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Individual and culture-level components of survey response styles: A multi-level analysis using cultural models of selfhood

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Variations in acquiescence and extremity pose substantial threats to the validity of cross-cultural research that relies on survey methods. Individual and cultural correlates of response styles when using 2 contrasting types of response mode were investigated, drawing on data from 55 cultural groups across 33 nations. Using 7 dimensions of self-other relatedness that have often been confounded within the broader distinction between independence and interdependence, our analysis yields more specific understandings of both individual- and culture-level variations in response style. When using a Likert-scale response format, acquiescence is strongest among individuals seeing themselves as similar to others, and where cultural models of selfhood favour harmony, similarity with others and receptiveness to influence. However, when using Schwartz's (2007) portrait-comparison response procedure, acquiescence is strongest among individuals seeing themselves as self-reliant but also connected to others, and where cultural models of selfhood favour self-reliance and self-consistency. Extreme responding varies less between the two types of response modes, and is most prevalent among individuals seeing themselves as self-reliant, and in cultures favouring self-reliance. As both types of response mode elicit distinctive styles of response, it remains important to estimate and control for style effects to ensure valid comparisons.

Keywords: Response style; Culture; Self-construal.

Across a broad range of practical issues, accurate interpretation of mean differences in values, attitudes and opinions obtained from surveys is crucial to testing of theories as well as effective practical interventions. We therefore need a clear understanding of the ways in which survey responses may be affected by extraneous factors. This issue is particularly critical when comparing responses from cultural groups that differ in habitual communication styles. Given a set of items keyed to Likert-type scales, respondents from particular groups may distinctively favour agreeing with items (acquiescence), favour extreme points (extremity) or favour midpoints (moderation). That research participants respond to survey items based on question format in addition to specific item content has long been recognised, and the threat posed by such effects to the validity of cross-cultural measurement has been studied extensively (Johnson, Shavitt, & Holbrook, 2011). However, we do not yet know the relative contribution of type of cultures sampled, type of respondent self-construal and particular response format to response style effects. If we can estimate these contributory factors, we will be better able to determine how best to design measures and how to control for response style effects.

Single-nation studies of acquiescence have indicated that scores may vary due to item complexity (Condon, Ferrando, & Demestre, 2006) and in relation to variations in item content (Hinz, Michalski, Schwarz, & Herzberg, 2007). However, the results of Smith (2004) suggest that variation in acquiescence between nations is also substantial and important. He reported that cross-national differences in acquiescence derived from different studies correlated at between .5 and .7, even though studies had used different items and different samples. Cross-cultural research into response style has mostly focused on two issues: how best to explain nation-level variations, and whether such effects should be considered measurement artefacts or valid indicators of specific population attributes. We contribute to these debates by (a) conducting a finer-grained examination than previous studies into the combined roles of cultural differences and corresponding individual differences in self-construal as predictors of both acquiescent and extreme response styles and (b) examining the extent to which these variations depend on the response scale employed. Our position is that response style will vary between samples no matter what type of measurement is employed—hence, for cross-cultural studies to approach valid measurement, effects of response style must be estimated. Whether these effects should also be discounted depends on the constructs being examined.

Culture and response style

Existing characterisations of cross-national differences have been strongly guided by the results of large-scale survey data. What we know therefore depends on the degree to which response styles have been adequately controlled. Smith (2004) computed estimates of nation-level acquiescence from seven previously published cross-national surveys, each sampling 34 or more nations. These surveys had employed Likert-type response categories, and none included reverse-coded items. Acquiescence was defined by summing item means across conceptually unrelated items. Substantial correlations were found between six of the seven acquiescence estimates, the exception being that derived from ratings of the behaviours of "others in my society" sampled by House et al. (2004). This does not mean that acquiescence was absent from the House et al. data, but if present, it was evidently shaped by different factors. Smith then used cultural dimension scores provided by House et al. to predict acquiescence within the other data sets. Acquiescence was greater in samples with more collectivistic behaviours and with values favouring uncertainty avoidance.

