23 SOCIAL DESIRABILITY IN POSITIVE PSYCHOLOGY: BIAS OR DESIRABLE SOCIALITY?

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Social desirability as a problem for positive psychology

The problem of social desirability (SD) has a long history in psychology. As soon as personality tests became popular in the early 1930s, their susceptibility to faking became a concern steadily raised by numerous researchers in the field. The famous 1937 criticism by Allport, as quoted in Ben-Porath (2003), seems to be no less valid nowadays:

Table 3. Pearson correlations between BIDR and VIA-Y scales obtained in Study 2 (N = 72).

VIA Character strength scale	*VIA-y* psychometric properties			Correlations with *BIDR* scales			
	N items	Cronbach's alpha	Retest, Pearson r	*SDE*	*IM*	*SDD*	Total
Beauty	8	.75	.77	-.02	.15	.23	.15
Bravery	7	.66	.62	.10	.22	.20	.22
Creativity	8	.77	.62	-.02	.05	-.01	.01
Curiosity	7	.70	.57	.02	.18	.08	.11
Fairness	7	.61	.68	.20	.43 ***	.34 **	.39 **
Forgiveness	7	.83	.80	.06	.47 ***	.55 ***	.45 ***
Gratitude	8	.77	.67	.27 *	.25 *	.33 **	.36 **
Honesty	7	.70	.80	.42 ***	.41 ***	.32 **	.48 ***
Hope	8	.81	.67	.31 **	.15	.17	.27 *
Humour	8	.78	.71	.06	.10	.13	.13
Industriousness	7	.75	.77	.48 ***	.20	.23	.30 *
Judgement	7	.65	.73	.43 ***	.22	.08	.24 *
Kindness	9	.77	.73	.06	.31 **	.36 **	.31 **
Leadership	7	.81	.88	.39 **	.11	-.03	.16
Love	9	.83	.73	.19	.21	.23	.26 *
Love of Learning	7	.74	.73	.20	.33 **	.26 *	.30 *
Modesty	7	.69	.79	.30 *	.42 ***	.37 **	.47 ***
Prudence	7	.79	.84	.66 ***	.15	.13	.43 ***
Self-Regulation	7	.71	.76	.44 ***	.20	.29 *	.37 **
Social Intelligence	7	.70	.71	.45 ***	.21	.18	.36 **
Spirituality	7	.85	.90	.11	.34 **	.34 **	.33 **
Teamwork	6	.69	.82	.44 ***	.31 **	.19	.38 **
Wisdom	8	.70	.77	.35 **	.26 *	.20	.34 **
Zest	5	.77	.72	.08	.03	-.02	.11

(*p<.05 **p<.01 ***p<.001)

> 'Another severe criticism lies in the ability of the subject to fake the test if he chooses to do so [...] Anyone by trying can (on paper) simulate introversion, conservatism, or even happiness. And if he thinks he has something to gain, he is quite likely to do so. [...] Even well-intentioned subjects may fail insight or slip into systematic error or bias that vitiates the value of their answers.' (p. 555)

A number of different SD scales have been developed since, with varying degrees of success (Paulhus, 1991), but the challenging task of evaluating and controlling the gap between attitude data obtained by means of self-report measures and respondents' actual behaviour still persists.

Social desirability is probably the most important type of response bias and also one most frequently addressed in research. Paulhus (2002) defines SD simply as a 'tendency to give overly positive self-descriptions' (p. 50). Socially desirable responding correlates with certain personality traits, such as narcissism and neuroticism, as well as with situational and setting variables related to perceived anonymity (Paulhus, 1991; 2002). Different strategies of controlling the SD effects have been proposed (Paulhus, 1991): they can be applied at the stages of test development (controlling for social desirability of individual items), presentation (reducing the level of demand, or 'situational press') and data processing (using as covariates additional measures of social desirability in order to separate its effects from the 'true score' variance).

The problem of social desirability seems to be especially important for positive psychology (Seligman, 2002; Gable & Haidt, 2005), which studies phenomena related to flourishing and, therefore, desirable by definition: among these are positive personality traits, such as character strengths (Seligman & Peterson, 2004), and positive states, such as subjective well-being. It is not unreasonable to hypothesise that at least some respondents might be inclined to over-report these variables, either unconsciously, in order to maintain a positive self-image, or consciously, aiming to produce a better impression upon the experimenter.

