results still did not support the hypothesis of exclusive reliance on somewhat diagnostic individuating information in trait ratings and reliance on both individuating information and stereotypes in TRPs. In addition, unexpectedly, unlike in the pilot tests and inconsistent with previous literature (e.g., Bem, 1974), there were no stereotype effects found for athleticism in the absence of individuating information.

There are two possible explanations for this latter discrepancy. First, the sample size in the no information condition in Study 3b (n = 40) was considerably smaller than the sample size in the pilot study that established this trait as masculine (Study 1a; N = 96). Because there is greater variability in smaller sample sizes, it is more likely for means obtained in a smaller sample to deviate more from an established pattern. Second,

the sample in Study 3b was taken from Mechanical Turk, whereas the pilot study was conducted on Rutgers students. It is possible that these two populations subscribe to different gender stereotypes.

In addition, as in Study 3a, the average individuating information effect found in the present study, r = .52, was smaller than the average individuating information effect size found in Kunda & Thagard's (1996) meta-analysis (r = .71). This is likely because the information was somewhat, rather than highly, diagnostic. In addition, the average effect size for significant target gender effects was r = .14, which is similar to the average effect in the meta-analysis (r = .25).

# Reconciling conflicting patterns of trait rating results across Studies 3a and 3b Testing Methodological explanations

Although the hypothesis of no stereotype effects on trait ratings in the presence of somewhat diagnostic individuating information was supported in Study 3b, it was not supported in Study 3a. The lack of a consistent pattern of trait rating findings across the two studies suggested that the reason for the discrepancy may have been particular to the methodology or sample employed in Study 3a instead of being attributable to an underlying cognitive process; the latter would have produced a consistent pattern of results. A series of analyses was performed to test this possibility.

First, I examined explanations based on the diagnosticity of stimulus traits with respect to dependent measure traits used in the trait ratings; it was possible that there were differences across studies in stimulus trait diagnosticity. However, the mean diagnosticity evaluations for masculine traits (Study 3b), M = 3.07, SD = 1.31, did not differ from that for feminine traits (Study 3a), M = 2.96, SD = 1.25,  $t(1905^{15}) = 1.81$ , p = .07. Another possibility was that there were target gender differences in the perceived relevance of the stimulus trait to the dependent measure traits. However, this was not a viable explanation because there was no consistent pattern of more target gender differences in diagnosticity in one study compared with the other; in both studies, there sometimes were and sometimes were not target gender differences in the perceived relevance of the stimulus trait to the dependent measure traits (see Table 4).

The next explanation that was considered was based on participant gender. The sample in Study 3a had a greater proportion of males (51 out of 76 were male) than Study

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<sup>&</sup>lt;sup>15</sup> The degrees of freedom was 1905 because, to perform the t-test, all diagnosticity evaluations were combined into one column of data, and there were 1907 diagnosticity evaluations. The t-test could not be performed on the data in its original format because the evaluations were made using different samples.

3b (44 out of 88 were male). To examine whether the greater proportion of males in Study 3a could account for the results, I performed a 2 (target gender: male vs. female) X 2 (judgment task order: trait rating first vs. TRP first) X 2 (participant gender) mixed-model ANOVA on the trait ratings in the individuating information condition in Study 3a (the condition and dependent measure for which unexpected stereotype effects were found). Target gender was the within-subjects factor. All effects involving participant gender were nonsignificant, Fs(1, 34) < 0.69, ps > .41. This indicated that the different gender compositions of the two samples did not account for the discrepancy in results.

I also examined the valence of the traits (Table 28) to determine whether differences in the valence of the traits might account for the results. Both traits used as masculine TRs (where no stereotype effects were found) were considered favorable traits, and the feminine TRs (where stereotype effects were found) were either considered unfavorable or neutral traits. There were approximately equal stereotype effects in the presence of individuating information for the neutral trait (sensitive; t(37) = 2.69, p = .01, r = .40) compared with the negative trait (emotional; t(37) = 2.09, p = .04, r = .32). However, the pattern of the mean differences showed a larger gender difference in evaluations on the neutral trait (sensitive:  $M_{\text{female}} = 6.00$ ,  $M_{\text{male}} = 5.30$ ) than on the negative trait (emotional:  $M_{\text{female}} = 5.38$ ;  $M_{\text{male}} = 4.90$ ). This suggested that a more positive valence does not reduce stereotype effects and that, therefore, the valence discrepancy likely does not account for the different patterns of results.

Finally, according to social role theory (e.g., Eagly, 1987), information about social roles plays a particularly strong, even causal (Koenig & Eagly, 2014) role in group stereotypes. Because home-orientation suggests domesticity and thus has implications

for social roles, while cooperativeness does not have any implications for social roles, it was possible that the stereotype effect in trait ratings was carried by evaluations of the home-oriented female target. However, a 2 (target gender: male vs. female) X 2 (stimulus information: Jennifer cooperative, John home-oriented vs. Jennifer home-oriented, John cooperative) mixed-model ANOVA performed on data from the individuating information condition in Study 3a revealed that means for the female target trended in the opposite direction; there was a trend toward Jennifer being evaluated as more feminine on trait ratings when she was depicted as cooperative, M = 11.82, SD = 1.29, than when she was home-oriented, M = 11.00, SD = 1.76, t(36) = 1.83, p = .08. Thus, social role theory could not explain the findings.

## **Meta-analysis**

Having considered and rejected all of these methodological accounts for the results, I conducted a meta-analysis in which I pooled the trait rating data from the individuating information conditions of Studies 3a and 3b to test for stereotype effects in the aggregate dataset. If the stereotype effect from Study 3a were eliminated in the pooled dataset, this would suggest that Study 3b's finding of no stereotype effects was the more accurate finding.

The meta-analysis was restricted to the individuating information conditions and to the trait ratings because there were no discrepancies between studies in results for TRPs or in results for the no information conditions. The analysis was performed on summed trait rating scales despite keeping the traits separate in Study 3b because, otherwise, a meta-analysis would not be possible. Trait ratings from Study 3b were

reverse-coded so that all scores in the dataset represented trait ratings on feminine traits, thereby providing a meaningful test of stereotype effects.

First, a 2 (target gender: male vs. female) X 2 (order of judgment task: TRs first vs. TRPs first) mixed-model ANOVA was performed. There were no significant effects involving the order of judgment task, Fs(1, 84) < 2.68, ps > .10, so this factor was dropped from the analysis. Next, a paired-samples t-test comparing evaluations of men to evaluations of women was performed on the aggregate dataset. This analysis revealed that, across the two studies, there was no stereotype bias in trait ratings in the presence of somewhat diagnostic individuating information,  $M_{\text{female}} = 6.92$ ,  $SD_{\text{female}} = 4.34$ ,  $M_{\text{male}} = 6.70$ ,  $SD_{\text{male}} = 3.72$ , t(85) = 0.87, p = .39, d = 0.13. Therefore, I concluded that the stereotype bias found in trait ratings in Study 3a likely came about by chance.

#### **General Discussion**

The present research tested the central a priori hypotheses put forth by the *DJT* model of person perception. The first hypothesis was that perceivers would rely exclusively on highly diagnostic individuating information in target evaluations rather than on stereotypes, regardless of the type of judgment task at hand. This hypothesis was supported by the results of Study 2.

The second hypothesis tested by the present research was that, in the presence of somewhat diagnostic individuating information and category information, perceivers would rely exclusively on somewhat diagnostic individuating information in trait ratings and on both stereotypes and somewhat diagnostic individuating information in target-relevant predictions. However, this hypothesis was not supported; aggregating across Studies 3a and 3b, no stereotype effects were found in trait ratings or target-relevant predictions in the presence of somewhat diagnostic individuating information.

Thus, rather than the *DJT* model, the present research supported a simpler, more parsimonious model. In this model, the decision tree consists of only one decision: Is there individuating information available? If there is, perceivers should exclusively rely on it in their evaluations of others, regardless of the circumstances of the evaluations. If there is no individuating information, perceivers should exclusively rely on stereotypes.

However, this model does not provide an adequate account of previous literature; a multitude of studies that did not meet any exclusion criteria for this dissertation (Appendix A) have found reliance on both individuating information and stereotypes in person perception (e.g., Crawford et al., 2011, Study 2; Dipboye, Fromkin, & Wiback, 1975; Glick et al., 1988; Heilman, 1984; Jackson, Sullivan, & Hodge, 1993, Studies 1 &

2; Kobrynowicz & Biernat, 1997, Study 2; Nelson, Acker, & Manis, 1996; see Kunda & Thagard, 1996, for a review), and these effects are usually found when individuating information is somewhat diagnostic (e.g., Crawford et al., 2011, Study 2; Dipboye et al., 1975; Glick et al., 1988; Heilman, 1984; Nelson et al., 1996; cf. Pratto & Bargh, 1999). This empirical evidence suggests that a distinction between highly and somewhat diagnostic individuating information should, indeed, be made; despite the support for the simplified model found by the present research, it does not fit well with the literature as a whole.

In addition, at the conceptual level, perceivers generally have a goal of making valid judgments (e.g., Eagly & Chaiken, 1993; Fiske & Neuberg, 1990). As discussed in the Introduction, to obtain this goal, it is not optimal to rely on somewhat diagnostic information to the same extent as highly diagnostic information; because stereotypes are oftentimes relatively accurate (see Jussim, 2012; Jussim, Crawford, & Rubinstein, 2015, for reviews), in such cases, relying on stereotypes likely improves the quality of perceivers' judgments.

However, the question of what might account for the discrepancy between the results of the present research from previous literature remains. Specifically, why might perceivers have disregarded their stereotypes in TRPs in the presence of somewhat diagnostic individuating information in the present research, whereas in previous research, stereotypes usually have influenced TRPs in the presence of somewhat diagnostic individuating information?

One possibility is the nature of the individuating information manipulations and the TRPs. In the present research, the individuating information and TRPs were relevant

to targets' personalities. In contrast, in all previous studies finding stereotype effects when TRPs or OSJs (which are considered interchangeable by the DJT model) were employed as dependent measures in the presence of somewhat diagnostic individuating information, the individuating information, TRPs, and OSJs were not directly relevant to targets' personalities. Instead, the individuating information was about academic credentials (Heilman, 1984; Dipboye et al., 1975), previous work experience and extracurricular interests (Glick et al., 1988; Nelson et al., 1996, Study 1), or political positions (Crawford et al., Study 2). Similarly, TRPs were predictions of a target's college major (Nelson et al., 1996, Study 1), or a politician's political position (Crawford et al., Study 2), and OSJs are inherently career-oriented in nature.

It is possible that people are more reluctant to apply stereotypes in evaluations based on or relevant to personal traits because such judgments may be perceived as more relevant to the person's character than are academically or occupationally oriented predictions or judgments, and it may be viewed as more "wrong" to apply stereotypes in personal judgments than in career-oriented judgments. In support of this argument, in the only previous research finding no stereotype effects in OSJs in the presence of somewhat diagnostic individuating information, the individuating information was behavioral information that was meant to exemplify personality traits (e.g., "spoke up against the majority at a group meeting" to imply assertiveness; Pratto & Bargh, 1991), just as it was in the present study.

Another possible reason for the discrepancy between the present research and past findings is that the previous studies used samples consisting of college students or business professionals, while the present research used a Mechanical Turk sample.

Mechanical Turk samples in some cases provide lesser quality data compared with university samples, particularly when workers have "low reputations" (i.e., less than a 95% HIT approval rate) or when instructional manipulation checks are not used (Peer, Vosgerau, & Acquisti, 2014). While extensive instructional manipulation checks were used to exclude inattentive participants and data were compared from analyses including and excluding fast responders, this explanation was made more likely because the recommended practice of only using participants with HIT approval ratings above 95% (e.g., Peer et al., 2014) was not followed; instead 80% was set as the criterion.

A final possibility is the fact that target gender was manipulated within-subjects in the present research, while this was not the case in some of the previous studies that used socially sensitive target groups and obtained stereotype effects in the presence of somewhat diagnostic individuating information (Glick et al., 1988; Heilman, 1984). The within-subjects target group manipulation made it more likely that social desirability bias influenced the results, thereby reducing the chance that evaluations would show stereotype bias. However, this explanation should be taken with caution because PC scale scores did not correlate with gender difference scores on TRPs in Studies 3a and 3b.

### **Limitations and future directions**

One major limitation of the *DJT* model is that its best use seems to be organizing and conceptualizing past literature rather than using it to predict the outcomes of judgments or explain their underlying processes. This is because one of the *DJT* model's main a priori predictions was not supported, and because no underlying mechanisms were included in the model.

In addition, in organizing past findings, the *DJT* model accounts for only a portion of the literature addressing reliance on individuating information and stereotypes in person perception. It does not aim to provide an account for several other evaluative situations, such as evaluations made in the presence of ambiguous individuating information (Darley & Gross, 1983; Gawronski, Geschke, & Banse, 2003; Kunda & Sherman-Williams, 1993; Ryan, Judd, & Park, 1996, Study 3; Sagar & Schofield, 1980), or studies that use other types of dependent measures such as causal attributions (e.g., Duncan, 1976) and memory for individuating information (e.g., Macrae, Bodenhausen, Milne, & Castelli, 1999; Macrae, Bodenhausen, Schloerscheidt, & Milne, 1999). Future models should provide an account of these additional evaluative situations (see Appendix A for a complete list of types of studies excluded by the DJT model).

In addition, the *DJT* model does not include factors such as motivation and attention that are known to have an effect on impression formation (e.g., Neuberg & Fiske, 1987), and that have been taken into account by previous theories (Brewer, 1988; Fiske & Neuberg, 1990). It also did not examine situational factors such as potential cross-cultural differences in reliance on individuating information and stereotypes. Future research should address these scenarios.

Another limitation to the present research is that the pilot tests were performed on Rutgers students, whereas in Studies 3a and 3b, participants were Mechanical Turk workers. This was a problem because, although Rutgers students held the stereotype that men are more athletic than women, Mechanical Turk workers did not; in Study 3b, which measured the effects of masculine somewhat diagnostic individuating information and stereotypes on person perception, there were no stereotype effects on the athleticism trait

rating, even in the absence of individuating information. Thus, the hypothesis of exclusive reliance on somewhat diagnostic individuating information in trait ratings, but reliance on both somewhat diagnostic individuating information and stereotypes in TRPs, could not be tested using athleticism trait ratings because participants did not subscribe to this particular stereotype.

