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## MEASUREMENT, CONSEQUENCES, AND DEBIASING OF CORRESPONDENT INFERENCE MAKING

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### ABSTRACT

We measure individual differences in the tendency to make correspondent inferences, i.e., to infer stable dispositions from the behavior of others, and show their impact on blame and guilt attributions, performance evaluations, and incentive-compatible investment decisions. Making situational information easier to process debiased the judgments of people most prone to make correspondent inferences

### INTRODUCTION

People tend to make *correspondent inferences* when observing others. They infer stable personality characteristics from the behavior of others, even when the presence of external factors severely constrains the range of possible behaviors other persons might have exhibited. This general tendency leads observers to over-attribute behavior of actors to their enduring dispositions and under-weight the influence of situational factors, committing a *correspondence bias* (Ross, 1977; Gilbert & Malone, 1995; Jones, 1979; Jones & Harris, 1967). Correspondent bias is prevalent and consequential. It is exhibited by a majority of American adults and generalizes across demographic characteristics (Bauman and Skitka, 2010). These biased attributions affect a wide variety of social judgments such as performance evaluations (e.g., Moore et al., 2010), blame and guilt judgments (e.g., Kassin & Sukel, 1997), impression formation in social interactions (e.g., Gilbert, 1998; Ross et al., 1977), and judgments of moral character (Bierbrauer, 1979).

In this paper we adopt a psychometric approach to the analysis of the propensity to make correspondent inferences. To examine whether the propensity to make correspondent inferences is a unique construct and a stable individual difference, we developed and validated an instrument that combines the four paradigms most commonly used to assess correspondence bias, taking into account different types of dispositions—attitudes, abilities, emotionality, and morality. In Studies 1A, 1B, and 2, we developed a new individual-difference measure designed to assess the extent to which a person makes correspondent inferences across varied judgmental tasks and targets, evaluated the reliability and the

dimensionality of the instrument, and performed a verification of its factorial structure and discriminant validity. In Studies 3, 4, and 5, we examined the consequences of the propensity to make correspondent inferences. In Study 3, we examined the relationship between the propensity to make correspondent inferences and attributions of blame to actors for having accidentally caused harm. In Study 4, we investigated whether propensity to make correspondent inferences is associated to a higher neglect of job difficulty when evaluating the performance of employees for promotion. In Study 5, we examined whether high propensity to make correspondent inferences induces a higher neglect of market forces when evaluating fund manager performances in both performance judgments and incentive-compatible investment decisions. Together, the studies and instrument elucidate the structure of the construct and the extent to which it influences consequential judgments. Finally, in Study 6 we examined a possible debiasing intervention, and show that making situational information easier to access helps people more prone to make correspondent inferences reduce bias in their judgments.

### STUDIES 1A-1B – SCALE DEVELOPMENT (N = 301)

In Study 1A, we generated and tested numerous scale items that were submitted to a purification process resulting in a 10-item scale measuring the propensity to make correspondent inferences, the *Neglect of External Demands* (i.e., NED<sup>1</sup>) scale, with good reliability and stability. In developing the scale, we used an item-generation process to capture a broad sense of the construct. We reviewed the literature on correspondent inferences, correspondence bias, and the fundamental attribution error, identifying the classic paradigms used to assess the bias: the attitude attribution paradigm (Jones & Harris, 1967), the quizmaster paradigm (Ross et al., 1977), the silent interview paradigm (Snyder & Frankel, 1976), and the moral attribution paradigm (Bierbrauer, 1979). The 10-item NED scale showed high reliability ( $\alpha = .83$ ). Each item correlated well with the scale, as signaled by an average item-to-total correlation equal to .52. All further analyses, in this and subsequent studies, use this 10-item scale. We submitted the 10 NED scale items to an exploratory and (in Study 1B) to a confirmatory factor analysis. The results of both analyses suggest that the tendency to make correspondent inferences adheres to a single-factor structure. In summary, some people have a higher propensity to make correspondent inferences that makes them more confident in dispositional attributions for observed behaviors across different judgments, targets, and situations.

