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Substantive individual differences in social desirability: Stability, change, and associations with personality traits and job satisfaction in a large-scale longitudinal survey

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ABSTRACT

Whether individual differences in Social Desirability (SD) reflect a *substantive* personality aspect or a *stylistic* response bias remains debated. Using a 6-wave dataset (1-year lag; $N = 2{,}648$), this study aimed to examine whether SD (measured with a 10-item dichotomous scale) exhibits patterns of stability and change similar to those of personality constructs typically related to adjustment. Tetrachoric (auto)correlations and a series of longitudinal structural equation models for categorical variables were adopted. After establishing thresholds/loadings invariance, results showed (a) high rank-order stability, positive mean-level change, and significant interindividual differences in intraindividual change; (b) consistent associations between SD baseline levels and Big Five traits; (c) consistent associations between SD individual-level change and job satisfaction. Overall, findings support the trait-like nature of SD.

1. Introduction

Social desirability has been defined as "the tendency to give positive self-descriptions" (Paulhus, 2002, p. 49), or more recently as "a conscious or unconscious motivation to create a positive image of oneself that aligns with societal norms and expectations" (Schröder et al., 2025, p. 2). However, the degree to which this tendency represents a response bias (*style*) or reflects true individual differences (*substance*) has been a long-standing matter of debate (Bou Malham & Saucier, 2016; Lönnqvist et al., 2007; McCrae & Costa, 1983; Perinelli & Gremigni, 2016; Ziegler et al., 2012). In this study, drawing on Uziel's (2010) framework of *interpersonally oriented self-control* and on the distinction between state and trait components proposed by Alexander et al. (2025), we aimed to investigate stability and change in social desirability using data from six annual waves of a large-scale longitudinal panel survey. More specifically, we examined whether, and to what extent, social desirability displays patterns of stability, change, and associations with external variables that parallel those typically observed in other (substantive) personality characteristics (Roberts & Yoon, 2022). In doing so, the study aimed to address a notable gap in the literature regarding research specifically focused on understanding the substantive value of social desirability (McCrae & Costa, 1983). In what follows, we first outline the historical roots of the two main research streams on social desirability, namely its measurement and the debate about substantive versus stylistic response tendency. We then review the most influential contemporary perspectives on social desirability, with particular attention to recent theoretical (Uziel, 2010) and empirical (Alexander et al., 2025) contributions supporting its substantive nature. Finally, we present the taxonomic framework of stability and change adopted in this study and discuss the implications of applying this framework to social desirability, an issue that has not yet been systematically addressed in prior research and that the present study aims to fill.

2. Measurement of social desirability and the substance vs. style debate

Early studies on social desirability primarily focused on the bias this phenomenon may introduce in self-reported assessments, leading researchers to develop scales aimed at controlling for this effect (Crowne & Marlowe, 1960; Edwards, 1957). Indeed, social desirability can be linked to the *evaluative* content of an item (i.e., which answer is considered good or bad) rather than to its *descriptive* content (i.e., responding by accurately describing the characteristic requested by the item). This evaluative aspect may distort test-takers' responses to various stimuli (whether in response to items or during interviews), especially in high-stakes situations such as personnel selection processes

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(Rau et al., 2025; Schröder et al., 2025). Hence, earlier efforts primarily focused on developing scales whose items described desirable but relatively infrequent behaviors. Well-known examples include the *Edwards Social Desirability Scale* (Edwards, 1957), the *Marlowe–Crowne Social Desirability Scale* (Crowne & Marlowe, 1960), the "Lie" scale embedded in the *Eysenck Personality Inventory* (Eysenck & Eysenck, 1964), and the "Good Impression" scale embedded in the *California Psychological Inventory* (Gough, 1956). The results from these scales were often used either to detect potential fakers based on established thresholds or to be correlated with other psychological measures to examine whether the latter were susceptible to social desirability bias (see Paulhus, 1991; Ziegler et al., 2012).

Nonetheless, during the 1970s and 1980s, research on social desirability underwent a significant transformation, driven by two major streams of inquiry that consolidated and expanded upon earlier works. The first focused on the multidimensional nature of social desirability and its assessment, while the second explored the substantive value of social desirability as a personality trait, rather than viewing it merely as a response style bias.

Concerning the first stream of research, Paulhus (1984, 1991, 2002) – drawing on the conscious versus unconscious bias distinction proposed by Sackeim and Gur (1978) – refined studies on the multidimensional facets of social desirability by highlighting the pivotal distinction between impression management (i.e., the deliberate and conscious tailoring of one's responses to create a favorable impression on others) and self-deception (i.e., the unconscious tendency to see oneself in an overly positive light). The latter was further divided into egoistic bias (i.e., portraying oneself as possessing "super-hero" qualities, such as exceptional competence or bravery) and moralistic bias (i.e., portraying oneself as having "saint-like" qualities, such as extreme honesty or altruism; see Paulhus & John, 1998). These conceptual advancements led to the development of the *Balanced Inventory of Desirable Responding* (BIDR; Paulhus, 1991, 1998) and subsequent related instruments, such as the *Bidimensional Impression Management Index* (BIMI; Blasberg et al., 2014), which further refined the multi-factorial assessment of social desirability.

Concerning the second stream of research, McCrae and Costa (1983) advanced earlier investigations into the substantive nature of social desirability (e.g., Dicken, 1963). By examining both self-reported and spouse-rated personality traits, they demonstrated that social desirability scales captured relevant individual differences in personality (e.g., associations with lower neuroticism), rather than merely reflecting artifacts resulting from deliberate attempts to distort responses in a favorable direction.

Over the past two decades, numerous studies have advanced and consolidated these two streams of research on social desirability. In some cases, they have been integrated into a unified framework in which the multidimensional facets of social desirability are brought together with their substantive associations to higher-order individual differences – such as the Agency and Communion dimensions of personality (Bakan, 1966) or the Alpha and Beta higher-order personality factors (Digman, 1997). This integration has yielded more comprehensive models that delineate the structural relations between social desirability and personality (e.g., Blasberg et al., 2014; Vecchione & Alessandri, 2013). Hence, classical social desirability scales are nowadays often no longer considered valid tools for controlling response bias (Uziel, 2010; Ziegler et al., 2012). Instead, alternative approaches are increasingly employed to detect faking-related issues and response style distortions in personality assessment contexts. An example is the use of latent variable bifactor models to isolate the *evaluative* factors (Kallio Strand et al., 2021; Persson et al., 2025) or the use of deep learning methods to analyze video recordings (Lee & Ziegler, 2025). Moreover, new scales of social desirability have emerged in recent years. For example, Vecchione et al. (2013) validated the *Egoistic and Moralistic Self-Enhancement Scale*, designed to capture individuals' tendencies to promote agentic (egoistic, "superhero") and communal (moralistic, "saint") self-presentations. Similarly, Fisher et al. (2024) developed the SDR-O, a unidimensional scale specifically designed to measure the impression management component of socially desirable responding within workplace and organizational contexts.

3. Contemporary theoretical re-conceptualizations of social desirability

Among the various consequences of the previously discussed conceptual developments, two recent re-conceptualizations of social desirability deserve mention.

First, Uziel (2010), in a review, proposed a reframing of social desirability scales, particularly the Impression Management (IM) dimension, arguing that it should no longer be viewed merely as a biasing response style but rather as a trait-like "interpersonally oriented self-control". According to Uziel (2010), individuals scoring high in IM demonstrate enhanced self-regulatory capacity, particularly in social contexts where adaptive and socially appropriate behaviors are required. He found that high IM is linked to numerous positive outcomes across life domains, such as reduced negative affect and greater life satisfaction. Hence, IM does not indicate a dependency on external approval; rather, it reflects an internalized capacity for self-regulation in socially evaluative situations. In Uziel's words, "when an individual with a high IM score does the 'appropriate' thing in a social context, this behavior stems not from dependence on the approval of others, but from a self-regulatory capacity that allows him/her to do the right thing (which is often a socially desirable act)" (Uziel, 2010, p. 256).

Second, Alexander et al. (2025) advanced the field by explicitly distinguishing between the stable (trait-like) and transient (state-like) components of social desirability. They defined *social desirability* as "a stable tendency to align one's thoughts and behaviors with perceived expectations" (p. 8) and *socially desirable responding* as "a response bias that occurs when intentionally rating oneself consistent with salient expectations while providing answers to a survey" (p. 8). To operationalize this distinction, they developed two separate instruments: A four-item scale for *trait social desirability* (e.g., "*I care about what other people think of me*") and a seven-item scale for *state socially desirable responding* (e.g., "*While responding to this survey, I ensured that my answers met others' expectations*"). Their key contribution lies in clarifying that *social desirability* is a stable, interpersonally oriented self-presentation tendency (consistent with self-presentation theory), whereas *socially desirable responding* is a situational, survey-specific behavior measured directly rather than inferred indirectly (notably, all seven items begin with "*While responding to this survey, …*"). Moreover, another key contribution by Alexander et al. (2025) is their emphasis on the importance of examining both stability and change in these tendencies. We point out that prior research on social desirability has rarely disentangled trait-based from state-based components (e.g., Haberecht et al., 2015; Schmitt & Steyer, 1992). This re-conceptualization enables researchers to distinguish between enduring, personality-linked dispositions in self-presentation (which, like all individual differences, may also show some degree of instability; e.g., Bleidorn, 2024; Roberts & Yoon, 2022; Wagner et al., 2020) and context-dependent response styles.

4. Stability and change: definitions and implications for social desirability

4.1. Definitions of stability and change

The study of stability and change in psychological constructs is of utmost importance in contemporary personality psychology, since disentangling stable and changeable components of individual differences (even in constructs typically considered highly stable, such as the Big Five personality traits) has important implications for both theory and practice (e.g., Bleidorn et al., 2019, 2021; Haehner et al., 2026).

Stability and change can be conceptualized along a continuum.

Drawing on a well-established taxonomy, three main types of stability and change can be distinguished (see Bleidorn et al., 2019, p. 1058; Newsom, 2024, Chapter 4). Relative stability/change (or rank-order stability/change) refers to the degree to which individuals maintain their relative position within a distribution over time and is typically evaluated using autoregressive coefficients. Absolute stability/change (or mean-level stability/change) refers to the extent to which average levels of a variable remain constant or change over time and is assessed by examining differences in sample means across repeated measurements. Finally, individual-level stability/change (or interindividual differences/similarity in intraindividual change; Baltes & Nesselroade, 1979; Grimm et al., 2017, p. 5) refers to variability in individuals' trajectories over time and can be examined by modeling growth parameters, such as the variance of the slope factor in a latent growth curve model.

4.2. Stability and change in social desirability

Although significant progress has been made in conceptualizing social desirability as a construct with substantive value, empirical research on its stability, change, and nomological network remains scarce. To the best of our knowledge, the only study published in the last decade that properly investigated stability and change in social desirability is Haberecht et al. (2015), who employed a two-wave design over 9 months using latent change models in a sample of 1,094 job seekers with unhealthy alcohol use. Their results revealed significant temporal (rank-order) stability ($r = 0.66$) and significant interindividual differences in intraindividual change, with school education emerging as a significant predictor of change.

This gap is critical in personality psychology studies: Understanding stability and change in individual differences (and their implications) is a central aim (Bleidorn, 2024; Roberts & Yoon, 2022), and recent perspectives emphasize the need to integrate idiographic (focused on within-person variability) and nomothetic approaches (focused on between-person generalization) to fully capture personality development processes (Kuper et al., 2025).