# Conclusion

Although not all of the *DJT* model's predictions were supported by the data, the unanimous disregarding of stereotypes in favor of information in the social environment is in keeping with a recent shift away from what were once the dominant perspectives in social psychology focusing on errors and biases (e.g., Fiske & Taylor, 1991; Nisbett & Ross, 1980), and toward views of social perception that incorporate accuracy and sensitivity of beliefs to valid information in the environment (e.g., Cone & Ferguson, 2015; Crawford et al., 2011; Jussim, 2012; Kunda & Thagard, 1996). Consistent with this, the present research lent support to the view that, although stereotypes do bias judgments at times, beliefs about groups and individuals from those groups oftentimes reflect reliance on the most relevant available information.

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Table 1 Summary of judgment complexity argument

		Judgn	nent task
		Trait rating	Target-relevant
			prediction or
			occupational suitability
			judgment
	Highly	Sources of complexity	Sources of complexity
	diagnostic	None	One source: Judgment
		Outcome:	task
		Reliance on	Outcome:
Diagnosticity of		individuating	Reliance on
individuating		information	individuating
information			information
	Somewhat	Sources of complexity	Sources of complexity
	diagnostic	One source:	Two sources: Judgment
		Diagnosticity of	task and diagnosticity
		individuating	of individuating
		information	information
		Outcome: Reliance on	Outcome: Reliance on
		individuating	individuating
		information	information and
			stereotypes

Table 2

Demographic characteristics of pilot samples

Demographic C	naracieristics of	1 1		
	Mean age	Gender	Race	Political
				ideology
Study:				
Study 1a N = 96	21.62	69 female, 27 male	45 White, 18 Latino/Hispanic, 15 Asian, 9 Black, 7 multiracial, 2 other	44 liberal, 18 moderate, 23 conservative, 11 "don't know"
Study 1b N = 228	19.15	120 male, 106 female, 2 other	98 White, 54 Asian, 36 Latino/Hispanic, 18 Black, 15 multiracial, 7 other	120 liberal, 43 moderate, 34 conservative, 31 "don't know"
Study 1c N = 273	19.58	149 female, 121 male, 3 other	110 White, 83 Asian, 42 Latino/Hispanic, 18 Black, 12 multiracial, 8 other	157 liberal, 46 moderate, 36 conservative, 34 "don't know"

Table 3
Study 1a comparisons of masculinity and femininity evaluations to gender neutrality

	M	SD	df	t	d
Acts as a leader					
Masculine	4.43	0.84	95	39.84***	4.08
Feminine	3.34	1.09	95	21.00***	2.15
Aggressive					
Masculine	4.56	0.77	94	45.16***	4.62
Feminine	2.62	1.16	93	13.57***	1.39
Ambitious					
Masculine	4.27	0.79	95	40.68***	4.14
Feminine	3.75	1.03	94	25.97***	2.67
Analytical					
Masculine	3.55	1.01	95	24.65***	2.52
Feminine	3.54	1.11	95	22.36***	2.29
Assertive	4.20	0.00	0.4	Ad a Waterbate	4.0.4
Masculine	4.39	0.80	94	41.15***	4.24
Feminine	3.00	1.04	93	18.70***	1.92
Athletic	4.50	0.70	0.2	40.00 atestes	<b>5</b> .00
Masculine	4.52	0.70	93	48.83***	5.03
Feminine	3.23	1.01	93	21.45***	2.21
Compassionate	2.05	0.06	0.4	10.00 de de de	1.02
Masculine	2.85	0.96	94	18.89***	1.93
Feminine	4.48	0.68	93	49.34***	5.12
Competitive	4.50	0.62	0.5	57 20444	<i>5.6</i> 0
Masculine	4.59	0.63	95	56.30***	5.69
Feminine	3.36	1.10	94	20.88***	2.15
Defends own beliefs	4.01	0.00	0.4	20.02***	2.07
Masculine	4.01	0.98	94	29.82***	3.07
Feminine	3.69	1.11	94	23.63***	2.42
Dominant	1.62	0.76	05	46.89***	4.70
Masculine	4.63	0.76	95 05	13.63***	4.78
Feminine	2.51	1.09	95	13.03	1.39
Gentle	2.44	1.02	05	13.75***	1 /1
Masculine Feminine	2.44 4.46	1.02 0.72	95 95	46.79***	1.41 4.81
Gullible	4.40	0.72	93	40.79	4.01
Masculine	2.77	1.13	95	15.38***	1.57
Feminine	3.40	1.13	95 95	21.92***	2.24
Independent	J.4U	1.07	73	41.74	∠ <b>.∠4</b>
Masculine	4.17	0.96	94	32.04***	3.30
Feminine	3.67	1.07	94 94	24.44***	2.50
Individualistic	5.07	1.07	24	∠ <b>⊤.</b> ┭┭ * * * *	2.30
Masculine	3.82	1.14	94	24.14***	2.47
Feminine	3.82 3.47	1.14	94 94	19.92***	2.47
1,6111111116	J. <del>+</del> /	1.41	フサ	17.74	2.04

Loves children					
Masculine	3.20	1.01	95	21.29***	2.18
Feminine	4.67	0.57	95	62.56***	6.44
Loyal	1.07	0.57	75	02.50	0.11
Masculine	3.63	1.09	94	23.49***	2.41
Feminine	3.74	1.23	95	21.77***	2.22
Makes decisions easily	3.71	1.23	75	21.77	2,22
Masculine	3.67	1.19	94	21.92***	2.24
Feminine	2.68	1.07	94	15.28***	1.57
Sensitive to the needs of	2.00	1.07	<i>7</i> 1	13.20	1.57
others					
Masculine	2.54	1.05	95	14.45***	1.47
Feminine	4.45	0.76	94	44.59***	4.54
Shy					
Masculine	2.48	1.15	95	12.59***	1.29
Feminine	3.56	1.17	95	21.49***	2.19
Sympathetic					
Masculine	2.61	0.97	95	16.37***	1.66
Feminine	4.47	0.71	95	47.86***	4.89
Understanding					
Masculine	3.08	1.10	94	18.50***	1.89
Feminine	4.26	0.93	94	34.39***	3.51
Warm					
Masculine	2.73	0.96	95	17.71***	1.80
Feminine	4.42	0.72	95	46.46***	4.75
Connected with others					
Masculine	3.22	1.06	95	20.54***	2.09
Feminine	4.19	0.96	95	32.71***	3.32
Cooperative					
Masculine	3.09	0.97	94	21.08***	2.15
Feminine	3.89	0.99	95	28.46***	2.92
Kinship-oriented					
Masculine	3.35	1.03	94	22.23***	2.28
Feminine	3.93	1.00	94	48.45***	2.93
Supportive					
Masculine	3.27	1.03	95	21.58***	2.20
Feminine	4.33	0.89	95	36.68***	3.74
Adventurous					
Masculine	4.22	0.87	95	36.12***	3.70
Feminine	3.44	1.09	95	21.84***	2.24
Boastful					
Masculine	4.04	1.10	95	26.99***	2.76
Feminine	2.90	1.10	95	16.89***	1.72
Confident					
Masculine	4.32	0.84	94	38.42***	3.95
Feminine	3.46	1.10	95	22.00***	2.24

Egotistical						
	Masculine	4.21	0.98	94	32.02***	3.28
	Feminine	2.89	1.13	94	16.42***	1.67
<b>Emotional</b>						
	Masculine	2.40	0.98	94	13.88***	1.43
	Feminine	4.58	0.69	95	50.82***	5.19
Sentimental						
	Masculine	2.60	1.03	94	15.21***	1.55
	Feminine	4.36	0.76	94	43.45***	4.42

*Note.* Masculine and Feminine evaluations were made on a scale of 1 (Not at all masculine, not at all feminine) to 5 (Very masculine, very feminine). T-tests compared means for masculinity and femininity evaluations to 1, which represented gender neutrality.

\*\*\*p < .001

Table 4
Study 1a comparisons of masculinity and femininity evaluations

Siudy 14 compar	Mean	linity and feminir SD	df	t	d
	difference	difference		•	
Acts as a	1.08	1.10	95	9.63***	0.98
leader					
Aggressive	1.94	1.30	93	14.42***	1.49
Ambitious	0.54	0.95	94	5.48***	0.57
Analytical	0.01	1.15	95	0.09	0.01
Assertive	1.41	1.16	92	11.68***	1.22
Athletic	1.29	1.09	93	11.41***	1.18
Compassionate	-1.62	1.13	93	-13.91***	1.43
Competitive	1.25	1.13	94	10.81***	1.11
Defends own	0.32	1.00	94	3.07**	0.32
beliefs					
Dominant	2.12	1.26	95	16.50***	1.68
Gentle	-2.02	1.38	95	-14.31***	1.46
Gullible	-0.63	1.25	95	-4.90***	0.50
Independent	0.50	1.10	94	4.38***	0.45
Individualistic	0.35	1.14	94	2.98**	0.31
Loves children	-1.47	1.08	95	-13.38***	1.36
Loyal	-0.13	1.20	94	-1.03	0.11
Makes	0.99	1.40	94	6.88***	0.71
decisions					
easily					
Sensitive	-1.91	1.31	94	-14.23***	1.46
Shy	-1.08	1.47	95	-7.22***	0.73
Sympathetic	-1.85	1.11	95	-16.30***	1.67
Understanding	-1.18	1.25	94	-9.22***	0.94
Warm	-1.69	1.18	95	-13.99***	1.43
Connected	-0.97	1.08	95	-8.79***	0.90
Cooperative	-0.80	1.12	94	-6.98***	0.71
Kinship-	-0.58	1.39	94	-4.07***	0.42
oriented					
Supportive	-1.06	1.13	95	-9.20***	0.94
Adventurous	0.78	1.12	95	6.86***	0.70
Boastful	1.15	1.42	95	7.90***	0.81
Confident	0.87	0.99	94	8.59***	0.88
Egotistical	1.32	1.26	94	10.20***	1.05
Emotional	-2.21	1.30	94	-16.63***	1.70
Sentimental	-1.76	1.41	94	-12.20***	1.25

*Note.* Masculine and Feminine evaluations were made on a scale of 1 (Not at all masculine, not at all feminine) to 5 (Very masculine, very feminine). Negative mean differences and *t* values represent female-typed traits. *T*-tests were paired-samples tests.

<sup>\*\*\*</sup>*p* < .001

Table 5
Studies 1b and 1c Differences in Perceived Relevance by Target Gender for Masculine
Stimulus and Dependent Measure Traits and Behaviors Used in Studies 3a and 3b

	$N_{male}$ ,	$M_{male}$ ,	$SD_{male}$ ,	t	d
Stimulus trait-	$N_{female}$	$M_{female}$	$SD_{female}$		
dependent					
measure trait					
Boastful- assertive	110, 118	2.90, 2.45	1.29, 1.32	2.60**	0.34
Competitive- assertive	110, 117	3.55, 3.43	1.00, 1.12	0.90	
Boastful- athletic	109, 118	2.86, 2.53	1.26, 1.27	2.00*	0.26
Competitive- athletic	110, 118	3.59, 3.28	1.31, 1.33	1.78	
Cooperative- sensitive	109, 118	2.76, 2.62	1.17, 1.23	0.89	
Cooperative- emotional	109, 118	2.50, 2.58	1.09, 1.29	-0.51	
Home-oriented- sensitive	142, 131	3.59, 3.13	1.04, 1.34	3.19**	0.38
Home-oriented- emotional	141, 130	3.26, 3.00	1.15, 1.29	1.73	
Stimulus trait-					
dependent					
measure behavior					
Boastful-	109, 117	3.23, 3.33	1.26, 1.19	-0.64	
continues speaking when					
interrupted Competitive-	110, 118	3.22, 2.64	1.34, 1.31	3.33**	0.44
continues speaking when					
interrupted Boastful-tell off	142, 129	3.44, 3.02	1.25, 1.38	2.69**	0.32
a peer who offends him/her	,	- · , <del>- · · -</del>	,		
Competitive- tell off a peer	142, 131	3.27, 2.83	1.34, 1.28	2.79**	0.34
who offends him/her					
Cooperative- encourages a	141, 131	3.52, 3.14	1.14, 1.35	2.52*	0.30

depressed friend to seek treatment					
Cooperative- comforts a stranger who is	142, 131	3.20, 2.87	1.24, 1.26	2.16*	0.26
visibly upset					
Home-oriented- encourages a depressed friend to seek	142, 131	3.47, 2.98	1.24, 1.30	3.17**	0.39
treatment Home-oriented- comforts a stranger who is visibly upset	141, 131	2.81, 2.32	1.29, 1.18	3.25**	0.40

*Note.* Evaluations were made on a scale of 1 (Not at all relevant) to 5 (Very relevant).

