Acquiescent and Socially Desirable Response Styles in Cross-Cultural Value Surveys

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Abstract

The present chapter presents two studies examining the differential effects of acquiescence and social desirability on value scores across cultures. In the first study, culture-level acquiescence indexes were extracted from data in eight multinational surveys, and culture-level social desirability scores were obtained from a meta-analysis of the Marlowe-Crowne Social Desirability Scale. Both types of indexes were correlated with cultural value dimensions reported in the literature and with indicators of affluence. We found that affluence explains a substantial proportion of the variance in the association of response styles with value scores in all the surveys. The second study investigated effects of score standardization. This study was based on a large cross-cultural data set collected with the Schwartz Value Survey (SVS). We found that value score standardization had some effect on the correlations of acquiescence with various value types, but only limited effects on social desirability. We conclude that affluence affects the relationship of response styles and value scores. Implications for the interpretation of cross-cultural differences in response styles and value surveys are discussed.

Introduction

The present chapter reports two studies that are part of a larger research effort to systematically examine the effects of response styles on value scores from a cross-cultural perspective. In a first study we explored relationships among response styles, affluence, and values, and in the second study we mapped the effect of value score standardization on variance due to response styles. Value surveys can be vulnerable to various response styles (e.g., Van Vaerenbergh & Thomas, 2012). Response styles are found to be interrelated, and among the most frequently studied response styles are acquiescent response style (ARS: the tendency to agree to items irrespective of content) and socially desirable response style (SDR: the tendency to answer questions in a socially acceptable manner) (He & van de Vijver, 2013). In value studies, ARS and SDR seem to play an important role. Respondents' endorsement of a value item on a Likert scale may obscure the true standing on the value due to a tendency to react affirmatively rather than denial (Schwartz, 1992). Values are defined as desirable goals (Kluckhohn, 1951), and the desirability component embedded in instruments assessing values may create a tendency to react in a socially desirable manner (Fisher & Katz, 2000). In cross-cultural value surveys, issues become even more complicated, because differences in response styles and "true" value differences are confounded. Moreover, differences can arise not only at the individual level but also from cultural differences in values and response styles (e.g., Johnson, Kulesa, Cho, & Shavitt, 2005; Smith & Fischer, 2008).

Previous investigations have found that response styles at culture level are associated with a number of values; yet findings so far have made use of scattered data, and have reported in part conflicting findings (see below). In addition, a role for affluence in the relationship between response styles and values has been suggested, but seldom tested empirically. In Study 1, we address this issue with a large data set of ARS and SDR indexes at culture level. To account for the effects of response styles, especially ARS, within-subject or within-culture standardization of value scores has been proposed (Schwartz, 1992). Nonetheless, there is almost no empirical evidence to support the suggested removal of response style effects by standardization or to support the idea that this procedure offsets both ARS and SDR. We test the effects of score standardization of value scores from the Schwartz Value Survey in Study 2.

The contribution of our studies is that we use a large data set of ARS and SDR scores at culture level to examine their relationships with value scores and affluence, so as to validate previous findings with more stable estimates. In addition, we provide empirical evidence as to the effects of score standardization by comparing the correlation patterns of raw and standardized Schwartz value scores with ARS and SDR. In the next section, we first review associations of ARS, SDR, affluence, and values that were reported previously. We then examine the findings of value score standardization on response styles and describe the research questions.

ARS, SDR, Affluence, and Values

ARS refers to the tendency to agree with propositions in general regardless of the content (Lentz, 1938). SDR is defined as the tendency of respondents to answer questions in a manner that will be viewed favorably by others (Crowne & Marlowe, 1960). It has been assumed that ARS and SDR are positively associated, because they exert joint impact on item responses (Ferrando & Anguiano-Carrasco, 2010), and both response styles are related to conformity (e.g., Gudjonsson & Young, 2011). Based on their shared affinity with conformity, we expect that ARS and SDR are positively related at culture level.

ARS at culture level was found to be systematically associated with affluence-related indicators and cultural values in various multinational studies. Specifically, ARS showed negative associations with "hard" social indicators such as the Human Development Index (HDI), political freedom, and democracy (Meisenberg & Williams, 2008; van Dijk, Datema, Piggen, Welten, & van de Vijver, 2009), and positive associations with "soft" indicators such as collectivism, hierarchy, and embeddedness (Harzing, 2006; Smith, 2004, 2011). There are also contradictory findings. For instance, Johnson, Kulesa, Cho, and Shavitt (2005) reported negative effects of power distance and uncertainty avoidance on ARS, whereas Harzing (2006) and Smith (2004, 2011) found a positive effect of power distance and a non-significant effect of uncertainty avoidance. The inconsistent results may be due to the fluctuation of ARS scores from different studies (e.g., number of countries covered, content of items from which these ARS indexes were constructed, and number of anchor points on the response scale). We replicate previous studies with ARS indexes compiled from more surveys involving various topics and answer scales, with a view to arrive at stable ARS measures.