Though some researchers in the area are well-aware of the possibility of SD bias, as of 2006 there still seems to have been no systematic efforts undertaken to evaluate and control the social desirability of scales widely used in positive psychological research. One common point of view states that because positive psychological inventories, such as the *Values in Action (VIA) Inventory of Strengths* (Seligman, Park, & Peterson, 2004), 'explicitly measure what is socially desirable [... it] means that controlling the confound, as it were, might also eliminate the essence of the concepts we are trying to measure' (Values In Action Institute, 2007, Question 6). This point of view seems worthy of critique on two main points.

Firstly, while it is true that individuals high in socially desirable strengths and virtues should be naturally inclined to behave in a socially desirable way (and therefore to report it), it is still no less true that individuals motivated to exaggerate the socially desirable features of their personality and behaviour should also be more likely to ascribe themselves these strengths and virtues in self-reports. In short, the effects of 'desirable sociality' and social desirability will be inevitably mixed up in self-report data.

This does not mean that social desirability effects cannot or should not be controlled at all when it comes to positive psychological personality variables: in our opinion, the feasibility of such a control is only a question of its methodology. Although it is true that most existing SD scales are basically self-report measures of socially desirable traits and behaviour (Paulhus, 1991), which renders them hardly useful for the proposed purpose, there are other more intricate and less subjective approaches that allow us to measure SD bias, such as the *Overclaiming Technique* (Paulhus *et al.*, 2003) and the *Self-Criterion Residual Method* (Paulhus & John, 1998). These approaches overcome the aforementioned limitation of classical SD scales, which makes them more suitable for positive psychology. But even the more straightforward approach based upon weighting of individual items by their respective SD values may improve agreement between self- and peer-ratings (Konstabel, Aavik & Allik, 2006).

The second critical point is that the once-prevalent notion of social desirability as a one-dimensional construct, which served as a basis for some popular scales (e.g., Edwards, 1957; Crowne & Marlowe, 1960), seems to be oversimplified and inadequate in the face of more recent multifactor models, such as the one developed by Paulhus (2002). Using the distinction between 'self-deception' and 'other-deception' proposed by Sackeim & Gur (1978), Paulhus distinguished the conscious impression management from unconscious self-deception, which further broke down into denial and enhancement components corresponding to negative and positive personality attributes (Paulhus & Reid, 1991). In empirical studies (Paulhus, 2002) the *Self-Deceptive Denial Scale* demonstrated its similarity to the *Impression Management Scale* and classical SD scales, whereas the *Self-Deceptive Enhancement Scale* was quite distinct from these and correlated with narcissism (Raskin & Hall, 1979).

To explain these data, Paulhus and John (1998) address an earlier distinction between 'alpha' and 'gamma' dimensions of self-favouring bias and suggest their relationship to fundamental human values of agency and communion respectively. According to Paulhus (2002), unconscious egoistic bias and its conscious counterpart, agency management, are motivated by the need for power, and influence self-perceptions of personality dimensions related to competence and social status. Egoistic bias operates in the *Self-Deceptive*

Enhancement Scale, which reflects the so-called 'normal narcissism' (Paulhus & John, 1998). Unconscious moralistic bias, and its conscious counterpart, impression management, are motivated by the need for communion, which leads to avoidance of disapproval by conforming to social norms in the form of less conscious 'saint-like' self-conceptions, or more conscious attempts to secure a positive image of oneself in the eyes of others. This type of bias is captured by the *Self-Deceptive Denial* and *Impression Management Scales*, which are both related to the classical *Marlowe-Crowne Scale*, as the data demonstrate (Paulhus & John, 1998). This theoretical model allows us to construe social desirability as 'a relatively stable, multidimensional trait' (Furnham, 1986), which might, nevertheless, be mediated by situational variables.

While it is clear enough that gamma bias (moralistic bias and impression management) should be controlled in positive psychological research, the role of alpha bias, or self-deceptive enhancement, in positive psychology, may not be as simple. It is not quite clear whether it represents distortion, personality content or both (Paulhus & John, 1998). There are numerous theoretical considerations suggesting that self-deception might function as an adaptive mechanism (Lockard & Paulhus, 1988; Paulhus, Fridhandler & Hayes, 1997; Giannetti, 2000), as well as experimental evidence of a relationship between self-deception and such variables as success in competition (Starek & Keating, 1991) or pain tolerance (Quattrone & Tversky, 1984). The relationship between the self-enhancement response style to such constructs, as perceived control (Skinner, 1995) and self-efficacy (Bandura, 1997), needs to be clarified, and empirical research is needed in order to discern the distinctions between the effects of 'healthy' self-enhancement that might contribute to well-being, and those reflecting narcissistic features of self-image.