Studying stability and change in mostly-stable individual differences (as it may be social desirability) requires longitudinal designs with wide time spans. Such designs allow researchers to disentangle enduring dispositions from mean-level change and its variability (i.e., interindividual differences in intraindividual change), as well as to assess their effects on distal outcomes (Jackson & Wright, 2024). To date, no study has applied this methodological rigor to social desirability.

5. The present study

The present study addresses the gaps presented above by analyzing a longitudinal subset from a large-scale national annual survey (LISS panel; waves 2019–2024), with the aim of advancing understanding of the substantive nature of social desirability. That is, the overarching question of the present study is whether social desirability exhibits patterns of stability and change comparable to those observed in well-established "substantive" individual differences related to well-adjustment, like self-esteem (Orth & Robins, 2014), personality traits (Bleidorn et al., 2022), or basic personal values (Vecchione et al., 2016). These patterns are typically characterized by high rank-order stability, positive mean-level change over time, significant interindividual differences in intraindividual change, and meaningful associations with external constructs. To address this question, we draw on two key contributions.

First, drawing on Alexander et al. (2025), we aim to extend their conceptualization of trait social desirability by empirically examining its year-by-year rank-order, mean-level, and individual-level stability/change, in line with established frameworks of substantive individual differences (Roberts & Yoon, 2022).

Second, building on Uziel's (2010) view of Impression Management as adaptive self-regulation (or interpersonally oriented self-control), we aim to test whether (a) interindividual differences in baseline levels and (b) interindividual differences in intraindividual change in social desirability are associated with personality traits and job satisfaction. Indeed, although prior research has speculated on the adaptive nature of socially desirable self-presentation (Uziel, 2010), little is known about whether variability in intraindividual changes in social desirability translates into meaningful life outcomes, over and above well-established predictors such as personality traits (Judge et al., 2002; Törnroos et al., 2019). Clarifying this link is crucial to determine whether social desirability truly reflects an interpersonal adaptation to the social world, as Uziel (2010) hypothesized.

5.1. Job satisfaction as criterion

The choice of job satisfaction as a criterion is motivated by several considerations. First, job satisfaction – defined as "the overall evaluative judgment one has about one's job" (Judge et al., 2017, p. 357) – represents a central construct in the literature on job attitudes. Indeed, it has been described as lying "[a]t its core" (Judge et al., 2017, p. 357) and as "the most researched attitude in organizational behavior" (Judge & Kammeyer-Mueller, 2012, p. 348). Therefore, it represents a widely recognized indicator of individuals' adjustment in the work and social domains.

Second, we focused on global job satisfaction, operationalized as a latent variable composed by multiple items capturing its different facets (e.g., satisfaction with salary, working hours, and current work). This approach has several advantages: First, it captures individuals' overall evaluation of their work experience, and thus provides a more suitable indicator of general adaptation to the work environment than single facet-level measures (Judge et al., 2017; Judge & Kammeyer-Mueller, 2012). Second, modeling job satisfaction as a latent variable allows for the estimation of reliability and the separation of true score variance from measurement error. Third, this multi-facet operationalization has a good content validity, since it is consistent with well-established frameworks, such as the Job Descriptive Index (JDI; Smith et al., 1969); moreover, compared to the original JDI format, the LISS items used a Likert-type response scale ranging from 0 to 10, which offers improved sensitivity and avoids limitations associated with the traditional "Yes – No –?" response format (see Lee et al., 2023).

Third, job satisfaction is widely used as a criterion variable in organizational research, particularly in studies aimed at establishing the criterion-related validity of constructs related to job attitudes, psychological well-being, and work-related adjustment. Accordingly, a large body of research employs job satisfaction as a benchmark outcome when evaluating the substantive relevance of newly developed measures (e.g., Bowling et al., 2024).

Taken together, these considerations make job satisfaction an appropriate outcome for examining whether baseline levels and change in social desirability reflect meaningful individual differences with implications for individuals' adaptation to their social and organizational environments.

5.2. Summary of the aims

In summary, this study aims to: (a) investigate the characteristics of various forms of stability and change in social desirability using large-scale longitudinal data and robust psychometric procedures, including tetrachoric autocorrelations, measurement invariance testing, and second-order latent growth modeling; (b) examine how Big Five personality traits relate to baseline levels and individual-level change in social desirability; (c) test whether baseline levels and individual-level change in social desirability are linked to a relevant life outcome, namely job satisfaction, beyond the influence of personality traits.

6. Method

6.1. Pre-processing and sample

Data were drawn from the *Longitudinal Internet Studies for the Social Sciences* (LISS) panel administered by CentERdata (Tilburg University, The Netherlands; see https://www.lissdata.nl/). The panel is a true probability sample drawn from the Dutch population register by Statistics Netherlands, comprising approximately 7,500 individuals aged 16 and older across 5,000 households (https://www.lissdata.nl/how-it-works). The LISS archive consists of a wide array of topics (https://www.dataarchive.lissdata.nl/study-units/view/1). For this study, we used the *Personality* (Project number = 7) and the *Work and Schooling* (Project number = 6) dataset from the LISS Data Archive.

To maximize participant retention for the social desirability and Big Five data, we conducted a preprocessing analysis on the *Personality* archive spanning from 2008 to 2024. The analysis indicated that the highest retention across waves was achieved by selecting annual data from 2019 to 2024. This resulted in a dataset comprising $N = 2{,}648$ participants with complete data on social desirability and Big Five items for all six waves. We then merged gender ("geslacht") and age category ("lftdcat") variables from the LISS *Background Variables* dataset (Project number = 1) using the respondent identifier ("nomem_encr") for the selected 2,648 participants. Gender frequencies were approximately balanced, with 1,301 males (49.13%) and 1,345 females (50.79%); only two participants had missing data (0.08%). Age distributions were: 15–24 years ($n = 145$, 5.48%), 25–34 years ($n = 204$, 7.70%), 35–44 years ($n = 265$, 10.01%), 45–54 years ($n = 435$, 16.43%), 55–64 years ($n = 641$, 24.21%), and ≥ 65 years ($n = 956$, 36.10%), with two cases missing (0.08%).

A wide-format dataset was then created, including Big Five personality items from a single wave (2019) and social desirability items from six waves (2019–2024). This dataset was further merged with job satisfaction data from the 2024 *Work and Schooling* module. The resulting matched subsample for analyses involving job satisfaction consisted of $n = 981$ participants.

6.1.1. Power consideration

From a power perspective, the sample size is consistent with common characteristics of previous studies using binary/dichotomous data and latent growth models. For example, Wu and Estabrook (2016), in a simulation study on measurement invariance for ordered categorical variables, generated binary data with a sample size of 1,000. Ye (2016), in a simulation study on latent growth curve analysis with dichotomous items, examined conditions with 50 participants (small) and 200 participants (medium; see Ye, 2016, p. 48). Finally, Newsom and Smith (2020), in a simulation study on binary latent growth curve models, tested conditions with 3, 5, and 7 waves and sample sizes of 100, 200, 500, and 1,000.

6.2. Measures

6.2.1. Social desirability

Social desirability was measured each year from 2019 to 2024 using 10 dichotomous items from the Strahan-Gerbasi short form of the Marlowe-Crowne Social Desirability Scale, Version 2 (Strahan & Gerbasi, 1972). Responses were originally coded as 1 = *No* and 2 = *Yes*. After reversing five items, all responses were recoded so that 0 = *No* and 1 = *Yes*. Items are reported in Appendix (Table A1).

6.2.2. Big five traits

Extraversion ($\alpha = 0.88$), Agreeableness ($\alpha = 0.83$), Conscientiousness ($\alpha = 0.78$), Neuroticism ($\alpha = 0.90$), and Openness ($\alpha = 0.76$) were assessed in 2019 using the 50-item International Personality Item Pool (IPIP) version of the Big Five Inventory (Goldberg, 1992). Participants were asked "*How accurately do the statements below describe you (as a person)? I…*" and responded using a 5-point Likert-type response scale ranging from 1 (*Very inaccurate*) to 5 (*Very accurate*). Each trait was measured with 10 items.

6.2.3. Job satisfaction

Job satisfaction ($\alpha = 0.83$) was assessed in 2024 using 5 items from the *Work and Schooling* module of the LISS panel. Participants were first presented with the following introductory statements: "*We would like to know how satisfied you are with your work and with certain aspects of your work. – How satisfied are you with…*". The 5 items were: "*your wages or salary or profit earnings?*" (item code in the LISS panel: cw24q128), "*your working hours?*" (cw24q129), "*the type of work that you do?*" (cw24q130), "*the general atmosphere among your colleagues?*" (cw24q131), and "*your current work*?" (cw24q133). Responses were recorded on an 11-point Likert-type response scale ranging from 0 (*not at all satisfied*) to 10 (*fully satisfied*).

6.3. Data analytic plan

6.3.1. Descriptive statistics and preliminary analysis of the consistency of item response patterns

Descriptive statistics were computed as a first step. For the social desirability items (binary coded), after reverse-coding the negatively keyed items, we calculated the proportion of "1″ (i.e., "Yes", or socially desirable answer) responses for each item at each time point. This analysis allowed us to examine whether the proportion of "*not socially desirable*" (0) versus "*socially desirable*" (1) responses in the overall sample remained stable or changed across the six annual assessments for each item. The consistency of response proportions over time may provide an initial indication of threshold stability, which can be interpreted as preliminary evidence of consistency in item response patterns at the sample level. More formally, this may reflect temporal consistency in the threshold parameter for each item, a possibility that will be examined more rigorously in the subsequent measurement invariance analyses (see the example in Fig. 1 for an illustration of the interpretation of the threshold parameter in a latent variable model). For the Big Five traits and job satisfaction, composite scores were computed by averaging item responses, and standard descriptive statistics were then obtained.

6.3.2. Consistency of social desirability items over time: Analysis of tetrachoric autocorrelations

Second, a tetrachoric correlation matrix was computed for the social desirability items across the six time points. Tetrachoric correlations estimate the association between the underlying continuous latent variables assumed to underlie the observed binary responses. As such, correlations of the same item across time (i.e., tetrachoric autocorrelations; McNeish et al., 2024) provide an initial indication of relative stability at the item level. Specifically, they reflect the extent to which individuals maintain their relative standing on the latent propensity captured by each item over time. Within a stability-and-change framework, higher tetrachoric autocorrelations indicate greater temporal stability in the tendency to report the "socially desirable" behaviors represented by each item. In contrast, lower correlations suggest more substantial change in relative positioning across measurement occasions. However, these estimates should be interpreted as preliminary, as they are based on single items and do not capture the broader latent social desirability factor, which is examined in subsequent analyses. Tetrachoric correlations are estimated with the "tetrachoric()" function from the "psych" package (Version 2.6.1; Revelle, 2026).