There is limited empirical evidence on the culture-level correlates of SDR. The only culture-level study on the Lie scale of the Eysenck Personality Questionnaire, an SDR measure, showed substantial negative correlations with HDI, Gross National Product, political freedom, and democracy (van Hemert, van de Vijver, Poortinga, & Georgas, 2002). It was also reported that the Lie scale was positively linked with cultural values of collectivism and power distance. Taking a similar approach to deriving culture-level scores of SDR, we expect the scores of the Marlowe-Crowne Social Desirability scale from different cultures to replicate these patterns.

To summarize, ARS and SDR are conceptually distinct yet related response styles that show similar patterns of correlations with affluence indicators. The correlates reviewed above imply that affluence may play a role in the relations between the two response styles and cultural values (e.g., Smith & Fischer, 2008). We investigate to what extent affluence serves as the common denominator in both response styles in Study 1.

Value Score Standardization

Score standardization refers to the procedure of transforming a set of raw scores to some other metric, usually by computing deviance scores (i.e., subtracting the mean of each score) or *z* scores (which corrects for

individual differences in both means and standard deviations). The procedure has become a popular practice to adjust for response styles in data obtained from subjective evaluation of values, attitudes, and other psychological constructs using rating scales (Fischer, 2004). Score standardization takes different forms and these have different implications. Fischer (2004) distinguished within-subject, within-group, and within-culture standardization, and each may correct for differences in means, standard deviations, or both. It has been claimed that score standardization was effective in controlling for response styles (e.g., Hofstede, 1980; van de Vijver & Leung, 1997). At the same time, standardization may eliminate content-related differences or introduce new distortions (Dolnicar & Grün, 2007). There is no evidence that standardization removes all and only response style effects that jeopardize the validity of self-reported values.

In the Schwartz Value Survey, an explicit rationale and instruction for standardization are detailed for analysis of individual-level value types and for culture-level value types (Schwartz, 1992, 1999; Schwartz & Sagiv, 1995). For the former, within-subject standardization is recommended, which amounts to subtracting a respondent's mean score from each item score. The idea behind the standardization is that individuals can differ in their value preferences, but that one person cannot have more values than another. Therefore, differences in individual means across all value item ratings reflect scale use and not value substance. Value scores should be converted into scores that indicate the relative importance of each value in the participant's value system. On the basis of data from two countries, Schwartz, Verkasalo, Antonovsky, and Sagiv (1997) suggested that within-subject standardization of value items mainly corrects for scale bias with only a small proportion of content-related variance being eliminated. Similarly, within-culture standardization is suggested for culture-level value types. Standardization here includes the correction of a country's value type scores for the mean deviation of that country from the grand mean score of all countries (Schwartz, 2009b). Overall, it remains rather unclear whether and to which extent standardization affects response styles on value scores. Previous discussion has focused mainly on ARS and extreme responding (Dolnicar & Grün, 2007; Fischer, 2004), whereas SDR has been neglected. In Study 2 we study the correlation patterns of ASR and SDR with both raw and standardized value scores.

Summary of Research Questions

We seek to answer the following research questions:

What is the relationship at the culture level among ARS, SDR, and cultural values? (Study 1)

How much of the culture-level variance in the relationship of ARS and SDR with cultural values can be accounted for by affluence? (Study 1)

What are the effects when value scores are standardized to correct for ARS and SDR? (Study 2)

Study 1

To answer the first two research questions, we studied the associations of ARS, SDR, affluence, and cultural values. The study was carried out by means of secondary data analyses with large data sets on ARS and SDR at culture level.

Method

In this section, we describe the construction of multiple ARS measures, the meta-analytically derived SDR, the indicators for affluence, and the cultural value measures.