<sup>\*</sup>p < .05
\*\*p < .01
\*\*\*p < .001

Table 6
Study 1b stimulus behavior trait ratings

Study 1b stimulus behavior trait ratings					
Behavior and trait rating	N	Mean	Standard	t	d
			Deviation		
Not saying anything when a peer					
offends [him/her]					
Passive/assertive	227	2.01	1.10	-27.04***	1.81
Acts as a follower/leader	226	2.78	1.32	-13.89***	0.92
Not defending a friend who is being					
picked on					
Passive/assertive	227	2.08	1.22	-23.70***	1.57
Acts as a follower/leader	226	2.11	1.14	-25.01***	1.66
Stops speaking when interrupted by a					
peer					
Passive/assertive	227	2.74	1.29	-14.72***	0.98
Acts as a follower/leader	226	2.72	1.17	-16.45***	1.09
Not sending cold food back in a	220	2.72	1.17	10.15	1.07
restaurant when out with a group of					
friends					
Passive/assertive	227	2.70	1.27	-15.35***	1.02
Acts as a follower/leader	226	3.19	1.27	-10.13***	0.67
	220	5.19	1.20	-10.13	0.67
Not correcting a friend who gave					
wrong information in a group					
conversation	226	0.70	1 10	1 6 0 5 de de de	1.00
Passive/assertive	226	2.73	1.18	-16.25***	1.08
Acts as a follower/leader	225	2.73	1.23	-15.47***	1.03
Telling off a peer who offends him/her					
Passive/assertive	227	5.81	1.17	23.41***	1.56
Acts as a follower/leader	228	5.23	1.15	16.22***	1.07
Defending a friend who is being picked					
on					
Passive/assertive	227	5.82	1.17	23.35***	1.56
Acts as a follower/leader	227	6.19	1.02	32.07***	2.15
Continuing to speak when interrupted					
by a peer					
Passive/assertive	227	5.42	1.52	14.14***	0.93
Acts as a follower/leader	225	5.15	1.16	14.81***	0.99
Sending food back in a restaurant					
because it's cold when out with a					
group of friends					
Passive/assertive	227	5.27	1.53	12.54***	0.83
Acts as a follower/leader	228	4.75	1.12	10.08***	2.00
Correcting a friend in a group	0		1.12	10.00	
conversation					
Passive/assertive	227	5.07	1.31	12.36***	0.82
Acts as a follower/leader	228	5.08	1.14	14.39***	0.82
Acis as a follower/feauci	220	5.00	1.14	17.37	0.23

Volunteers to tutor a friend who is					
struggling in school					
Uncompassionate/compassionate	228	6.20	0.96	34.65***	2.29
Regularly donates money to charity					
Uncompassionate/compassionate	228	6.28	0.99	34.67***	2.30
Encourages a depressed friend to seek					
treatment					
Uncompassionate/compassionate	228	6.27	0.88	38.59***	2.58
Offers to do chores for a friend who is					
injured					
Uncompassionate/compassionate	228	6.32	0.93	37.51***	2.49
Comforts a stranger who is visibly					
upset					
Uncompassionate/compassionate	228	6.50	0.92	41.01***	2.72
Suggests that a friend who is struggling					
in school go to the tutoring center					
Uncompassionate/compassionate	226	4.82	1.15	10.70***	0.71
Never donates money to charity					
Uncompassionate/compassionate	227	3.22	1.00	-11.64***	0.78
Does not give advice to a depressed					
friend because [s/he] feels it isn't					
[his/her] place					
Uncompassionate/compassionate	228	3.32	1.21	-8.43***	0.56
Suggests that a friend who is injured					
temporarily hire someone to help with					
chores					
Uncompassionate/compassionate	228	3.56	1.25	-5.35***	0.35
Does not comfort a stranger who is					
visibly upset					
Uncompassionate/compassionate	228	3.34	0.92	-10.79***	0.72

*Note.* Passive and assertive ratings were on a scale of 1 (Very passive) to 7 (Very assertive). Acts as a follower/acts as a leader ratings were on a scale of 1 (Very much acts as a follower) to 7 (Very much acts as a leader). Uncompassionate and compassionate ratings were on a scale of 1 (Very uncompassionate) to 7 (Very compassionate). T-tests compared cell means to 4 (the midpoint of the scales). \*\*\*p < .001

Table 7 Studies 1h and 1c competitiveness trait behavior diagnosticity evaluations

	N	Mean	Standard deviation	t comparing mean to 3	d	t comparing mean to 2 or	d
Continues speaking when interrupted	226	3.28	1.22	3.48**	0.23	-8.82***	0.59
Brags to his/her colleagues about a promotion	227	3.81	1.22	10.03***	.66	-2.35*	0.16
Plays in a basketball league	227	3.13	1.25	1.54		-10.54***	0.70
Argues a lot with spouse	227	2.74	1.28	-3.07**	0.20	8.74***	0.58
Says offensive things to friends	227	2.38	1.38	-6.72***	0.45	4.18***	0.28
Gets angry when s/he loses bets	273	3.81	1.29	10.38***	0.63	-2.39*	0.15
Tells people off when they offend him/her	273	3.06	1.33	0.78		-11.69***	0.71
Applies for awards at work	273	4.03	1.12	-,-		0.49	
Boasts about his/her accomplishments	271	3.44	1.37	5.27***	0.32	-6.73***	-0.41
Interrupts others who are speaking	273	2.59	1.36	-4.98***	0.30	7.16***	0.43
Insults people who beat him/her in sports	272	3.08	1.49	0.86		-10.25***	-0.62
Sabotages his/her colleagues to get ahead at work	273	3.07	1.48	0.78		-10.39***	-0.63
Gets upset when s/he loses when playing sports	234	3.85	1.33	9.79***	0.64	-1.72	
Insults people to make him/herself look better	237	2.83	1.48	1.76		8.64***	0.56
Says negative things to his/her boss about a colleague with whom s/he is competing for a promotion	237	3.18	1.53	1.78		-8.26***	-0.54

Note. Evaluations were made on a scale of 1 (Not at all relevant) to 5 (Very relevant). Means falling above 3 were compared to 4 in the *t*-tests reported in the last column. Means falling below 3 were compared with 2 in the t-tests reported in the last column. Means falling above 4 were not compared with 3 in the 5<sup>th</sup> column. Sample sizes differ because these evaluations came from two separate samples.

<sup>\*</sup>p < .05

<sup>\*\*</sup>p < .01 \*\*\*p < .001

Table 8
Studies 1b and 1c boastfulness trait-behavior diagnosticity evaluations

Studies 1b and 1c boastfulness trait-behavior diagnosticity evaluations									
	N	Mean	Standard deviation	t comparing mean to 3	d	t comparing mean to 2 or 4	d		
Continues speaking when interrupted	228	2.92	1.35	-0.93		10.26***	0.68		
Brags about a promotion to his/her colleagues	228	4.61	0.81			11.48***	0.75		
Plays in a basketball league	228	1.82	1.06	-16.75***	1.11	-2.50*	0.17		
Argues a lot with his/her spouse	227	2.25	1.28	-8.81***	0.59	2.95**	0.20		
Says offensive things to friends	226	2.60	1.34	-4.48***	0.30	6.77***	0.45		
Defends a friend who is being picked on	273	2.52	1.33	-5.96***	0.36	6.45***	0.39		
Tells off a peer who offends him/her	271	3.24	1.32	2.98**	0.18	-9.45***	0.58		
Asks for a raise in pay at work	273	3.37	1.22	5.05***	0.30	-8.47***	0.52		
Gets angry	270	3.24	1.26	3.15**	0.19	-9.95***	0.60		

when s/he loses a bet							
Interrupts others who are speaking	273	3.36	1.34	4.39***	0.27	-7.97***	0.48
Complains to a store manager about the quality of a product	273	3.09	1.34	1.08		-11.23***	0.68
Blames his/her colleague for his/her own mistake at work	273	3.27	1.37	3.28**	0.20	-8.81***	0.53

Note. Evaluations were made on a scale of 1 (Not at all relevant) to 5 (Very relevant). Means falling above 3 were compared to 4 in the *t*-tests reported in the last column. Means falling below 3 were compared with 2 in the *t*-tests reported in the last column. Means falling above 4 were not compared with 3 in the 5<sup>th</sup> column. Sample sizes differ because these evaluations came from two separate samples.

<sup>\*</sup>p < .05
\*\*p < .01
\*\*\*p < .001

Table 9 Study 1b competitiveness trait-trait diagnosticity evaluations

	N	Mean	Standard	t comparing to 3,	t comparing to
			deviation	d	4, <i>d</i>
Assertive	227	3.49	1.07	6.91***, 0.46	-7.22***, 0.48
Acts as a leader	228	3.75	1.10	10.36***, 0.68	-3.37**, 0.23
Aggressive	228	3.81	1.05	11.62***, 0.77	-2.78**, 0.18
Athletic	228	3.43	1.33	4.89***, 0.32	-6.49***, 0.43
Dominant	228	3.89	1.01	13.20***, 0.88	-1.70
Boastful	227	3.15	1.17	1.92	-10.89***, 0.73
Egotistical	227	3.02	1.32	0.20	-11.24***, 0.74
Decisive	227	3.54	1.22	6.71***, 0.44	-5.68***, 0.38
Confident	228	4.10	0.96		1.52

*Note.* Evaluations were made on a scale of 1 (Not at all relevant) to 5 (Very relevant).

<sup>\*</sup>p < .05 \*\*p < .01 \*\*\*p < .001

Table 10 Study 1b boastfulness trait-trait diagnosticity evaluations

	N	Mean	Standard	t comparing to	t comparing to 2
			deviation	3, <i>d</i>	or 4, d
Assertive	228	2.67	1.33	-3.80***, 0.25	-15.19***, .50
Acts as a leader	226	2.44	1.20	-7.01***, 0.47	5.56***, 0.37
Aggressive	224	3.32	1.27	3.78***, 0.25	-7.98***, 0.54
Athletic	227	2.69	1.27	-3.70***, 0.24	-15.19***, 0.54

Note. Evaluations were made on a scale of 1 (Not at all relevant) to 5 (Very relevant). Means falling above 3 were compared to 4 in the *t*-tests reported in the last column. Means falling below 3 were compared with 2 in the *t*-tests reported in the last column.

<sup>\*</sup>p < .05

<sup>\*\*</sup>p < .01 \*\*\*p < .001

Table 11 Study 1b cooperativeness trait-trait diagnosticity evaluations

Simily 10 cooperativeness with an area restricted or area restricted or area restricted or an area restricted or an area restricted or area restricte						
	N	Mean	Standard	t comparing	t comparing	
			deviation	mean to $3$ , $d$	mean to 2 or 4,	
					d	
Compassionate	227	3.94	1.03	13.78***, 0.91	-0.84	
Gentle	227	3.10	1.26	1.16	-10.78***, 0.71	
Loves children	226	2.58	1.42	-4.41***, 0.30	6.19***, 0.41	
Sensitive	227	2.69	1.20	-3.92***, 0.26	8.61***, 0.58	
Sympathetic	226	3.36	1.20	4.49***, 0.30	-8.04***, 0.53	
Understanding	226	4.15	0.94		2.42*, 0.16	
Warm	227	3.07	1.31	0.76	-10.74***, 0.71	
Supportive	226	3.98	1.08	13.65***, 0.91	-0.31	
Connected	225	4.25	0.95		3.95***, 0.26	
Emotional	227	2.54	1.20	-5.82***, 0.38	6.76***, 0.45	
Sentimental	227	2.48	1.27	-6.13***, 0.41	5.76***, 0.38	

Note. Evaluations were made on a scale of 1 (Not at all relevant) to 5 (Very relevant). Means falling above 3 were compared to 4 in the *t*-tests reported in the last column. Means falling below 3 were compared with 2 in the *t*-tests reported in the last column.

<sup>\*</sup>p < .05
\*\*p < .01
\*\*\*p < .001

Table 12 Study 1b shyness trait-trait diagnosticity evaluations

	N	Mean	Standard	t comparing to	t comparing to
			deviation	3, <i>d</i>	2 or 4, <i>d</i>
Compassionate	228	2.10	1.18	-11.53***, 0.76	1.23
Gentle	228	3.23	1.38	2.54*, 0.17	-8.40***, 0.56
Loves children	228	2.04	1.20	-12.05***, 0.80	0.50
Sensitive	228	3.35	1.32	3.95***, 0.27	-7.46***, 0.49
Sympathetic	228	2.80	1.30	-2.29*, 0.15	9.29***, 0.62
Understanding	227	2.73	1.35	-3.01**, 0.20	8.19***, 0.54
Supportive	228	2.54	1.31	-5.38***, 0.35	6.19***, 0.41
Emotional	226	3.15	1.31	1.78	-9.73***, 0.65
Cooperative	227	2.64	1.39	-3.87***, 0.26	6.98***, 0.46
Sentimental	227	2.74	1.34	-2.92**, 0.19	8.30***, 0.55

Note. Evaluations were made on a scale of 1 (Not at all relevant) to 5 (Very relevant). Means falling above 3 were compared to 4 in the t-tests reported in the last column. Means falling below 3 were compared with 2 in the *t*-tests reported in the last column.

<sup>\*</sup>p < .05

<sup>\*\*</sup>p < .01 \*\*\*p < .001

Table 13
Studies 1b and 1c cooperativeness trait-behavior diagnosticity evaluations

	N	Mean	Standard	t	d	t	d
			deviation	comparing		comparing	
				mean to 3		mean to 2	
						or 4	
Sends	227	2.15	1.24	-10.25***	0.68	1.87	
flowers							
when a							
friend's							
mother							
passes away							
Wants to	227	2.44	1.36	-6.15***	0.41	4.93***	0.32
have	221	2.77	1.50	-0.13	0.41	4.93	0.32
children							
Visits sick	226	2.39	1.37	-6.72***	0.45	4.29***	0.28
friend in the							
hospital							
T CC 1 1	227	1.00	1.04	1	1.06	1 47	
Is offended	227	1.90	1.04	-15.95***	1.06	-1.47	
when his/her							
boss criticizes							
his/her work							
morner work							
Works well	226	4.66	0.79		2.10	12.62***	0.84
in teams							
Feels	273	2.07	1.18	-12.98***	0.79	1.03	
sentimental							
during sad							
movies							
Donates	273	2.66	1.31	-4.26***	0.26	8.38***	0.50
money to	213	2.00	1.31	4.20	0.20	0.50	0.50
charity							
J							
Offers to	272	3.46	1.22	6.23***	0.38	-7.32***	0.44
tutor a friend							
who is							
struggling in							
school							
Encourages	272	3.33	1.26	4.39***	0.26	-8.27***	0.53
Encourages a	414	5.55	1.20	4.33	0.20	-0.27	0.55

depressed friend to seek treatment							
Helps friends resolve disputes	269	3.84	1.12	12.27***	0.75	-2.33*	0.14
Offers to do chores for a friend who is injured	272	3.42	1.26	5.55***	0.33	-7.57***	0.46
Organizes a community fundraiser for cancer research	273	3.22	1.32	2.76**	0.17	-9.80***	0.59
Comforts a stranger who is visibly upset	273	3.04	1.26	0.53		-12.60***	0.76
Readily admits when s/he makes mistakes at work	271	3.81	1.20	11.13***	0.68	-2.58**	0.16
Apologizes when s/he offends a friend	270	3.86	1.18	11.87***	0.73	-2.00*	0.12
Prefers to work in teams	273	3.97	1.23	13.04***	0.79	-0.44	0.02
Doesn't take sides when his/her friends argue	273	3.44	1.22	5.97***	0.36	-7.61***	0.46
Usually	237	3.66	1.19	8.59***	0.55	-4.38***	0.29

agrees to do people favors when asked							
Tries to avoid getting into arguments	234	3.66	1.17	8.58***	0.56	-4.46***	0.29
Readily makes compromises to end conflicts with friends	234	3.94	1.17	12.32***	0.80	-0.73	0.05
Rarely argues with his/her spouse	237	3.17	1.28	2.09*	0.13	-9.98***	0.65

*Note.* Evaluations were made on a scale of 1 (Not at all relevant) to 5 (Very relevant). Means falling above 3 were compared to 4 in the t-tests reported in the last column. Means falling below 3 were compared with 2 in the t-tests reported in the last column. Means falling above 4 were not compared with 3 in the t-tests reported in the last column. column. Sample sizes differ because these evaluations came from two separate samples.