Exploratory research is indispensable in order to evaluate the possibility of controlling the social desirability bias that might influence positive psychological self-report data, and to answer the question whether the concept of SD bias is applicable to positive psychological variables at all. In order to investigate the relationships between different components of social desirability and a number of positive psychological variables, three exploratory studies were undertaken.

Study 1

The principal aim of this study was to investigate the relationship between social desirability scales and subjective well-being scales in an anonymous

setting with low situational press, where, if any, only personality-related SD bias is to be expected.

The serious problem we encountered was a lack of appropriate psychometric tools. The only existing Russian-language tool to measure social desirability was the short 20-item version of the *Crowne & Marlowe (1960) Scale* adapted by Khanin (1976), some of its items being evidently obsolete in the face of changed standards of desirable behaviour in Russia since the fall of the Soviet Union. Considering also the fact that the validity of the original scale is in question (Barger, 2002), we decided to use a Russian translation of the 60-item version of the *Balanced Inventory of Desirable Responding (BIDR-6)* (Paulhus, 1998); the instrumental aim of the study was, therefore, to assess its psychometric properties.

Method

Subjects

Respondents were undergraduate students (N = 225), aged 18 to 22, of three different Moscow universities majoring in economics, law, management, psychology and art. The questionnaires were administered anonymously (participants were instructed to sign the forms with any nickname of their choice) in a group setting; credits were given for study participation time.

Instruments

A translation of the 60-item version of *BIDR-6* (Paulhus, 1998) prepared by S. Lebedev was used. The original inventory includes three balanced 20-item scales: *Self-Deceptive Enhancement (SDE)*, *Impression Management (IM)* and *Self-Deceptive Denial (SDD)*. Although Paulhus (1998) proposes 5-point scoring, a 7-point scale was used in this Russian version in order to provide more flexibility establishing cut-off points in case of dichotomous scoring. However, the results presented below were obtained using raw 7-point scores, because not enough data have been gathered yet to justify selection of an optimal cut-off criterion.

Among other instruments administered, were the *Subjective Happiness Scale (SHS)*, Lyubomirsky & Lepper (1999), and the *Satisfaction With Life Scale (SWLS)*, Diener *et al.* (1985), both translated into Russian by D. Leontiev for this study (reliability levels for Russian versions are shown in table 1).

Also used were the *General Causality Orientations Scale* (GCOS) (Deci & Ryan, 1985; Dergacheva, Dorfman, & Leontiev, 2002), the *Purpose in Life Test (PIL)* (Crumbaugh & Maholick, 1981; Leontiev, 1992), the *Scales of Psychological Well-Being* (Ryff & Keyes, 1995; Shevelenkova & Fesenko, 2005), the *Hardiness Personal Views Survey II (PVS-II)* (Maddi, 1997; Leontiev & Rasskazova, 2006), the *Sense of Coherence Scale (SOC)* (Antonovsky, 1993; Osin, 2007), and the *Perceived Control Inventory (PCI)* (Bazhin, Golynkina, & Etkind, 1993) based on the locus of control scale by Rotter (1966).

Results and discussion

Item analysis was performed upon the Russian version of the *BIDR-6*. Some of the original items had to be discarded due to cultural differences and/or low item-total correlations with their respective scales. The two resulting Self-Deception Scales had 14 items each, with internal consistencies (standardised alpha) .76 and .75 for the Enhancement and Denial Scales, respectively, whereas the Impression Management Scale had 12 items and a .73 alpha. Though not high, these internal consistency values were deemed sufficient for this exploratory research. The reliability of the combined 40-item *BIDR* was .85; however, the correlation pattern of the combined scale with other measures was not as distinct as that of its components, and is not presented here for the sake of brevity.

The Pearson correlation between the *IM* and *SDD Scales* was stronger ($N = 225$, $r = .66$, $p<.001$) than between *SDE* and *IM* ($N = 225$, $r = .32$, $p<.001$), as well as SDE and SDD ($N = 225$, $r = .23$, $p<.001$). This pattern of correlations agrees with source inventory data (Paulhus, 1998; Paulhus & Reid, 1991).

Pearson correlations between the *BIDR* scales and other measures are shown in table 1. As the content of the test battery varied across different student groups, the respective number of cases is shown for each correlation coefficient.