6.3.3. Measurement invariance and rank-order stability of social desirability latent factors

The third step involved evaluating measurement invariance and, subsequently, rank-order stability at the latent level, operationalized as correlations over time among social desirability latent factors estimated

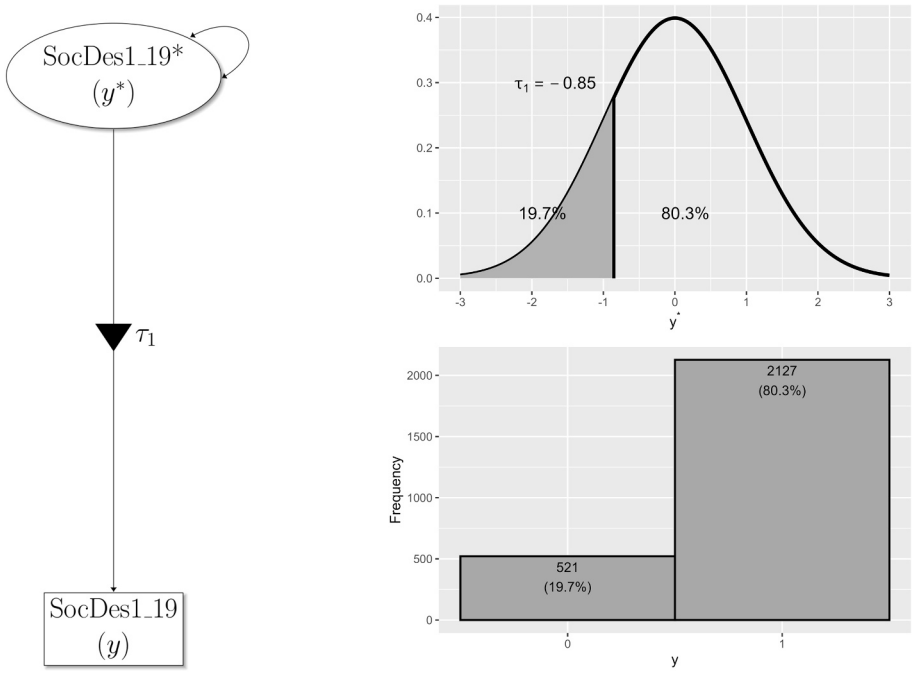

Fig. 1. Threshold Parameter in a Latent Variable Model with Binary Data Using a Probit Link Function. *Note*. This example is based on the observed frequencies for Social Desirability Item 1 at T1 (SocDes1_19). The R and LaTeX code used to reproduce this figure is provided in the Supplementary Material. y represents the observed binary variable, whereas y* denotes the underlying continuous latent response variable. The threshold parameter (τ_1) defines the point on y* above which the observed response takes the value 1, and below which it takes the value 0. This figure is based, in part, on Grimm (2026, p. 105).

under invariant measurement parameters (see Fig. 2 for a graphical representation of the model estimated in this step). Establishing measurement invariance is a prerequisite for subsequent latent growth modeling and enables a more rigorous examination of associations among social desirability latent factors independent of measurement error (Little, 2024). In this context, correlations among latent factors estimated while accounting for both measurement error and invariant measurement parameters provide a more accurate assessment of rank-order stability over time. Notably, this approach addresses a gap in the social desirability literature, where such rigorous assessments of stability at the latent level over longer time spans (i.e., six years) remain limited.

In more detail, measurement invariance (MI) of the social desirability factors across six time points was tested using confirmatory factor analysis (CFA) with (a) the diagonally Weighted Least Squares with Mean and Variance adjustments (WLSMV) estimator and (b) theta parameterization,[1] both of which are recommended for binary data analyzed under a probit link function (Grimm, 2026; Millsap & Yun-Tein, 2004; Newsom, 2024; Wu & Estabrook, 2016). Two nested models were compared. In the *configural invariance model*, one latent factor per wave was specified, each loading on the same ten social desirability items. Latent variances were fixed to 1 for model identification, and covariances among latent factors across time points were freely estimated. No cross-time constraints were imposed, and residual covariances between corresponding items across waves were freely estimated. In the *thresholds/loadings invariance model*, both factor loadings and item thresholds were constrained to equality across time points, as is required for model identification with binary indicators (Wu & Estabrook, 2016). Latent factor variances were fixed to 1, the latent mean at T1 was fixed to 0, and means for the remaining time points were freely estimated (Grimm et al., 2017, p. 381). Model comparison was based on the weighted difference test for the WLSMV estimator (Newsom, 2024, p. 45), by means of the "satorra.2000" method in the "lavTestLRT()" function of the "lavaan" package (Rosseel, 2012). Additionally, since no established standards exist for evaluating fit index changes in longitudinal measurement invariance with binary data and large samples, we adopted the more conservative guidelines proposed for multi-group invariance with ordinal variables (Svetina, Rutkowski, & Rutkowski, 2020, p. 115), using an RMSEA increase no greater than 0.010 and a CFI decrease no greater than 0.002 as thresholds for acceptable invariance.

6.3.4. *Second-Order growth curve models: Examining mean-level and individual-level stability and change*

In the fourth step, different unconditional second-order latent growth curve models (also referred to as curve-of-factors models; see Geiser et al., 2013) were tested to examine (a) mean-level stability and change and (b) individual-level stability and change. In each model, a latent factor representing social desirability was estimated at each time point (2019–2024) from the ten binary items, using invariant factor loadings and thresholds established in the previous step (Grimm, 2026). To ensure comparability and model identification, the first-order factors had (a) residual variances constrained to equality, (b) intercepts fixed to zero, and (c) residual covariances fixed to zero (Grimm et al., 2017, p. 391). All models incorporated time-invariant thresholds and accounted for item-specific residual correlations across waves, as specified in the measurement invariance step. Four competing growth models were specified: (a) an intercept-only model with a single latent growth factor (intercept) loading equally (value = 1) across all time points; (b) a linear growth model including both intercept and slope, with slope loadings

[1] For a simple discussion of the differences between theta parameterization and delta parameterization in categorical structural equation modeling, see Grimm (2026, p. 100) and Kline (2023, p. 323). For a more comprehensive overview about parametrization in longitudinal structural equation models with categorical data, see Bianconcini and Bollen (2025).

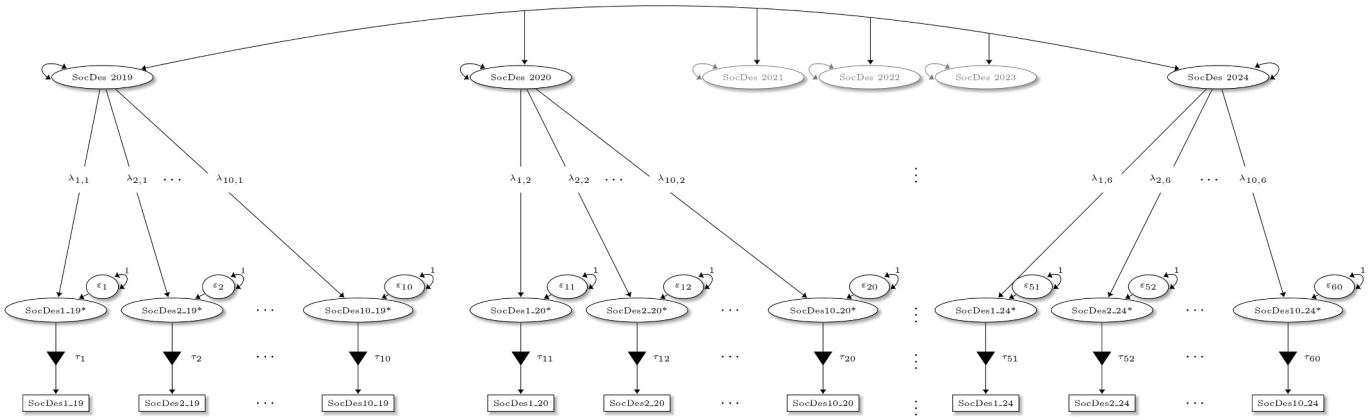

Fig. 2. Path Diagram of the Longitudinal Model Testing Measurement Invariance and (Latent) Rank-order Stability. *Note*. Residual variances, *Var*(ε), were fixed to 1 due to the use of the theta parameterization. For a discussion of the differences between theta parameterization and delta parameterization in Categorical Structural Equation Modeling, see Grimm (2026, p. 100) and Kline (2023, p. 323). Residual covariances between the same items across time are not shown to avoid overloading the figure. Measurement invariance of factor loadings (λ) and thresholds (τ) is imposed in the model; thus, loadings and thresholds for the same items are constrained to be equal across time (e.g., for item 3: $\lambda_{3,1} = \lambda_{3,2} = \lambda_{3,3} = \lambda_{3,4} = \lambda_{3,5} = \lambda_{3,6}$ and $\tau_3 = \tau_{13} = \tau_{23} = \tau_{33} = \tau_{43} = \tau_{53} = \tau_{63}$). The LaTeX code used to reproduce this figure is provided in the Supplementary Material.

reflecting linear time (0–5); (c) a latent basis growth model, where the slope factor had the second loading fixed to 0,[2] the last loading fixed to 1, and all other loadings freely estimated; and (d) a quadratic model, including intercept, linear, and quadratic slope factors with time values coded accordingly. As in the previous step, model comparisons were performed using the weighted difference test (implemented via the "satorra.2000" method in "lavTestLRT()" function).

Importantly, if the intercept-only model shows a better fit than the alternative models, this would support absolute stability over time. Conversely, if models including a slope provide a better fit, this would indicate systematic change. In such cases, the mean of the slope factor reflects average (i.e., absolute, or mean-level) change over time, whereas a significant variance of the slope would attest individual differences in change trajectories (i.e., individual-level change, or inter-individual differences in intraindividual change).

6.3.5. Social desirability baseline levels and individual-level change: Correlations with big five

In the fifth step, a latent growth curve model with covariates was specified to examine the associations between the social desirability latent growth factor/s and the Big Five personality traits measured at baseline (i.e., in 2019). The latent growth structure was based on the best-fitting latent growth model identified in the previous step. Specifically, the intercept-only model includes a single latent growth factor (intercept), linear and latent basis models include two latent growth factors (intercept and slope), and the quadratic model includes three latent growth factors (one intercept and two slope factors). Each Big Five trait was modeled as a latent variable composed of three item parcels. Covariances were freely estimated between the social desirability latent growth factors and each of the Big Five latent factors. Additionally, covariances among the five personality traits were freely estimated.

6.3.6. Social desirability baseline levels and individual-level change: Effects on job satisfaction, controlling for big five traits

Sixth, building on the model estimated in the previous step, a structural model was tested to examine the effects of social desirability latent growth factor/s and personality traits on job satisfaction measured at the final wave (2024). Job satisfaction was modeled as a latent construct defined by five observed indicators (i.e., items). The latent job satisfaction factor was regressed on the latent growth factor/s of social desirability, as well as on the five Big Five personality traits assessed at baseline (i.e., 2019).

6.4. Software and codes

All analyses were conducted in R (Version 4.5.3). The Supplementary Material (including R scripts to reproduce the analyses, R and LaTeX code to reproduce all figures, full results, and relevant information about the LISS dataset used in this study) is available at the following GitHub repository: https://github.com/EnricoPerinelli/Soc-Desirability.

7. Results

7.1. Descriptive statistics and preliminary analysis of the consistency of item response patterns

The first step consisted in the analysis of the descriptive statistics for all study variables. Descriptive statistics for the Big Five and job satisfaction composite scores are reported in Table 1, while descriptive statistics for social desirability items over time are presented in Fig. 3. As shown in Fig. 3, all 10 Social Desirability items exhibit substantial stability in response patterns across time points. For instance, Item 1 and Item 5 display consistently high endorsement rates (ranging from 79.0% to 82.6% and from 89.0% to 90.9%, respectively), whereas Item 2 and Item 10 show markedly lower levels of approval (ranging from 34.4% to 36.8% and from 32.1% to 34.7%, respectively). This descriptive finding

Table 1
Descriptive Statistics for Big Five and Job Satisfaction Composite Scores.

Composite score	*n*	*M*	*SD*	Min	Max	Sk	Ku
Extraversion 2019	2648	3.19	0.66	1.2	5	−0.08	−0.15
Agreeableness 2019	2648	3.84	0.52	1.8	5	−0.40	0.34
Conscientiousness 2019	2648	3.77	0.51	1.7	5	−0.25	−0.09
Neuroticism 2019	2648	2.48	0.71	1	5	0.34	−0.15
Openness 2019	2648	3.48	0.50	1.6	5	0.13	0.01
Job Satisfaction 2024	981	7.40	1.25	2.6	10	−0.59	0.67

Note. Sk = Skewness. Ku = Kurtosis.