<sup>\*</sup>p < .05

<sup>\*\*</sup>p < .01 \*\*\*p < .001

Table 14

Home-oriented behavior relevance evaluations

	N	Mean	Standard	t comparing	t comparing
			deviation	mean to $3$ , $d$	mean to 2 or 4, <i>d</i>
Feels sentimental during sad movies	273	2.48	1.28	-6.69***, 0.41	6.27***, 0.38
Donates money to charity	273	2.41	1.19	-8.13***, 0.50	5.74***, 0.34
Takes off from work to attend a friend's parent's funeral	270	3.41	1.25	5.34***, 0.33	-7.76***, 0.47
Encourages a depressed friend to seek treatment	273	3.24	1.29	3.05**, 0.19	-9.77***, 0.59
Attends all of his/her kids' sports games	273	4.18	1.04		2.79**, 0.17
Offers to do chores for a friend who is injured	273	3.22	1.26	2.94**, 0.17	-10.21***, 0.62
Visits a sick friend in the hospital	273	3.26	1.27	3.33**, 0.20	-9.66***, 0.58
Organizes a community fundraiser for cancer research	272	2.56	1.27	-5.67***, 0.35	7.29***, 0.44
Comforts a stranger who	272	2.57	1.26	-5.58***, 0.34	7.51***, 0.45

is visibly upset					
Takes off from work to attend his/her child's school play	273	3.98	1.14	14.24***, 0.86	-0.27
Is a member of the school board	272	3.28	1.26	3.69***, 0.22	-9.35***, 0.57
Volunteers at a homeless shelter	272	2.73	1.25	-3.57***, 0.22	9.56***, 0.58
Spends most of his/her free time with his/her family	273	4.36	1.05		5.64***, 0.34

Note. Evaluations were made on a scale of 1 (Not at all relevant) to 5 (Very relevant). Means falling above 3 were compared to 4 in the *t*-tests reported in the last column. Means falling below 3 were compared with 2 in the *t*-tests reported in the last column. Means falling above 4 were not compared with 3 in the  $5^{th}$ column. Sample sizes differ because these evaluations came from two separate samples.

<sup>\*</sup>p < .05 \*\*p < .01 \*\*\*p < .001

Table 15 Study 2 ANOVA results including fast responders

Dependent Variable	Individuating information F, $\eta$	Target gender F	Judgment task order F	Target Gender X Individuating Information F	Target gender X judgment task order F	Individuating information X order F, $\eta$	Target gender X individuating information X order F
Assertive	1131.74***, .92	0.12	1.58	2.35	1.58	0.56	2.54
Acts as a leader	512.32***, .81	0.08	0.05	0.44	0.09	0.13	0.60
Confident	334.73***, .76	0.01	0.32	3.25	0.84	2.71	2.71
Occupational suitability judgments	309.36***, .76	0.07	1.40	0.07	0.24	7.68**, .12	1.53

Note. Df = (1, 109). Results are reported in-text with fast responders excluded (see Table 17).

<sup>\*\*</sup> *p* < .01. \*\*\**p* < .001

Table 16
Study 2 correlations among main dependent measures

	Pass. target assertive TR	Assert. target acts as a leader TR	Pass. target acts as a leader TR	Assert. target confident TR	Pass. target confident TR	Assert. target OSJs	Pass. target OSJs
Assertive target assertive TR	03	.49***	.07	.31**	09	.16	10
Passive target assertive TR		10	.46***	.05	.46***	.18	10
Assertive target acts as a leader TR			.06	.24*	02	.44***	05
Passive target acts as a leader TR				09	.52***	.04	.51***
Assertive target confident TR					.03	.16	08
Passive target confident TR						07	.52***
Assertive target OSJs							.07

*Note.* N = 113. TR = trait rating. OSJ = occupational suitability judgment. Pass. = passive. Assert. = assertive.

Table 17 Study 2 ANOVA results

Dependent Variable:	Individuating information $F$ , $\eta$	Target gender F	Judgment task order F	Target Gender X Individuating Information F	Target gender X judgment task order F	Individuating information X order <i>F</i> , $\eta$	Target gender X individuating information X order F
Assertive	870.62***, .91	0.00		0.69			
Acts as a leader	405.61***, .83	0.00		1.48			
Confident	279.73***, .76	0.57	0.21	1.82	0.20	4.16*, .09	0.50
Occupational suitability judgments	234.69***,	0.10	1.18	0.02	0.10	5.53*, .12	0.60

Note. Df for Assertive and Acts as a leader TRs = (1, 89). Df for Confident TR and OSJs = (1, 87). The judgment task order factor was dropped from the assertiveness and acts as a leader trait ratings because all effects involving judgment task order were nonsignificant in these analyses, Fs(1, 87) < 1.97, ps > .16.

<sup>\*</sup>*p* < .05

<sup>\*\*</sup> *p* < .01.

<sup>\*\*\*</sup>*p* < .001.

Table 18
Study 2 main effect means, standard deviations, and 95% confidence intervals

-	Individuating	information	Target	Gender	Judgmei	nt task order
	Assertive	Passive	Female	Male	TR first	OSJ first
	M, SD, 95%	M, SD, 95%	M, SD, 95%	M, SD, 95%	M, SD, 95%	M, SD, 95%
	CI	CI	CI	CI	CI	CI
Assertive	$6.27^{a}$ , $1.19$ ,	1.68 <sup>b</sup> , 1.19,	3.99°, 1.20,	$3.98^{\circ}, 0.76,$		
	(6.10, 6.45)	(1.43, 1.93)	(3.76, 4.19)	(3.78, 4.20)		
Acts as a	$6.10^{a}, 0.93,$	2.44 <sup>b</sup> , 1.49,	4.23°, 1.18,	4.27°, 1.24,		
leader	(5.90, 6.29)	(2.13, 2.75)	(3.76, 4.19)	(3.78, 4.20)		
Confident	$6.08^{a}$ , $1.37$ ,	$2.80^{\rm b}, 1.49,$	4.52°, 1.47,	4.36°, 1.38,	4.39 <sup>d</sup> , 1.55,	4.49 <sup>d</sup> , 1.26,
	(5.78, 6.40)	(2.50, 3.07)	(4.21, 4.83)	(4.03, 4.67)	(4.08, 4.70)	(4.17, 4.81)
OSJs	12.07 <sup>a</sup> , 1.92,	$6.35^{b}, 2.91,$	9.16°, 1.97,	9.27°, 2.53,	$9.02^{\rm d}, 2.46$	9.41 <sup>d</sup> , 2.30,
	(5.78, 6.40)	(2.50, 3.07)	(8.66, 9.65)	(8.76, 9.78)	(8.53, 9.52)	(8.90, 9.92)

Note. N = 91. Within each main effect for each dependent measure, pairs of means that do not share superscripts differ significantly at at least p < .05. OSJs = occupational suitability judgments. Assertive, acts as a leader, and confident were measured on scales of 1 (Very passive, very much acts as a follower, very unconfident) to 7 (Very assertive, very much acts as a leader, very confident). OSJs were measured on a scale of 2-14, with higher numbers representing higher suitability for the job. Judgment task order means are reported only for dependent measures in which there were significant effects involving judgment task order.

Table 19 Study 3a ANOVA results including fast responders

Dependent Variable	Individuating information $F, \eta$	Target gender $F, \eta$	Judgment task order F	Target Gender X Individuating Information $F, \eta$	Target gender X judgment task order F	Individuating information X order F	Target gender X individuating information X order F
Trait ratings	48.63***, .36	73.64***, .51	2.72	22.84***, .29	0.37	2.00	0.71
Target-relevant predictions	56.63***, .47	25.83***, .31		16.93***, .25			

*Note.* Df for trait ratings = (1, 81). Df for target-relevant predictions = (1, 83). Judgment task order is included in the table for trait ratings even though none of its effects were significant because in the analyses reported in-text, there was a significant individuating information X judgment task order which was nonsignificant when fast responders were included. Fast responders were those who completed the survey in less than 4 minutes. Results are reported in-text with fast responders excluded (see Table 21).

\*\*\*p < .001

Table 20
Study 3a correlations among main dependent measures

	Male target TR	Female target TR	Male target TRP
Female target TR	01	.51***	08
Male target TR		.24*	.68***
Female target TRP			.14

*Note.* N = 74.

Table 21 Study 3a ANOVA results excluding fast responders

Dependent Variable	Individuating information $F, \eta$	Target gender $F$ , $\eta$	Judgment task order F	Target Gender X Individuating Information F, η	Target gender X judgment task order F	Individuating information X order <i>F</i> , η	Target gender X individuating information X order F
Trait ratings	53.69***, .39	70.64***, .36	2.10	24.82***, .31	0.36	7.58**, .15	1.33
Target-relevant predictions	57.93***, .48	18.77***, .30		16.93***, .24			

*Note.* Df for trait ratings = (1, 70). Df for target-relevant predictions = (1, 72). \*\* p < .01 \*\*\*p < .001

Table 22 Study 3a Main effect means, standard deviations, and 95% confidence intervals

	Individuating	g information	Targ	Target gender		
	Feminine information	No information	Female	Male	TR first	TRP first
	M, SD, 95% CI	M, SD, 95% CI	M, SD, 95% CI	M, SD, 95% CI	M, SD, 95% CI	M, SD, 95% CI
Trait ratings	10.81 <sup>a</sup> , 1.65, (10.54, 11.26)	9.03 <sup>b</sup> , 1.79, (9.78, 10.52)	11.20°, 1.68, (10.83, 11.62)	8.85 <sup>d</sup> , 2.38, (8.32, 9.10)	10.15 <sup>e</sup> , 2.19, (9.78, 10.52)	9.78°, 1.89, (9.43, 10.13)
Target- relevant predictions	11.48 <sup>a</sup> , 1.93, (11.00, 11.94)	8.92 <sup>b</sup> , 2.30, (8.44, 9.40)	11.00°, 2.37, (10.45, 11.51)	9.46 <sup>d</sup> , 2.73, (8.96, 9.86)		

Note. N = 74. Within each main effect for each dependent measure, pairs of means that do not share superscripts differ significantly at at least  $p \le .05$ . TR = trait rating. TRP = target-relevant prediction. Trait ratings and target-relevant predictions were measured on scales of 2-14. Lower values represented less characterizations by female traits and lower likelihood of engaging in feminine behaviors.

Table 23
Study 3a target gender X individuating information cell means, standard deviations, and 95% confidence intervals

		Individuating information			
		Feminine information No information			rmation
	Target gender:	Male	Female	Male	Female
		M, SD, 95% CI	M, SD, 95% CI	M, SD, 95% CI	M, SD, 95% CI
DV:					
Trait ratings		$10.26^{a}$ , $1.69$ ,	11.37 <sup>b</sup> , 1.60,	$7.03^{c}$ , 1.81,	11.03 <sup>d</sup> , 1.76,
		(9.84, 10.93)	(10.86, 11.97)	(6.47, 7.58)	(10.47, 11.59)
Target-relevant		$11.32^{a}$ , $1.61$ ,	11.63 <sup>a</sup> , 2.25,	$7.50^{\circ}$ , 2.25,	$10.33^{\rm d}, 2.34,$
predictions		(10.69, 11.95)	(10.89, 12.37)	(6.85, 8.15)	(9.57, 11.10)

Note. N = 74. Within each set of comparisons (e.g., comparing the male target to the female target within the feminine individuating information condition), means that do not share superscripts differ at at least p < .05. Trait ratings and target-relevant predictions were measured on scales of 2-14. Lower values represented less characterizations by female traits and lower likelihood of engaging in feminine behaviors.