Johnson, Kulesa, Cho, and Shavitt (2005) analysed extreme responding across 19 nations and acquiescence across 10 nations. Extremity was coded as the frequency

of using scale endpoints. Acquiescence was coded as the frequency with which respondents agreed or tended to agree with both items in a series of paired positively and negatively worded items that had similar content. After controlling for individual-level effects, acquiescence was significantly predicted by low GNP and by each of Hofstede's (2001) cultural dimensions, namely collectivism, femininity, low uncertainty avoidance and low power distance. These results differ in some respects from those of Smith (2004), perhaps because of the smaller number of nations sampled. Moreover, neither study included individual-level measures of cultural orientation.

Studies were thus needed to assess effects at both individual and national levels. Smith and Fischer (2008) reported a multi-level analysis of extremity and acquiescence using survey data from business managers in 38 nations (Smith, Peterson, & Schwartz, 2002). Their data included a three-item measure of independent/interdependent self-construal. At the individual level, acquiescence was predicted by interdependence, whereas extremity was predicted by independence. At the nation level, acquiescence was stronger in collectivistic cultures and extremity was stronger in more individualistic cultures. Moreover, cross-level interactions were found. Acquiescence was particularly strong among individuals with interdependent self-construal within collectivistic cultures. Extremity was particularly strong among individuals with independent self-construals within individualistic cultures.

Subsequent studies using large-scale cross-national survey data continue to identify nation-level collectivism as a strong predictor of acquiescent responding (He, van de Vijver, Dominguez Espinosa, & Mui, 2014; Smith, 2011). These studies also show that response styles are associated with a cultural dimension termed monumentalism versus flexumility (Minkov, 2011). Minkov defines monumentalism as "a cultural syndrome that stands for pride and an invariant self: A conviction that one must have an invariant identity and hold onto some invariant beliefs and norms. It also reflects an avoidance of personal duality and inconsistency" (p. 129). Both acquiescence and extremity are greater in monumentalist cultures.

The studies reviewed provide indications of the cultural contexts that elicit most acquiescence in response to Likert-scale items. However, the concept of collectivism is broad and ill-defined, and we need more specific understandings to better understand its linkage with response style. Here, we unpackage the previously found nation-level effects of collectivism and monumentalism by distinguishing five dimensions of self-other relatedness that are distinctively linked to collectivism or to monumentalism, and estimating their effects on acquiescent and extreme responding at both individual and cultural levels of analysis. Additionally, we explore possible effects of two further dimensions of self-other relatedness that are not linked empirically to either collectivism or monumentalism.

Taking account of response style

Cross-cultural researchers have employed four principal ways of taking account of response style: inclusion of reverse-scored items (Owe et al., 2013), within-respondent standardisation (Hofstede, 2001; Schwartz, 2007), use of response categories other than Likert-type scales (Schwartz, 2007) and adjusting scores by identifying a latent acquiescence factor (Welkenhuysen-Gybels, Billiet, & Cambré, 2003). In other major projects such as the World Values Survey (Inglehart, Foa, Peterson, & Welzel, 2008), response style variations are not modelled, implicitly assuming that acquiescence is a component of the values and behaviours under study. Here, we test whether different effects are found when responding to Likert-scale items, and when using items keyed with Schwartz's (2007) alternative response format, which involves comparing verbal portraits of others with oneself. Our concern is not with comparing the magnitude of each response style across items, since this may well vary with item content; we focus instead on the personal and cultural circumstances that maximise distinctive response styles within a given set of items and response scales.

Self-construals and cultural models of selfhood

To extend earlier findings, predictors are required that tap individual and cultural aspects of the contrast between individualism and collectivism. Measures of independent and interdependent self-construal are suitable for this purpose. However, the most widely used measures (e.g., Singelis, 1994) lack adequate reliability and validity, partly owing to a lack of control for acquiescence. Recently, Vignoles et al. (in press) developed and validated a measure tapping seven dimensions of self-construal in a study including 55 cultural groups across 33 nations. In contrast to many cross-cultural studies, Vignoles et al. (in press) obtained data from several different cultural groups within many of the sampled nations. In this paper, we adopt cultural groups, rather than nations, as higher-level units of analysis.

Vignoles et al.'s (in press) measure includes forward and reverse-scored items tapping each of their seven dimensions, allowing them to model a response-style method factor. In multi-level measurement models, their seven-factor solution showed configural invariance across individual and cultural levels, allowing them to characterise individuals' self-construals and cultural groups' models of selfhood using the same seven dimensions. Furthermore, the seven dimensions could not be reduced to a second-order contrast between independence and interdependence at either level. The seven factors should

therefore be considered as separate constructs at both individual and cultural levels, and can be used to predict the response style profiles that will be found in relation to differing response formats.

