Values Assessment for Personnel Selection: Comparing Job Applicants to Non-Applicants

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Abstract *

Some scholars suggest that organizations could improve their hiring decisions by measuring the personal values of job applicants, arguing that values provide insights into applicants' cultural fit, retention prospects, and performance outcomes. However, others have expressed concerns about response distortion and faking. The current study provides the first large-scale investigation of the effect of the job applicant context on the psychometric structure and scale means of a self-reported values measure. Participants comprised 7,884 job applicants (41% male; age M =43.32, SD = 10.76) and a country-, age-, and gender-matched comparison sample of 1,806 non-applicants (41% male; age M = 44.72, SD = 10.97), along with a small repeated-measures, cross-context sample. Respondents completed the 57-item Portrait Values Questionnaire (PVQ) measuring Schwartz' universal personal values. Compared to matched non-applicants, applicants reported valuing power and selfdirection considerably less, and conformity and universalism considerably more. Applicants also reported valuing security, tradition, and benevolence more than nonapplicants, and reported valuing stimulation, hedonism, and achievement less than non-applicants. Despite applicants appearing to embellish the degree to which their values aligned with being responsible and considerate workers, invariance testing suggested that the underlying structure of values assessment is largely preserved in job applicant contexts.

Keywords: Schwartz values, personnel selection, faking, response distortion, personal values

Introduction

Many employers are interested in attracting and hiring employees with the 'right' personal values (Groothuizen et al., 2018; Patterson et al., 2015; Patterson et al., 2016). For instance, the NHS Health Education England recently developed a values-based recruitment framework that sought to "recruit students and employees on

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the basis that their values align with those of the [organization]" (NHS, 2016, p. 4). To support such organizations, many providers of workplace psychometric testing services offer measures of personal values and motivation (e.g., Schwartz Values, NHS Values Tool, Hogan's MVPI, SHL MQ, etc.). Furthermore, an emerging body of research has found that employee values predict work outcomes such as job satisfaction, organizational citizenship behavior, organizational commitment, and retention (Arthaud-Day et al., 2012; Cohen & Liu, 2011; Edwards & Cable, 2009; Kristof-Brown et al., 2005; Liu & Cohen, 2010; Uçanok & Karabati, 2013).

Nonetheless, values assessment for employee selection is not without controversy. In addition to concerns about unfairly discriminating against applicants with particular ideological perspectives (Baron & Jost, 2019; van de Werfhorst, 2020), most psychometric assessments of personal values rely on self-report by applicants and are vulnerable to response distortion. Indeed, research has revealed that job applicants provide more socially desirable responses on many other types of assessments including personality questionnaires (Birkeland et al., 2006; Cao & Drasgow, 2019; Schmit & Ryan, 1993; Ziegler et al., 2011) and interviews (Melchers et al., 2020), yet the impact of the employee selection context on the assessment of values remains unclear. This study aims to contribute to this important debate about the role of values assessment in personnel selection by investigating the ways in which job applicants respond to personal values assessments and the effect this has on the psychometric properties of such assessments.

Personal Values

Employee values have been examined from a range of perspectives (for reviews, see De Clercq et al., 2008; Dose, 1997; Kristof-Brown et al., 2005), including work preferences (Lyons et al., 2010; O'Reilly III et al., 1991), work motivation (Elizur et al., 1991; Macky et al., 2008), work interests (Fouad, 2007), work centrality (Hirschfeld & Feild, 2000), work belief systems (Buchholz, 1978), and cultural values (Hofstede, 1980). Within the context of employee selection, employee values are often referred to as personal values. Personal values are broad evaluative criteria that provide a framework for prioritizing goals and determining what is important or good in life (Bilsky & Schwartz, 1994; Rokeach, 1973; Schwartz, 1992). Arguably, the most established and rigorously studied taxonomy of personal values is that proposed by Schwartz (Schwartz, 1992; Schwartz et al., 2012). The taxonomy arranges 10 basic values in a circular configuration: self-direction, stimulation, hedonism, achievement, power, security, tradition, conformity, benevolence, and universalism (see Figure 1). Values on opposite sides of the circumplex tend to be opposed to one another (e.g., power versus universalism), and values near one another tend to be positively correlated. The circular arrangement includes two higher-order dimensions: transcendence versus self-enhancement, and conservation versus openness to change. Schwartz has developed two main measures of the 10 basic values, which tend to yield similar results (Borg et al., 2019): the Schwartz Values Survey (SVS; Schwartz, 1992, 2007) and the Portrait Values Questionnaire (Schwartz et al., 2012).

The values of employees have often been examined in terms of value alignment using the concepts of person-organization and person-job fit (Chatman, 1989; Cohen, 2010). Several theories assert that employees will be more motivated, satisfied, and committed when their values align with those of their employer and their

role (Berings et al., 2004; Cohen, 2010; Dierdorff & Morgeson, 2013). Indeed, metaanalytic evidence broadly supports the claim that "person-organization fit", which is often operationalized through the congruence between personal and organization values, predicts reduced turnover intentions and commitment (Verquer et al., 2003). Alignment between individual and organizational values has been shown to enhance role fulfilment, minimize costs associated with turnover, increase role satisfaction, and organizational commitment (Meglino et al., 1989; Podsakoff et al., 2003; Riketta, 2005).

Nonetheless, while the person-job-fit-perspective emphasizes the moderating effect of organizational differences, personal values can also have generalizable main effects on workplace outcomes. Most organizations seek to recruit workers who follow organizational rules (conformity), respect coworkers (benevolence, universalism), avoid exploiting others (low power), value a safe workplace (security), and are willing to defer personal pleasure for organizational goals (low hedonism). Initial research also supports the validity of this perspective showing that particular personal values predict employee outcomes (e.g., Agras & Ates, 2015; Fischer & Smith, 2006; Glazer et al., 2004), including employee attitudes to diversity (Anglim et al., 2019), organizational commitment (Cohen, 2007, 2009, 2010; Fischer & Smith, 2006; Glazer et al., 2004), and organizational citizenship behavior (Arthaud-Day et al., 2012; Cohen & Liu, 2011; Liu & Cohen, 2010; Uçanok & Karabatı, 2013). For instance, Cohen and Liu (2011) found that employees who valued benevolence engaged in more organizational citizenship behaviors, and Anglim et al. (2019) found that workers who value universalism less and security and tradition more tended to have more negative attitudes to workplace diversity.

Response Distortion in Employee Selection Assessments

Despite a vast literature on high-stakes personality assessment, a literature search yielded almost no research on applicant responses to measures of personal values within an employee selection context. Studies of tangential relevance have examined the extent to which personal values predict careless responding (Furnham et al., 2015) and personality faking (Yankov, 2019), the effect of participant anonymity on values assessment (Feather, 1975), and the effect of instructed faking in a small sample study (n = 51) using an early values assessment tool (Braun, 1963). Finally, Lönnqvist et al. (2007) used an instructed-faking paradigm to examine peer and student impression management. Another body of research has examined the influence of social desirability on values assessment in the context of anonymous research (Danioni et al., 2020; He et al., 2014; Robinson & Betz, 2008; Rokeach, 1973; Schwartz et al., 1997). This research typically correlates measures of personal values with impression management scales such as the BIDR (Paulhus, 1988) or Marlow-Crowne (Strahan & Gerbasi, 1972). For example, Schwartz et al. (1997) found that the Marlowe-Crown correlated positively above .20 with conformity, tradition, security, and benevolence, and negatively below -.20 with self-direction, hedonism, and stimulation. Nonetheless, the limitations of this methodology are well known (McCrae & Costa, 1983) as impression management scales blend socially desirable responding with substantive variance particularly related to being conventional and rule-abiding (de Vries et al., 2018; de Vries et al., 2014). As such, this research is of limited relevance to understanding the effect of the employee selection context on personal values assessment (for a critcial discussion, see Burns & Christiansen, 2011).