Table 24 Study 3b correlations among main dependent measures

	Male target	Female	Male target	Female	Male
	assertive TR	target	athletic TR	target TRPs	target
		athletic TR			TRPs
Female	.62***	.42***	.34**	.81***	.46***
target					
assertive TR					
Male target		.24*	.35**	.47***	.74***
assertive TR					
Female			.18	.43***	.24*
target					
athletic TR					
Male target				.34**	.27*
athletic TR					
Female					.40***
target TRPs					
	R = trait rating. TRI	P = target-relevant	t prediction.		
* $p < .05$					
**p < .01					
*** $p < .001$					

Table 25 Study 3b ANOVA results

Dependent Variable	Individuating information $F, \eta$	Target gender F	Target Gender X Individuating Information F
Assertive TR	46.38***, .53	8.94**, .13	13.41***, .16
Athletic TR	39.93***, .53	0.15	5.80*, 0.21
Target- relevant predictions	57.93***, .48	18.77***, .30	16.93***, .24

Note. Df = (1, 86). TR = trait rating. \*p < .05\*\*p < .01\*\*\*p < .001

Table 26
Study 3b main effect means, standard deviations, and 95% confidence intervals

	Individuating	information	Target	gender
	Masculine	No	Female	Male
	information	information		
	M, SD,	M, $SD$ ,	M, $SD$ ,	M, $SD$ ,
	95% CI	95% CI	95% CI	95% CI
Assertive TR	6.17 <sup>a</sup> , 1.24,	4.69 <sup>b</sup> , 1.09,	5.43°, 1.53,	5.80 <sup>d</sup> , 1.25,
	(5.88, 6.46)	(4.37, 5.00)	(4.99, 5.50)	(5.37, 5.86)
Athletic TR	$5.20^{a}$ , $1.32$ ,	3.93 <sup>b</sup> , 1.31,	4.60°, 1.51,	$4.64^{\circ}$ , $1.43$ ,
	(4.93, 5.47)	(3.63, 4.22)	(4.26, 4.79)	(4.31, 4.89)
Target-	$11.77^{a}, 2.03,$	$9.03^{\rm b}, 2.65,$	$10.20^{\circ}$ , $3.00$ ,	$10.57^{\rm d}, 2.49,$
relevant	(11.24, 12.30)	(8.44, 9.61)	(9.71, 10.69)	(10.09, 11.10)
predictions				

Note. N = 88. TR = trait rating. Within each set of comparisons (e.g., comparing the male target to the female target within the masculine individuating information condition), means that do not share superscripts differ at at least p < .05. Within each main effect for each dependent measure, pairs of means that do not share superscripts differ significantly at at least p < .05. Assertive and athletic trait ratings were measured on scales of 1 (very passive, very unathletic) to 7 (very assertive, very athletic). Target-relevant predictions were on scales of 2-14, with higher values representing greater perceived probability that the target would engage in the masculine behaviors.

Table 27
Study 3b target gender X individuating information cell means, standard deviations, and 95% confidence intervals

		Individuating information				
		Masculine	Masculine information		rmation	
Targ	Target gender:	Female	Male	Female	Male	
		M, SD,	M, SD,	M, SD,	M, SD,	
		95% CI	95% CI	95% CI	95% CI	
DV						
Assertive TR		$6.21^{a}$ , $1.27$ ,	$6.13, 1.20^{a},$	$4.28^{b}$ , $1.09$ ,	$5.10^{\circ}$ , 1.08,	
		(5.87, 6.55)	(5.80, 6.45)	(3.90, 4.65)	(4.74, 5.46)	
Athletic TR		$5.40^{a}$ , $1.28$ ,	$5.00^{a}$ , $1.35$ ,	3.65 <sup>b</sup> , 1.19,	4.20 <sup>b</sup> , 1.42,	
		(5.04, 5.75)	(4.60, 5.40)	(3.26, 4.04)	(3.77, 4.64)	
Target-relevant		12.13 <sup>a</sup> , 1.85,	11.42 <sup>a</sup> , 2.21,	$8.28^{b}, 2.75,$	$9.78^{\circ}, 2.55,$	
predictions		(11.46, 12.79)	(10.74, 12.10)	(7.55, 9.00)	(9.03, 10.52)	

Note. N = 88. TR = trait rating. Within each set of comparisons (e.g., comparing the male target to the female target within the feminine individuating information condition), means that do not share superscripts differ at at least p < .05. Assertive and athletic trait ratings were measured on scales of 1 (very passive, very unathletic) to 7 (very assertive, very athletic). Target-relevant predictions were on scales of 2-14, with higher values representing greater perceived probability that the target would engage in the masculine behaviors.

Table 28
Valence of stimulus and dependent measure traits used in Studies 3a and 3b

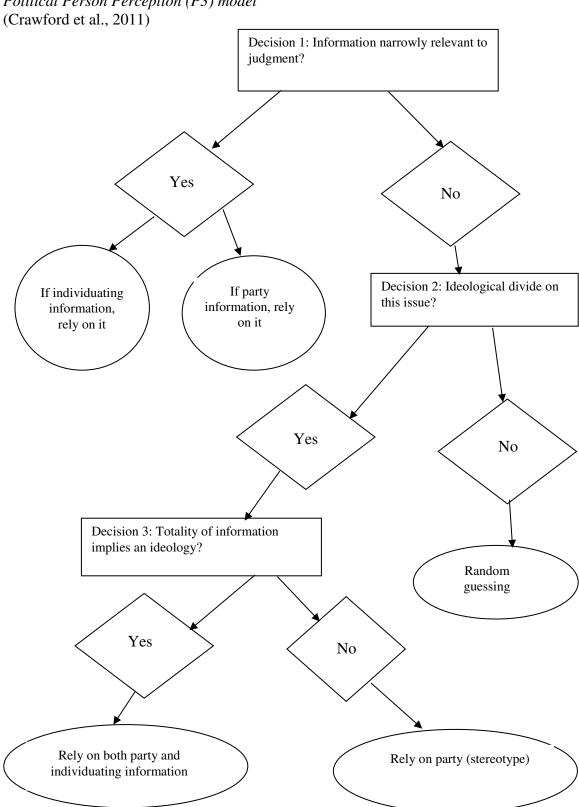
	N	Mean	SD	t	d
Stimulus					
traits					
Boastful	112	5.13	2.90	-10.45***	1.00
Competitive	114	9.83	2.07	9.44***	0.88
Cooperative	114	13.27	1.20	46.93***	4.39
Dependent					
measure					
traits					
Assertive	114	9.89	2.46	8.23***	0.77
Athletic	112	11.82	2.15	18.79***	1.78
Emotional	114	7.07	2.23	-4.45***	0.42
Sensitive	113	8.33	2.34	1.49	

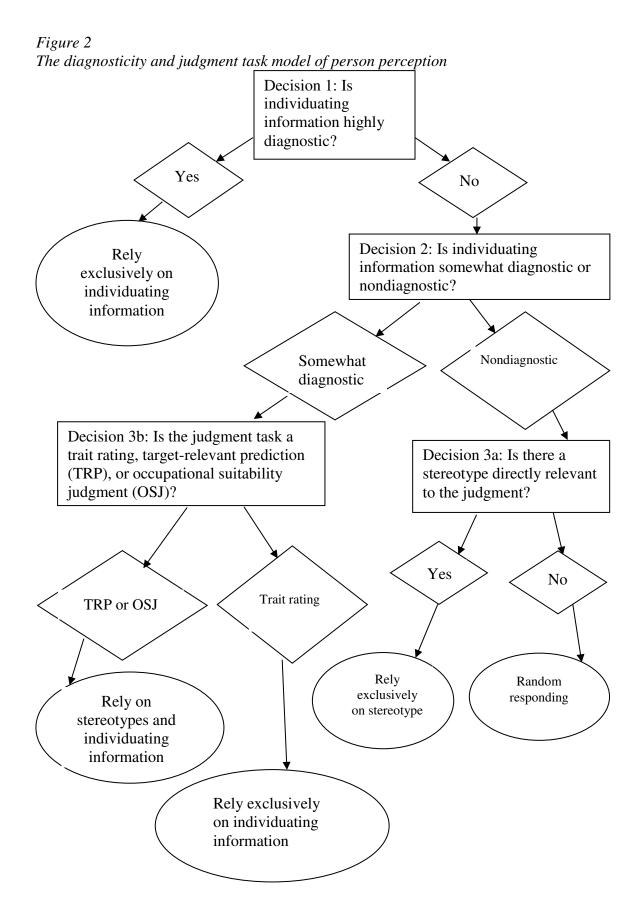
*Note.* Home-oriented, which was used as a stimulus trait in Study 3a, was not measured. Valence measure was a sum of two 1 (Very negative, very unfavorable) to 7 (Very positive, very favorable) scales. T-tests compared mean to 8, which represented neutral valence.

\*\*\*p < .001

Figure 1

Political Person Perception (P3) model





## Appendix A

Justifications for exclusion criteria and studies that met each criterion <sup>16</sup>

Exclusion criteria category 1: Studies that did not test individuating information and stereotype effects as specified by the conceptual definition of the model

Exclusion criterion 1a: Studies that do not vary individuating information in any way between- or within-subjects or only manipulate the presence or absence of individuating information

If studies do not vary individuating information between- or within-subjects, there can be no measurable statistical effects (e.g., main effect, interaction) involving individuating information, which are necessary to test the *DJT* model's hypotheses. And if the only individuating information manipulation is whether individuating information is present or absent, in one of the two "individuating information" conditions there is, in fact, no individuating information. Thus, there is likewise no variation in the *actual* individuating information that could result in a measurable statistical individuating information "effect."

Studies: Biernat & Fuegen (2001, Studies 1 & 2; Biernat, Fuegen, & Kobrynowicz (2010), Studies 1, 2, & 3; Biernat & Kobrynowicz (1997), Studies 1 & 2; Biernat, Kobrynowicz, & Weber (2003), Studies 1 & 2; Biernat & Manis (1994), Study 3; Cohen (1981); Denhaerinck, Leyens, & Yzerbyt (1989); Depret & Fiske (1999); Dienstbier (1972); Fuegen, Biernat, Haines, & Deaux (2004); Gawronski, Geschke, & Banse (2003); Goodwin, Gubin, Fiske, & Yzerbyt (2000), Study 3; Guinote & Phillips, (2010); Gushue (2004); Hilton & Fein (1989), Study 3; Jussim, Nelson, Manis, & Soffin (1995); Kunda,

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<sup>&</sup>lt;sup>16</sup> Some studies met multiple exclusion criteria. Such studies are not listed more than once with the exception of studies listed in Exclusion Criteria Category 1.

Sinclair, & Griffin (1997), Studies 2 & 3; Langer & Abelson (1974); Madon, Guyll, Hilbert, Kyriakatos, & Vogel (2006), Study 1; Nisbett, Zukier, & Lemley (1981), Studies 1, 2, & 3; Yzerbyt, Schadron, & Leyens, (1997)

Exclusion criterion 1b: Studies that vary individuating information but do not examine the effect of this variation

The reason for excluding such studies is self-evident: They cannot speak to the DJT model's hypotheses because even in the case of the prediction of exclusive reliance on stereotypes, data on the individuating information effect is necessary to determine whether the study supports or does not support the model's predictions.

Studies: Cameron & Trope (2004), Study 2; Klauer, Wegener, & Ehrenberg (2002).

Exclusion criterion 1c: Studies that do not vary category information in any way between- or within-subjects or only manipulate its presence or absence

As with studies that do not vary individuating information or only manipulate its presence or absence, studies that do not vary category information or only manipulate its presence or absence cannot identify measurable statistical "effects" of category information due to lack of variation in category information. The category information effect must be measurable to provide adequate tests of all of the model's hypotheses.

Studies: Blair, Chapleau, & Judd (2005); Bodenhausen (1988), Studies 1 & 2;
Bodenhausen & Lichtenstein, 1987; Collings (2002); Goodwin, Gubin, Fiske, & Yzerbyt (2000), Studies 1 & 2; Kunda & Oleson (1997), Studies 1, 2, 3, & 4; Macrae,
Bodenhausen, Milne, & Wheeler (1996), Studies 1 & 2; Neuberg & Fiske, (1987); Peters & Rothbart (2000); Ryan, Judd, & Park (1996), Studies 1 & 2; Ruscher, Fiske, & Schnake (2000); Sherman, Stroessner, Conrey, & Azam (2005); Smith et al. (2006),

Study 1; Tausch & Hewstone (2010); Weber & Crocker (1983), Studies 2, 3, & 4; Yzerbyt, Coull, & Rocher (1999).

Exclusion criterion 1d: Studies that vary category information but do not examine the effects of this variation

Like studies that vary individuating information but do not examine the effects of this variation, studies that vary category information without examining its effects are excluded because they lack adequate information to provide (or not provide) support for any of the model's hypotheses.

Study: Rahn (1993)

Exclusion criterion 1e: Studies that do not examine any main effects or interactions and/or otherwise report insufficient statistics to relate the results to the model's hypotheses

Such studies are not included because their results cannot be systematically related to the model's predictions.

Studies: Berndt & Heller (1986); Biernat, Tocci, & Williams (2012); Clark et al., 2009, Study 1; Goodwin et al. (2000), Study 4; Locksley, Hepburn, & Ortiz, 1982, Study 2; Rajecki, Graaf-Kaser, & Rasmussen (1992); Rosenhan (1974); Smith et al. (2006). Exclusion criterion 1f: Studies that do not examine the main effect of individuating information and stereotypes separately

Combining individuating information and stereotype effects means that the question of whether perceivers relied on individuating information, stereotypes, or both sources of information cannot be addressed.

Studies: Bodenhausen & Wyer (1985), Study 1; Fiske, Neuberg, Beattie, & Milberg (1987), Study 1; Hurwitz & Peffley (1997).

Exclusion criterion 1g: Studies that only manipulate individuating information by varying the pattern in which it is presented

Effects of presentation pattern speak more to the process of *learning* the information rather than the extent to which perceivers rely on the *content* of the information. Moreover, only one study has used this manipulation.

Study: Weber & Crocker (1983), Study 1.

Exclusion criterion 1h: The target is a subtype of the category rather than a particular individual

Such studies do not measure person perception—rather, they measure perceptions of a subset of people within a social category.

Study: Kobrynowicz & Biernat (1997), Study 1

## Exclusion criteria category 2: Dependent variables that are categorically excluded

Generally speaking, categories of dependent variables were excluded for one or more of a few reasons. They were excluded if they were fundamentally different from TRs, OSJs, and TRPs or if the literature involving this particular type of DV is so exiguous that no general predictions can be made on the basis of the extant literature.

Exclusion criterion 2a: Causal attributions

Causal attributions are categorically excluded from the model and literature review for two reasons. First, they are fundamentally different from TRs, OSJs, and TRPs because they involve elaborate causal reasoning (e.g., Kunda & Thagard, 1996; Trope, 1986). In contrast, trait inferences, which are the basis for trait ratings and target-relevant

predictions, are generally made on an automatic basis (e.g., Winter & Uleman, 1984). Although OSJs may involve more controlled processing than TRs or TRPs because perceivers face the additional cognitive step of considering characteristics of the job, such judgments likely do not require the type of elaborate causal reasoning involved in causal attributions. The second reason for excluding attributions is a practical one: Including causal attributions would entail reviewing the attribution theory literature in Papers 1 and 2, which is not feasible given space limitations. Thus, excluding causal attributions helps to keep the scope of the qualifying exam within tractable boundaries.