Culture-level ARS data. We located in the literature eight multinational surveys with Likert scales from which we could construct ARS indexes. Different response formats and scale characteristics were used in these surveys. Topics of the surveys range from social issues to learning motivations in different school subjects. More specifically, the ARS indexes were constructed from the European Values Survey (EVS, in 2008), Georgas et al.'s Family Value Study (in 2000), the European Social Survey (ESS, in 2008), the International Social Survey Program (ISSP; data sets in 2003, 2005, and 2006), the Program for International Student Assessment (PISA, in 2009), and the Trends in International Mathematics and Science Study (TIMSS, in 2007). Most datasets were published online; data of the Family Value Study were provided by James Georgas. More information on the database is presented in Table 1.

Table 1

Overview of Surveys for Constructing Acquiescence Indexes

Survey	N of Items Utilized	Response Likert Points	N of Countries	N of Respondents
ESS (2008)	26	5	29	37,827
EVS (2008)	18	5	45	51,076
Family Value Study (2006)	36	7	27	5,194
ISSP 2003	6	5	29	37,768
ISSP 2005	8	5	16	22,653
ISSP 2006	7	5	33	48,641
PISA	4	4	14	83,361
TIMSS-Math	8	4	50	218,426
TIMSS-Science	8	4	29	140,419

Note. ESS = European Social Survey; EVS = European Values Survey; ISSP = International Social Survey Programme; PISA = Programme for International Student Assessment; TIMSS = Trends in International Mathematics and Science Study.

Computation of the ARS index. We derived ARS measures in two ways. The first, conventional operationalization was to select a variety of items that measure different constructs and use the same Likert answer scale. The proportion of answers expressing agreement is an index of ARS. For scales with bidirectional items (i.e., scales with both positively and negatively worded items), ARS indexes can be computed as the proportion of responses expressing agreement for positively worded items and for negatively worded items separately and the average can be taken as ARS scores (van Dijk et al., 2009).

In data obtained from ISSP (three waves), PISA, and TIMSS (two scales in TIMSS were used, one for motivation in learning math and the other one for science), we identified six scales with bidirectional items; hence, we calculated six ARS scores based on such items. For the other three surveys, we compiled three ARS indexes using the proportion of agreement responses (e.g., answers of 4 and 5 of the 5-point Likert scale). It should be noted that ARS indexes constructed this way (i.e., inclusion of the endorsement of the positive end of a scale) especially in unbalanced (positive vs negative) item sets can be viewed as a weaker form of extreme response style (He & van de Vijver, 2013). We first calculated the individual index for each respondent, and then averaged the index across members of the same country to obtain a country-level index. In total, we compiled nine ARS scores at country level, and the number of countries ranged from 14 to 50. We replaced the missing values of the ARS indexes across the surveys using EM imputation; the imputation was supported by the nonsignificance of Little's MCAR test: $\chi^2(182) = 174.73$, $p = .64$ (Little & Rubin, 2002). We treated the nine ARS indexes as tau equivalent estimates (Lord & Novick, 1968), and used the mean as a global indicator of ARS. The value of Cronbach's alpha for this ARS scale was .87.

Culture-level SDR data. Culture-level SDR was derived from an instrument-based meta-analysis (van Hemert, 2003) using the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). This scale was chosen because of its popularity over the years and the prolific number of publications around the world. A total of 1052 publications from 1960 to 2011 which used the Marlowe-Crowne Social Desirability Scale or its various adapted forms were reviewed. Data from 153 journal articles, 4 unpublished theses, and 1 technical report were retained after excluding studies done with clinical, army, and inmate samples, and studies with

"faking" or experimental instructions. Among all the studies, the scale was used in English (49.7%), French (10.1%), Spanish (8.2%), Chinese (6.9%), German (5.7%), Danish (3.8%), Portuguese (2.5%), Japanese, Swedish, Hebrew, Turkish and Arab/Iranian (1.9% each), Italian and Dutch (1.3% each), and Croatian, Greek, Norwegian, Indonesian, and Hindu (0.6% each).

Computation of the SDR index. Means and standard deviations of the Marlowe- Crowne Social Desirability Scale (33 items) were recorded for each study and aggregated to the culture level. For studies using different short or adapted forms of the scale, scores were converted using the following formula: $m \times [33 / (n \times r)]$, where m is the reported mean, n is the number of items, and r is the number of anchor options in the response scale. The means of the full original scale and those of the transformed scores were compared and no significant difference was found. Cronbach's alpha of the full scale was .76, and of the various short forms the reliability ranged from .76 to .82 (corrected with the Spearman-Brown formula). At the end, the mean scores of SDR at culture-level were obtained for 42 countries (for more details, see Domínguez Espinosa & van de Vijver, 2012).

Measures of affluence. The affluence level of a country was measured with the Human Development Index, literacy rates, and democratization.