Only four of the dimensions identified by Vignoles et al. (in press) were associated with culture-level collectivism: difference (vs. similarity), self-direction (vs. dependence on others), self-expression (vs. harmony) and self-containment (vs. connectedness to others). Their data also indicates that a fifth dimension, consistency (vs. variability), was associated with monumentalism (vs. flexumility). Two further dimensions, self-reliance (vs. dependence on others) and self-interest (vs. commitment to others) were not related to either collectivism or monumentalism.

DEVELOPMENT OF HYPOTHESES

We now consider how positions of individuals and cultural groups on these dimensions may predict levels of acquiescence and extremity, starting with the frequently employed Likert-type "agree/disagree" format.

Collectivism

Hofstede (2001) emphasised that individualism–collectivism is about independence from or dependence on group membership. In contrast, his dimension of masculinity–femininity "… is about ego-enhancement versus relationship enhancement, regardless of group ties" (Hofstede, 2001, p. 293). This defines collectivism as entailing long-term inclusion in groups, rather than particular aspects of group dynamics. However, later authors have understood collectivism as including, for example, preference for preserving harmony and being receptive to influence from relevant others (Smith, Fischer, Vignoles, & Bond, 2013). Each of these attributes may be distinctive of particular collectivistic cultures, but there is no reason to expect they are necessarily strongly associated with one another. We therefore consider in turn possible understandings of the effect of collectivism on response styles, involving each of the four dimensions of self-other relatedness that showed predicted associations with collectivism in Vignoles et al. (in press).

Firstly, cultural differences in response style may be a matter of communication style (Smith, 2004, 2011). People in collectivist cultures are more likely to curtail self-expression to safeguard harmony within their groups (i.e., self-expression vs. harmony). Disagreeing with others or expressing extreme opinions would both risk disturbing harmony. Consequently, individuals focused on harmony rather than self-expression may prefer the "safer" option of expressing agreement with the statements in a questionnaire, and adopting less extreme positions in their responses.

Secondly, effects of collectivism on response styles may involve social influence. Members of individualist cultures are more likely to make their own decisions (self-direction), whereas members of collectivist cultures are more likely to be influenced by others (receptivity to influence), as shown by cross-national comparisons of conformity (Bond & Smith, 1996). Those who are more receptive to influence may be more swayed by the opinions expressed in questionnaire items and so agree with them more (i.e., higher acquiescence). It is less clear whether self-direction versus receptivity to influence could be expected to predict extreme responding.

Thirdly, effects of collectivism may derive from self-other differentiation. Two of the self-construal dimensions tap this issue, but in slightly different ways: Difference versus similarity reflects a desire to be different or similar to others: one could assert one's difference by disagreeing with the presented items, or by taking up extreme positions. Self-containment versus connectedness concerns the clarity or permeability of self-other boundaries. Those perceiving a very clear boundary between self and others might have less difficulty expressing their opinions clearly, whereas those perceiving a fuzzy boundary might give less extreme responses due to uncertainty about their own (diffuse) position in relation to items.

For each of these possibilities, a related issue is how far effects are attributable to individuals' personal cultural orientations (i.e., their self-construals) or to the culture-level normative environment (i.e., cultural models of selfhood). For each prediction, we test both levels simultaneously. The possibilities outlined above comprise alternative ways of understanding linkages of cultural collectivism with response style. Thus, although we number them here as one hypothesis, referring to acquiescence and one referring to extremity, the proposed elements within each hypothesis are independent of one another:

> H1. Acquiescent responding on Likert-type scales will be greater where persons or cultural groups score higher on (a) harmony with others, (b) receptiveness to influence, (c) similarity with others and (d) connectedness with others.

Conversely:

> H2. Extreme responding on Likert-type scales will be higher where persons or cultural groups score higher on (a) self-expression, (b) self-direction, (c) difference from others and (d) self-containment.