The Current Study

Given the growing interest in values-based recruitment (Edwards et al., 2018; Groothuizen et al., 2018; Patterson et al., 2015), the current study sought to contribute to the debate about the suitability of incorporating assessments of personal values into employee selection practices. Specifically, it provides the first large-scale assessment of the effect of the employee selection context on scale means and the psychometric structure of personal values. We compared two large samples of age- and sex-matched Australian adults who had completed a measure of Schwartz's 10 basic values using the Portrait Values Questionnaire under conditions of either low-stakes research (i.e., the non-applicants) or high-stakes employee selection (i.e., the applicants). We also examined a smaller repeated measures samples where participants had completed the values assessment under both conditions in order to assess the robustness of the results and the within-person response dynamics (Hu & Connelly, 2021).

When formulating expectations about job applicant responding we adopted a theoretical model of response distortion on self-report instruments drawing from the broader literature on personality faking (e.g., Komar et al., 2008; Zickar & Robbie, 1999) and as broadly articulated in Anglim et al. (2017). That is, we construe social desirability to be both an item-level property and a person-level characteristic (McCrae & Costa, 1983; Uziel, 2010; Wiggins, 1968). Item-level social desirability is expected to be mostly a generalizable property of the item with some variation based on the cultural context as well as job- (Dunlop et al., 2012) and organization-specific (Roulin & Krings, 2020) beliefs about the "ideal worker". The capacity to alter responses in an applicant context in a socially desirable manner is defined as the discrepancy between an applicant's true score and the ideal response, which is commonly operationalized as the scale maximum. Various features of the high-stakes assessment context including applicant beliefs about the assessment process are posited to influence the degree to which socially desirable responding is elevated in this context (McFarland & Ryan, 2006). Applicants are expected to exhibit individual differences in the degree to which they elevate their level of socially desirable responding ranging from no changes, to small changes based on processes such as rationalization, positive spin, and using a work frame of reference (Schmit et al., 1995), to large changes where the applicant is answering almost solely on the basis of what is perceived as the ideal response (McLarnon et al., 2019). Thus, from this perspective, elevated levels of socially desirable responding in applicants are not necessarily intentional and may reflect substantive aspects of a person's values in a work context. A consequence of applicants moving towards both an ideal and scale end-points is a reduction in item standard deviations and, therefore, scale standard deviations (Anglim et al., 2017).

Based on input from practitioners with subject-matter expertise in the interpretation of values profiles, and the broader literature on applicant–non-applicant differences on psychometric assessments, we had the following expectations. First, we expected some movement towards idealized responding to result in a reduction in standard deviations in the applicant context, but that otherwise the structure of basic values would be largely preserved. Second, because organizations tend to value employees who are rule abiding, we expected applicants to have higher scores on

conformity, tradition, and security than non-applicants. Because organizations tend to value employees who are respectful of others, want to make a positive contribution to the world, and do not want to exploit others, we expected applicants to have higher scores for benevolence and universalism and lower scores for power than non-applicants.

Method

Data, analysis scripts, and study materials are available on the OSF at https://osf.io/gr6x9

Participants and Procedure

For this study, we drew from data collected from a sample of non-applicants and a sample of job applicants. The data from all participants were collected in partnership with an Australian professional consulting organization that specializes in personnel selection assessment services, with clients from many industries. The applicants all completed the measure of values as part of the process of applying for a job. These data were collected over several years and in relation to hundreds of different positions and recruiting organizations across the full spectrum of industries and job types (see the online supplement for further details). The non-applicants (i.e., the research-only sample) were recruited from a large contact database maintained by the same organization that provided the assessments to the applicants. People entered the contact database through a wide range of mechanisms relating to engagement with the consulting organization including training, professional development, subscribing to newsletters, and completing assessments. People on this database were sent an email inviting them to complete a research questionnaire that included demographics and values measures along with other measures not relevant to the current study (reported in Albrecht et al., 2020). The study received an ethics exemption from the first author's institutional ethics review board because it concerned pre-existing nonidentifiable data (Ethics ID: 2018-363).

In forming the final sample for analysis, a matching process was applied to ensure that the applicant and non-applicant groups had similar age and gender distributions. Prior to matching, a small number of participants were excluded if they (a) were missing age, gender, or values data, (b) provided the same response to all values items, or (c) had completed the survey too quickly suggesting nonconscientious responding (identified by a break in the histogram of survey completion times). Following this data cleaning process, the matching was achieved using strata sampling (Anglim et al., 2017). Age was categorized into 18-34, 35-45, 46-65 (the few participants aged over 65 were dropped). Six strata were formed by crossing gender and the three age categories. As the initial applicant sample was much larger than the non-applicant sample, we mostly used the entire non-applicant sample and used the non-applicant sample proportions as the basis for randomly sampling from applicant sample strata.

The final sample after the matching process consisted of 7,884 applicants (41% male; age M = 43.32, SD = 10.76, range: 18–65) and 1,806 non-applicants (41% male; age M = 44.72, SD = 10.97, range: 18–65). Almost all participants resided in Australia.

We also included a small repeated-measures sample (n = 104; 58% female; mean age = 40.7, SD = 11.7). These participants completed the measure of values in

both the applicant and non-applicant conditions, as described for the main sample. Of these participants, 68% completed their non-applicant responses before their applicant responses. The mean time between the two completions of the PVQ was 5.7 months (SD = 3.8).

Personal Values

Schwartz's values were measured using the Revised Portrait Values Questionnaire (PVQ-RR) (Schwartz et al., 2012). The questionnaire consists of 57 positively-keyed items and yields scores for each of 10 basic values. Although we focused on the 10 basic values, some values can be decomposed into two or three narrower "refined" values (e.g., the basic value of power can be decomposed into the refined values of dominance and resources). Each refined value is measured by three items. Thus, each basic value is measured by three, six, or nine items, depending on the number of refined values which comprise the basic value (51 of the items align with one of the 10 basic values). Each item of the PVQ adopts a third-person orientation describing a person of the same gender as the respondent. An example item phrased for a female respondent is: "It is important to her to have all sorts of new experiences". Participants rated "how much that person is or is not like" them on a scale: 1 = not like me at all, 2 = not like me, 3 = a little like me, 4 = moderately like me, 5 =like me, 6 =very much like me. The 10 basic values were scored using the ipsatization approach that is standard for this measure. First, raw (non-ipsatized) 'scale scores' for the 10 basic values were calculated for each participant as the mean response to the corresponding scale items. Second, an overall mean rating was obtained for each participant as the mean response to the 10 raw PVQ scales. Thus, this overall raw mean measures the general tendency to rate values items as important. Third, the overall mean rating was subtracted from the raw non-ipsatized scale scores to obtain ipsatized scores for each of the 10 basic values.

Results

Correlations and Factor Structure

Table 1 presents the correlations between sex, age, and basic values for applicants and non-applicants. Broadly consistent with past research (e.g., Lyons et al., 2005) we found that across both groups, men valued power more than women; older adults placed greater value on tradition, benevolence, and universalism and less value on stimulation, hedonism and achievement compared to younger adults. Correlations between the basic values were broadly consistent with Schwartz's theory (Schwartz et al., 2012). Demonstrating this point, Figure 2 presents two-dimensional non-metric multidimensional scaling solutions for non-applicants and applicants. where each cell in the underlying distance matrix was defined as zero minus the correlation between the two basic values. The only structural difference between the results of the current study and Schwartz's underlying model is that in the current study the position of security and tradition are flipped. Correlations were also guite similar across applicants and non-applicants. For instance, we created vectors out of the 45 correlations between the 10 values. The following descriptive statistics of these correlations can be observed: mean correlation (non-applicants = -0.105; applicants = -0.106), standard deviation of correlations (non-applicants = 0.205, applicants = 0.190), the mean absolute correlation (non-applicants = 0.191; applicants = 0.182). In summary, the absolute correlations were slightly smaller in applicants, potentially consistent with a small amount of range restriction associated with means closer to scale end-point and smaller scale standard deviations. The correlation between the applicant correlations and their non-applicant counterparts was .93, suggesting that the inter-relations among the values were very stable across assessment contexts.