[2] The choice of this parametrization was data-driven. Specifically, we fixed the second and last loadings to maximize the excursion of the latent trajectory, as descriptive statistics suggested that social desirability decreased from T1 to T2 and subsequently increased. Importantly, the choice of where to anchor the 0 and 1 does not affect model fit; instead, it allows for a more informative examination of individual change by maximizing the mean and variance of the random slope.

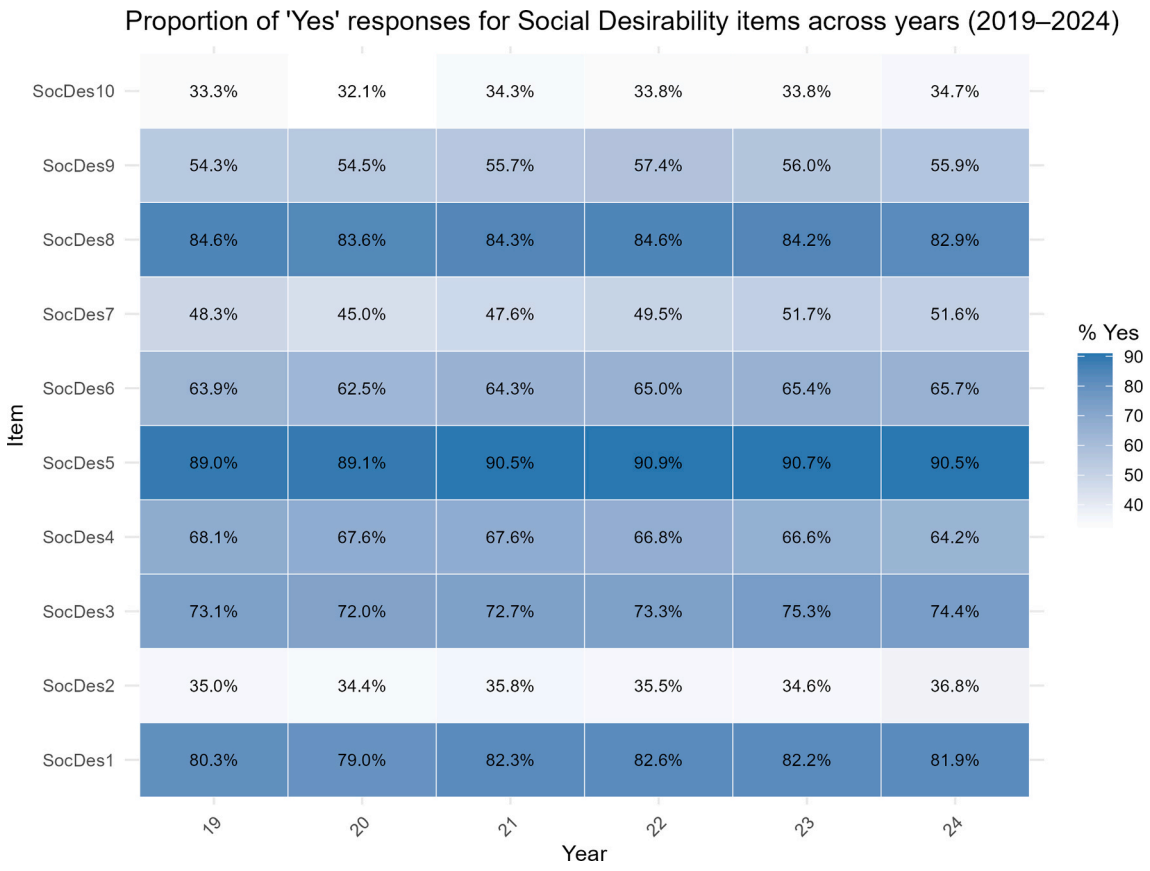

Fig. 3. Descriptive statistics for Social Desirability Items. *Note*. SocDes = Social Desirability item. Reverse-coded items were recoded so that "Yes" responses consistently indicate higher levels of Social Desirability. N = 2,648.

provides preliminary evidence of consistency in item response patterns at the sample level. Specifically, it indicates that the proportion of individuals endorsing the "socially desirable" behaviors represented by the items remains stable over time.

7.2. Consistency of social desirability items over time: Analysis of tetrachoric autocorrelations

Second, the tetrachoric correlation matrix for social desirability items across time points is presented in Fig. 4 (values are reported in the Supplementary Material). This correlation plot highlights a clear pattern of high temporal stability for each item, as indicated by the strong correlations along the diagonal blocks. Indeed, Fig. 4 clearly shows five darker blue diagonals, corresponding to the 1-year, 2-year, 3-year, 4-year, and 5-year tetrachoric autocorrelations. Specifically, the 50 1-year tetrachoric autocorrelations ranged from .51 to .83, with a mean of 0.71 and a standard deviation of 0.085. Similarly, the 10 5-year tetrachoric autocorrelations (i.e., those between items measured in 2019 and the same items measured in 2024) ranged from .47 to .77, with a mean of 0.64 and a standard deviation of 0.098. Hence, the generally large magnitude of the tetrachoric autocorrelations, which remained substantial even across a 5-year lag, supports the relative stability of the behaviors described by the items.

7.3. Measurement invariance and rank-order stability of social desirability latent factors

Third, measurement invariance of social desirability factors over time was supported according to the established criteria. Although the weighted chi-square difference test was significant (p = .0157), Table 2 shows that the decrease in CFI (< 0.002) and the increase in RMSEA (< 0.010) remain well below the conventional thresholds for meaningful change. Table 3 reports the parameter estimates for both the configural and thresholds/loadings invariance models, showing that even in the configural model, loadings and thresholds are quite similar across time points. This is further corroborated by the constrained estimates in the thresholds/loadings invariance model, which closely mirror the freely estimated parameters.

Regarding the rank-order stability (Fig. 2), results are reported in Table 4: Correlations for latent factors were high, ranging from .892 (SocDes 2020 with SocDes 2022) to .947 (SocDes 2022 with SocDes 2024). Hence, the rank-order stability of the social desirability latent factors is very high and remains stable even across long time intervals.

7.4. Second-order growth curve models: Examining mean-level and individual-level stability and change

Fourth, results from the latent growth curve models are presented in Table 5. The latent basis growth model provided the best fit to the data, as indicated by the weighted chi-square difference tests. These findings suggest that the trajectory of social desirability over time follows a nonlinear pattern, rather than a strictly linear or static trend. Further insights into the latent basis growth model are detailed in Table 6 (see also Fig. 5). Specifically, the slope loadings indicate an initial decline from 2019 (estimate = 0.334 [95%CI = 0.090, 0.577], p = .007) to 2020 (fixed to 0), followed by a marked increase, reaching the highest value in 2022 (estimate = 1.100 [95%CI = 0.807, 1.392], p < .001) and stabilizing between 2023 (estimate = 1.035 [95%CI = 0.764, 1.306], p < .001) and 2024 (fixed to 1). Regarding the latent growth factors, the intercept mean was fixed to 0 for identification purposes, while its variance was significant (estimate = 0.132 [95%CI = 0.090, 0.174], p < .001), indicating substantial individual differences in baseline levels.

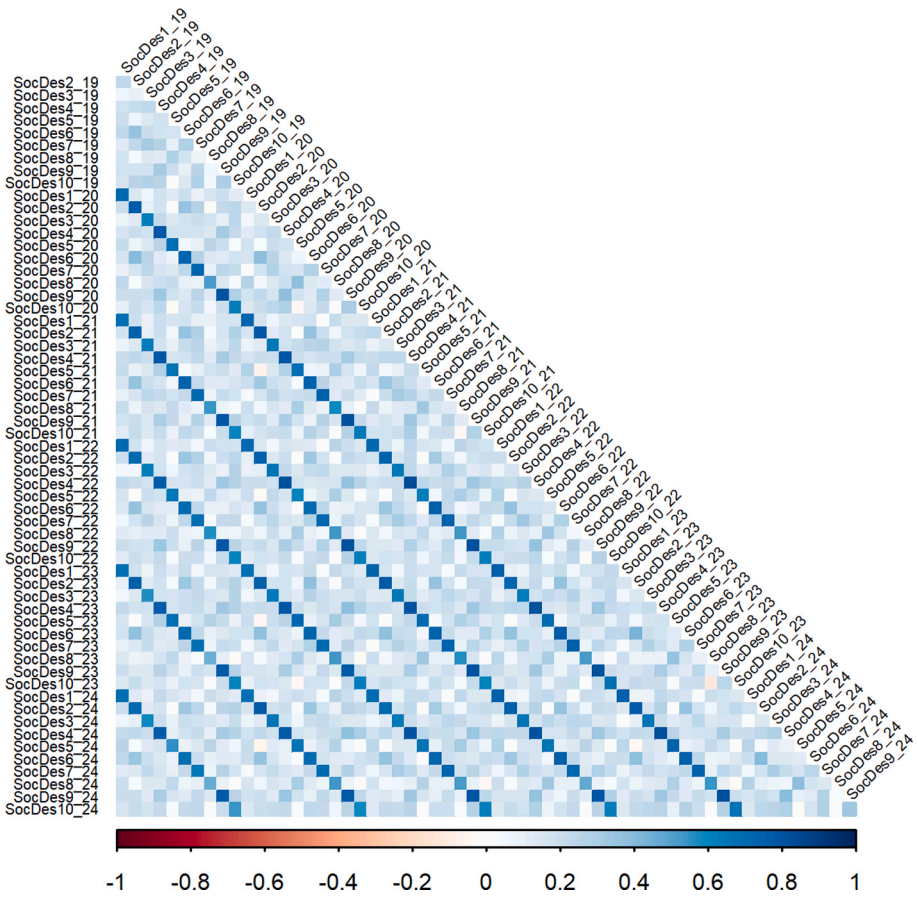

Fig. 4. Tetrachoric correlation matrix of Social Desirability items (2019–2024). *Note.* SocDes*i_YY* = Social Desirability item and year (e.g, SocDes3_21 is the Social Desirability item 3 collected in 2021). $N = 2648$.

Table 2
Binary-data Measurement Invariance Results.

Invariance Model	WLSMV-Scaled χ^2	*df*	Scaled CFI	Scaled TLI	Scaled RMSEA	SRMR	W$\Delta\chi^2(\Delta df)$	*p*	ΔCFI	ΔRMSEA
Configural	4604.402	1545	0.967	0.962	0.027	0.067	–	–	–	–
Thresholds/loadings	4531.850	1640	0.968	0.966	0.026	0.068	127.04(95)	0.0157	−0.001	−0.001

Note. WLSMV = diagonally Weighted Least Squares with Mean and Variance adjustments estimator. *df* = degrees of freedom. CFI = Comparative Fit Index. TLI = Tucker-Lewis Index. RMSEA = Root Mean Square Error of Approximation. SRMR = Standardized Root Mean Square Residual. ΔCFI = Decrease in CFI. ΔRMSEA = Increase in RMSEA. W$\Delta\chi^2(\Delta df)$ = weighted difference test.

The mean of the slope factor was also significant (estimate = 0.042 [95% CI = 0.027, 0.057], $p < .001$), suggesting an average increasing trend across individuals from 2020 to 2024.[3] Additionally, the slope variance was significant (estimate = 0.012 [95%CI = 0.003, 0.020], $p = .006$), reflecting significant variability in individual growth trajectories (i.e., significant interindividual differences in intraindividual change). The covariance between intercept and slope was negative and significant (standardized estimate = -.213 [95%CI = -.363, −.062]), indicating that individuals with higher (lower) baseline levels tend to decrease (increase) over time.