Study<sup>17</sup>: Duncan (1976)

Exclusion criterion 2b: Memory for individuating information

Memory for individuating information as dependent variables are excluded from this qualifying exam for reasons very similar to causal attributions. First, memory is a fundamentally different cognitive process than target evaluations. Specifically, memory for individuating information, like memory for any information, involves the processes of encoding, representation, and retrieval of this information (e.g., Macrae, Hewstone, & Griffiths, 1993). Such processes are not addressed in detail by most prior models reviewed in Paper 1 (Crawford et al., 2011, Fiske & Neuberg, 1990; Kunda & Thagard, 1996; cf. Brewer, 1988) and are generally not addressed by empirical research most relevant to the *DJT* model. In addition to the dissimilarity between memory for individuating information and the dependent variables included by the *DJT* model, excluding memory for individuating information as a dependent variable avoids a review

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<sup>&</sup>lt;sup>17</sup> Additional studies have used attributions as DVs, but in this study attributions were the only person perception DV.

of literature relevant to memory and associated cognitive processes, which would be difficult both because of space limitations and the sheer amount of literature on this topic.

Studies: Macrae, Bodenhausen, Milne, & Castelli (1999), Studies 1 & 2; Macrae, Bodenhausen, Schloerscheidt, & Milne (1999); Studies 1 & 2

Exclusion criterion 2c: Stereotype activation

Stereotype activation is not included as a dependent variable because it is not at all interchangeable with stereotype *reliance*, which is a main focus of the *DJT* model. Even though stereotype application oftentimes results in stereotype reliance, this is not universally true; a number of intervening factors (e.g., motivation to control prejudice; Plant & Devine, 1998) can prevent stereotype reliance (e.g., Devine & Monteith, 1999; cf. Bargh, 1999), even though stereotypes are activated uncontrollably (e.g., Dovidio, Evans, & Tyler, 1986).

Studies: Casper, Rothermund, & Wentura (2011); Kunda, Davies, Adams, & Spencer (2002), Studies 1 & 2

Exclusion criterion 2d: Voting behavior

The main reason for excluding this DV was that only one study that met inclusion criteria (i.e., that was identified based on the search criteria used for the literature review) examined it. Therefore, there is insufficient past empirical basis for making a priori hypotheses regarding this DV.

Study: Sigelman, Sigelman, Walkosz, & Nitz (1995)

Exclusion criterion 2e: Narrative descriptions of targets

In these studies, participants express their impressions of the targets in an unstructured format. This DV is clearly different in nature than TRs, TRPs, and OSJs

because participants are free to think about any attributes that come to mind rather than one specified by the researchers.

Studies: Fiske et al. (1987), Study 2; Yeung & Kashima (2010)

Exclusion criterion 2f: Punishment decisions

Punishment decisions were excluded for two reasons. First, there was only one study that met inclusion criteria that examined this DV; thus, there is insufficient basis for a priori predictions. In addition, punishment decisions arguably measure discrimination to a greater extent than stereotype reliance.

Study: Rosen & Jerdee (1974)

Exclusion criterion 2g: Performance evaluations

Performance evaluations are excluded because of the mixed results of such evaluations, which may stem from the format of the evaluations. Researchers have utilized assignment of letter grades (Biernat, & Manis, 1994, Study 2) and ratings on Likert-type scales that assess the quality of a *specific* performance rather than a trait (e.g., Clark et al., 2009, Study 2) to operationalize performance evaluations. It is unclear in different types of performance evaluations to what standard perceivers are comparing the performance; perceivers who assess others' performance subjectively on Likert-type scales tend to show different patterns of evaluations than do perceivers who assess performance on "common standard" measures (i.e., measures where all targets are assessed using a single standard such as letter grades; Biernat & Manis, 1994).

Studies: Biernat & Manis (1994), Study 2; Clark et al. (2009), Study 2

Exclusion criterion 3: Papers where the information given in the methods section is not specific enough to determine the level of diagnosticity of the individuating information

This criterion is based on the fact that every a priori hypothesis that the model makes includes the diagnosticity of the individuating information. If the diagnosticity cannot be determined, there is no way of knowing which outcomes would be expected.

Studies: Branscombe & Smith (1990); Chan & Mendelsohn (2010); Fiske & Von Hendy (1992), Studies 1 & 2; Gawronski, Ehrenberg, Banse, Zukova, & Klauer (2003); Jackson (1983).

## Exclusion criteria category 4: Characteristics of individuating information manipulation

Exclusion criterion 4a: Ambiguous individuating information

Ambiguous individuating information is excluded from the model because the aim of the model is to examine the effects of the diagnosticity and judgment task on reliance on individuating information. Ambiguity is irrelevant to this question because "ambiguous" individuating information refers to information that is "open to multiple construals" (Kunda & Thagard, 1996, p. 293) rather referring to information whose diagnosticity is unclear. Finally, the experimental designs of studies employing ambiguous individuating information generally hold individuating information constant, making such studies unamenable to testing reliance on stereotypes *and* individuating information.

Studies: Darley & Gross, 1983; Gawronski et al., 2003; Kunda & Sherman-Williams, 1993; Ryan, Judd, & Park, 1996, Study 3; Sagar & Schofield, 1980

Exclusion criterion 4b: Mixed individuating information

Studies examining the effects of "mixed" individuating information—i.e., individuating information where the various pieces of information imply conflicting attributes—are excluded mainly because there is much potential variation in how "mixed" the information is and one would expect different outcomes based on the level of heterogeneity of the information. For example, one would expect different outcomes in a study where half of the information suggests the target is intelligent and half suggests the target is unintelligent compared with a study where 90% of the information suggests the target is intelligent and 10% suggests the target is unintelligent.

Study: Crawford et al. (2011), Study 3

It should be noted that some studies have employed mixed individuating information but examined the effects of each piece of information *separately*. Such studies are included in the review because, for statistical purposes, the information was not "mixed."

Exclusion criterion 4c: The individuating information was not actually given to participants

In this study, participants were deceived into thinking they had received individuating information when they, in fact, had not. The reason for excluding this study is self-evident; if perceivers were not actually given individuating information, it would be impossible for them to rely on it. Moreover, only one study uses this manipulation.

Study: Yzerbyt, Schadron, Leyens & Rocher (1994)

Exclusion criterion 4d: The individuating information is whether the target agrees with perceiver's views

This information manipulation (consisting of whether a target agrees or disagrees with the perceiver's guilt judgment in a mock trial) is excluded because it does not relate in any way to a group stereotype. In addition, only one study has used this manipulation.

Study: Kunda et al. (2002), Study 3

Exclusion criterion 4e: The individuating information provided had implications for attributions of target behavior rather than target attributes

This manipulation was excluded because of its greater relevance to causal attribution measures than to the evaluations included in the *DJT* model.

Study: Bodenhausen & Wyer (1985), Study 2

Exclusion criterion 4e: Individuating information is physical information

Such manipulations were excluded because data indicate that physical features are a defining component of social categories (e.g., Andersen & Klatzky, 1987); this likely amplifies the likelihood of finding stereotype reliance in relevant evaluations compared with evaluations given trait information, behavioral information, etc. Indeed, some evidence relevant to this argument indicates greater stereotype effects in the presence of photos of the targets than in the absence of photos (e.g., Beckett & Park, 1995; Pratto & Bargh, 1991).

Studies: Biernat, Kobrynowicz, & Weber (2003), Studies 3 & 4; Stone, Perry, & Darley (1997)

Exclusion criterion 4f: The individuating information manipulation was not successful

In one published study, the individuating information manipulation was not successful; targets about whom information was provided that purportedly suggested high academic ability were evaluated on academic evaluations less favorably than targets

about whom irrelevant information was provided while they should have been rated more favorably. This study is excluded.

Study: Bar-Tal, Raviv, & Arad, (1989)

Exclusion criterion 4g: The individuating information is pseudorelevant to the evaluation

Pseudorelevant individuating information is information that is completely irrelevant to the evaluation at hand but relevant to many other judgments. It is distinct from completely irrelevant information, which is completely irrelevant to the evaluation at hand and to most other judgments (Hilton & Fein, 1989). Studies exclusively using pseudorelevant individuating information or which exclusively compare pseudorelevant to completely irrelevant information are excluded because the nature of an individuating information effect given pseudorelevant info is different from that given other types of information for two reasons. First, there is no expected direction of mean differences based on individuating information because the information is irrelevant to the judgment at hand. Moreover, with pseudorelevant information, there is no way to test for reliance on stereotypes and individuating information. This is because a pseudorelevant individuating information "effect" takes the form a "dilution effect" (Hilton & Fein, 1989): The stereotype effect is attenuated or not present. This does not meet the DJT model's definition of an individuating information effect.

Studies: Hilton & Fein (1989), Studies 1, 2, & 3; Yzerbyt, Leyens, & Schadron (1997); Yzerbyt, Schadron, & Leyens (1997)

Exclusion criteria category 5: Target categories or stereotypes with following characteristics:

Exclusion criterion 5a: There are no relevant stereotypes about the categories and the individuating information is not completely irrelevant

The *DJT* model does not address such scenarios because, in the absence of a stereotype and in the presence of highly or somewhat diagnostic individuating information, the only possible outcome is reliance on individuating information.

Studies: Dovidio & Gaertner (2000); Ziegler & Burger (2011)

Exclusion criterion 5b: Categories are not real (stereotype learning paradigms)

Because the categories in such studies are not real, they carry none of the social significance that are carried by stereotypes of actual social categories. Therefore, there is no potential for socially desirable responding, motivation to respond without prejudice, and other such influences to impact judgments. Thus, such categories are fundamentally different from social categories.

Study: Hicklin & Wedell (2007)

Exclusion criterion 5c: Implicit stereotypes were measured instead of explicit stereotypes

A study where the only measure of stereotypes was implicit is excluded because implicit and explicit social cognition are fundamentally different processes; the former is generally thought to depend on nonconscious spreading activation networks that are independent of whether the perceiver consciously endorses these associations, while the latter rely on propositional processes guided by inference and reasoning (e.g., Gawronski & Bodenhausen, 2006, 2011). More importantly, implicit and explicit dependent measures correlate weakly; in a major meta-analysis of the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998), the mean implicit-explicit correlation

was r = .214 (Greenwald, Poehlman, Uhlmann, & Banaji, 2009). This weak relationship suggests that implicit and explicit measures cannot be used interchangeably.

Studies: Gawronski et al. (2003); Macrae, Bodenhausen, & Milne (1995), Studies 1, 2, & 3.

Exclusion criterion 6: Studies where the results of multiple categories of dependent variables (as specified by the *diagnosticity and judgment task* model) are combined into a single dependent variable will be excluded

Although combining the results of TRPs and OSJs is acceptable because the *DJT* model groups these two types of tasks together, data where TRs and TRPs and/or OSJs are combined into a scale or index do not provide acceptable tests of the model's hypotheses much in the same way as studies where the diagnosticity of the individuating information is not clear cannot provide adequate tests of the model's hypotheses. Because all of the model's hypotheses that are included in this review include the category of judgment task (TR vs. OSJ and/or TRP), the hypotheses cannot be tested if the type of judgment task is not clear.

Studies: Jussim, Coleman, & Lerch (1987); Jussim, Fleming, Coleman, & Kohberger (1996)

Exclusion criterion 7: Studies where the diagnosticity of the information varies for multiple evaluations that are combined into a scale are excluded.

Like studies that combine multiple categories of judgment tasks into one scale, studies where judgments of various degrees of relevance to the individuating information are combined into a scale are excluded because the effects of individuating information of varying levels of diagnosticity cannot be examined separately. Isolating the level of

diagnosticity is crucial to allowing a study to provide support or lack of support for the *DJT* model since the model does not make any predictions that do not include the diagnosticity of the information.

Studies: Deaux & Lewis (1984), Studies 1, 2, & 3; Madon et al., (2006), Study 2

Exclusion criterion 8: Studies whose designs are so complicated that the results

cannot be interpreted in light of the diagnosticity and judgment task model are

excluded

Such studies are excluded because the reported results cannot provide direct support or lack of support for the *DJT* model's hypotheses.

Studies: Biernat, (1991); Futoran & Wyer (1986)

## Appendix B

Modifications to proposed research

In conducting the research for this dissertation, several deviations from the proposal were necessary. Some of these modifications were described in-text; the remainder are described in this Appendix.

### Valence pilot test results

A pilot test of the valence of gender stereotyped traits was proposed. This study was, indeed, conducted, but because the amount of appropriate stimuli and dependent measures found in Studies 1b and 1c was so small, the selection criterion that the selected traits and behaviors must be equivalent in valence was dropped in selecting trait and behavioral information. Details of the valence study are as follows:

#### Method

*Design.* This study had a within-subjects, non-experimental design.

Participants. A power analysis using a desired effect size of d = .4 indicated that the necessary sample size is 52. This effect size was chosen because it roughly corresponds to an r of .21, which is the average effect size in all of social psychology (Richard, Bond, & Stokes-Zoota, 2003). The average effect size in all of social psychology was selected rather than a domain-specific effect size because the items in this study do not relate to any particular topic that has been studied in the past. Data were collected from 127 Infant and Child Development students. Seven cases were discarded for failure to complete the measures and six cases were discarded due to at least one failed attention check, leaving a final sample size of 114 students.

*Measures*. The perceived valence of 22<sup>18</sup> traits that were found to be the most strongly gender-typed in Study 1 was measured with two 1 (Very unfavorable, very negative) to 7 (Very favorable, very positive) bipolar Likert-type scales<sup>19</sup>. Demographic items also were administered.