In order to further examine the similarity of measurement models in applicants and non-applicants, multiple-groups invariance tests were conducted on the nonipsatized responses to the 51 portrait values items (i.e., the items with corresponding basic values). Item-level confirmatory factor analytic models (Anglim et al., 2017; Biderman et al., 2011; Chen et al., 2016) were estimated using maximum likelihood in lavaan (Rosseel, 2012) in R. Each non-ipsatized item was permitted to load on its theorized basic value. To control for acquiescent tendencies that the ipsatized scoring procedure is intended to control for, a method factor was also included that involved assigning a weight of one for all items (Ten Berge, 1999). For detailed model specification see the R code in the OSF repository. All substantive factors and the method factor were permitted to correlate. We also considered modelling data using a bifactor model with an additional evaluative factor (e.g., Anglim et al., 2017; Biderman et al., 2019), but this model did not converge. Fit statistics were then calculated based on a series of progressively stricter equality constraints being introduced: i.e., no constraints, item loadings, item intercepts, item residuals, latent factor variances, latent factor covariances, and finally latent variable means. Given the high degree of statistical power, interpretation was focused on the relative decline in fit captured by CFI, SRMR, and RMSEA (Putnick & Bornstein, 2016).

Table 2 presents model fit statistics for the multiple group confirmatory factor analytic models. Unsurprisingly, AIC and BIC (Vrieze, 2012) suggest that the least constrained model provides the best fit, however examination of changes in CFI helps to quantify the extent to which the various constraints reduce fit. In general, constraining item loadings to be equal, led to very little change in fit (Δ CFI = -.002) suggesting that the general structure of items loading on factors seen in non-applicants was largely preserved in applicants. Reflecting the fact that item and scale-level variances were slightly lower among the applicants, constraining item residuals (Δ CFI = -.012) and latent factor variances (Δ CFI = -.006) reduced the fit. This is consistent with applicant responses being somewhat closer to scale end points, which leads to reduced variances, and greater convergence of responses around a socially desirable ideal. Interestingly, constraining factor covariances to be equal led to only a small reduction in fit (Δ CFI = -.004). Unsurprisingly, given the moderate to large observed mean differences between applicants and non-applicants, constraining latent variable means to be equal reduced fit (Δ CFI = -.012).

Several analyses were also conducted to examine whether a "socially ideal employee" factor was influencing responses in the applicant context. First, we conducted a 10 factor exploratory factor analysis of the 51 non-ipsatized items that pertain to the 10 basic values. Factor loading matrices are presented in the online supplement. In general, the broad pattern of loadings was similar across applicants and non-applicants. Factor loadings also broadly converged with the proposed structure of the measure. Deviations from proposed structure were also consistent with the circular representation of the scale and the nesting of narrow values within broad values (e.g., achievement and power items loaded on a common factor; hedonism and stimulation items loaded on a common factor). Interestingly, the size of the first unrotated factor was larger in the non-applicants (20.8%) than the applicants (18.3%).

A further item-level analysis was conducted to examine whether loadings on the first factor were more consistent with socially desirable responses in the applicant condition. This involved obtaining item means and item factor loadings in the applicant and non-applicant samples as well as item-level difference in means between applicants and non-applicants. Details are presented in the online supplement. These analyses showed that item-level mean differences between applicants and nonapplicants were positively correlated with applicant first factor loadings (r = .76), non-applicant first factor loadings (r = .63), applicant means (r = .68) and nonapplicant means (r = .33). Given that item-level mean differences provide a direct measure of item social desirability, the larger correlation with applicant first-factor loadings suggests that applicant responses were informed more by item-level social desirability. Nonetheless, the correlation was substantial in the non-applicant context and the difference in these two correlations was not that large.

Group Differences

Table 3 presents the means and standard deviations for applicants and nonapplicants along with standardized estimates of effect sizes. There was only a slight tendency for applicants to endorse items more across the board (d = 0.10). Consistent with the results from invariance testing, differences between applicants and nonapplicant means on basic values varied substantially. The most prominent differences were that applicants reported valuing power (d = -0.89) and self-direction (d = -0.45) less and valuing conformity (d = 0.69) and universalism (d = 0.54) more. More moderate differences were that applicants reported valuing security (d = 0.39), tradition (d = 0.28) and benevolence (d = 0.13) more and valuing stimulation (d = -0.28), hedonism (d = -0.20), and achievement (d = -0.20) less. Overall, the pattern of results aligns with greater endorsement among applicants of values related to selftranscendence and conservation and less endorsement of values related to selfenhancement and openness to change. To assess the robustness of these results, group differences and intercorrelations using non-ipsatized scoring are presented in the online supplement, which showed that the effect of ipsatized scoring on the results was small.

Also, consistent with the results from invariance testing, scale standard deviations were significantly smaller for applicants than non-applicants. Levene's Test for homogeneity of variance was statistically significant at p < .00001 for all values, except hedonism (p = .02) and stimulation (p = .004). Mean scale standard deviations were 0.72 for non-applicants and 0.64 for applicants; this equates to standard deviations of the values measured among applicants being 89% the size of those of the non-applicants.

Within-Person Analysis

In order to examine the robustness of the results and examine within-person response dynamics, we also examined the much smaller repeated measures sample (n = 104). Group mean differences for ipsatized and non-ipsatized values are presented in the online supplement. In general, a similar pattern of results emerged, albeit with less precise estimates given the sample size; for instance, the correlation of the Cohen's d

values for the 10 basic ipsatized values between the main and repeated measures samples was r = .93. Compared to the between-subjects sample, the size of the differences were somewhat smaller.

Several analyses were also conducted on the repeated measures sample to examine the way that responses varied between contexts at the within-person level. First, the average correlation between applicant and non-applicant responses to the corresponding 10 basic ipsatized values was r = .59, suggesting that individual differences in values were reasonably well preserved in the applicant context. Also, the distribution of differences cores were skewed (see supplement) for the values that showed notable mean differences. This is consistent with some participants showing similar or slightly more socially desirable responses in the applicant setting and a small proportion of participants engaging in more substantial response distortion. The skewed nature of response changes is highlighted graphically in the online supplement.

Industry Analysis

In order to examine whether applicant responses varied based on the type of job for which applicants were applying, a set of regression models were estimated (see Table 4). Specifically, we predicted each basic value (ipsatized and z-score standardized) from the main and interaction effects of job applicant status and industry (current job for non-applicants; applied for job for applicants), along with demographic control variables of age (linear and quadratic) and gender. We focused analyses on the three largest industry categories that employed a common coding across applicants and non-applicants: (1) health and community services, (2) government and defense, and (3) education and training. Note that only a subset of applicants had industry data (N = 6,353; see online supplement for detailed breakdown). The main effect of each industry shows the extent to which incumbents (i.e., non-applicants) scored higher or lower on that value relative to non-applicants employed in "other" industries (the metric is analogous to Cohen's d, and "other" industries are all those that are not health, education, or government). Each applicant by industry interaction shows the extent to which applicants for a position in that industry differed from incumbents in that industry after controlling for age, gender, and the general effect of the applicant context.

Results of these regression models are shown in Table 4. Incumbents in health (consistent with Knafo & Sagiv, 2004) and government jobs valued benevolence and universalism more and valued power less than those in other industries. That said, these effects were relatively small compared to the applicant context effects. They also partially capitalize on chance given the exploratory nature of the analysis (i.e., 3 industries by 10 basic values = 30 effect sizes). The six applicant-by-industry interaction effects for these three values and two industries were either non-significant (4 out of 6) or were in the opposite direction. In summary, applicants for health positions were less benevolent and applicants for government jobs showed greater concern for power after controlling for demographics and the general job applicant context may reduce the scope for industry differences to emerge. In addition, applicants are also likely to fall somewhere between the general population and incumbents on range of characteristics relevant to values.