7.5. Social desirability baseline levels and individual-level change: Correlations with big five

Fifth, we estimated a model in which covariances were freely specified between the latent Big Five personality traits and the latent intercept and slope factors of social desirability. The model demonstrated a good fit to the data ($N = 2,648$; WLSMV-Scaled $\chi 2_{(2662)} = 9684.560$, $p < .001$; Scaled CFI = 0.928; Scaled TLI = 0.923; Scaled RMSEA = 0.032; SRMR = 0.071). Results reported in Table 7 showed that the latent intercept of social desirability (capturing individual differences in the chosen baseline level, namely in 2020) exhibited medium-sized correlations with Agreeableness, Conscientiousness, and Neuroticism (the latter being negative). These three traits are often conceptualized as indicators of the higher-order, or *meta*-trait, Alpha/Stability factor. In contrast, the intercept showed significant but small correlations with Extraversion and Openness, which are typically considered indicators of the *meta*-trait Beta/Plasticity factor. Regarding the latent slope of social desirability (capturing individual-level change), no significant correlations were found with any of the Big Five personality traits. This pattern suggests that while baseline levels of social desirability are meaningfully

[3] Note that in this latent basis growth model, the slope mean represents the total change from the second to the last wave, and the slope variance reflects interindividual differences in intraindividual change across this time span. Importantly, parameters associated with the slope factor (i.e., mean, variance, and covariance with the intercept) in a latent basis model do not capture wave-to-wave change. Instead, they represent change conditional on the specific model parameterization (see Grimm et al., 2017; Newsom, 2024, for alternative specifications of latent basis growth models).

Table 3
Main Parameters from "Configural" and "Thresholds/Loadings" Invariance Models.

Parameter	Item	Configural						Thresholds/loadings
		2019	2020	2021	2022	2023	2024	2019–2024
λ (loading)	SocDes1	0.411	0.347	0.352	0.4	0.358	0.352	0.37
	SocDes2	0.546	0.518	0.525	0.519	0.537	0.587	0.538
	SocDes3	0.453	0.455	0.472	0.457	0.471	0.435	0.457
	SocDes4	0.595	0.562	0.651	0.656	0.628	0.682	0.627
	SocDes5	0.301	0.333	0.337	0.344	0.374	0.295	0.331
	SocDes6	0.553	0.565	0.524	0.507	0.573	0.507	0.54
	SocDes7	0.586	0.522	0.512	0.536	0.494	0.541	0.532
	SocDes8	0.258	0.331	0.306	0.277	0.269	0.256	0.283
	SocDes9	0.561	0.645	0.568	0.581	0.515	0.579	0.574
	SocDes10	0.578	0.485	0.51	0.499	0.431	0.57	0.51
τ (threshold)	SocDes1	−0.92	−0.85	−0.98	−1.01	−0.98	−0.97	−0.941
	SocDes2	0.44	0.452	0.412	0.418	0.451	0.39	0.441
	SocDes3	−0.68	−0.64	−0.67	−0.69	−0.76	−0.72	−0.678
	SocDes4	−0.55	−0.53	−0.55	−0.52	−0.51	−0.44	−0.498
	SocDes5	−1.28	−1.3	−1.38	−1.41	−1.42	−1.37	−1.35
	SocDes6	−0.41	−0.37	−0.41	−0.43	−0.46	−0.45	−0.408
	SocDes7	0.048	0.142	0.068	0.013	−0.05	−0.05	0.043
	SocDes8	−1.05	−1.03	−1.05	−1.06	−1.04	−0.98	−1.026
	SocDes9	−0.12	−0.13	−0.17	−0.22	−0.17	−0.17	−0.149
	SocDes10	0.497	0.518	0.453	0.467	0.455	0.454	0.486

Note. SocDes = Social Desirability item. Thresholds/loadings column reflects parameter estimates under invariance constraints across time points. Parameters are unstandardized. Each item has only one threshold, since all items are binary/dichotomous.

Table 4
Rank-order Stability: Latent Variable Correlations between Social Desirability Factors over Time.

Latent Factor	1	2	3	4	5	6
SocDes 2019	1					
SocDes 2020	.942	1				
SocDes 2021	.939	.910	1			
SocDes 2022	.899	.892	.923	1		
SocDes 2023	.893	.902	.930	.935	1	
SocDes 2024	.909	.910	.925	.947	.920	1

Note. Results refer to "thresholds/loadings invariance model". All $p < .001$. SocDes = Social Desirability latent factor.

associated with personality traits (particularly those reflecting Alpha/Stability *meta*-trait), the trajectories of change in social desirability over time appear to be independent from these broader dispositional factors.

7.6. Social desirability baseline levels and individual-level change: Effects on job satisfaction, controlling for big five traits

Sixth, using a subset of the available data, we examined the effects of the Big Five personality traits and social desirability baseline levels (latent intercept) and individual-level change (latent slope) on job satisfaction in 2024. The model demonstrated a good fit to the data (n = 981; WLSMV-Scaled $\chi2_{(2995)} = 5566.363$, $p < .001$; Scaled CFI = 0.926; Scaled TLI = 0.922; Scaled RMSEA = 0.030; SRMR = 0.080). Results reported in Table 8 showed that Conscientiousness ($\beta = .141$, $p = .001$), Agreeableness ($\beta = .093$, $p = .029$), and Extraversion ($\beta = .091$, $p = .025$) were significant positive predictors of job satisfaction, while Neuroticism was negatively associated with job satisfaction ($\beta = –.249$, $p < .001$). In contrast, Openness did not show a significant association ($\beta = -.054$, $p = .191$). Regarding social desirability, the latent intercept (reflecting individual differences in baseline levels, i.e., in 2020) was not significantly related to job satisfaction ($\beta = .066$, $p = .293$). Most interestingly, the latent slope of social desirability (reflecting intra-individual change over time) emerged as a significant positive predictor of job satisfaction ($\beta = .180$, $p = .026$). This indicates that individuals who exhibited greater increases in social desirability over time also reported higher levels of job satisfaction in 2024, beyond the influence of social desirability intercept and personality traits. The model explains 21.5% of the variance in job satisfaction latent variable.

7.7. Supplementary analysis

As a supplementary analysis, the final model was re-estimated by including age as an additional covariate (we thank an anonymous reviewer for this suggestion). Age may represent a potential confounder in the relationships between Big Five traits, baseline levels and change in social desirability, and job satisfaction. Indeed, older individuals may display more mature behavioral patterns and greater awareness of socially appropriate conduct, which could be associated with higher levels of social desirability, greater changes (in social desirability) over time, and higher levels of job satisfaction. Consequently, the effect of individual-level change in social desirability on job satisfaction could be attenuated once age is taken into account. The model showed a good fit to the data (n = 979; WLSMV-Scaled $\chi2_{(3068)} = 5778.888$, $p < .001$; Scaled CFI = 0.922; Scaled TLI = 0.918; Scaled RMSEA = 0.030; SRMR = 0.081). Age was positively and significantly correlated with social desirability intercept ($\varphi = .318$, $p < .001$) but not with the slope ($\varphi =$

Table 5
Results of Unconditional Second-order Latent Growth Curve Models for Binary Data.

Model	WLSMV-Scaled χ^2	*df*	Scaled CFI	Scaled TLI	Scaled RMSEA	SRMR	W$\Delta\chi^2(\Delta df)$	*p*
Intercept-only	4555.362	1659	0.968	0.966	0.026	0.068	–	–
Linear growth	4546.978	1656	0.968	0.966	0.026	0.068	10.634(3)	.01388
Latent basis growth (nonlinear)	**4531.600**	**1652**	**0.969**	**0.966**	**0.026**	**0.068**	**32.599(4)**	**< .001**
Quadratic growth	No conv.	–	–	–	–	–	–	–

Note. WLSMV = diagonally Weighted Least Squares with Mean and Variance adjustments estimator. *df* = degrees of freedom. CFI = Comparative Fit Index. TLI = Tucker-Lewis Index. RMSEA = Root Mean Square Error of Approximation. SRMR = Standardized Root Mean Square Residual. W$\Delta\chi^2(\Delta df)$ = weighted difference test. For the Quadratic model, the covariance matrix of latent variables was not positive definite. The best-fitting model is reported in bold.

Table 6
Main Parameters from the Second-order Latent Basis Growth Model.

Parameter	Notation	Unstd. Est. [95% CI]	*p*	Std. Est. [95% CI]
Slope =~ SocDes 2019	λ_{T1}	0.334 [0.090, 0.577]	.007	.098 [.014, 0.182]
Slope =~ SocDes 2020	λ_{T2}	0	–	0
Slope =~ SocDes 2021	λ_{T3}	0.756 [0.508, 1.003]	< .001	.223 [.134, .312]
Slope =~ SocDes 2022	λ_{T4}	1.100 [0.807, 1.392]	< .001	.323 [.228, .417]
Slope =~ SocDes 2023	λ_{T5}	1.035 [0.764, 1.306]	< .001	.304 [.210, .399]
Slope =~ SocDes 2024	λ_{T6}	1	–	.294 [.199, .390]
Mean(Intercept)	k_1	0	–	0
Variance(Intercept)	φ_{11}	0.132 [0.090, 0.174]	< .001	1
Mean(Slope)	k_2	0.042 [0.027, 0.057]	< .001	.386 [.246, .526]
Variance(Slope)	φ_{22}	0.012 [0.003, 0.020]	.006	1
Covariance (Intercept-Slope)	φ_{21}	−0.008 [-0.016, 0.000]	.038	−.213 [-.363, −.062]

Note. "Slope =~ SocDes" represents the slope loadings for each Social Desirability latent factor, with thresholds and loadings invariance imposed. To identify the latent basis growth model, (a) slope loadings for 2020 and 2024 were fixed to 0 and 1, respectively, (b) the mean of the latent intercept factor was fixed to 0. Unstd. Est. = Unstandardized Estimates. Std. Est. = Standardized Estimates. 95%CI = 95% Confidence Intervals. The "Notation" column is useful for guiding the interpretation of the parameters in Fig. 5.

.127, $p = .093$). As expected, age exerted a positive and significant effect on job satisfaction ($\beta = .080$, $p = .021$). Nevertheless, the effect of social desirability slope on job satisfaction remained statistically significant ($\beta = .182$, $p = .037$). The model explains 22.5% of the variance in job satisfaction latent variable (i.e., only a 1% increase compared to the previous model without age). These findings further support the robustness of the positive association between individual-level changes in social desirability and job satisfaction, even after controlling for age.

8. Discussion

This study aimed to provide a comprehensive longitudinal investigation of individual differences in social desirability. Using six waves of annual data from a large-scale national survey (the LISS panel), we examined the extent of stability and change in social desirability over time, its associations with personality traits, and its prospective value for job satisfaction. Our goal was to contribute to the growing body of research that conceptualizes social desirability as a substantive individual difference, rather than merely a response style artifact. As outlined in "The present study" section, the study had three main aims, and the findings related to each are discussed below.

First, our findings revealed substantial temporal stability in social desirability. This was evidenced by the consistent item endorsement rates across time, the high rank-order stability indicated by the tetrachoric autocorrelations, and the strong longitudinal associations among the latent factors. These results support the view that social desirability demonstrates a high degree of rank-order stability, comparable to that of other personality traits. Furthermore, through second-order latent growth modeling with binary indicators, we identified a nonlinear developmental trajectory, which indicates a significant (albeit small) mean-level change. Importantly, both the intercept and the slope showed significant interindividual variability, with the latter finding indicating that individual-level social desirability is not entirely static, but can exhibit meaningful interindividual differences in intraindividual change. This finding advances emerging research that has begun to distinguish between the stable and changeable components of social desirability (Alexander et al., 2025) and to document interindividual differences in intraindividual change (Haberecht et al., 2015).