The *SDE Scale* demonstrated low to moderate correlations with all the other measures used. The strongest of its correlations are those with the *Environmental Mastery*, *Self-Acceptance*, *Sense of Coherence* and *Autonomy Scales*. The highest of the observed correlations might result from overlap in item content between the *SDE* and respective scales. Although there is clearly no such overlap with the *SHS* and *SWLS* Scales, it is unclear whether correlations between these and the *SDE Scale* result from unconscious self-enhancement or show the indirect effect that perceived competence has on general subjective well-being.

Table 1. Pearson correlations between BIDR scales and other measures obtained in Study 1.

Scale	Alpha	N	SDE	IM	SDD
Subjective Happiness (SHS)	.71 x	220	.27 ***	-.01	.07
Life Satisfaction (SWLS)	.74 x	219	.38 ***	.24 ***	.19 **
Positive Relations (Ryff)	.82 x	219	.31 ***	.24 ***	.15 *
Autonomy (Ryff)	.81 x	219	.54 ***	.16 *	.09
Environmental Mastery (Ryff)	.71 x	219	.54 ***	.15 *	.09
Personal Growth (Ryff)	.80 x	219	.20 **	.06	.04
Purpose In Life (Ryff)	.77 x	219	.46 ***	.24 ***	.17 *
Self-Acceptance (Ryff)	.82 x	219	.57 ***	.16 *	.13
Ryff: Positive Statements	92 x	219	.52 ***	.15 *	.08
Ryff: Negative Statements	91 x	219	-.50 ***	-.25 ***	-.19 **
Purpose In Life (PIL)	.92	172	.47 ***	.26 ***	.26 **
Hardiness (PVS-II)	.92	133	.46 ***	.19 *	.15
Autonomy Orientation (GCOS)	.80	138	.21 *	.20 *	.12
Controlled Orientation (GCOS)	.79	138	.26 **	-.09	-.12
Impersonal Orientation (GCOS)	.81	138	-.50 ***	-.14	-.02
Perceived Control (PCI)	.71 x	85	.47 ***	.34 **	.17
Sense of Coherence (SOC)	.87 x	49	.58 ***	.32 *	.25

(*p<.05 **p<.01 ***p<.001)
Standardised alpha reliability shown for Study 1 sample; for published Russian versions of the inventories, if unmarked.

The *IM* and *SDD* Scales showed weak yet significant correlations with the *Life Satisfaction*, *Purpose In Life*, Perceived *Competence*, *Sense of Coherence* and some other scales, suggesting that these might be susceptible to social desirability in the classical sense (gamma bias). It is reasonable to suppose that these effects should increase in a non-anonymous setting.

In order to compare the social desirability of positive and negative statements regarding subjective well-being, the *Scales of Positive Psychological Well-Being inventory* was split into two scales, comprised of positive and negative (reverse-scored) items, with 44 and 40 items respectively. The Pearson correlation with the total *BIDR* score was somewhat stronger for negative items (r = -.41; p<.001) than for positive items (r = .32; p<.001). The higher correlations with the *SDD* and *IM* Scales (see table 1), demonstrated by the negative component, suggest its higher susceptibility to SD bias.

To obtain information about the general structure of the whole correlation

matrix, an exploratory Principal Components analysis, with subsequent Varimax rotation, was performed upon the data matrix of one respondent group (N = 84), yielding three factors which accounted for 59% of the total variance.

Table 2. Varimax rotated principal component structure of the correlation matrix obtained in Study 1 (N=84; factor loadings above .3 are shown).

Scale	Commu-nality	Factor 1 (31%)	Factor 2 (16%)	Factor 3 (12%)
Self-Deceptive Enhancement (BIDR)	.46	.51	.38	
Impression Management (BIDR)	.76			.86
Self-Deceptive Denial (BIDR)	.76			.87
Subjective Happiness (SHS)	.41	.61		
Life Satisfaction (SWLS)	.43	.57		
Purpose In Life (PIL)	.54	.62		.38
Positive Relations (Ryff)	.38	.58		
Autonomy (Ryff)	.61	.62	.46	
Environmental Mastery (Ryff)	.68	.79		
Personal Growth (Ryff)	.45	.53	.41	
Purpose In Life (Ryff)	.64	.76		
Self-Acceptance (Ryff)	.78	.87		
Hardiness (PVS-II)	.55	.71		
Autonomy Orientation (GCOS)	.89		.93	
Controlled Orientation (GCOS)	.42		-.46	-.38
Impersonal Orientation (GCOS)	.55		-.69	
Perceived Control (PCI)	.68	.54	.56	

Factor 1 can be interpreted as psychological well-being, which includes positive self-image. Though self-deceptive enhancement strategy might contribute to its construction, it is impossible to distinguish between its 'bias' and 'true score' components using the present measures of self-enhancement. Factor 2 can be interpreted as personal autonomy. Factor 3 captures the moralistic component of social desirability, or gamma bias. It seems that, in a neutral setting, only PIL scores might be affected by SD bias to some extent, which corresponds to previous findings (Ebersole & Quiring, 1989).