Item-Level Analysis

Returning to the main sample, Table 5 provides a more granular look at values endorsement among applicants and non-applicants. It shows for a subset of the PVQ items, descriptive statistics for applicants and non-applicants. The table shows how endorsement of items varies both across and within scales. It also highlights how applicants exhibited lower endorsement for items about taking unnecessary risks and items that indicated an unseemly interest in money and power. Interestingly, there were subtle distinctions across applicants and non-applicants. For example, applicants showed greater endorsement for having ambition but there were no differences from non-applicants in valuing being very successful. Collectively, this highlights how decisions about how to operationalize scales, particularly with regards to item-level social desirability, can impact observed differences between applicants and nonapplicants.

Discussion

The current study sought to contribute to the debate about the appropriateness of using personal values assessments to inform employee selection practices. Several key findings emerged. First, applicants prioritized a distinctly different set of values to non-applicants. Most prominently, applicants reported valuing conformity, security, and universalism more and power and self-direction less than non-applicants. Second, the job applicant context did not substantially disrupt the inter-relations among the values as proposed by Schwartz (2007), although scale variances were slightly lower amongst the applicants. Third, applicants endorsed the values items, overall, to only a very slightly greater extent than non-applicants. As such, the effect of ipsatized scoring on the profile of applicant–non-applicant differences was small. Fourth, the repeated measures data showed that individual differences was relatively well preserved. Overall, our findings have theoretical and practical implications for values assessment in employee selection settings.

Values and Assessment for Employee Selection

We observed moderate to large differences in socially desirable responding on Schwartz basic values in the employee selection context. The magnitude of these differences in values is broadly similar to those seen in the personality assessment domain (Anglim, Bozic, et al., 2018; Anglim et al., 2017; Birkeland et al., 2006). This ranged from much lower levels of endorsement of power to moderately larger levels of endorsement of universalism, conformity, and security, and moderately lower levels of self-direction, as well as slightly higher levels of tradition, and slightly lower levels of stimulation, hedonism, and achievement. The broad pattern of differences aligns with greater applicant endorsement of concern for others and conservatism, as opposed to self-interest and openness to change. As such, applicants appear to anticipate that employers are seeking to hire employees who will be willing to put aside their own self-interest and comply with the employer's rules. Power was the value that showed the greatest difference between applicants and non-applicants. Power includes elements of greed, status seeking, and exploitation, whereas universalism captures a desire to help others and society. In contrast, greater levels of conformity, but also security, and tradition, and lower levels of self-direction, stimulation, and hedonism align broadly with the notion of a responsible worker. Importantly, Schwartz measures conformity in terms of a willingness to follows rules, even when others are not watching. These scales all align with prioritizing the safety and integrity of the organization as opposed to personal interests.

Some scales showed little difference between applicants and non-applicants and were highly endorsed in both samples. For instance, benevolence (i.e., caring for people close to oneself) was the most endorsed value in both applicants and nonapplicants, and applicants showed only slightly higher levels of endorsement (d =0.13) than non-applicants. In the case of benevolence, it seems that there is little tension between being oneself and assessments of what might make a good employee. In general, organizations may see people who care about their family and friends to be good people, and also people more likely to be positive in their interactions with others as part of their work role. In contrast, self-direction, the second most endorsed value by non-applicants, was somewhat lower (d = -0.45) among the applicants. Although applicants endorsed this value at a high level, in absolute terms, some applicants may have tempered their responses for self-direction in order to show that they can delay their own interests for the purposes of conforming to the expectations of the employer.

The effect of ipsatized scoring of Schwartz values assessments on the potential for response distortion needs to be considered (Rudney, 2021). Studies in the context of personality assessments have found that ipsatized response formats can be effective in reducing applicant-non-applicant differences (Bowen et al., 2002) albeit at the expense of clarity of test structure (Bowen et al., 2002; Meade, 2004; Salgado et al., 2015). However, this effect is typically achieved by equating item social desirability across blocks of items; that is, if all items in a block are equally desirable, the constrained response format makes it impossible to fake-good, on all desirable scales. With Schwartz' scales, some values are perceived as socially desirable whereas others are undesirable. In this context, rather than controlling for social desirability, ipsatized scoring controls mostly for a response style (for discussion, see Ten Berge, 1999). This response style is probably largely acquiescence bias, but it may also reflect substantive individual differences in how much people feel strongly about values in general. The need to ipsatize is typically explained in terms of the conceptualization of values as a configuration of relative importance that drives our limited motivational resources. However, there is also a more pragmatic need to ipsatize driven by the fact that the Schwartz's Portrait Values Questionnaire has no reverse-scored items. Providing a balance of positive and negatively worded items is a common approach in personality assessment to overcome acquiescent response bias (e.g., Costa & McCrae, 1992). This interpretation is reinforced by the fact that there was almost no difference in the overall mean rating between applicants and non-applicants. Similarly, this mean rating had a very high correlation between contexts in the repeated measures sample suggesting that it is a relatively stable characteristic possible reflecting a combination of acquiescence bias and placing more value on values.

Interestingly, the factor structure and pattern of scale correlations were broadly similar across the applicant and non-applicant samples, albeit with some modest discrepancies. One interpretation is that applicant responding involves a 'movement' from honest to perceived ideal responses. Applicants vary in how much they alter their responses and, as highlighted by the within-subjects data, applicants who are further from the socially desirable scale end-point tend to alter their responses more. This is unsurprising given that this larger discrepancy creates a greater capacity to alter responses. This is consistent with the small reduction in standard deviations observed in the applicant sample. Nonetheless, results, including the repeated measures data, are consistent with the proposition that most applicants are answering either honestly or engaging in mild forms of self-enhancement, while a minority are engaging in more extreme forms of fabrication. The net effect of these processes is that the psychometric structure of values assessments is reasonably well preserved in an applicant setting.

The industry analysis showed that estimates of applicant–non-applicant differences were robust and that industry differences in basic values were small, especially compared to the size of applicant–non-applicant differences. An explanation for these relatively small industry-differences is that that basic values are more distally related to whether someone is attracted to, is hired in and stays in a given industry, when compared to more domain-specific values captured by measures of career interests.

It is also interesting to consider the meaning of the observed pattern of industry by applicant context effects. In particular, where there was an industry effect, the applicant by industry interaction was either close to zero or operated in the opposite direction to the main effect of industry (e.g., benevolence in health; power in government). The following factors suggest that this opposing effect should operate. First, the effect of attraction, selection, and attrition mean that people applying for a job in a given industry are likely to have values somewhere between those who work and those who do not work in a given industry. Second, statistically, to the extent that the non-applicant sample is higher on a value by chance, the non-applicant sample will on average be slightly lower. Third, when applicants for jobs in a given industry are truly higher on a socially desirable value, this reduces the gap between honest and ideal response, and this should tend to reduce the magnitude of response distortion. Predicting the opposing trend, people's honest levels on traits are somewhat related to perceptions of social desirability and traits that characterize incumbents may often align with any context-specific differences in perceptions of social desirability. For instance, workers in health and community services value universalism and this may well be perceived as particularly desirable in that industry. In addition, there are more pragmatic sampling issues that lead samples of non-applicants in a given industry to subtly differ from applicants in the distribution and mix of specific jobs that are undertaken, which is likely to add noise to any estimates. Overall, it seems likely that the observed effects are combination of these effects.

Limitations and Future Research

Several limitations and potential areas for future research should be noted. First, theory and research suggests that the amount and nature of response distortion varies based on a range of contextual factors including applicant perceptions of the role (Dunlop et al., 2012) and the organization (Roulin & Krings, 2020) as well as over time and between countries (Davidov et al., 2008; Spini, 2003). This topic is particularly important to understand in relation to personal values as researchers and practitioners often emphasize the benefits of values as being highly contingent on the nature of the organization. While the current study did examine industry by job type interactions, future research could explore this further. The jobs that applicant apply

for could be coded more granularly based on value profiles obtained from data from sources such as O*Net to assess value alignment (Carlstrom, 2011). Repeated measures data involving both applicant measurement and a low-stakes research follow-up would further help to disentangle the effect of targeted faking from true differences in values based on occupational interests (Knafo & Sagiv, 2004).