Second, our results extend prior research by empirically linking baseline and change levels of social desirability to specific personality

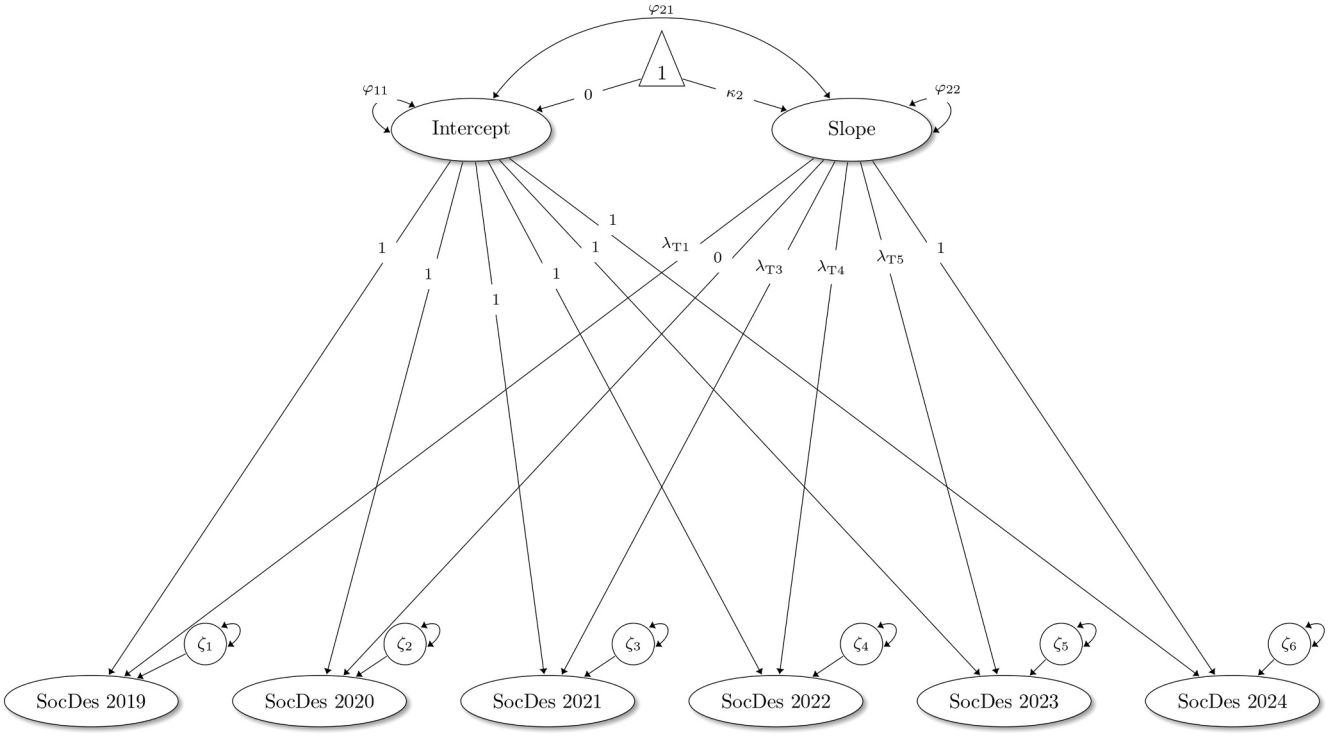

Fig. 5. Unconditional Second-Order Latent Basis Growth Curve Model. *Note*. The measurement model is reported in Fig. 2. Results of the main parameters are reported in Table 6. Residual variances (i.e., variances for ζ_1, ζ_2, …, ζ_6) were constrained to be equal. SocDes = Social Desirability. The LaTeX code used to reproduce this figure is provided in the Supplementary Material.

Table 7
Latent Correlations between Big Five Traits and Social Desirability Levels (Intercept) and Change (Slope).

Latent Variable	1	2	3	4	5	6	7
1. Extraversion	1						
2. Agreeableness	.348***	1					
3. Conscientiousness	.168***	.376***	1				
4. Neuroticism	−.306***	−.147***	−.330***	1			
5. Openness	.396***	.330***	.316***	−.254***	1		
6. SocDes − Intercept	.072*	.302***	.286***	−.482***	−.066*	1	
7. SocDes − Slope	−.032	−.052	−.045	.009	.070	−.206*	1

Note. Big Five traits were modeled as latent variables, each composed of three item parcels, and refer to baseline measurements (2019). "SocDes – Intercept" and "SocDes – Slope" represent the latent intercept (baseline levels) and slope (individual-level change) factors of social desirability, respectively, as specified in the second-order latent basis growth model with thresholds/loadings invariance imposed across time. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 8
Longitudinal Effect of Big Five Traits (2019) and Social Desirability Levels (Intercept) and Change (Slope) on Job Satisfaction (2024).

Latent Predictor	*B*	SE	*z*-value	*p*	*β*
Extraversion	0.147	0.066	2.239	.025	.091*
Agreeableness	0.166	0.076	2.189	.029	.093*
Conscientiousness	0.360	0.105	3.413	.001	.141**
Neuroticism	−0.362	0.075	−4.830	< .001	−.249***
Openness	−0.099	0.076	−1.308	.191	−.054
SocDes − Intercept	0.213	0.203	1.052	.293	.066
SocDes − Slope	1.154	0.520	2.221	.026	.180*

Note. A subset of available data is used ($n = 981$). Big Five traits were modeled as latent variables, each composed of three item parcels, and refer to baseline measurements (2019). Job Satisfaction was modeled as a latent variable composed of five indicators, assessed at the final wave (2024). "SocDes – Intercept" and "SocDes – Slope" represent the latent intercept (baseline levels) and slope (individual-level change) factors of social desirability, respectively, as specified in the second-order latent basis growth model with thresholds/loadings invariance imposed across time. B = Unstandardized effect. SE = Standard error. β = Standardized effect. *$p < .05$. **$p < .01$. ***$p < .001$.

traits. However, evidence emerged only for associations with baseline levels. Interestingly, the pattern of latent correlations that social desirability baseline level shows with Big Five traits seems to reflect the distinction between Stability and Plasticity *meta*-trait personality factors (see DeYoung et al., in press; for an updated perspective). Specifically, we found medium-sized positive correlations with Agreeableness and Conscientiousness, and a negative correlation with Neuroticism, traits that comprise the *meta*-trait Stability (Alpha) factor. This pattern is consistent with findings by Vecchione and Alessandri (2013), who showed that moralistic bias aligns with the Alpha (Stability) dimension, whereas egoistic bias is more closely related to the Beta (Plasticity) factor (i.e., Extraversion and Openness). Given that the short form of the Marlowe–Crowne Social Desirability Scale (MCSDS) emphasizes socially desirable behaviors reflecting moral integrity, it is plausible that our measure primarily captures the moralistic component. This interpretation is supported by the stronger correlations observed with Alpha/Stability traits and the weaker correlations with Beta/Plasticity traits.

Third, and most critically, our findings demonstrate that intra-individual increases in social desirability significantly predict higher levels of job satisfaction, above and beyond the effects of the Big Five personality traits and social desirability baseline levels. This novel result lends empirical support to Uziel's (2010) conceptualization of social desirability (particularly the impression management component) as a form of adaptive interpersonal self-regulation. Rather than indicating faking or distortion, increases in socially desirable responding over time may reflect a process of psychosocial maturation or interpersonal adjustment, especially useful in contexts that reward social appropriateness and self-control.

In sum, these findings offer empirical support for the recent re-conceptualizations of social desirability proposed by Uziel (2010) and Alexander et al. (2025), which frame it as a trait-like form of interpersonal regulation rather than intentional distortion or deceptive self-presentation, and emphasize its state-trait duality.

8.1. Practical implications

From a practical point of view, this study suggests that long-term increases in social desirability may not necessarily reflect inauthenticity or bias, but rather successful adaptation to social environments. As such, both researchers and practitioners should reconsider blanket assumptions about the "biasing" nature of social desirability and instead explore its potential adaptive or constructive functions. The field of personality psychology offers a rich array of theoretical frameworks and methodological tools to support this rethinking (Roberts & Yoon, 2022). More importantly, our findings call for caution in the use of generic social desirability scales within personnel selection processes, given the significant correlation of its stable component with personality traits. Using such measures to infer deliberate faking or deception may be problematic, particularly when they fail to distinguish between response styles and stable personality traits (Uziel, 2010; Ziegler et al., 2012). Therefore, instruments that assess socially desirable responding should be applied judiciously and interpreted with caution, especially when high-stakes decisions are involved. In applied or research selection contexts, leveraging advanced analytic approaches capable of disentangling substantive trait variance from response-style effects is particularly important. A recent example is provided by Guenole et al. (2023), who applied a hybrid person-centered and variable-centered approach (i.e., within-subject trifactor mixture modeling) to BIDR responses across honest and faking conditions. This approach simultaneously models multiple BIDR latent factors (both general and specific) and identifies latent classes of respondents (compliers vs. noncompliers) across the two experimental conditions. More broadly, similar analytic strategies may be applied to other measures commonly used in selection contexts that are potentially susceptible to socially desirable responding. Finally, useful recommendations for reducing faking in personality assessments administered in high-stakes contexts (e.g., personnel selection) are provided by Fuechtenhans and Brown (2023).

8.2. Limitations and future directions

Several limitations warrant discussion. First, we relied on the Strahan-Gerbasi short form of the MCSDS, which – although widely used – does not differentiate between the multiple facets of social desirability (e.g., impression management, self-deception, egoistic bias, moralistic bias, etc.) and is limited to dichotomous Yes–No response options. Future studies should employ multidimensional instruments (e.g., Blasberg et al., 2014; Fisher et al., 2024; Paulhus, 1991; Vecchione et al., 2013) with expanded Likert-type response formats (Vispoel & Kim, 2014) to assess whether specific subcomponents exhibit distinct developmental trajectories and predictive patterns, and offer participants a more accurate mode of responding.

Second, a more serious limitation concerns the relatively low inter-item correlations observed across the social desirability items,

suggesting that the scale may capture an heterogenous set of desirable behaviors. One possible explanation lies in the use of binary-coded items to assess an underlying continuous trait, which may have attenuated the observed associations among items. As noted by Newsom (2024), "[d]ichotomization of continuous variables results in an attenuation of the correlation coefficient in comparison to the value of the correlation that would be obtained if the variable had not been dichotomized" (Newsom, 2024, p. 13). Nevertheless, two methodological choices helped mitigate this issue. First, the use of second-order latent growth models enabled the estimation of growth factors (and associated parameters) in social desirability latent variables, thus controlling for measurement error at each wave (Geiser et al., 2013; Isiordia & Ferrer, 2018). Second, the demonstration that longitudinal measurement invariance holds even in the presence of binary indicators strengthened the validity of the longitudinal comparisons (Grimm, 2026).

Third, although we examined a set of time-invariant variables (Big Five at Wave 1, job satisfaction at Wave 6), future research should consider time-varying predictors of change in social desirability, such as life events or job transitions. Exploring these contextual influences could help uncover the mechanisms that drive intraindividual change and better link these changes to relevant outcomes. Relatedly, the use of objective outcome measures (e.g., supervisor-rated job performance) could complement self-report data and strengthen the validity of inferences. Moreover, age can also be considered a potential predictor of the evolution of social desirability over time. Although results reported in "Supplementary analysis" showed a positive but non-significant association between age and the social desirability slope, future research should adopt more advanced analytical approaches (e.g., Local Structural Equation Modeling; Liu et al., 2025) to better capture potential non-linear developmental trajectories of social desirability across the lifespan. Indeed, it is plausible to hypothesize the presence of a "maturation" effect, whereby interpersonal-oriented values and socially responsible behaviors become more pronounced with increasing age. Such a process may contribute to changes in social desirability over time, even if these dynamics are not fully captured by linear models.