The Human Development Index (HDI) is a composite measure of the average achievements of a country on three dimensions of human development: a long and healthy life (life expectancy), access to knowledge (enrolment in education), and standard of living (Gross Domestic Product per capita) (United Nations, 2010). Data were available for 194 countries.

Literacy rate of adults in a country (percentage of people aged 15 and above) were extracted from the World Data Bank for 130 countries (The World Bank, 2011) as an approximation of level of education.

Index of democratization, the entitlement of ideologically and socially different groups to compete for political power, was obtained from the Polyarchy Index of Democracy (Vanhanen, 2007). The average index from 1998 to 2000 was available for 184 countries.

Measures of cultural values. We compiled cultural value scores from five traditions:

(i) Individualism, power distance, uncertainty avoidance, and masculinity scores were taken from Hofstede (2009) (N = 70).

(ii) Schwartz cultural value dimension scores including harmony, embeddedness, hierarchy, mastery, intellectual autonomy, affective autonomy, and egalitarianism were taken from Schwartz (2009a). It should be noted that dimension scores here were standardized within-cultures (N = 75).

(iii) Secularism and self-expression scores were extracted from Inglehart's value dimensions (Inglehart, Basafiez, Diez-Medrano, Halman, & Luijkx, 2004) (N = 80).

(iv) The nine societal value dimensions including power distance, uncertainty avoidance, institution collectivism, ingroup collectivism, gender egalitarianism, assertiveness, future orientation, performance orientation, and humane orientation from the GLOBE leadership project were taken for 62 countries (House, Hanges, Javidan, Dorfman, & Gupta, 2004).

(v) Dimensions including social cynicism, reward for application, social complexity, fate control, and religiosity were taken from the Social Axioms scale for 39 countries (Leung & Bond, 2004).

Results

Correlation analyses were used to study the associations among the variables of interest. We describe the findings in two parts. First, we report the relationships of the two response styles and affluence indicators. Second, we compare the zero-order correlations and partial correlations (corrected for affluence) of the two response styles with cultural values.

ARS, SDR, and affluence. The correlation of the ARS and SDR was .48, $p < .01$, which indicated that the two response styles were rather strongly related at the culture level. As shown in Table 2, both ARS and SDR showed strong negative correlations (.51 to .66, $p < .05$) with HDI, literacy rate, and democratization. Thus, affluence showed a consistent association with the two response styles, with less affluent countries tending to use more ARS and SDR.

Table 2

Correlations of ARS and SDR with Affluence Factors

	ARS	SDR
Human Development Index (HDI)	-.55*	-.66**
Literacy Rate	-.56*	-.55*
Democratization	-.51*	-.63**

Note. ARS = Acquiescent Response Style. SDR = Social Desirability Responding. HDI = Human Development Index.

     The role of affluence in the correlations between response styles and values. Correlations of ARS and SDR with all the cultural value variables were computed, both with effects of HDI uncontrolled and controlled for. The two sets of correlations can be found in Table 3. As shown in the table, ARS was positively related to embeddedness, hierarchy, collectivism (GLOBE), uncertainty avoidance (GLOBE), future orientation, performance orientation, reward for application, and religiosity, and negatively related to individualism (Hofstede), harmony, secularism, and autonomy. However, nine out of the 13 significant correlations became nonsignificant after correcting for HDI. Leaving out the non-significant correlations in both zero-order and partial correlations, the average explained variance dropped from 17.02% to 6.24%.

Table 3

Correlations of ARS and SDR with Cultural Value Scores from Five Research Traditions

	ARS		SDR	
	Zero-order	HDI partialed out	Zero-order	HDI partialed out
Hofstede Values				
Power Distance	.14	-.20	.37*	-.15
Individualism	-.27*	.01	-.54**	-.09
Masculinity	.12	.10	.19	.20
Uncertainty Avoidance	-.07	-.14	-.04	-.08
Schwartz Values				
Harmony	-.35*	-.20	-.15	-.10
Embeddedness	.43*	.04	.56**	.13
Hierarchy	.36	.20	.30	.13
Mastery	.16	.18	-.15	-.03
Affective Autonomy	-.32*	-.05	-.50**	-.09
Intellectual Autonomy	-.49*	-.20	-.45*	-.07
Egalitarianism	.07	.31*	-.25	-.09
Inglehart Values				
Secularism	-.71**	-.59**	-.54**	-.06
Self-Expression	-.07	.36**	-.56**	.11
GLOBE-should be				
Power Distance	.12	.14	.02	.09
Uncertainty Avoidance	.36*	-.10	.32	-.10
Institution Collectivism	.42**	.29*	.25	-.06
Ingroup Collectivism	.31*	.28	-.13	-.08
Gender Egalitarianism	-.25	-.01	-.28	.04
Assertiveness	-.07	-.14	.19	.06
Future Orientation	.48**	.14*	.16	-.08
Performance Orientation	.33*	.26	.07	.03
Humane Orientation	-.15	-.23	-.20	-.18
Social Axioms				
Social Cynicism	.02	-.25	.48*	.29
Reward for Application	.61**	.27	.68**	.14
Social Complexity	-.36*	.11	-.60**	-.27
Fate Control	.31	-.28	.82**	.49*
Religiosity	.49**	.08	.71**	.32