Second, when comparing applicant and non-applicant groups, there is the potential that there are alternative explanations for observed differences besides the difference between high-stakes and low-stakes assessment. The current study matched on age and gender and both samples were drawn from a similar broad cross-section of the Australian adult population in terms of jobs and occupations. Nonetheless, future research could match or apply propensity scoring (Connelly et al., 2013) on additional demographic variables. Future research could also employ repeated measures designs where applicants have their values retested in a confidential research setting.

Third, while it is common to operationalize "faking" or "response distortion" as the difference between latent applicant and non-applicant responses (Griffith et al., 2007; Griffith & Converse, 2012; Peterson et al., 2011), debate persists about the nature of these changes (Hogan et al., 2007). In particular, applicants are potentially engaging in legitimate response processes (Marcus, 2009) where they are, for example, applying a work frame of reference (Schmit et al., 1995) or providing a contextually relevant performance reflecting their social skills (Hogan et al., 2007). Relatedly, there is also an open question about the extent to which response differences observed in job applicant settings impact criterion validity (Anglim, Lievens, et al., 2018; Komar et al., 2008; Marcus et al., 2020; Morgeson et al., 2007a, 2007b; Rothstein & Goffin, 2006). While the current data does not speak to this question directly, our repeated measures data suggests that much of the individual differences assessed in a non-applicant context is also captured in the job applicant context.

Finally, the current research used the popular Portrait Values Questionnaire. In practice, there are a wide range of values assessments used in workplace settings (for a review see De Clercq et al., 2008; Dose, 1997) some of which are modelled on Schwartz's framework (Albrecht et al., 2020; Avallone et al., 2010; Consiglio et al., 2017). Nonetheless, the results do highlight the broad perceptions of how much and what ways applicants choose to present themselves on values assessments. Future research could also examine values assessments and the capacity for faking based on alternative assessment methods such as situational judgement tests (Husbands et al., 2015), interviews (Parsons et al., 1999), biodata, even derived from scraping social media pages (Lievens & Van Iddekinge, 2016).

Conclusion

The current study contributes to the debate about the appropriateness of including measures of personal values as part of employee selection practices. It showed that the structure of personal values is largely preserved in a job applicant setting albeit with some compression of scores around an ideal point and that ipsatized scoring has a limited effect on estimates of applicant–non-applicant differences. In broad terms, applicants sought to present themselves as responsible and considerate workers. Overall, results are consistent with applicant responses to items being influenced by their social desirability and this social desirability mostly transcending

particular roles. These estimates of differences between applicants and non-applicants can also assist practitioners in applying and interpreting values assessment in job applicant settings.

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Table 1

Applicants (Lowe	er utuge	maij											
	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Male		.15	05	09	01	04	05	.05	.01	.01	.13	02	07
2. Age	.13		08	.06	05	18	14	05	.12	05	.03	.19	.12
3. Mean rating	07	14		29	.03	.05	.07	06	.11	.09	.26	21	26
4. Self-direction	06	.03	20		.12	07	.02	05	21	33	40	.08	.17
5. Stimulation	01	12	.08	.09		.30	01	10	44	42	36	14	.11
6. Hedonism	05	17	.09	05	.23		09	11	22	27	29	11	02
7. Achievement	.04	18	.05	05	.07	02		.33	20	23	25	17	32
8. Power	.15	.07	24	.01	.01	09	.24		14	24	06	34	47
9. Security	08	.08	.19	21	44	23	21	25		.24	.12	03	08
10. Conformity	03	08	.07	27	40	26	27	37	.32		.16	01	.00
11. Tradition	.02	.11	.33	32	35	29	26	16	.16	.12		15	33
12. Benevolence	.03	.15	29	.01	19	12	17	19	06	.05	19		.26
13. Universalism	05	.11	36	.04	05	14	24	32	03	.12	27	.26	

Correlations for Demographics and Basic Values for Applicants (Upper diagonal) and Non-Applicants (Lower diagonal)

Note. Sample is 7884 applicants and 1806 non-applicants. Male is coded 0 = Female, 1 = Male. Age is age in years.

Table 2

			Fit statistics								
Model	χ^2	df	AIC	BIC	CFI	RMSEA	SRMR				
Configural	38888	2336	1,257,055	1,260,056	.814	.057	.058				
Weak (L)	39330	2377	1,257,416	1,260,122	.812	.057	.059				
Strong (LI)	40899	2417	1,258,905	1,261,324	.805	.057	.060				
Strict (LIR)	43221	2468	1,261,125	1,263,178	.793	.058	.061				
StrictVar (LIRV)	44044	2479	1,261,926	1,263,900	.789	.059	.067				
StrictCov (LIRVC)	44774	2534	1,262,546	1,264,125	.785	.059	.071				
StrictCovMean (LIRVCM)	47199	2545	1,264,949	1,266,449	.773	.060	.082				

Model Fit Statistics for Invariance Tests of Schwartz Portrait Values Items

Note. Sample is 7884 applicants and 1806 non-applicants. Constraints on parameters between applicant and non-applicant groups are indicated in parentheses where L = item loadings, I = item intercepts, R = item residuals, V = latent factor variances, C = latent factor covariances, and M = latent variable means.

Table 3

	Non-app $(n = 1)$	plicants ,806)	Appl (<i>n</i> = /			
Variable	M	SD	M	SD	d	sig
Male	0.41	0.49	0.41	0.49	0.00	
Age	44.72	10.97	43.32	10.76	-0.13	***
Mean rating	4.24	0.53	4.29	0.45	0.10	***
Self-direction	0.58	0.63	0.30	0.56	-0.45	***
Stimulation	0.08	0.77	-0.14	0.72	-0.28	***
Hedonism	0.26	0.68	0.12	0.64	-0.20	***
Achievement	0.16	0.66	0.03	0.58	-0.20	***
Power	-1.25	0.79	-1.96	0.69	-0.89	***
Security	0.18	0.63	0.42	0.56	0.39	***
Conformity	-0.24	0.75	0.28	0.64	0.69	***
Tradition	-1.10	1.05	-0.81	0.96	0.28	***
Benevolence	0.85	0.53	0.92	0.47	0.13	***
Universalism	0.48	0.66	0.84	0.54	0.54	***
*** <i>p</i> < .001						

Descriptive Statistics and Group Differences for Basic Values in Non-Applicants and Applicants

Table 4

Predictor	SD	ST	HE	AC	РО	SE	СО	TR	BE	UN
Intercept	0.45***	0.26***	0.24***	0.22***	0.82***	-0.33***	-0.68***	-0.25***	-0.26***	-0.59***
Control variables										
Z-Age - Linear	0.03**	-0.08***	-0.15***	-0.18***	0.02	0.09***	-0.07***	0.08***	0.16***	0.10***
Z-Age - Quadratic	-0.01	0.03*	0.03*	-0.02	-0.06***	0.01	0.02*	-0.02	0.03**	0.00
Male	-0.18***	-0.02	-0.09***	0.06*	0.16***	-0.08**	0.04	0.09***	-0.04	-0.05
Applicant	-0.49***	-0.38***	-0.28***	-0.29***	-0.98***	0.48***	0.83***	0.24***	0.36***	0.70***
Industry effects										
Health	-0.02	-0.02	-0.03	-0.03	-0.21***	-0.03	0.05	-0.04	0.20***	0.25***
Applicant * Health	0.02	0.00	-0.03	-0.09	0.01	0.10	0.00	0.21**	-0.39***	-0.04
Education	0.04	-0.03	-0.07	0.05	0.05	-0.05	0.04	-0.15	0.16	0.09
Applicant * Education	-0.04	0.07	0.06	-0.10	-0.22*	-0.01	-0.09	0.21	-0.12	0.14
Government	0.12	-0.05	-0.05	-0.10	-0.20**	0.05	0.12	-0.14*	0.20**	0.23***
Applicant * Government	0.03	0.06	0.04	0.12	0.24**	-0.11	-0.28***	0.04	-0.16	-0.08
Adjusted R ²	0.06	0.03	0.04	0.05	0.21	0.06	0.13	0.03	0.04	0.12

Regression Models Predicting Basic Values (Ipsatized and Z-Score Standardized) from Age, Gender, Industry and Job Applicant Status