Fourth, while our use of an annual panel survey allowed us to test long-term stability and change in social desirability, future research should also investigate shorter dynamic processes (e.g., Uziel & Schmidt-Barad, 2023). More frequent assessments could help implement a finer-grained idiographic–nomothetic approach to social desirability, capturing short-term fluctuations and contextual responsiveness (see Kuper et al., 2025). The use of intensive longitudinal data, combined with analytic approaches such as Dynamic Structural Equation Modeling (DSEM; Hamaker et al., 2023) or Continuous-Time Structural Equation Modeling (CT-SEM; Driver et al., 2017), may be particularly useful for these purposes (see Hamaker, 2025). Relatedly, from an advanced data-analytic perspective, and given the growing interest in personality trait change (Bleidorn, 2024), future research could adopt parallel process latent growth curve models (see Wickrama et al., 2022) to examine the associations between the intercept and slope growth factors of social desirability and those of personality traits.

Fifth, although job satisfaction is a relevant and important outcome, future studies should explore additional life domains (such as interpersonal relationships, health behaviors, or career outcomes) to further expand the nomological network of social desirability levels and change. Furthermore, because job satisfaction was measured only at the final wave, it is theoretically possible that individuals who showed greater increases in social desirability already had higher levels of job satisfaction at earlier time points. Accordingly, the observed association should not be interpreted as evidence of a directional causal effect. Our goal in including job satisfaction was primarily to examine whether levels and change in social desirability are associated with meaningful real-world indicators of psychosocial adjustment. Nevertheless, future studies should employ longitudinal designs including repeated measures of outcomes and appropriate analytic approaches to better investigate the directionality of these associations (e.g., Random-Intercept Cross-Lagged Panel Models; see Little, 2024, Chapter 9, for a review).

Finally, as a future direction to improve our understanding of the mechanisms underlying the stability of social desirability, the role of time-varying variables should be investigated. Indeed, a recent theoretical contribution by Bailey et al. (2026) cautions against interpreting trait-like stability as definitive evidence of stable underlying traits, by proposing the so-called *illusory-trait hypothesis*. According to this perspective, patterns that appear trait-like may emerge from omitted time-varying processes that influence the focal variables but are not included in the analytical model. Simulation results showed that such omitted time-varying confounders can generate empirical patterns consistent with stable traits, even when the true data-generating process does not contain any time-invariant trait component. Moreover, the authors demonstrated that even advanced longitudinal models commonly used to estimate trait effects (e.g., the RI-CLPM) may detect substantial trait variance under these conditions. Therefore, the presence of trait-like stability in longitudinal data should not be taken as definitive evidence for time-invariant causal traits. Bailey et al. (2026) suggested that a "potential solution is to articulate and assess theoretically motivated time-varying confounding variables in advance and use these variables as covariates to accurately estimate the causal effects of the focal variables" (p. 182). In this regard, a promising direction for future research on individual differences in social desirability would be to identify and model theoretically relevant time-varying processes that may contribute to the substantial stability observed in our results.

9. Conclusion

Although more than 40 years have passed since McCrae and Costa's (1983) seminal article arguing that social desirability reflects substance rather than style, and despite growing agreement that such scales should not be used to detect faking (Uziel, 2010; Ziegler et al., 2012), the study of individual differences in social desirability, under a "substantive" perspective, still receives limited attention. It is time to study social desirability as we study other personality constructs (Roberts & Yoon, 2022). By demonstrating its (a) high relative (rank-order) stability, (b) significant changes at both mean- and individual-level, (c) interesting pattern of associations with both Big Five traits and job satisfaction, this study hopefully represents a further step toward a more consolidated understanding of how socially desirable responses could be part of a trait-like construct related to individuals' broader psychosocial functioning.

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Declaration of competing interest

The author declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix

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Table A1
Social Desirability Items.

Item	SocDes Response
I never hesitate to go out of my way to help someone in trouble	Y
I have never intensely disliked anyone	Y
There have been times when I felt like rebelling against people in authority even though I knew they were right	N
I can remember "playing sick" to get out of something	N
When I don't know something I don't at all mind admitting it	Y
I am always courteous, even to people who are disagreeable	Y
At times I have really insisted on having things my own way	N
I would never think of letting someone else be punished for my wrongdoings	Y
There have been times when I was quite jealous of the good fortune of others	N
I am sometimes irritated by people who ask favors of me	N

Note. "SocDes Response" indicates which response reflects a socially desirable answer (Y = Yes, N = No). These items are drawn from the M–C 2(10) version of Strahan and Gerbasi (1972). The only difference is that item#7 in the original version reads "I sometimes feel resentful when I don't get my way" (see Strahan & Gerbasi, 1972, p. 192).

Data availability

The authors do not have permission to share data. The Supplementary Material (including R scripts to reproduce the analyses, R and LaTeX code to reproduce all figures, full results, and relevant information about the LISS dataset used in this study) is available at the following GitHub repository: https://github.com/EnricoPerinelli/Soc-Desirability

References

Alexander, K. C., Mackey, J. D., McAllister, C. P., & Ellen, B. P. (2025). What do you want to hear? A self-presentation view of social desirability bias. *Journal of Business Research, 189*, Article 115191. https://doi.org/10.1016/j.jbusres.2025.115191

Bailey, D. H., Hübner, N., Zitzmann, S., Hecht, M., & Murayama, K. (2026). Illusory traits: Wrong but sometimes useful. *Psychological Review, 133*(1), 173–186. https://doi.org/10.1037/rev0000522

Bakan, D. (1966). *The duality of human existence: An essay on psychology and religion*. Rand Mcnally.

Baltes, P. B., & Nesselroade, J. R. (1979). History and rationale of longitudinal research. In J. R. Nesselroade, & P. B. Baltes (Eds.), *Longitudinal research in the study of behavior and development* (pp. 1–39). Academic Press.

Bianconcini, S., & Bollen, K. A. (2025). Implications of alternative parameterizations in structural equation models for longitudinal categorical variables. *Psychometrika, 90*(2), 554–587. https://doi.org/10.1017/psy.2024.23

Blasberg, S. A., Rogers, K. H., & Paulhus, D. L. (2014). The Bidimensional Impression Management Index (BIMI): Measuring agentic and communal forms of impression management. *Journal of Personality Assessment, 96*(5), 523–531. https://doi.org/10.1080/00223891.2013.862252

Bleidorn, W. (2024). Toward a theory of lifespan personality trait development. *Annual Review of Developmental Psychology, 6*, 455–478. https://doi.org/10.1146/annurev-devpsych-010923-101709

Bleidorn, W., Hill, P. L., Back, M. D., Denissen, J. J. A., Hennecke, M., Hopwood, C. J., Jokela, M., Kandler, C., Lucas, R. E., Luhmann, M., Orth, U., Wagner, J., Wrzus, C., Zimmermann, J., & Roberts, B. (2019). The policy relevance of personality traits. *American Psychologist, 74*(9), 1056–1067. https://doi.org/10.1037/amp0000503

Bleidorn, W., Hopwood, C. J., Back, M. D., Denissen, J. J. A., Hennecke, M., Hill, P. L., Jokela, M., Kandler, C., Lucas, R. E., Luhmann, M., Orth, U., Roberts, B. W., Wagner, J., Wrzus, C., & Zimmermann, J. (2021). Personality trait stability and change. *Personality Science, 2*(1). https://doi.org/10.5964/ps.6009

Bleidorn, W., Schwaba, T., Zheng, A., Hopwood, C. J., Sosa, S. S., Roberts, B. W., & Briley, D. A. (2022). Personality stability and change: A meta-analysis of longitudinal studies. *Psychological Bulletin, 148*(7–8), 588–619. https://doi.org/10.1037/bul0000365

Bou Malham, P., & Saucier, G. (2016). The conceptual link between social desirability and cultural normativity. *International Journal of Psychology, 51*(6), 474–480. https://doi.org/10.1002/ijop.12261

Bowling, N. A., Michel, J. S., Islam, M. R., Rotch, M. A., Wagner, S. H., & Zelazny, L. (2024). What's holding you back? Development of the Multi-Facet Organizational Constraints Scale (MOCS). *Journal of Business and Psychology, 39*(6), 1211–1238. https://doi.org/10.1007/s10869-024-09961-8

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*(4), 349–354. https://doi.org/10.1037/h0047358

DeYoung, C. G., Tai, M. H., Chou, E., & Mlačić, B. (in press). Are the metatraits fact or artifact? Ruling out alternative explanations for the higher-order factors of the Big Five. *Journal of Personality and Social Psychology*. Doi: 10.1037/pspp0000593.

Dicken, C. (1963). Good impression, social desirability, and acquiescence as suppressor variables. *Educational and Psychological Measurement, 23*(4), 699–720. https://doi.org/10.1177/001316446302300406

Digman, J. M. (1997). Higher-order factors of the big five. *Journal of Personality and Social Psychology, 73*(6), 1246–1256. https://doi.org/10.1037/0022-3514.73.6.1246

Driver, C. C., Oud, J. H. L., & Voelkle, M. C. (2017). Continuous time structural equation modeling with R Package ctsem. *Journal of Statistical Software, 77*, 1–35. https://doi.org/10.18637/jss.v077.i05

Edwards, A. L. (1957). *The social desirability variable in personality assessment and research*. Dryden Press.

Eysenck, H. J., & Eysenck, S. B. G. (1964). *Manual of the eysenck personality inventory*. University of London Press.

Fisher, R. J., Rawal, S., Hochstein, B., & Plouffe, C. R. (2024). Development and validation of the SDR-O: A new measure of socially desirable responding in organizations. *Personality and Individual Differences, 222*, Article 112597. https://doi.org/10.1016/j.paid.2024.112597

Fuechtenhans, M., & Brown, A. (2023). How do applicants fake? A response process model of faking on multidimensional forced-choice personality assessments. *International Journal of Selection and Assessment, 31*(1), 105–119. https://doi.org/10.1111/ijsa.12409

Geiser, C., Keller, B. T., & Lockhart, G. (2013). First- versus second-order latent growth curve models: Some insights from latent state-trait theory. *Structural Equation Modeling: A Multidisciplinary Journal, 20*(3), 479–503. https://doi.org/10.1080/10705511.2013.797832

Goldberg, L. R. (1992). The development of markers for the Big-five factor structure. *Psychological Assessment, 4*(1), 26–42. https://doi.org/10.1037/1040-3590.4.1.26

Gough, H. G. (1956). *California psychological inventory*. Consulting Psychologists Press.

Grimm, K. J. (2026). *Categorical data analysis with structural equation models: Applications in Mplus and lavaan*. Guilford Press.

Grimm, K. J., Ram, N., & Estabrook, R. (2017). *Growth modeling: Structural equation and multilevel modeling approaches*. Guilford Press.