### STUDY 2 – DISCRIMINANT VALIDITY

Using five different samples of respondents (total N = 773) we examined the discriminant validity of the NED scale in relation to 19 established measures of potentially related psychological constructs, i.e., measures of intelligence, inclination toward cognitive activities (i.e., SAT scores, Decision Making Competence, and Need for Cognition), and cognitive processing style (i.e., Cognitive Reflection, Need for Precision, Need to Evaluate, and Need for Cognitive Closure), measures of attributional style, psychological constructs that assess traits related to causality (i.e., Locus of Control, and Desirability of Control), and personality traits (i.e., the Big Five Inventory; BFI). These comparisons determine whether individual differences in the propensity to make correspondent inferences simply reflect individual differences in more basic or established traits.

There were interesting significant correlations with related constructs in directions that would be predicted by an inferential correction model of correspondence bias: Participants more prone to correspondent inferences were characterized by significantly

lower intelligence scores, lower levels of cognitive reflection, lower decision making competence on some specific dimensions (applying decision rules, consistency in risk perceptions, and resistance to sunk costs), lower need for cognitions scores, lower cognitive reflection, and higher need for cognitive closure scores. The small size of all the significant correlations observed, however, suggests that the NED scale measures a distinct construct, which does not appear to be a derivative of general intelligence, decision making ability, cognitive processing styles, preferences and beliefs about control, personality traits, or attributional style. In each of the next studies, we measure the 10-item NED scale and examine its effects on judgments and behaviors.

### **STUDY 3 – CORRESPONDENT INFERENCES AND BLAME ATTRIBUTIONS**

In Study 3 we examined whether the propensity to make correspondent inferences predicts the amount of blame observers attribute to people who cause harm accidentally. Specifically, we compared scenarios in which an actor was causing negligent or accidental harm, with the expectation that participants with a greater propensity to make correspondent inferences would be more likely to attribute blame to the actor even in the case of accidental harm as they should underweight the situational factors that contributed to the harm. Participants ( $N = 200$ ) saw one of two versions of a set of 24 scenarios describing moral situations: A version in which the protagonist caused negligent harm to a person, or a version in which the protagonist caused accidental harm to the same person. In both versions of the scenario the background information and the harm caused were the same.

The results revealed a significant interaction between NED scores and type of scenario (accidental harm vs. negligent harm) on attributions of blame,  $\beta = -.17$ ,  $SE = .031$ ,  $t = -5.41$ ,  $p < .001$ . Participants characterized by a high propensity to make correspondent inferences were more likely to make dispositional attributions to actors for harmful events when the harm was due to the negligence of the agent. Moreover, this relationship was even stronger when no harm was intended and the outcome was accidental—when participants should have discounted more for situational factors that contributed to harm having been caused.

### **STUDY 4 – CORRESPONDENT INFERENCES AND PERFORMANCE EVALUATION**

In Study 4 we investigated the effect of the NED scale in predicting the weight given to the level of task difficulty when evaluating performance. Participants ( $N = 204$ ) were asked to evaluate twelve candidates who were up for promotion to a higher rank position. Information on each candidate's individual performance was provided, together with information on the difficulty of the situation in which the candidate was operating. We predicted that propensity to make correspondent inferences would induce participants to be less influenced by adjusted performance (i.e., performance corrected for situational difficulty) when assessing candidates. The results supported this prediction, as they revealed a significant and negative interaction between NED scores and adjusted performance,  $\beta = -.034$ ,  $SE = .007$ ,  $t = -5.07$ ,  $p < .001$ ,  $\beta = -.017$ . The results support the prediction in showing that participants characterized by high NED scores were less likely to anchor their assessments on adjusted performance, favoring candidates who benefited from an easier situation. These results are particularly interesting in light of the fact that information on the situational difficulty was provided next to information on individual performance, and in the same format, suggesting that the NED scale is diagnostic of dispositional attributions also in contexts where information on situational factors is available and clear.

## STUDY 5 – CORRESPONDENT INFERENCES AN INVESTMENT DECISIONS

In Study 5 we then examined whether the NED scale predicts attributions of credit for success and failure, and also influences incentive-compatible behaviors based on these attributions. Participants ( $N = 201$ ) read information about the performance of two mutual investment funds, in different calendar years. One of the funds decreased in value but outperformed the market, whereas the other fund increased in value but underperformed with respect to the market. If taking into account the situational information, the fund that decreased in value had a superior net performance compared to the fund that increased in value. After reading the information, participants rated the performance of each of the two fund managers. They then indicated which fund they would prefer if they had \$1000 to invest and could only choose between those two funds. Finally, they were told they would receive a \$1 bonus payment to invest in the fund they thought superior and that the bonus would be adjusted by the 2011 performance (gain or loss) of the chosen fund.