Note. N = 6353. Health = health and community services (n = 2,014), Government = government and defense (n = 782), Education = education and training (n = 442), Reference category = all other industries (3,115). SD = Self-direction, ST = Stimulation, HE = Hedonism, AC = Achievement, PO = Power, SE = Security, CO = Conformity, TR = Tradition, BE = Benevolence, UN = Universalism. Age is z-score standardized. Male is coded 1 = Male, 0 = Female. Outcome variables are the 10 ipsatized values after z-score standardization. Applicant is coded 0 = non-applicant, 1 = applicant. Industry of current job (non-applicants) or applied for job (applicants) is dummy coded with reference category of "other". *p < .05; **p < .01; ***p < .001

Table 5

Comparison of Percentage of Value Endorsement by Non-Applicants and Applicants for a Subset of PVQ Items

	Non-App $(n = 1)$	olicants (806)	Appl $(n = 1)$	icants 7,884)		
Item Text	М	ŚD	M	SD	d	sig
Self-direction						
1. Form their views independently	4.67	1.11	4.58	1.07	-0.08	**
2. Have their own opinions	5.16	0.82	5.05	0.81	-0.13	***
3. Make their own decisions about their life	5.29	0.77	5.31	0.73	0.03	
Stimulation						
4. Always look for different things to do	4.47	1.12	4.36	1.13	-0.10	***
5. Take risks that make life exciting	3.93	1.28	3.51	1.22	-0.34	***
Hedonism						
6. Have a good time	4.56	1.04	4.58	0.94	0.02	
7. Enjoy life's pleasures	4.88	0.93	4.86	0.92	-0.03	
Achievement						
8. Have ambitions in life	5.07	0.98	5.28	0.81	0.21	***
9. Be very successful	4.31	1.22	4.31	1.16	0.00	
Power						
10. People do what they say	3.60	1.35	3.17	1.28	-0.32	***
11. Have the power that money can bring	3.16	1.40	2.17	1.06	-0.70	***
Security						
12. Avoid disease and protect their health	4.86	1.03	5.15	0.93	0.29	***
13. Their country is secure and stable	4.71	1.15	5.13	0.91	0.36	***
Tradition						
14. Maintain traditional values	3.41	1.46	3.61	1.35	0.14	***
15. Follow their family's customs or religion	2.82	1.47	3.28	1.42	0.32	***
Conformity						
16. Never violate rules	4.22	1.28	5.05	0.99	0.65	***
17. Avoid upsetting other people	4.34	1.24	4.55	1.08	0.16	***
Benevolence						
18. Take care of people they are close to	5.41	0.77	5.66	0.62	0.33	***
19. People they know have full confidence in them	5.01	0.94	5.15	0.85	0.15	***
Universalism						
20. Vulnerable in society be protected	5.03	1.02	5.44	0.77	0.40	***
21. Care for nature	4.62	1.16	5.07	0.94	0.39	***
22. Be tolerant toward all kinds of people	5 18	0.91	5 59	0.66	0.45	***

Note. Item responses are on a 1 to 6 scale. For basic values with underlying narrow values, the first item of each narrow value was selected. For basic values with no narrow values, the first two items were selected. Cohen's d is applicant mean minus non-applicant mean divided by the non-applicant standard deviation. Item text is abridged, and the version presented to participants used pronouns aligned with the participant's gender. "sig" is the significance of the difference between applicant and non-applicant proportions using an independent groups t-test. *p < .05, **p < .01, ***p < .001

Figure 1

Schwartz's Circular Motivational Continuum of 10 Basic and Higher-Order Values



Note. Adapted from Figure 1 in Schwartz et al. (2012).

Figure 2

Multidimensional Scaling Solution for Basic Values for Non-Applicants and Applicants



Note. SD = Self-direction, ST = Stimulation, HE = Hedonism, AC = Achievement, PO = Power, SE = Security, CO = Conformity, TR = Tradition, BE = Benevolence, UN = Universalism.

Online Supplement

Values Assessment for Personnel Selection: Comparing Job Applicants to Non-Applicants

Non-Ipsatized Scoring of Values

The standard approach to scoring Schwartz values is to employ ipsatizedscoring. Table S1 and Table S2 show the correlations and group differences when ipsatized scoring is not employed (i.e., scale scores are simply the mean of relevant items).

Table S1

Correlations for Demographics and Non-Ipsatized Basic Values for Applicants (Upper diagonal) and Non-Applicants (Lower diagonal)

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Male		.14	04	11	.02	05	07	.02	02	01	.08	07	09
2. Age	.12		08	01	.07	19	15	08	.03	08	02	.07	.06
3. Mean rating	07	14		.50	.58	.64	.66	.53	.69	.61	.62	.64	.48
4. Self-direction	11	09	.53		.39	.27	.37	.20	.22	.10	.07	.33	.32
5. Stimulation	06	16	.58	.37		.57	.38	.25	.14	.08	.12	.28	.36
6. Hedonism	08	19	.61	.30	.51		.37	.26	.32	.21	.21	.35	.30
7. Achievement	01	23	.63	.32	.41	.37		.56	.33	.26	.25	.32	.12
8. Power	.10	03	.39	.17	.24	.18	.44		.29	.17	.31	.11	11
9. Security	08	03	.71	.27	.14	.29	.32	.14		.56	.49	.45	.30
10. Conformity	05	14	.62	.16	.09	.19	.21	02	.62		.47	.39	.31
11. Tradition	01	.03	.64	.15	.12	.19	.22	.19	.51	.47		.33	.10
12. Benevolence	03	.01	.57	.29	.22	.29	.26	.02	.40	.40	.30		.45
13. Universalism	08	01	.45	.22	.25	.19	.12	20	.35	.39	.18	.38	

Note. Male is coded 0 = Female, 1 = Male. Age is age in years.

Table S2

	Non-ap (n = 1)	plicants ,806)	$\begin{array}{c} \text{Appl} \\ (n = 1) \end{array}$	icants 7,884)		
Variable	M	SD	M	SD	d	sig
Self-direction	4.82	0.70	4.59	0.64	-0.33	***
Stimulation	4.32	0.95	4.14	0.88	-0.19	***
Hedonism	4.51	0.89	4.39	0.82	-0.13	***
Achievement	4.40	0.87	4.32	0.76	-0.10	***
Power	2.99	0.93	2.33	0.73	-0.71	***
Security	4.42	0.87	4.72	0.78	0.34	***
Conformity	4.00	0.96	4.57	0.81	0.60	***
Tradition	3.13	1.29	3.49	1.18	0.28	***
Benevolence	5.07	0.67	5.21	0.55	0.20	***
Universalism	4.72	0.73	5.12	0.57	0.55	***

Descriptive Statistics and Group Differences for Non-Ipsatized Basic Values in Non-Applicants and Applicants

****p* < .001

Job Data

Table S3 sets out the job types that people applied for. Note that for a large number of jobs, no information was available. Table S4 is the frequency count of responses by participants in the non-applicant research survey with regards to their current job.

Table S3

Frequency Count of Job Type that Participants Applied for in the Applicant Sample

Applied for Job	n
Accounting	158
Administration and Office Support	297
Advertising, Arts & Media	32
Banking & Financial Services	56
Call Centre and Customer Service	111
Community Service & Development	830
Construction	67
Consulting & Strategy	96
Design & Architecture	26
Education & Training	280
Engineering	65
Farming, Animals & Conservation	40
Government & Defence	508
Healthcare & Medical	754
Hospitality & Tourism	88
Human Resources & Recruitment	265
Information & Communication Technology	159
Insurance & Superannuation	24
Legal	68
Manufacturing, Transport & Logistics	59
Marketing & Communications	143
Mining, Resources & Energy	16
Real Estate & Property	41
Retails & Consumer Products	108
Sales	61
Science & Technology	37
Self Employment	53
Sport & Recreation	32
Trades & Services	73
Missing	3337

Table S4

Frequency Count of Current Job Type in the Non-Applicant Sample

Current Job	n
Accommodation, Cafes and Restaurants	28
Agriculture, Forestry and Fishing	28
Communication Services	108
Construction	55
Cultural and Recreational Services	50
Education	162
Electricity, Gas, Water and Waste Services	58
Financial and Insurance	112
Government Administration and Defence	274
Health and Community Services	430
Manufacturing	75
Mining	19
Personal and Other services	186
Property and Business Services	90
Retail Trade	69
Transport and Storage	43
Wholesale Trade	19
Missing	0

Repeated Measures Data

Differences in means for the repeated measures sample are presented in Table S5 (ipsatized) and Table S6 (non-ipsatized). Correlations between applicant and non-applicant responses are also presented. Skewness of the difference scores (applicant minus non-applicant) is also presented. Figure S1 shows a scatter plot of applicant and non-applicant responses for the two scales showing the largest differences between contexts.