Guenole, N., Brown, A., & Lim, V. (2023). Can faking be measured with dedicated validity scales? Within-subject trifactor mixture modeling applied to BIDR responses. *Assessment, 30*(5), 1523–1542. https://doi.org/10.1177/10731911221098434

Haberecht, K., Schnuerer, I., Gaertner, B., John, U., & Freyer-Adam, J. (2015). The stability of social desirability: A latent change analysis. *Journal of Personality, 83*(4), 404–412. https://doi.org/10.1111/jopy.12112

Haehner, P., Krämer, M. D., Wright, A. J., & Bleidorn, W. (2026). Life events and personality trait change: A coordinated data analysis. *European Journal of Personality, 40*(2), 391–412. https://doi.org/10.1177/08902070251356148

Hamaker, E. L. (2025). Analysis of intensive longitudinal data: Putting psychological processes in perspective. *Annual Review of Clinical Psychology, 21*, 379–405. https://doi.org/10.1146/annurev-clinpsy-081423-022947

Hamaker, E. L., Asparouhov, T., & Muthén, B. (2023). Dynamic structural equation modeling as a combination of time series modeling, multilevel modeling, and structural equation modeling. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling* (2nd ed.,, pp. 576–596). The Guilford Press.

Isiordia, M., & Ferrer, E. (2018). Curve of factors model: A latent growth modeling approach for educational research. *Educational and Psychological Measurement, 78*(2), 203–231. https://doi.org/10.1177/0013164416677143

Jackson, J. J., & Wright, A. J. (2024). The process and mechanisms of personality change. *Nature Reviews Psychology, 3*(5), 305–318. https://doi.org/10.1038/s44159-024-00295-z

Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology, 87*(3), 530–541. https://doi.org/10.1037/0021-9010.87.3.530

Judge, T. A., & Kammeyer-Mueller, J. D. (2012). Job attitudes. *Annual Review of Psychology, 63*, 341–367. https://doi.org/10.1146/annurev-psych-120710-100511

Judge, T. A., Weiss, H. M., Kammeyer-Mueller, J. D., & Hulin, C. L. (2017). Job attitudes, job satisfaction, and job affect: A century of continuity and of change. *Journal of Applied Psychology, 102*(3), 356–374. https://doi.org/10.1037/apl0000181

Kallio Strand, K., Bäckström, M., & Björklund, F. (2021). Accounting for the evaluative factor in self-ratings provides a more accurate estimate of the relationship between personality traits and well-being. *Journal of Research in Personality, 93*, Article 104120. https://doi.org/10.1016/j.jrp.2021.104120

Kline, R. B. (2023). *Principles and practice of structural equation modeling* (5th ed.). The Guilford Press.

Kuper, N., Andresen, P. K., Beck, E. D., Costantini, G., Hamaker, E. L., Wright, A. G. C., & Zimmermann, J. (2025). From persons to general principles: Methodological decisions for idiographic and nomothetic research. *European Journal of Personality, 39*(4), 635–661. https://doi.org/10.1177/08902070241278020

Lee, P., Joo, S., & Jia, Z. (2023). Cross-cultural differences in the use of the "?" Response category of the Job Descriptive Index: An application of the item response tree model. *International Journal of Selection and Assessment, 31*(1), 175–188. https://doi.org/10.1111/ijsa.12414

Lee, T. C., & Ziegler, M. (2025). Leveraging deep learning for the detection of socially desirable tendencies in personnel selection: A proof-of-concept. *PloS one, 20*(8), Article e0329205. Doi: 10.1371/journal.pone.0329205.

Little, T. D. (2024). *Longitudinal structural equation modeling* (2nd ed.). Guilford Publications.

Liu, T., Ding, R., Su, Z., Peng, Z., & Hildebrandt, A. (2025). Modelling nonlinear moderation effects with local structural equation modelling (LSEM): A non-technical introduction. *International Journal of Psychology*, *60*(1), Article e13259. Doi: 10.1002/ijop.13259.

Lönnqvist, J. E., Paunonen, S., Tuulio-Henriksson, A., Lönnqvist, J., & Verkasalo, M. (2007). Substance and style in socially desirable responding. *Journal of Personality, 75*(2), 291–322. https://doi.org/10.1111/j.1467-6494.2006.00440.x

McCrae, R. R., & Costa, P. T. (1983). Social desirability scales: More substance than style. *Journal of Consulting and Clinical Psychology, 51*(6), 882–888. https://doi.org/10.1037/0022-006X.51.6.882

McNeish, D., Somers, J. A., & Savord, A. (2024). Dynamic structural equation models with binary and ordinal outcomes in M*plus*. *Behavior Research Methods, 56*(3), 1506–1532. https://doi.org/10.3758/s13428-023-02107-3

Millsap, R. E., & Yun-Tein, J. (2004). Assessing factorial invariance in ordered-categorical measures. *Multivariate Behavioral Research, 39*(3), 479–515. https://doi.org/10.1207/S15327906MBR3903_4

Newsom, J. T. (2024). *Longitudinal structural equation modeling: A comprehensive introduction* (2nd ed.). Routledge. Doi: 10.4324/9781003263036.

Newsom, J. T., & Smith, N. A. (2020). Performance of latent growth curve models with binary variables. *Structural Equation Modeling: A Multidisciplinary Journal, 27*(6), 888–907. https://doi.org/10.1080/10705511.2019.1705825

Orth, U., & Robins, R. W. (2014). The development of self-esteem. *Current Directions in Psychological Science, 23*(5), 381–387. https://doi.org/10.1177/0963721414547414

Paulhus, D. L. (1984). Two-component models of socially desirable responding. *Journal of Personality and Social Psychology, 46*(3), 598–609. https://doi.org/10.1037/0022-3514.46.3.598

Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17–59). Academic Press. https://doi.org/10.1016/B978-0-12-590241-0.50006-X.

Paulhus, D. L. (1998). *Paulhus deception scales (PDS): The balanced inventory of desirable responding–7: User's manual. Multi-Health Systems.*

Paulhus, D. L. (2002). Socially desirable responding: The evolution of a construct. In H. I. Braun, D. N. Jackson, & D. E. Wiley (Eds.), *The role of constructs in psychological and educational measurement* (pp. 49–69). Routledge.

Paulhus, D. L., & John, O. P. (1998). Egoistic and moralistic biases in self-perception: The interplay of self-deceptive styles with basic traits and motives. *Journal of Personality, 66*(6), 1025–1060. https://doi.org/10.1111/1467-6494.00041

Perinelli, E., & Gremigni, P. (2016). Use of social desirability scales in clinical psychology: A systematic review. *Journal of Clinical Psychology, 72*(6), 534–551. https://doi.org/10.1002/jclp.22284

Persson, H., Björklund, F., & Bäckström, M. (2025). How social desirability influences the relationship between measures of personality and key constructs in positive psychology. *Journal of Happiness Studies, 26*(3). https://doi.org/10.1007/s10902-025-00879-3

Rau, R., Schömann, L. M., & Grosz, M. P. (2025). People "fake-good" on personality self-reports more strongly in a job context than in a dating context. *Journal of Research in Personality, 116*, Article 104596. https://doi.org/10.1016/j.jrp.2025.104596

Revelle, W. (2026). *psych: Procedures for Psychological, Psychometric, and Personality Research* (Version 2.6.1) [Computer software]. https://cran.r-project.org/web/packages/psych/index.html.

Roberts, B. W., & Yoon, H. J. (2022). Personality psychology. *Annual Review of Psychology, 73*, 489–516. https://doi.org/10.1146/annurev-psych-020821-114927

Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software, 48*(2), 1–36. https://doi.org/10.18637/jss.v048.i02

Sackeim, H. A., & Gur, R. C. (1978). Self-deception, self-confrontation, and consciousness. In G. E. Schwartz, & D. Shapiro (Eds.), *Consciousness and self-regulation: Advances in research and theory* (pp. 139–197). US: Springer. https://doi.org/10.1007/978-1-4684-2571-0_4.

Schmitt, M. J., & Steyer, R. (1993). A latent state-trait model (not only) for social desirability. *Personality and Individual Differences, 14*(4), 519–529. https://doi.org/10.1016/0191-8869(93)90144-R

Schröder, V., Heimann, A. L., Ingold, P., Roulin, N., Mast, M. S., Bachmann, M., & Kleinmann, M. (2025). Social desirability tendency in personality-based job interviews—A question of interview format? *International Journal of Selection and Assessment, 33*(2). https://doi.org/10.1111/ijsa.70006

Smith, P. C., Kendall, L. M., & Hulin, C. L. (1969). *The measurement of satisfaction in work and retirement: A strategy for the study of attitudes. Rand Mcnally.*

Strahan, R., & Gerbasi, K. C. (1972). Short, homogeneous versions of the marlowe-crowne social desirability scale. *Journal of Clinical Psychology, 28*(2), 191–193. https://doi.org/10.1002/1097-4679(197204)28:2<191::AID-JCLP2270280220>3.0.CO;2-G

Svetina, D., Rutkowski, L., & Rutkowski, D. (2020). Multiple-group invariance with categorical outcomes using updated guidelines: An illustration using Mplus and the lavaan/semTools packages. *Structural Equation Modeling: A Multidisciplinary Journal, 27*(1), 111–130. https://doi.org/10.1080/10705511.2019.1602776

Törnroos, M., Jokela, M., & Hakulinen, C. (2019). The relationship between personality and job satisfaction across occupations. *Personality and Individual Differences, 145*, 82–88. https://doi.org/10.1016/j.paid.2019.03.027

Uziel, L. (2010). Rethinking social desirability scales: From impression management to interpersonally oriented self-control. *Perspectives on Psychological Science, 5*(3), 243–262. https://doi.org/10.1177/1745691610369465

Uziel, L., & Schmidt-Barad, T. (2023). Impression management in daily life: An experience sampling test for the expression of impression management as interpersonally oriented self-control. *Frontiers in Psychology, 14*. https://doi.org/10.3389/fpsyg.2023.1198891

Vecchione, M., & Alessandri, G. (2013). Alpha and beta traits and egoistic and moralistic self-enhancement: A point of convergence between two research traditions. *Journal of Personality, 81*(1), 39–48. https://doi.org/10.1111/j.1467-6494.2012.00786.x

Vecchione, M., Alessandri, G., & Barbaranelli, C. (2013). Measurement and application of egoistic and moralistic self-enhancement. *International Journal of Selection and Assessment, 21*(2), 170–182. https://doi.org/10.1111/ijsa.12027

Vecchione, M., Schwartz, S., Alessandri, G., Döring, A. K., Castellani, V., & Caprara, M. G. (2016). Stability and change of basic personal values in early adulthood: An 8-year longitudinal study. *Journal of Research in Personality, 63*, 111–122. https://doi.org/10.1016/j.jrp.2016.06.002

Vispoel, W. P., & Kim, H. Y. (2014). Psychometric properties for the Balanced Inventory of Desirable responding: Dichotomous versus polytomous conventional and IRT scoring. *Psychological Assessment, 26*(3), 878–891. https://doi.org/10.1037/a0036430

Wagner, J., Orth, U., Bleidorn, W., Hopwood, C. J., & Kandler, C. (2020). Towards an integrative model of sources of personality stability and change. *Current Directions in Psychological Science, 29*(5), 438–444. https://doi.org/10.1177/0963721420924751

Wickrama, K., Lee, T. K., O'Neal, C. W., & Lorenz, F. (2022). *Higher-order growth curves and mixture modeling with Mplus: A practical guide* (2nd ed.). Routledge, 10.4324/9781003158769.

Wu, H., & Estabrook, R. (2016). Identification of confirmatory factor analysis models of different levels of invariance for ordered categorical outcomes. *Psychometrika, 81*(4), 1014–1045. https://doi.org/10.1007/s11336-016-9506-0

Ye, F. (2016). Latent growth curve analysis with dichotomous items: Comparing four approaches. *British Journal of Mathematical and Statistical Psychology, 69*(1), 43–61. https://doi.org/10.1111/bmsp.12058

Ziegler, M., MacCann, C., & Roberts, R. D. (2012). *New perspectives on faking in personality assessment.* Oxford University Press.