Note. ARS = Acquiescent Response Style; SDR = Social Desirability Responding; HDI = Human Development Index. *$p < .05$. **$p < .01$.

   We found positive correlations of SDR with power distance, embeddedness, social cynicism, reward for application, fate control, and religiosity. Negative correlations were found for individualism, autonomy, secularism, self-expression, and social complexity. Among the 12 significant correlations, only fate control stayed significant when HDI was controlled for. Leaving out the non-significant correlations in both zero-order and partial correlations, the average explained variance dropped from 31.47% to 4.64%.

Discussion

We set out to test the relationship between response styles and cultural values after statistically controlling for affluence. The findings support that affluence serves as a common denominator of relationships between the two response styles and cultural values. Correcting for affluence leads to a large reduction of the correlations between various psychological indicators and response styles. The reduction was larger for SDR than for ARS. Implications of the differential reductions in correlations are discussed in the General Discussion section.

Study 2

In this study, we explored the effects of value score standardization on ARS and SDR. We focused only on value scores from Schwartz Value Survey, for which there is a large data set so that we could construct value scores with raw and standardized data.

Method

Measures of ARS and SDR. The same measures of culture-level ARS and SDR as in Study 1 were used for the current analysis. Specifically, we had one global ARS index and one SDR index from the Marlowe-Crowne Social Desirability Scale.

Schwartz values of raw and standardized scores. With the original data of the Schwartz Value Survey collected by Schwartz and collaborators in 73 countries from 1988 to 2010, we were able to compute the seven culture-level value scores with both raw scores and within-culture standardized scores. Followed the coding manual (Schwartz, 2009b), the within-culture standardization was done in three steps: 1) calculate the mean of value ratings for all respondents from a country, 2) subtract the mean score from the scale mean (a score of 4 in this case), and 3) subtract the score difference obtained in Step 2 from each cultural value type score. In total, we had seven dimension scores in the raw and the standardized form.

Results

We correlated the response style measures with both raw and standardized scores of the Schwartz value types (Table 4). We found consistent, positive correlations of ARS with raw value scores. Because opposing values in the motivational continuum are conflicting and should show dissimilar correlations, the consistent, positive correlations of all raw value scores with ARS suggest strong confounding of value scores and response styles. With standardized value scores, ARS was significantly associated to only a few value types, such as embeddedness versus autonomy, which pointed to the role of conformity. The variance explained in the value scores by ARS on average dropped from 18.90% to 10.52% as a consequence of score standardization. The shift of correlations between ARS and culture-level value types is shown in Figure 1.

Table 4

Correlations of ARS and SDR with Raw and Standardized Schwartz Value Scores

	ARS		SDR	
	Raw Value Score	Standardized Value Score	Raw Value Score	Standardized Value Score
Culture-Level Type				
Harmony	.20*	-.36	.08	-.12
Embeddedness	.53*	.41*	.47**	.55**
Hierarchy	.51*	.32	.27	.20
Mastery	.58*	.21	.13	-.14
Affective Autonomy	.08	-.27*	-.43*	-.50**
Intellectual Autonomy	.04	-.46*	-.28	-.40*
Egalitarianism	.64*	.04	.06	-.18

Note. The entries for standardized value scores differ slightly from the corresponding entries in Table 3 because here a uniform set of 55 items in the SVS was taken for analysis. ARS = Acquiescent Response Style; SDR = Socially Desirable Responding; HDI = Human Development Index. *$p < .05$. **$p < .01$.

The correlation patterns of SDR with raw and standardized value scores were very similar (Table 4). SDR showed positively associations with embeddedness (versus autonomy) in both sets of value scores. Standardization made the correlation slightly stronger. The explained variance increased from 10.04% to 13.94%. Still, the shift of patterning was rather limited and did not suggest a decrement in correlations after standardization as found for ARS. The shift of correlations between SDR and culture-level value types is presented in Figure 2.