To summarise, Study 1 has confirmed the distinction between self-deception and other-deception as two essentially different components of social desirability.

The *SDE Scale* does indeed conceptually overlap with subjective well-being scales, which makes it difficult to answer the question of whether it measures bias or valid personality content. The community bias measured by the *IM* and *SDD Scales* does probably influence some subjective well-being scales even in an anonymous setting, but the extent of this influence is rather small.

Study 2

The idea of this study was to investigate the relationship between the two components of social desirability and the *VIA* scales in an anonymous setting.

Method

Subjects

Respondents were students (N = 98), aged 14 to 17, of a Moscow school (equal distribution across age and gender). Participation in the research was voluntary, as part of their psychology course; research was performed in a group setting. The participants were asked to sign the forms either using their real names or nicknames of their choice.

Instruments

The Russian translation of the *VIA Inventory of Character Strengths for Youth (VIA-y)* (Park & Peterson, 2005) was prepared by D. Leontiev; this study was undertaken as part of work aimed at adaptation of the *VIA-y*, and its results are published in Russian (Burovikhina, Leontiev, & Osin, 2007). The same versions of *BIDR*, *SWLS*, *SHS*, *PIL*, *PCI*, *GCOS* and *Scales of Psychological Well-Being* as those used in Study 1 were also administered.

Results and discussion

The standardised alpha internal consistency coefficients of SD scales were lower in this teenage sample, constituting .72 for both the *Self-Deception Scales* and .65 for the *Impression Management Scale*; the overall alpha for the 40-item total scale was .84. The inter-correlation pattern for the three SD scales was essentially the same, indicating a closer relationship between *IM* and *SDD* ($r = .66$, $p<.001$) than either between *SDE* and *IM* ($r = .39$, $p<.001$), or *SDE* and *SDD* ($r = .31$, $p<.001$).

Pearson correlations between the *BIDR* scales and character strengths measured by the *VIA-y* are shown in table 3. The number of valid items, internal consistency obtained on a larger adolescent sample (N = 145), and retest reliability (N = 44, a two-week interval was used) are shown for each *VIA* scale (reprinted from Burovikhina, Leontiev, & Osin, 2007). The set of significant correlations between the *BIDR* and subjective well-being scales used in Study 1 was essentially reproduced in Study 2 and is not presented here for the sake of brevity.

Contrary to our expectations raised by moral value as one of the criteria used to define character strengths (Seligman & Peterson, 2004; Park, Peterson, & Seligman, 2004), not all *VIA* scales showed significant correlations with social desirability scales. Most notably, for Creativity, Humour and Zest correlation coefficients with all three SD scales neared zero. This might be understood as a limitation of the presently available SD scales, which employ too narrow a notion of socially desirable traits. On the other hand, it is possible that these character strengths become subjectively valued only later in life and are not very relevant to an average adolescent. (Unfortunately, the Russian adaptation of the adult *VIA* questionnaire has not yet been completed).

Quite as expected, the correlation pattern with the two kinds of SD bias was not uniform across the 24 character strengths. Some strengths (Hope, Industriousness, Judgement, Leadership, Prudence, Self-Regulation, Social Intelligence) were only significantly associated with the *SDE Scale*, whereas other strengths (Fairness, Forgiveness, Kindness, Love of Learning, Spirituality) were only significantly associated with the *IM* and *SDD Scales*. This is quite reasonable, as the former strengths encompass mostly self-regulation skills and optimism which correspond to agency values, while all of the latter strengths are interpersonal skills which correspond to communion values. A small number of characters strengths (Gratitude, Honesty, Modesty, Teamwork, Wisdom) were associated with both SD components, which suggests their relevance to both self-regulation and communion maintenance.

It is probably true that SD scales cannot help to distinguish the social desirability bias (individuals tending to overrate their strengths) from the effects

of 'desirable sociality' (individuals really possessing these traits and behaving in a socially desirable way). However, it seems that not all strength scales are susceptible to SD bias in the same way, and administration of the *VIA* inventory in conditions of varying levels of demand and samples with different observed levels of socially desirable behaviour should help to determine the extent to which the data obtained from the *VIA* do really reflect 'desirable sociality'.