Table S5

Descriptive Statistics and Differences for Ipsatized Basic Values in Repeated Measures Sample

	Non-ap	oplicant	Appli	cant			
Variable	М	SD	М	SD	r	Skew	d [95% CI]
Mean rating	4.35	0.46	4.32	0.42	.72		-0.05 [-0.09, 0.19]
Self-direction	0.53	0.59	0.38	0.60	.57	-0.86	-0.24 [0.06, 0.42]
Stimulation	0.13	0.69	-0.03	0.62	.59	-0.04	-0.24 [0.07, 0.41]
Hedonism	0.38	0.63	0.36	0.53	.61	-0.30	-0.03 [-0.13, 0.19]
Achievement	0.31	0.56	0.27	0.58	.55	-0.07	-0.06 [-0.13, 0.25]
Power	-1.42	0.71	-1.78	0.65	.55	-0.47	-0.51 [0.33, 0.69]
Security	0.12	0.61	0.14	0.58	.55	0.27	0.02 [-0.2, 0.16]
Conformity	-0.31	0.71	0.09	0.57	.52	0.49	0.57 [-0.74, -0.39]
Tradition	-1.03	0.97	-0.95	0.89	.72	0.00	0.08 [-0.22, 0.06]
Benevolence	0.93	0.44	0.92	0.37	.47	-0.13	-0.01 [-0.18, 0.19]
Universalism	0.35	0.67	0.59	0.58	.73	1.84	0.35 [-0.48, -0.21]

N = 104. r is the correlation between applicant and non-applicant responses. Skew is the skewness of difference scores (applicant minus non-applicant).

Table S6

Descriptive Statistics and Differences for Non-Ipsatized Basic Values in Repeated Measures Sample

	Non-aj	oplicant	Appli	Applicant		
Variable	М	SD	M	SD	r	<i>d</i> 95% CI
Self-direction	4.87	0.57	4.71	0.66	.49	-0.29 [0.08, 0.51]
Stimulation	4.48	0.81	4.29	0.73	.59	-0.23 [0.06, 0.40]
Hedonism	4.73	0.80	4.69	0.70	.68	-0.05 [-0.10, 0.20]
Achievement	4.65	0.68	4.60	0.67	.55	-0.08 [-0.10, 0.26]
Power	2.93	0.81	2.54	0.71	.54	-0.48 [0.30, 0.65]
Security	4.47	0.83	4.46	0.81	.68	-0.01 [-0.14, 0.16]
Conformity	4.03	0.96	4.42	0.78	.65	0.40 [-0.55, -0.25]
Tradition	3.32	1.24	3.38	1.12	.76	0.04 [-0.17, 0.09]
Benevolence	5.27	0.50	5.25	0.50	.61	-0.05 [-0.12, 0.22]
Universalism	4.70	0.70	4.91	0.59	.67	0.30 [-0.45, -0.15]

Figure S1

Non-Ipsatized Responses to Power and Conformity in Applicant and Non-Applicant Contexts for the Repeated Measures Sample



Item-Level Analysis

Theory and past research suggests that the first unrotated factor of items often indexes a factor related to social desirability. Item means are also thought to partially index social desirability on the assumption that people tend to be more socially desirable than not, and therefore people tend to agree more with socially desirable items and disagree more with undesirable items. The degree to which item means are expected to index social desirability is expected to be amplified in contexts which promote socially desirable responding (e.g., fake good instructions, job applicant contexts). Likewise, the first factor is expected to index social desirability more in applicant contexts, because item social desirability is expected to have a greater influence on responses. Finally, the difference between applicant and non-applicant item means provide a direct index of item-level social desirability.

To examine the degree to which item means and factor loadings indexed social desirability, an item-level analysis was performed. We were particularly interested in the degree to which item-level correlations between applicant–non-applicant differences and first-factor loadings were greater when the loadings were derived from applicant data rather than non-applicant data. Such a pattern would support the claim that item-level social desirability informed the response process more in applicant conditions.

Table S7 presents the correlations between these item-level statistics. All analyses were based on the 57 items using the 1 to 6 response scale (i.e., not ipsatized). In general, factor loadings in the non-applicant condition showed moderately large correlations (i.e., r = .63) with differences in means, consistent with the first factor being related to social desirability or social adjustment. This correlation with applicant–non-applicant differences was elevated when factor loadings were derived from applicant data (i.e., r = .76). This is consistent with responses by participants in the applicant context being influenced by item social desirability more so than in a non-applicant context.

Table S7

Variable	М	SD	1	2	3	4
1. Applicant Loading	0.37	0.16				
2. Non-Applicant Loading	0.42	0.10	.87			
3. Applicant Mean	4.38	0.96	.57	.71		
4. Non-Applicant Mean	4.29	0.74	.32	.57	.92	
5. Difference in Means	0.08	0.41	.76	.63	.68	.33

Correlations and Descriptive Statistics for Item-Level Characteristics on the Portrait Value Questionnaire

N = 57 items. Loading refers to the loading on the first unrotated principal component. Mean is the item mean. Difference in means is the applicant mean minus the non-applicant mean.

Exploratory Factor Analysis

To further compare the factor structure of the values measure in the applicants and non-applicants, exploratory factor analyses were conducted. Specifically, maximum likelihood exploratory factor analysis with promax rotation was conducted separately for the applicant and non-applicant samples. The analysis was based on raw responses to the 51 items that map onto the 10 basic values. Ten factors were extracted as this aligns with the proposed factor structure and was plausible based on the scree plot and interpretability of the factor loading matrix. Factor loadings matrices for non-applicants (Table S8) and applicants (Table S9) are presented.

In general, the factor loadings were quite similar across the two samples. In general, factor loadings are broadly consistent with the scales design. Minor deviations from proposed structure were as follows: (1) achievement and power items loaded together, (2) stimulation and hedonism items loaded together, (3) conformity-interpersonal and conformity-resources items were split into two factors, (4) universalism-nature items formed a separate factor, (5) security-personal loadings were relatively weak on the factor with security-societal items. All of these patterns were present in both applicant and non-applicant samples. They are all broadly consistent with expectations of factor analysis and the structure of the measure. For instance, there are different numbers of items per broad value in the measure and there is a subscale structure of narrow values. The two cases where items from different broad values load on a common factor occur with values that have only 3 items per factor (i.e., achievement; hedonism and stimulation), and with values that are proximal on the circular representation of values, and are thus intended to correlate highly. The two instances of splitting pertains to narrow values within a broad value.

Of greater relevance to the present context, the exploratory factor analysis suggests that the high-level structure of the values measure is preserved in applicants.