Discussion

We compared the correlation patterns of ARS and SDR with raw and standardized value scores in the Schwartz value framework. We found that the correlation patterns of ARS with values were strongly affected by the standardization procedure, although not to the same extent for these value types, whereas the effects for SDR were more limited.

General Discussion

We address three main findings and some possible implications: (i) the correlation of ARS and SDR with affluence indicators; (ii) the pattern of correlations of these two response styles with value scores, with and without the effect of affluence partialed out; and (iii) shifts in the correlations between response styles and value scores as a consequence of value score standardization. We discuss the implications integrating results of both studies.

In Study 1 we found that the correlation between ARS and SDR at country level was rather strong and that both response styles showed substantial correlations with three affluence-related indicators. The correlation with affluence suggests substantial and systematic differences between countries. At face value the correlation between them would seem to suggest that the two response styles address partly different aspects of the HDI variable. However, method effects may have played a role; the two styles were obtained through very distinct methods. ARS scores were derived from distributions of responses on Likert scales, whereas SDR scores were based on a separate measure (the Marlowe-Crowne scale). How the response style effects work out for value scores in five research traditions (Hofstede, Schwartz, GLOBE, Inglehart, and Social Axioms) is presented in Table 3. The table also shows that after correction for affluence the number of significant correlations decreases dramatically, especially for SDR, where only one of twelve entries remains significant. Perhaps more than any other of our findings this illustrates how response styles can influence findings of cross-cultural differences in

the domain of values as they have been reported in numerous previous studies. In addition, the entries clearly suggest that there is differentiation in the size of the correlations. ARS and SDR probably should not be treated as having general effects; instead they affect differentially various values and value dimensions. This heterogeneity also holds across traditions; the GLOBE study which asked for values as they "should be" did not lead to any significant correlations with SDR across countries.

We found that ARS is mostly associated with values regarding "fitting in" or "normativeness" (secularism, institution collectivism, in-group collectivism). ARS is also positively correlated with embeddedness and negatively with autonomy, which equally points to "fitting in". This pattern of correlations is much weaker after correction for the effects of HDI.

As mentioned, with one exception significant correlations of SDR with value scores became insignificant after correcting for HDI. Low and insignificant correlations were found with various value scores known to be related to affluence (e.g., individualism and low power distance, secularism, and low autonomy), and for four of the five factors of the Social Axioms Scale, which measures generalized beliefs about people and events in the social world. Here we also found the only remaining significant effect. Ignoring this single exception, it can be concluded that affluence can account for most country differences in correlations between SDR and value scores.

Estimated effects of both ARS and SDR response styles are reduced strongly after correction for differences in HDI. However, standardization does not lead to large shifts in correlations for SDR, and the limited effects are difficult to interpret. For ARS standardization leads to substantial shifts in correlations, but these are more varied, at least for the value types distinguished by Schwartz (Schwartz, 1992, 1999) that we could analyze. In Table 4 some correlations for a given value type of standardized scores and raw scores even have an opposite sign, while in other instances the correlation remains almost the same. Still, there is consistency in the sense that related values tend to show similar shifts. Figures 1 and 2 where value types are organized in a circle so that similar values are next to each other provide an illustration of this patterning for ARS.

In general terms there are three ways in which variance due to response styles can be interpreted. The first is to ignore such variance, effectively treating it as error variance. Although this option is chosen implicitly by authors when response style effects are not considered, this cannot be a viable option in cross-cultural research on values in view of the size of various correlations of response styles with other variables reported here. Ignoring the impact of response styles at country level would imply that affluence will be related to many values at country level, thereby obscuring real associations. The second way is to treat response style effects as systematic variance that is due to cross-cultural non-equivalence in measures used to assess value dimensions. Here response styles are seen as a validity threat and presumably the validity of scores will be improved if such non-target variance is corrected for. A study by Van Herk, Poortinga, and Verhallen (2004) can serve as an example. These authors found higher ARS scores for representative samples of respondents in countries from Southern Europe compared with samples from countries in Western Europe. At face value the higher scores expressed higher levels of product liking and purchase intentions. However, there was no evidence for corresponding national differences in volumes of actual purchases. In this case, response styles added non-target variance to scores, and should be viewed as cultural bias.