**Results.** Correlational analyses assessed the strength of the associations between the favorability/unfavorability and positivity/negativity items for each attribute. All were found to be strongly correlated, rs (112) > .44, ps < .001. Therefore, these two items were summed for each attribute to provide a valence index. The perceived valence of the traits was established with single-sample t-tests comparing the mean valence scores with 8, the midpoint of the scale representing neutral valence. The goal was to identify the valence of traits to use for future studies when selecting appropriate stimulus information and dependent measures. The results of these analyses are provided in Table 28.

## **Diagnosticity measure**

Although originally a diagnosticity measure was proposed that combined two items (perceived relevance and perceived usefulness of the information), perceived usefulness was omitted to avoid overwhelming participants with an inordinately long questionnaire.

#### Gender differences in diagnosticity

Another criterion for the selection of stimulus traits and behaviors and dependent measure traits and behaviors that was outlined in the proposal was that there should be no differences based on target gender in the perceived diagnosticity of the trait or behavior information. Once again, because of the diminutive number of traits and behaviors that met

<sup>&</sup>lt;sup>18</sup> 23 traits met the criteria of d > .7, but one (supportive) was accidentally omitted.

<sup>&</sup>lt;sup>19</sup> Other measures were administered but are not reported because they were for a study that was included in the proposal but, with the permission of the Committee, not conducted.

the core criteria for selection, this criterion was discarded. See Table 4 for gender difference information.

### Selection of illustrative behaviors for Study 3a and 3b stimulus information

Due to the paucity of behaviors that were considered highly diagnostic with respect to the traits that would be used in the stimulus target descriptions in Studies 3a and 3b, I was forced to use some that did not meet the criteria for being considered highly diagnostic. However, this likely was not a problem because, since participants read a sentence declaring that the target was characterized by the trait (e.g., "Jennifer is a very competitive person"), this likely biased interpretations of subsequent information in favor of being perceived as characterized by the trait. This argument is supported in the person perception literature that the construal of ambiguous individuating information is influenced by stereotypes (see Kunda & Thagard, 1996, for a review); the category information colors perceptions of individuating information that is not completely clear, just as reading that a person is characterized by a trait might influence interpretations of their behavior.

#### Studies 3a and 3b

The dissertation proposal proposed a single study to examine the effects of somewhat diagnostic masculine versus feminine individuating information and stereotypes on person perception. In the proposed study, the individuating information manipulation was whether targets received feminine or masculine individuating information. Instead, in Study 3a, the individuating information manipulation was whether participants received somewhat diagnostic feminine individuating information or no individuating information, and in Study 3b, the individuating information manipulation was whether participants

received somewhat diagnostic masculine individuating information or no individuating information.

This was because the design of the pilot tests did not allow for the development of dependent measures that were necessary to execute the study as proposed. Specifically, to execute the proposed study, it was necessary to have dependent measure traits and behaviors for which both masculine and feminine stimulus traits were somewhat diagnostic. This was the only way that the same dependent measures could be administered in both the masculine and the feminine individuating information conditions. However, the pilot tests only measured (1) the relevance of feminine traits to other feminine traits and feminine behaviors, and (2) the relevance of masculine traits to other masculine traits and masculine traits and behaviors was unestablished, as was the relevance of masculine traits to feminine traits and behaviors. Therefore, the pilot data did not provide adequate diagnosticity data to develop the proposed study because the same dependent measures could not be administered in both individuating information conditions on the basis of the pilot data.

However, the designs of Studies 3a and 3b still allowed for testing the effects of stereotypes and both masculine and feminine individuating information on person perception. They also still fully addressed the branch of the *DJT* model regarding reliance on somewhat diagnostic individuating information and stereotype information in different types of judgment tasks.

Another change to Studies 3a and 3b was the population from which the samples were drawn. I used Mechanical Turk samples for Studies 3a and 3b instead of Rutgers samples, which was what was included in the proposal.

# **Appendix C**

Gender type of behavior measure, Study 1a

In general, how masculine or feminine is it for a person to be characterized by the following personality traits?

- How masculine is this trait?

```
(1 = Not at all, 2 = Slightly, 3 = Somewhat, 4 = Moderately, 5 = Very)
```

- How feminine is this trait?

```
(1 = Not at all, 2 = Slightly, 3 = Somewhat, 4 = Moderately, 5 = Very)
```

#### **Traits:**

Acts as a leader

Aggressive

**Ambitious** 

Analytical

Assertive

Athletic

Compassionate

Competitive

Defends own beliefs

Dominant

Gentle

Gullible

Independent

Individualistic			
Loves children			
Loyal			
Makes decisions easily			
Sensitive to the needs of others			
Shy			
Sympathetic			
Understanding			
Warm			
Connected with others			
Cooperative			
Kinship-oriented			
Supportive			
Adventurous			
Boastful			
Confident			
Egotistical			
Emotional			
Sentimental			

# **Appendix D**

Demographic items for all studies

1. How old are you?

- What is your gender?
   Male
   Female
   Other
   Which race or ethnicity best describes you?
   White/Caucasian
   Black/African-American
  - 3. Asian/Asian-American
  - 4. Latino/Hispanic
  - 5. Mixed race
  - 6. Other
- 4. Where would you place yourself on this scale of political ideology?
  - 1. Very liberal
  - 2. Moderately liberal
  - 3. Slightly liberal
  - 4. Moderate; middle of the road
  - 5. Slightly conservative
  - 6. Moderately conservative
  - 7. Very conservative
  - 8. Don't know

- 5. Do you usually think of yourself as a Democrat, a Republican, an Independent, or something else?
  - 1. Strong Democrat
  - 2. Moderate Democrat
  - 3. Independent Democrat
  - 4. Independent
  - 5. Independent Republican
  - 6. Moderate Republican
  - 7. Strong Republican
  - 8. Something else
  - 9. Don't know

# Appendix E

Manipulation checks and suspicion checks from all studies

# **Instructional manipulation checks:**

All studies included items in the format of, "please respond to this item by selecting 'slightly likely.' These items were interspersed throughout the studies.

## **Suspicion check:**

Suspicion check for all studies: What do you believe was the purpose of this study?

## **Content manipulation checks:**

These manipulation checks were included to ensure that participants were reading the individuating information provided in the studies.

Study  $2^{20}$ :

Which of the following characteristics does Sealman Furniture want in their Sales Manager? You can select more than one option.

- Passive personality
- Assertive personality
- Exemplary leadership skills
- Strong organizational skills
- Excellent oral and written communication skills

Please select the skills and expertise that appear on [target's] resume. You can select more than one option:

- Customer service
- Customer outreach

 $<sup>^{20}</sup>$  The first item was used as a basis to discard participants if they answered incorrectly, but the second was not.

- Leadership
- Communication
- Organization
- Marketing

Studies 3a and 3b

Which of the phrases below was used in the information about Daniel (at the top of the page) to describe him?

- Very unadaptable
- Moderately unadaptable
- Slightly unadaptable
- Neither adaptable nor unadaptable
- Slightly adaptable
- Moderately adaptable
- Very adaptable

### Appendix F

Stimulus behavior diagnosticity measure, Study 1b

Please use the scales provided to indicate how relevant the following personality traits are to the behaviors that are listed. Please make these evaluations as they relate to **wo/men**.

- 1. How **passive or assertive** is a wo/man who engages in each of the following behaviors? Response scale: 1 (very passive) to 7 (very assertive)
  - a. Telling off a peer who offends him/her
  - b. Defending a friend who is being picked on
  - c. Continuing to speak when interrupted by a peer
  - d. Sending food back in a restaurant because it's cold when out with a group of friends
  - e. Correcting a friend in a group conversation
- 2. How **passive or assertive** is a wo/man who engages in each of the following behaviors? Response scale: 1 (very passive) to 7 (very assertive)
  - a. Not saying anything when a peer offends him/her
  - b. Not defending a friend who is being picked on
  - c. Stops speaking when interrupted by a peer
  - Not sending cold food back in a restaurant when out with a group of friends
  - e. Not correcting a friend who gave wrong information in a group conversation
- 3. To what extent does a wo/man who engages in the following behaviors act as a follower or act as a leader?

Response scale: 1 (Very much acts as a follower) – 7 (very much acts as a leader)

- a. Not saying anything when a peer offends him /her
- b. Not defending a friend who is being picked on
- c. Stops speaking when interrupted by a peer
- Not sending cold food back in a restaurant when out with a group of friends
- e. Not correcting a friend who gave wrong information in a group conversation
- 4. To what extent does a wo/man who engages in the following behaviors act as a follower or act as a leader?

Response scale: 1 (Very much acts as a follower) – 7 (very much acts as a leader)

- a. Telling off a peer who offends him
- b. Defending a friend who is being picked on
- c. Continuing to speak when interrupted by a peer
- d. Sending food back in a restaurant because it's cold when out with a group of friends
- e. Correcting a friend in a group conversation
- 5. How **uncompassionate or compassionate** is a wo/man who engages in each of the following behaviors?

Response scale: 1 (Very uncompassionate) - 7 (Very compassionate)

- a. Volunteers to tutor a friend who is struggling in school
- b. Regularly donates money to charity
- c. Encourages a depressed friend to seek treatment
- d. Offers to do chores for a friend who is injured

- e. Comforts a stranger who is visibly upset
- 6. How **uncompassionate or compassionate** is a wo/man who engages in each of the following behaviors?

Response scale: 1 (Very uncompassionate) - 7 (Very compassionate)

- a. Suggests that a friend who is struggling in school go to the tutoring center
- b. Never donates money to charity
- c. Does not give advice to a depressed friend because he feels it isn't his place
- d. Suggests that a friend who is injured temporarily hire someone to help with chores
- e. Does not comfort a stranger who is visibly upset

## Appendix G

Trait-trait diagnosticity measure, study 1b

1. If you know that a [man/woman] is assertive, how relevant or irrelevant is that information to evaluating whether [s/he] possesses each of the following personality traits?

Response scale: 1 (Not at all relevant to being an assertive [wo/man]), 2, 3 (somewhat relevant to being an assertive wo/man), 4, 5 (highly relevant to being an assertive wo/man)

- a. Acts as a leader
- b. Aggressive
- c. Athletic
- d. Competitive
- e. Dominant
- f. Boastful
- g. Egotistical
- h. Decisive
- i. Confident
- 2. If you know that a wo/man generally acts as a leader, how relevant or irrelevant is that information to evaluating whether s/he possesses each of the following personality traits?

Response scale: 1 (Not at all relevant to acting as a leader), 2, 3 (Somewhat relevant to acting as a leader), 4, 5 (Highly relevant to acting as a leader)

a. Aggressive

	b.	Athletic
	c.	Competitive
	d.	Dominant
	e.	Boastful
	f.	Egotistical
	g.	Decisive
	h.	Confident
	3. If you	know that a wo/man is compassionate, how relevant or irrelevant is that
	inform	ation to evaluating whether s/he possesses each of the following
	person	ality traits?
	Respoi	nse scale: 1 (Not at all relevant to being a compassionate wo/man), 2, 3
(Somewhat relevant to being a compassionate wo/man), 4, 5 (Highly relevant to being a compassionate wo/man)		
	b.	Loves children
	c.	Sensitive
	d.	Shy
	e.	Sympathetic
	f.	Understanding
	g.	Warm
	h.	Supportive
	i.	Emotional
	j.	Sentimental

- k. Connected with others
- 1. Cooperative
- 4. If you know that a wo/man is competitive, how relevant or irrelevant is that information to evaluating whether s/he possesses each of the following personality traits?

Response scale: 1 (Not at all relevant to being a competitive wo/man), 2, 3 (Somewhat relevant to being a competitive wo/man), 4, 5 (Highly relevant to being a competitive wo/man)

- a. Aggressive
- b. Athletic
- c. Dominant
- d. Boastful
- e. Egotistical
- f. Decisive
- g. Confident
- 5. If you know that a wo/man is shy, how relevant or irrelevant is that information to evaluating whether s/he possesses each of the following personality traits?

  Response scale: 1 (Not at all relevant to being a shy wo/man), 2, 3 (Somewhat relevant to being a shy wo/man), 4, 5 (Highly relevant to being a shy wo/man)
  - a. Gentle
  - b. Loves children
  - c. Sensitive
  - d. Sympathetic

- e. Understanding
- f. Supportive
- g. Emotional
- h. Cooperative
- i. Sentimental
- 6. If you know that a wo/man is aggressive, how relevant or irrelevant is that information to evaluating whether s/he possesses each of the following personality traits?

Response scale: 1 (Not at all relevant to being an aggressive wo/man), 2, 3 (Somewhat relevant to being an aggressive wo/man), 4, 5 (Highly relevant to being an aggressive wo/man)

- a. Athletic
- b. Dominant
- c. Boastful
- d. Egotistical
- e. Decisive
- f. Confident
- 7. If you know that a wo/man is cooperative, how relevant or irrelevant is that information to evaluating whether s/he possesses each of the following personality traits?

Response scale: 1 (Not at all relevant to being a cooperative wo/man), 2, 3 (Somewhat relevant to being a cooperative wo/man), 4, 5 (Highly relevant to being a cooperative wo/man)

a. Gentle b. Loves children c. Sensitive d. Sympathetic Understanding Warm Supportive Connected with others **Emotional** Sentimental 8. If you know that a wo/man is athletic, how relevant or irrelevant is that information to evaluating whether s/he possesses each of the following personality traits? Response scale: 1 (Not at all relevant to being an athletic wo/man), 2, 3 (Somewhat relevant to being an athletic wo/man), 4, 5 (Highly relevant to being an athletic wo/man) a. Dominant b. Boastful

c. Egotistical

d. Decisive

### Appendix H

Trait-behavior diagnosticity measure, Study 1b

1. How relevant or irrelevant to being a **competitive** wo/man are the following behaviors?

Response scale: 1 (Not at all relevant to being a competitive wo/man), 2, 3 (Somewhat relevant to being a competitive wo/man), 4, 5 (Highly relevant to being a competitive wo/man)

- a. Continues speaking when interrupted
- b. Brags to his/her colleagues about a promotion
- c. Plays in a basketball league
- d. Argues a lot with his/her spouse
- e. Says offensive things to his/her friends
- 2. How relevant or irrelevant to being a shy wo/man are each of the following behaviors?