Study 3

The aim of this study was to investigate the way self-report indicators of subjective well-being change in a situation when not only personality-related, but also situational SD effects, are to be expected.

Method

Subjects and procedure

The respondent sample was comprised of high-school graduates who submitted their applications in order to take entrance examinations at the Department of Psychology of Moscow State University (MSU), in June 2006. The research was conducted during the application period, which encompasses two weeks and ends the day before the first examination. In order to enter the MSU Department of Psychology and receive a state-sponsored education, applicants have to pass three written examinations (mathematics, essay and biology), after which only a fixed number of those who obtained the highest total scores are chosen. The remaining applicants are free to apply for a self-sponsored placement, provided their examination scores are sufficiently high, or to try another university. Because the examination dates are fixed, in general, applicants can make only two attempts to enter a university in one year, and the option to try again the following year is quite unavailable to men due to two years obligatory military service. The entrance examinations in Russia are thus an event that might shape one's future life course in a matter of a few days; it is a stressful all-or-nothing situation, in which the outcome largely depends on one's own skills.

When the applicants filled in the official forms, they were invited to participate in a 'study of personality traits' on a voluntary basis, to 'help the advancement of scientific research'; a popular psychology book was also offered

as a reward to each participant. Approximately 20% of all applicants took part in the study, giving a sample of 108 respondents aged 15 to 22 (median age was 17 years). There were only 17 male applicants (15.7%) in the sample, which corresponds to the usual gender distribution of Psychology applicants at the MSU. Successful applicants comprised 29.6% of our sample, which is higher than the overall percentage of successful psychology applicants in 2006 (20.4%): it is probable that applicants with higher motivation to study psychology were more likely to participate in our study and were better prepared for entrance examinations.

The research was conducted individually or in a small group setting, in a room with one or two experimenters (psychology graduate students) and one to five participants present simultaneously. Each participant was personally welcomed by an experimenter and offered drinking water and chocolate bars (free of charge). Participants were instructed to sign the forms using their full name and indicating the exact date of their birth. The instruction included a statement of confidentiality and strictly scientific use of the participants' personal data. However, we hoped that personal contact with an experimenter, lack of anonymity and the applicants' motivation to be at their best in the face of impending examinations would contribute enough to the situational press for significant SD effects to be expected.

Instruments

In addition to the *BIDR*, *SHS*, *PIL test* and *PVS-II* tools used in Studies 1 and 2, a number of other inventories were administered, including the *Generalised Self-Efficacy Scale (SES)* (Schwartzer, 1993; Schwartzer, Jerusalem, & Romek, 1997) and the *Optimistic Thinking Scale for Youth (OTS-Y)* (Gordeeva, 2007; Gordeeva, Osin, Sheviakhova, in press) – a refined Russian version of the *ASQ* (Peterson, Semmel, von Bayer, Abramson, Metalsky, & Seligman, 1982), that measures optimistic attributional style comprised of permanence, pervasiveness and controllability parameters over 24 situations. The standardised alpha reliability coefficients obtained in this study for *SES* and *OTS-Y* were .84 and .86, respectively.

In order to provide a more objective criterion of self-deception, along with filling out the forms respondents were also asked to estimate their chances of entering the university using a percentage scale anchored by '0% – no chance at all to 100% – entrance guaranteed'.

Results and discussion

The resulting Pearson correlations between the *BIDR* scales and other measures are shown in table 4. Compared to Study 1, correlations with the *IM* and *SDD* scales have increased for *SHS*, *PIL* and *PVS-II* (in all six cases this observed difference between correlation coefficients was statistically significant at the p<.05 level, using one-tailed test), whereas correlations with the *SDE Scale* did not increase significantly. Self-efficacy and optimistic attributional style were also found to be significantly correlated to both components of SD. These results suggest that moralistic bias effects must have affected the scores of at least some Study 3 participants.

Table 4. Pearson correlations between positive psychological scales and social desirability measures obtained in Study 3.