The results revealed a significant interaction between NED scores and the type of fund,  $\beta = -.488$ ,  $SE = .085$ ,  $t = -5.76$ ,  $p < .001$ , on fund evaluations. The propensity to make correspondent inferences was associated to more favorable evaluations of the manager of the fund that increased in value but underperformed with respect to the market,  $\beta = .364$ ,  $SE = .059$ ,  $z = 6.19$ ,  $p < .001$ , but with less favorable evaluations, of the manager of the fund that decreased in value but outperformed with the respect to the market,  $\beta = -.118$ ,  $SE = .060$ ,  $z = -1.96$ ,  $p = .04$ . The same pattern of results was observed both on the hypothetical preference between the two funds (recoded such that high values indicated preference for the fund with a positive performance but underperformed with respect to the market), as the effect of the NED was positive and significant,  $\beta = .45$ ,  $t = 5.20$ ,  $p < .001$ , and on the incentive compatible choice of the fund in which participants decided to invest their dollar obtained as a bonus,  $b = -.56$ ,  $SE = .15$ ,  $\chi^2(1) = 13.94$ ,  $p < .001$ . Participants more prone to make correspondent inferences were more likely to make dispositional attributions for good and bad absolute performances and to ignore the comparative value of those performances than participants less prone to make correspondent inferences, despite having the information needed to adjust their attributions readily available. The consistency of this pattern across performance evaluations, preferences, and incentive-compatible choices made by participants provides further evidence of the predictive validity of the NED scale and of the pervasive effect of correspondent inferences not only on judgments, but also on behavior.

## STUDY 6 – DEBIASING CORRESPONDENT INFERENCES

People more prone to make on correspondent inferences do not seem to benefit from the availability of situational information, so we tested whether making situational information easier to process would help them make less biased judgments. Study 6 uses the same paradigm of Study 5, asking participants to evaluate the performance of two fund managers, but in one condition (debiasing) situational information was easier to incorporate in judgments, as the information on the performance of the fund and on market performance was aggregated in a table, which also contained a figure indicating the net performance of the fund with respect to the market. After reading the information, participants ( $N = 306$ ) rated the performance of each of the two fund managers and made a hypothetical investment choice between the two funds as in Study 5.

The results revealed a significant a significant three-way interaction between propensity to make correspondent inferences, debiasing condition, and type of fund,  $\beta = .559$ ,  $SE = .161$ ,  $t = 3.48$ ,  $p = .001$ . Specifically, participants characterized by low propensity to

make correspondent inferences evaluated the fund overperforming with respect to the market significantly more favorably than the fund underperforming with respect to the market, in both the control and the debiasing condition. Instead, participants characterized by high propensity to make correspondent inferences evaluated the fund overperforming with respect to the market significantly more favorably than the fund underperforming with respect to the market in the debiasing condition, but less favorably in the control condition. These results show that whereas individuals less prone to correspondent inference-making are able to make more accurate judgments when situational information is provided, individuals more prone to correspondent inference-making are more resistant to the use of situational information unless they are nudged toward it.

## CONCLUSION

For half a century, correspondence bias has been studied across different targets, contexts, and dispositions. The results of six studies provide evidence that there is substantial variation across persons in the propensity to make correspondent inferences, but that there are stable individual differences. These differences were associated with the extent to which people attributed blame for accidental harm, with a higher neglect of task difficulty when assessing the performance of candidates in a promotion decision. Finally, they influenced whether evaluative judgments of and incentive compatible choices between fund managers overweighed their absolute performance and neglected their performance relative to the market. In addition, we provide evidence on a potential debiasing strategy, based on increasing the accessibility of situational information, which may help consumers make less biased decisions. Individual differences in decision making appear to be prevalent (Baron and Ritov, 2004; Bruine de Bruin et al., 2007; Scopelliti et al., 2015), but their implications have often been overlooked. We argue that the identification and the assessment of individual differences in susceptibility to specific biases is a valuable approach to identify the structure and dimensionality of a bias, to test its influence in consequential judgments, decisions, and behaviors, and since decision-making can be improved (Nisbett et al. 1987; Morewedge et al., 2015), it provides useful tools for the pursuit of research on debiasing.

## ENDNOTES

1. The scale is named after Edward E. "Ned" Jones, who first found evidence for this tendency and the correspondence bias.

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