Table S8

Factor Loadings for Exploratory Factor Analysis of Portrait Values Items in Non-Applicants

Item	1	2	3	4	5	6	7	8	9	10
ac1	.27	.21	.07	.20	.12	.13	.02	13	07	04
ac2	.60	.18	06	.12	01	.10	.06	04	11	02
ac3	.50	03	.08	05	.15	11	07	.20	06	07
bec1	03	02	.92	.01	09	02	10	03	.02	.02
bec2	02	.00	.96	07	02	09	09	05	.01	.00
bec3	.00	09	.54	.05	.00	.02	08	.03	.09	.13
bed1	.18	.09	.35	.01	.11	.05	.00	.07	06	.03
bed2	08	.10	.59	.04	.01	.02	.03	02	02	.02
bed3	13	01	.54	05	.12	.01	.01	.00	02	.07
coi1	02	.07	.05	.08	02	07	04	.79	02	06
coi2	.01	.00	08	.01	.07	.06	11	.80	.06	.07
coi3	02	.03	08	.02	.04	.01	.03	.84	03	.04
cor1	03	.01	01	.02	05	.88	05	.08	.00	06
cor2	03	01	05	.00	.02	.91	05	07	.06	01
cor3	06	01	05	.01	01	.91	.02	02	01	.01
he1	.03	06	.05	.65	10	08	.11	.17	01	04
he2	.01	.00	.14	.66	06	04	.14	.04	06	09
he3	09	13	02	.86	08	.04	03	.04	.03	.03
pod1	.37	06	.07	07	.08	.06	03	.01	.03	.09
pod2	.74	02	08	03	.01	04	10	05	.05	.12
pod3	.64	01	03	10	.05	.01	03	09	.02	.13
por1	.83	.01	.02	07	06	07	.01	.00	.03	10
por2	.83	04	01	.01	09	04	.06	.03	.02	05
por3	.67	14	04	.04	10	01	03	.01	.01	.00
sda1	03	.14	.07	.01	.55	.04	.03	05	06	12
sda2	.04	14	17	.02	.71	.04	.00	.01	.06	.06
sda3	08	08	07	.04	.74	07	.10	.08	04	03
sdt1	03	.01	04	11	.68	03	.01	01	.04	06
sdt2	.03	.10	.18	03	.55	05	01	07	03	11
sdt3	11	10	02	01	.76	.01	06	.09	.03	.10
sep1	.10	.00	.18	.10	03	.10	.26	04	.13	01
sep2	.10	04	.26	.03	.04	.15	.33	.01	04	10
sep3	.10	.06	05	18	06	.37	.14	.26	.00	02
ses1	.01	03	01	05	.04	07	.81	.03	.02	06
ses2	.00	.05	11	.00	.00	05	.89	07	.01	.14
ses3	03	09	12	.01	.02	.03	.91	04	.02	.09
st1	.04	.05	.04	.45	.14	.01	09	02	.04	.04
st2	.07	.09	17	.62	.08	12	06	07	.07	.11
st3	05	.07	08	.75	.11	.08	09	04	.01	03
tr1	02	13	.09	.01	.03	.13	.08	.04	03	.58
tr2	.05	.08	.05	04	05	02	.02	.02	07	.84
tr3	05	.09	01	.02	01	07	.14	.01	.00	.86
unc1	.01	.63	.06	15	03	15	.05	.06	.13	.02
unc2	.01	.75	11	.01	03	04	01	.07	.03	.04
unc3	03	.74	05	08	.04	04	.07	.06	.01	.01
unn l	04	.06	.11	02	.01	03	.05	.03	.77	07
unn2	.08	.00	03	.05	.01	.04	05	.00	.81	.06
unn3	.02	.06	.00	.02	.00	.03	.05	02	.85	08
unt1	.02	.80	.09	01	13	.02	07	.01	02	02
unt2	04	.77	02	.05	01	.07	09	05	.00	.09
unt3	12	.52	01	.04	.06	.10	.02	03	02	.05

Note. Items with absolute loadings above .30 are bolded. AC = achievement, BEC = benevolence caring, BED = benevolence dependability, COI = conformity interpersonal, COR = conformity rules, HE = hedonism, POD = power dominance, POR = power resources, SDA = self-direction action, SDT = self-direction thought, SEP = security personal, SES = security societal, ST = stimulation, TR = tradition, UNC = universalism concern, UNN = universalism nature, UNT = universalism tolerance.

Table S9

Factor Loadings for Exploratory Factor Analysis of Portrait Values Items in Applicants

Item	1	2	3	1	5	6	7	8	0	10
201	00	25	31	03	08	0	- 16	05	- 02	- 02
ac 1 ac 2	38	.23	. 34 27	.03	.00	.00	10	.05	02	02
ac2 ac3	.30	- 08	.27	- 04	03	.11	.00	10	- 03	- 05
hec1	- 01	00	- 02	- 10	.05 87	- 03	- 07	- 04	03	05
bec2	01	- 08	02	- 07	.07	05	07	04	- 01	.01
bec3	13	- 13	05	07	32	.00	00	00	01	15
bed1	13	13	- 02	- 01	27	.00	.17	10	.00	02
bed2	- 03	.15	02	- 03	.27 48	16	- 02	- 01	- 02	- 04
bed3	.05	- 04	- 02	- 07	42	05	.02	.01	- 06	.01
coil	- 08	04	02	- 08	.42	- 02	.0) 74	.03	00	- 07
coi?	00	05	.07	06	- 08	02	78	- 01	.00	07
coi3	03	.00	.02	.00	- 09	.01	.70	- 02	- 04	- 01
cor1	- 05	.00	- 01	- 06	- 03	- 03	.05	02	- 03	01
cor?	- 02	.00	- 06	- 10	- 08	.05	- 01	- 02	.03	.01
cor3	02	.00 86	- 01	10	- 05	.00	01	02	.05	.01
he1	- 08	- 02	62	.00	.03	- 17	15	- 03	.00	.01
he?	00	02	.02	10	.05	- 08	03	03	- 03	- 01
he3	11	- 08	.03	- 01	.00	- 08	.03	02	- 02	01
nod1	43	10	- 07	01	.01	- 02	- 11	.00	.02	.01
pod1	.72	- 03	- 06	- 01	- 06	.02	- 05	00	.02	.03
pod2	64	.05	- 10	- 03	.00	.01	- 14	.00	.02	.02
pous nor1	.04	- 11	- 04	.05	.00	01	05	- 02	- 01	- 06
por?	69	- 04	03	.00	.01	- 11	.09	- 07	03	- 07
por2	63	- 04	.00	.00	.02	- 11	.02	- 08	- 04	- 02
sda1	- 11	.01	.00	.00	03	02	- 11	.00 57	.01	- 09
sda2	15	.00	- 10	- 09	- 15	- 02	05	.64	.00	.05
sda3	- 01	- 16	06	.05	- 09	.00	11	.65	- 06	- 03
sdt1	- 12	02	- 10	.00	.00	- 06	- 09	.63	01	- 01
sdt2	- 08	- 06	09	02	13	- 01	- 16	.51	02	- 05
sdt3	02	- 03	- 03	- 09	- 02	- 03	09	.63	- 02	06
sen1	07	17	08	23	15	- 07	02	- 01	18	- 09
sep1	- 01	19	02	.34	18	- 08	09	07	- 04	- 03
sep2	02	23	- 16	16	- 08	01	.41	07	.00	03
ses1	- 06	01	- 05	.67	07	- 06	- 05	07	03	- 04
ses2	.07	10	.00	.92	11	.14	09	05	01	.06
ses3	.04	- 07	02	.92	- 11	.03	.03	02	03	.04
st1	.04	.01	.34	03	07	.04	.08	.19	.04	.04
st2	.15	18	.57	06	12	.13	09	.02	.04	.04
st3	01	.05	.70	11	11	.14	02	.05	.03	.01
tr1	02	.15	.00	.09	.05	17	.06	.03	03	.54
tr2	02	.01	.02	01	.04	.03	02	05	04	.85
tr3	06	03	.04	.08	03	.04	04	.02	.06	.84
unc1	08	13	13	.10	.12	.46	.05	.04	.13	.01
unc2	04	03	.04	.04	08	.64	.08	.02	.05	.04
unc3	.02	01	07	.08	03	.70	.10	.00	.01	05
unn1	07	.03	.01	04	.10	03	01	01	.77	03
unn2	.07	02	.03	05	05	.02	.03	.01	.78	.06
unn3	.00	.00	02	.03	03	.05	.00	03	.86	01
unt1	06	.06	.01	03	.12	.53	.04	05	05	03
unt2	02	.05	.05	.02	.01	.70	05	08	01	.06
unt3	07	.07	.02	.03	01	.54	02	.06	08	.00