Scale	BIDR (N=108)			Success overestimation index (N=86)
	SDE	IM	SDD	
Subjective Happiness (SHS)	.37 **	.44 ***	.40 ***	.27 *
Purpose In Life (PIL)	.56 ***	.50 ***	.45 ***	.23 *
Hardiness (PVS-II)	.54 ***	.42 ***	.39 ***	.27 *
Generalised Self-Efficacy (SES)	.52 ***	.34 ***	.23 *	.30 **
Optimistic Attributional Style (OTS-Y)	.30 **	.35 ***	.22 *	.35 **

(*p<.05 **p<.01 ***p<.001)

In order to confirm this finding, raw scores on the *BIDR* and other scales in question were compared between Studies 1 and 3. A subset of cases (N = 91) was drawn from the Study 1 sample, comparable in terms of age (median age 17 years) and gender. Differences were tested by means of the two-tailed Student's *t* test (the results of this analysis are summarised in Table 5).
The groups did not differ significantly in self-deceptive enhancement, but the other two BIDR scales measuring the gamma component of SD were significantly higher in Study 3. Also, compared to Study 1, scores on all three positive scales were significantly higher in Study 3. There seems to be little reason for high-school graduates in a stressful pre-competition situation to feel happier and to perceive their lives as more meaningful than do undergraduate students, who have already entered the university and are studying their chosen disciplines. There is also little reason for applicants to display

Table 5. Comparison of raw score distributions between Studies 1 and 3 using two-tailed Student t-test.

Scale	Mean		SD		df	Student's t value	p, two-tailed test
	Study 1	Study 3	Study 1	Study 3			
SDE	58.9	60.8	10.5	12.6	193	1.13	.2598
IM	47.4	52.0	12.2	12.7	193	2.56	.0112
SDD	51.8	57.0	12.0	13.4	193	2.83	.0051
SHS	19.3	21.1	2.97	3.89	195	3.60	.0004
PIL	99.0	110.4	16.2	15.1	192	5.09	.0000
PVS-II	80.5	87.8	16.5	17.9	197	2.97	.0033

SDE: *Self-Deceptive Enhancement*; IM: *Impression Management*; SDD: *Self-Deceptive Denial*; SHS: *Subjective Happiness Scale*; PIL: *Purpose In Life Test*;PVS-II: *Hardiness PVS-II*.

more hardiness-related attitudes than do students who have already passed the examinations; on the contrary, it is reasonable to hypothesise that students who have managed to enter the university successfully should be more able to cope with stress, and hence be more hardy than applicants, who might be unable to cope with examination stress. A more likely explanation for these observed differences is the gamma bias effect.

To find more support for this hypothesis, raw scores on the *PIL* and *SES Scales* were compared using the two-tailed Student's *t* test to those obtained in one of our previous studies, on a sample of Psychology freshmen studying during their first term at the MSU (voluntary participation, anonymous group setting). Quite as expected, the scores of first-year students were significantly lower on both the *Purpose in Life Test* ($t = 2.12$, $df = 202$, $p = .0352$) and the *Self-efficacy Scale* ($t = 3.20$, $df = 180$, $p = .0016$) than those of applicants, even though the magnitude of these differences was not as large.

Further analysis revealed that the sample of applicants was heterogeneous. Apart from those who submitted their applications and actually took entrance examinations, there was a small sub-sample (N=21; median age also 17) comprised of individuals who came to support their siblings and friends in a stressful pre-examination situation and did not take the examinations themselves, even though some of them did actually apply. When compared (the two-tailed Student's *t*-test was used) to those who took the examinations, these individuals' scores demonstrated lower happiness ($t = 3.37$, $df = 105$, $p = .0010$), less purpose in life ($t = 3.80$, $df = 103$, $p = .0002$), lower self-efficacy ($t = 3.32$, $df = 106$, $p = .0012$) and lower hardiness ($t = 2.84$, $df = 106$, $p = .0052$). Correspondingly lower were their scores on the Impression Management ($t = 2.52$, $df = 105$, $p = .0133$) and *Self-Deceptive Denial* ($t = 2.52$, $df = 105$,

p = .0133) Scales. There was a similar, though non-significant difference in self-deceptive enhancement (t = 1.79, df = 105, p = .0761). It could well be that applicants' friends and siblings are characterised by a much lower subjective well-being, but a more probable interpretation is that they do not experience such a high level of demand and do not respond to it by an increased impression management and self-deceptive denial.

Though the average *SDE* level in Study 3 did not differ significantly from that in Study 1, a low yet significant Pearson correlation was observed between *SDE* scores and the number of days remaining before the exam (N=86; r = -.23; p<.05). Apart from pure chance, this effect can be explained by individual differences between those applicants who submit their applications far in advance and those who prefer to do it at the very last moment; however, there were no similar significant correlations with any other scale used. A hypothesis can be inferred that positive self-deception plays an adaptive role in situations in which it is necessary to achieve success: it might be applied by the subject in order to cope with increasing anxiety as the examination date approaches.