Standardization as recommended by Schwartz (2009b) amounts to a form of correction for general response tendencies that can be assumed to affect all scores equally. Apparently, standardization reduces effects of ARS on value scores. The better recovery of theoretically expected patterns (Table 4) and empirically support through the relationships with the other value measurements (Table 3) in the case of ARS seems to suggest that score standardization is an effective way to control for ARS in Schwartz Value Survey, at least partially. As mentioned, the entries in Table 4 suggest that ARS has differential effects for various value types. To counter the effects of SDR, standardization is a more remote option, since value score standardization does not affect the substantial correlations of SDR with the value type scores. If anything, the pattern of correlations is somewhat more sharply defined after standardization if SDR is seen as an expression of positive social values

(e.g., embeddedness). Thus, a general correction to reduce or remove response style effects may be hard to justify.

ARS with SVS culture level

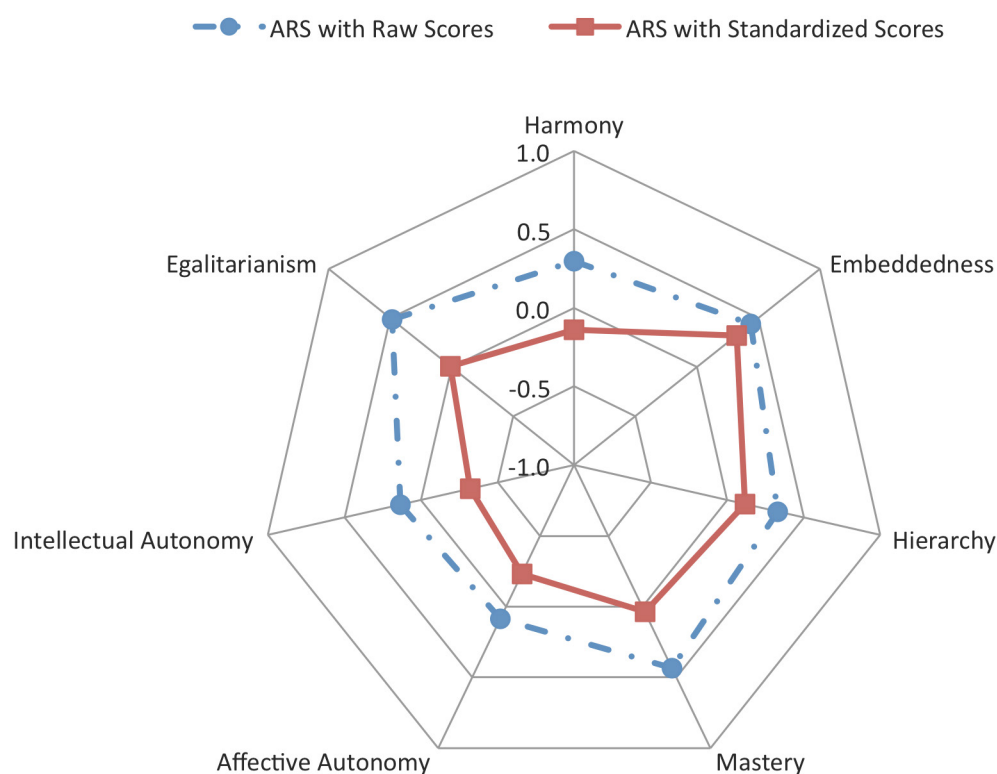- - ● - ARS with Raw Scores   ■ ARS with Standardized Scores

Figure 1. Correlations of acquiescence (ars) with raw and standardized culture-level Schwartz value scores