Response scale: 1 (Not at all relevant to being a shy wo/man), 2, 3 (Somewhat relevant to being a shy wo/man), 4, 5 (Highly relevant to being a shy wo/man) Sends flowers when a friend's mother passes away

- a. Wants to have children
- b. Visits sick friend in hospital
- c. Works well in teams
- d. Is offended when work is criticized by boss

3. How relevant or irrelevant to being an athletic wo/man are each of the following behaviors?

Response scale: 1 (Not at all relevant to being an athletic wo/man), 2, 3 (Somewhat relevant to being an athletic wo/man), 4, 5 (Highly relevant to being an athletic wo/man)

- a. Continues speaking when interrupted
- b. Brags to his/her colleagues about a promotion
- c. Plays in a basketball league
- d. Argues a lot with spouse
- e. Says offensive things to friends
- 4. How relevant or irrelevant to being a cooperative wo/man are each of the following behaviors?

Response scale: 1 (Not at all relevant to being a cooperative wo/man), 2, 3 (Somewhat relevant to being a cooperative wo/man), 4, 5 (Highly relevant to being a cooperative wo/man)

- a. Sends flowers when a friend's mother passes away
- b. Wants to have children
- c. Visits sick friend in hospital
- d. Offended when boss criticizes work
- e. Works well in teams

5. How relevant or irrelevant to being an aggressive wo/man are each of the following behaviors?

Response scale: 1 (Not at all relevant to being an aggressive wo/man), 2, 3 (Somewhat relevant to being an aggressive wo/man), 4, 5 (Highly relevant to being an aggressive wo/man)

- a. Continues speaking when interrupted
- b. Brags to his/her colleagues about a promotion
- c. Plays in a basketball league
- d. Argues a lot with spouse
- e. Says offensive things to friends
- 6. How relevant or irrelevant to being a boastful wo/man are each of the following behaviors?

Response scale: 1 (Not at all relevant to being a boastful wo/man), 2, 3 (Somewhat relevant to being a boastful wo/man), 4, 5 (Highly relevant to being a boastful wo/man)

- a. Continues speaking when interrupted
- b. Brags to his/her colleagues about a promotion
- c. Plays in a basketball league
- d. Argues a lot with spouse
- e. Says offensive things to friends

# Appendix I

Trait-trait diagnosticity measure, Study 1c

1. How relevant or irrelevant to being a **home-oriented** wo/man are the following personality traits?

Response scale: 1 (Not at all relevant to being a home-oriented wo/man), 2, 3 (Somewhat relevant to being a home-oriented wo/man), 4, 5 (Highly relevant to being a home oriented wo/man)

- a. Gentle
- b. Sensitive
- c. Shy
- d. Sympathetic
- e. Understanding
- f. Warm
- g. Supportive
- h. Emotional
- i. Sentimental
- j. Connected with others
- k. Cooperative

### Appendix J

Trait-behavior diagnosticity measure, Study 1c

1. How relevant or irrelevant to being a cooperative wo/man are each of the following behaviors?

Scale: 1 (Not at all relevant to being a cooperative wo/man), 2, 3 (Somewhat relevant to being a cooperative wo/man), 4, 5 (Highly relevant to being a cooperative wo/man)

- a. Feels sentimental during sad movies
- b. Donates money to charity
- c. Offers to tutor a friend who is struggling in school
- d. Encourages a depressed friend to seek treatment
- e. Helps friends resolve disputes
- f. Offers to do chores for a friend who is injured
- g. Organizes a community fundraiser for cancer research
- h. Comforts a stranger who is visibly upset
- i. Readily admits when s/he makes mistakes at work
- j. Apologizes when s/he offends a friend
- k. Prefers to work in teams
- 1. Doesn't take sides when his/her friends argue
- m. Usually agrees to do people favors when they ask him/her
- n. Tries to avoid getting into arguments
- o. Readily makes compromises to end conflicts with friends
- p. Rarely argues with his/her spouse

2. How relevant or irrelevant to being a home-oriented wo/man are each of the following behaviors?

Response scale: 1 (Not at all relevant to being a home-oriented wo/man), 2, 3 (Somewhat relevant to being a home-oriented wo/man), 4, 5 (Highly relevant to being a home oriented wo/man)

- a. Feels sentimental during sad movies
- b. Donates money to charity
- c. Takes off from work to attend a friend's parent's funeral
- d. Encourages a depressed friend to seek treatment
- e. Attends all of his/her kids' sports games
- f. Offers to do chores for a friend who is injured
- g. Visits a sick friend in the hospital
- h. Organizes a community fundraiser for cancer research
- i. Comforts a stranger who is visibly upset
- j. Takes off from work to attend his/her child's school play
- k. Is a member of the school board
- 1. Volunteers at a homeless shelter
- m. Spends most of his/her free time with his family
- 3. How relevant or irrelevant to being a boastful wo/man are each of the following behaviors?

Response scale: 1 (Not at all relevant to being a boastful wo/man), 2, 3 (Somewhat relevant to being a boastful wo/man), 4, 5 (Highly relevant to being a boastful wo/man)

- a. defends a friend who is being picked on
- b. Tells off a peer who offends him/her
- c. Asks for a raise in pay at work
- d. Gets angry when s/he loses a bet
- e. Interrupts others who are speaking
- f. Complains to a store manager about the quality of a product
- g. Blames his/her colleague for his/her own mistake at work
- 4. How relevant or irrelevant to being a competitive man are each of the following behaviors?

Response scale: 1 (Not at all relevant to being a competitive wo/man), 2, 3 (Somewhat relevant to being a competitive wo/man), 4, 5 (Highly relevant to being a competitive wo/man)

- a. Gets angry when s/he loses bets
- b. Tells people off when they offend him/her
- c. Applies for awards at work
- d. Boasts about his/her accomplishments
- e. Interrupts others who are speaking
- f. Insults people who beat him/her in sports
- g. Sabotages his/her colleagues to get ahead at work
- h. Gets upset when s/he loses when playing sports
- i. Insults people to make himself /herself look better
- j. Says negative things to his/her boss about a colleague with whom s/he is competing for a promotion

## Appendix K

Stimulus information, Study 2

# Job description

Sealman Furniture is seeking a Sales Manager. This person will be responsible for leading all sales teams to ensure that sales goals are met or exceeded, overseeing sales budgets, and designing and implementing a business plan to expand Sealman's customer base. A B.A. in Business or a related field is required, as well as at least 5 years of sales experience.

The ideal candidate will have the following characteristics:

- Assertive personality
- Exemplary leadership skills
- Strong organizational skills
- Excellent oral and written communication skills

### **Resume information**

Resume, [Target name]

## **Skills and Expertise**

- Customer service
- Customer base building
- Strong oral and written communication skills
- Excellent organizational skills

## **Work Experience**

2010-present

Assistant sales manager, Fisher Academic Press

• Identified marketing opportunities

- Monitored sales figures
- Addressed customer service issues

2005-2010

Sales representative, Cooper Pharmaceuticals

- Prospect new business in regional and local territories
- Make sales calls and complete sales contracts
- Attend trade shows to demonstrate products

#### **Education**

2001-2005

University of Washington

B.A. in Business

Resume, [Target name]

# **Skills and Expertise**

- Customer service
- Customer outreach
- Clear oral and written communication
- Strong organizational skills

## **Work Experience**

2010-present

Assistant Sales Manager, Hirsch Agriculture

- Monitored budget
- Tracked inventory

• Resolved customer problems

2004-2010

Sales representative, Peterson Electronics

- Drafted sales proposals
- Visited clients to demonstrate products
- Cold calls to potential clients

### **Education**

2000-2004

University of Pittsburgh

B.A. in Business

## **Interview transcripts**

Passive candidate:

**Interviewer:** Why do you want this job?

[Target]: I think it would be a good opportunity to further build skills that I already have and to learn new ones.

#### **Interviewer:**

What do you do if a peer says something offensive to you?

## [Target]:

I probably would not say anything--it's best not to cause conflict.

#### **Interviewer:**

What if someone is picking on a friend of yours?

## [Target]:

I probably would keep quiet.

#### **Interviewer:**

And if someone interrupts you while you're speaking, what is your reaction?

## [Target]:

I let them speak.

#### **Interviewer:**

Let's say you're having a group conversation and one of your friends says something that you know is incorrect. What would you do?

## [Target]:

I wouldn't say anything--I wouldn't want to embarrass my friend.

Assertive candidate

## **Interviewer:**

Why do you want this job?

## [Target]:

I would like to move into a position with more responsibilities so that I can continue my growth as an employee.

#### **Interviewer:**

What do you do if a peer says something offensive to you?

## [Target]:

I'd let them know that I found what they said offensive--it's important to stand up for yourself.

## **Interviewer:**

What if someone is picking on a friend of yours?

# [Target]:

I would definitely defend my friend.

### **Interviewer:**

And if someone interrupts you while you're speaking, what is your reaction?

# [Target]:

I tend to just continue speaking.

### **Interviewer:**

Let's say you're having a group conversation and one of your friends says something that you know is incorrect. What would you do?

# [Target]:

I'd correct him or her.

# Appendix L

Study 2 trait ratings and occupational suitability judgments

# Trait ratings:

- How passive or assertive is [target]? (Responses on a scale of 1, very passive, to
   very assertive)
- 2. To what extent does [target] act like a follower or act like a leader? (Responses on a scale of 1, Very much acts like a follower, to 7, very much acts like a leader)
- 3. How unconfident or confident is [target]? (Responses on a scale of 1, Very unconfident, to 7, Very confident)

## Occupational Suitability Judgments

- How bad or good of a candidate is [target] for the position at Sealman's?
   (Responses on a scale of 1, Very bad, to 7, Very good)
- 2. If you were the person in charge of hiring at Sealman's, how unlikely or likely would you be to hire [target]? (Responses on a scale of 1, very unlikely, to 7, very likely)

# Appendix M

Critical and filler target descriptions, Study 3a

Critical target descriptions:

[Target] is a very home-oriented person. For example, s/he spends most of his/her free time with his/her family and attends all of his/her kids' sports games.

[Target] is a very cooperative person. For instance, s/he readily makes compromises to end conflicts with friends and prefers to work in teams.

Filler target descriptions:

Michelle is a very moody person. She has strong mood swings, gets into a lot of arguments with her husband about trivial things, and snaps at her friends if they annoy her.

Jeff is a very predictable person. For example, he eats the same thing for lunch every day, most of his clothes are the same color, and his friends always know what jokes he will make.

Daniel is a very adaptable person. For example, when he moved into a new town, he quickly made new friends and settled in.

# Appendix N

Trait ratings and target-relevant predictions, Study 3a

## Trait ratings:

- 1. How unemotional or emotional a person is [target]? (Responses were on a scale of 1, very unemotional, to 7, Very emotional)
- 2. How sensitive or insensitive a person is [target]? (Responses were on a scale of 1, Very insensitive, to 7, very sensitive)

Target-relevant predictions (responses to both were on a scale of 1, Very unlikely, to 7, very likely)

- 1. How likely or unlikely is John to comfort a stranger who is visibly upset?
- 2. How likely or unlikely is [target] to encourage a depressed friend to seek treatment?

### **Appendix O**

Political correctness scale

(Jussim et al., 2018)

Answers were on a 1 (Strongly Disagree) to 7 (Strongly Agree) scale.

Please rate the following statements based on how much you agree or disagree with each.

- 1. I usually enjoy listening to people who express ideas very different from my own.
- 2. I have never disliked anyone of another ethnic group.
- I have never said anything that might make a person feel bad about their physical appearance.
- 4. I have made fun of elderly people.
- 5. I have never said something that could be interpreted as a racial slur.
- 6. I never notice a person's race when I first meet them.
- 7. I have considered the possibility that certain students were admitted to college for reasons other than their academic ability.
- 8. I find it frustrating to keep up with the correct terms to refer to minority group members.
- 9. I have considered the possibility that some welfare recipients might not deserve their benefits
- 10. I have felt unsafe in a neighborhood with a different ethnic composition than my own.
- 11. I have considered the possibility that affirmative action programs might be unfair to Whites.
- 12. It would bother me if someone of a different sexual orientation made a pass at me.
- 13. I am always very patient when I interact with non-English speakers.

- 14. My own and other groups' holidays are equally important to me.
- 15. I have avoided walking by someone on the street because that person did not belong to my own ethnic group.
- 16. I have considered the possibility that having some scholarships only open to minority students puts White students at a disadvantage.
- 17. I can think of no job that men are more capable of performing than women.
- 18. I believe that minority students and White students have equal academic qualifications.
- 19. I really enjoy hearing lectures on minority issues.
- 20. I am always friendly when I encounter a homeless person.
- 21. I have never made fun of people who speak with a different accent than I do.
- 22. I would sometimes park in a handicapped spot if I knew I would not get a ticket.
- 23. Except for childbirth capabilities, there are no important biological differences between men and women.

# Appendix P

Critical and filler target descriptions, Study 3b

Critical target descriptions:

[Target] is a very competitive person. For instance, s/he gets angry when s/he loses when playing sports and applies for a lot of awards at work.

[Taget] is a very boastful person. For instance, he likes to tell people that he makes a lot of money and showed off his new sports car even to distant acquaintances.

*Filler target descriptions:* 

Michelle is a very moody person. She has strong mood swings, gets into a lot of arguments with her husband about trivial things, and snaps at her friends if they annoy her.

Jeff is a very predictable person. For example, he eats the same thing for lunch every day, most of his clothes are the same color, and his friends always know what jokes he will make.

Daniel is a very adaptable person. For example, when he moved into a new town, he quickly made new friends and settled in.

# Appendix Q

Trait ratings and target-relevant predictions, Study 3b

## Trait ratings:

- How passive or assertive is [target]? (Responses on a scale of 1, Very passive, to
   Very assertive)
- 2. How unathletic or athletic is [target]? (Responses on a scale of 1, Very unathletic, to 7, Very athletic)

Target-relevant predictions (responses to both were on a scale of 1, Very unlikely, to 7, very likely):

- 1. How likely or unlikely is John to continue speaking when he is interrupted?
- 2. How likely or unlikely is John to tell off a peer who offends him?