There was a positive Pearson correlation between the applicants' grade point average (GPA) over three examinations and their subjective expectations of success (N = 86, r = .38, p<.001). It is clear that self-ratings reflected the objective reality (level of preparedness for exam) to some extent. In order to obtain a measure of self-deception, the standardised GPA was subtracted from standardised success self-ratings. The resulting success overestimation index was normally distributed and demonstrated significant Pearson correlations with a number of subjective well-being scales (shown in the far right column of table 4). It also correlated with self-deceptive enhancement (N = 86, r = .22, p<.05), whereas its correlation coefficients with the *IM* and *SDD* Scales were nearly zero (r = .04 and r = -.11, respectively), which perfectly corresponds to the idea that expectations of success are affected by alpha or agency bias. It also suggests that the *Self-Deceptive Enhancement Scale* does indeed capture this kind of bias along with some 'valid' personality content.

The fact that *SDE* levels did not differ strongly in conditions with a higher level of demand, such as those in Study 3, suggests that participants' motivation to self-enhance did not vary so much between Studies 1 and 3 as did their motivation to present themselves in a more socially favourable way (community bias). It is quite possible that subjective effects of a non-anonymous presentation were stronger in the Study 3 situation than subjective effects of a competitive setting. Another possible interpretation is that emphasising one's positive traits helps in situations in which achievement is a requirement, by bringing about a more congruent self-image and strengthening self-confidence. In any case, the results obtained in Study 3 demonstrate clearly that subjective well-being

scale scores can be affected to a certain extent by both types of SD bias in a non-anonymous, stressful and competitive setting.

General discussion and conclusions

The two types of self-favouring bias, egoistic and moralistic bias, emerge so distinctly as two dimensions that it does not seem very productive to continue speaking of social desirability without specifying the type of SD bias in question. It is only moralistic bias manifested in the processes of self-deceptive denial and impression management that can be truly called *social* desirability, as it implements the tendency to conform to conventional social norms. Egoistic bias manifested in the process of self-enhancement has a different motivational background, and its nature would be better reflected by calling it *personal* desirability. This distinction clearly recalls the concepts of agency and communion as two generic modalities of human existence, universally present in autobiographical narrative (McAdams, 1985; McAdams, Hoffman, Day, & Mansfield, 1996), and also bears a certain resemblance to the ideas of basic needs theory formulated by Deci & Ryan (2000). Egoistic bias can be construed as an illusion aimed at satisfying the need for autonomy and competence, whereas moralistic bias, in turn, corresponds to the need of relatedness. Empirical studies are needed in order to confirm the existence of these links.

It is not yet clear to what extent positive psychological self-report measures are affected by SD bias owing to personality-related variables. However, the research outlined above shows clearly that some widely used measures of subjective well-being can be moderately influenced by social desirability bias owing to situational variables. The possibility of such bias should always be considered, and it is better for the researchers to be aware of the necessity of estimating (and decreasing, where possible) the influence of these situational variables, the 'situational press'. Whenever possible, self-report data should be supplemented with more objective expert or peer ratings, biographical or observational data.

It is an important task for positive psychology to find a place for social desirability within its theoretical framework, and to develop adequate approaches to its measurement and control. It is true that personality content measured by current SD scales, which are basically self-ratings of desirable behaviour, does overlap the 'true score' content of well-being scales. This does not mean, however, that SD bias cannot or should not be controlled; it only means that direct self-report measures are inadequate for that purpose.

The problem of self-deception is even more challenging. It is certainly a task for positive psychology to find out the conditions which allow self-deception to play a positive role in flourishing by strengthening motivation, and when, on the contrary, its role becomes detrimental by preventing adequate self-appraisal. The study of individual differences in self-deception might help us to gain a better understanding of such phenomena as optimism, faith, hope and forgiveness.

Self-deception is a more complex problem for Psychology than impression management. It is a point where, using Sartre's paradoxical statement, 'we have to deal with human reality as a being which is what it is not and which is not what it is' (1956, p. 58). Self-deception does not constitute a mere gap between the subjective reality of consciousness and the more objective reality of behaviour. This gap is the gap of possibility, the cradle of potential *fiat*, which is, according to James (1956), a necessary condition of anything coming to existence. If believing they are stronger than they really are enables people to reach higher goals, whether in the realm of achievement or that of pro-social behaviour, it is a matter of faith. And only when faith is held for its own sake, in order to preserve a personal *status quo* of some kind, can it justly be called bad faith (Sartre, 1956), or self-deception, in a proper sense. The question of discerning between these two phenomena in theory and in empirical research is a challenging task for the positive psychology of motivation.

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