The third way of dealing with cultural variance due to response styles is to approach this variance not as validity threat, but as providing information about the interpretation of cross-cultural differences in a target variable. For example, Smith (2004) interpreted differences in ARS as reflecting differences in collectivism. The correlations in Tables 3 and 4 suggest substantial relationships of SDR with individualism-collectivism, a dimension known to be highly correlated with affluence. Like individualism-collectivism SDR may be seen from this perspective as a psychological correlate of affluence. From this perspective any correction is likely to amount to overcorrection. The strong consequences of partialing out affluence-related variance underscore the need for a substantive interpretation; ARS and especially SDR are likely to contain information on the standing of individuals and cultures on value types and value dimensions. At the same time, it is conceptually an unsatisfactory state of affairs, if cross-cultural differences in response styles, in affluence, and in values appear as a mixture of interrelated variables. One way to disentangle the mixed effects is to view affluence as a moderator of the link between response styles and values. The affluence level of a country would then be a psychological indicator of the preferred national communication style (Smith, 2004, 2011), which provides a perspective in examining cross-cultural similarities and differences. Response styles are higher in less affluent countries, where people tend to endorse values pertaining to "fitting in."
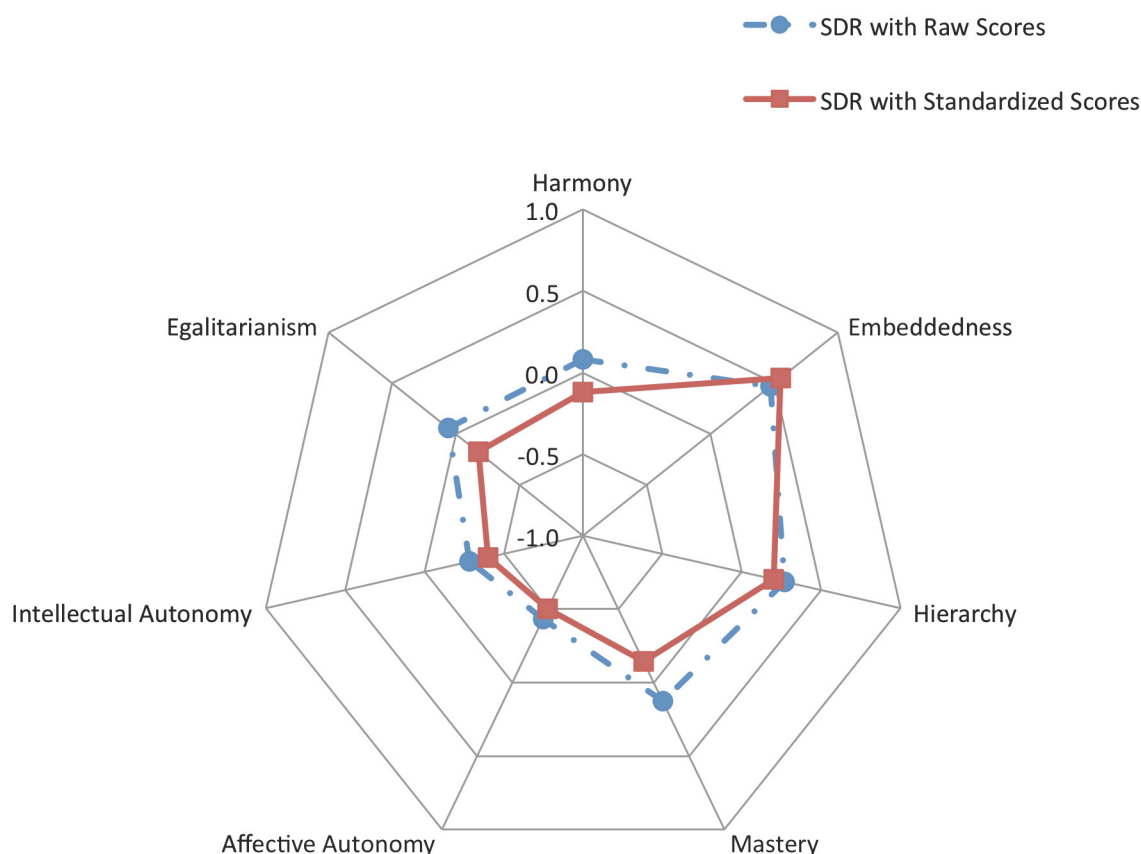
Figure 2. Correlations of social desirable responding (sdr) with raw and standardized culture-level Schwartz value scores

It should be noted that there are some limitations in the present study. We constructed ARS indexes from different surveys with unbalanced numbers of countries available, which resulted in many missing values. Caution needs to be taken in generalizing the findings of correlations with ARS. In addition, we only studied the effects of value score standardization in one dataset (i.e., Schwartz Value Survey), while more value surveys with raw and standardized scores might be examined to test the generalizability of our findings. Last but not least, apart from the overlap in variance suggested by correlations in Table 3 and 4, there is also non-explained variance that requires further differentiation and interpretation.

Conclusions

In summary, in large data sets we found notable associations between ARS and SDR that cannot be ignored when cross-cultural score differences observed in various traditions of values research are interpreted. We examined effects of correction for affluence (HDI) and standardization. When a distinction is made between valid cross-cultural variance or target variance, and variance due to non-equivalence or bias of variables, evidence for both can be pointed to. All in all, a complex picture has emerged from our two studies. In future research we intend to further tease apart variance components as mentioned in this chapter and extend the search to other types of response styles, such as extremity and midpoint responding.

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