Monumentalism

Monumentalism has been shown to predict both high acquiescence and high extremity (He et al., 2014; Smith, 2011). In both studies, monumentalism was more

strongly correlated with extremity than with acquiescence. Models of selfhood in monumentalist cultures are characterised by high self-consistency. It is plausible that self-consistency and extremity would be associated, given that cultures of monumentalism favour religious commitment and certainty regarding the merits of one's nation: Participants concerned about self-consistency would want to give answers that maximally reflect their existing views, rather than moderating them.

H3. Extreme responding on Likert-type scales will be greater where persons or cultural groups score higher on self-consistency.

It is harder to see theoretically why self-consistency would predict higher acquiescence, and we suspect that the previously observed relations between monumentalism and acquiescence may be due to aspects of monumentalism not captured by Vignoles et al. (in press) dimensions of selfhood (which were not designed to capture monumentalism).

We also explored associations of response styles with the remaining two aspects of self-construal identified by Vignoles et al. (in press), namely self-interest versus commitment to others and self-reliance versus dependence others, but made no specific predictions.

Response mode

Cross-cultural researchers have sought to control for or eliminate effects of response style. In particular, Schwartz (2007) asked respondents to rate how similar to themselves are persons exemplifying specific values. By providing a set of specific comparators, he sought to overcome some ambiguities of responding to items with Likert-type scales (e.g., Heine, Lehman, Peng, & Greenholz, 2002).

Schwartz's (2007) portrait-comparison format requires respondents to reflect about themselves and about others. Some of the arguments presented above in relation to collectivism can be expected to apply also to the "like me/unlike me" format. Respondents who favour harmony, similarity and connectedness with others, and are receptive to influence, are more likely to see other persons as similar to themselves:

H4. Acquiescent responding on portrait-comparison response scales will be greater where persons or cultural groups score higher on (a) harmony with others, (b) receptiveness to influence, (c) similarity with others and (d) connectedness with others.

However, making judgements using the portrait-comparison format may be easier in more individualistic cultures, where persons' actions are taken as representative of internal states. In more collectivist cultures, actions are more frequently seen as responding to contextual requirements (Smith et al., 2013), and respondents are less likely to describe themselves as consistent across settings (e.g., Tafarodi, Lo, Yamaguchi, Lee, & Katsura, 2004). Church et al. (2012) investigated beliefs in traitedness in Mexico, the Philippines, Japan and the United States; traitedness beliefs negatively predicted the need to monitor one's behaviours in relation to others. Where traitedness is high, the similarity or difference between oneself and various types of others will be more apparent, enabling respondents to make more definite judgements about each of the survey items. Conversely, where traitedness is low, less extreme judgements would be likely: "I am sometimes like this person, and sometimes not." Traitedness is most clearly exemplified by self-construals of oneself as different from others, self-reliant and consistent in one's behaviour. Thus:

H5. Extreme responding on portrait-comparison response scales will be greater where persons or cultural groups score higher on (a) difference from others, (b) self-consistency and (c) self-reliance.

We note that in relation to self-consistency, our reasoning led us to converging predictions for Likert scales (H3) and for portrait-comparison scales (H5b).

METHOD

Data were collected by (Owe et al., 2013) and Vignoles et al. (in press), who provide fuller details of the development of their self-construal measure. Selection of the dependent measures used in this secondary analysis was constrained by those employed in the original study. However, it was desirable to select a broad range of items with conventional Likert-type response scales. It was also important to sample Schwartz's (2007) portrait-comparison format, since this is explicitly intended to overcome problems associated with Likert-scale format.

Participants and Procedure

Opportunity samples of adults were accessed by snowballing from researchers' social networks, through community groups and non-governmental organisations, and by university students collecting data from their relatives. The sample comprised 7122 adults from 55 different cultural groups. Cultural groups drawn from within each nation were defined on the basis of demographic criteria such as region, ethnicity, religion and status that were judged to be most salient by locally based co-authors of this paper. This procedure was adopted to provide more adequate representation of cultural diversity than that

provided by simple comparison of nations. Full demographic details are provided in the Appendix.

Measures

Self-construals/cultural models of selfhood

Vignoles et al. (in press) included 38 self-construal items in their survey. Some items were adapted from earlier measures (e.g., Gudykunst et al., 1996; Singelis, 1994) and others were newly drafted. Wordings were intended to improve clarity and concreteness and to account for acquiescence using reverse-coded items that did not include negative statements. The present study uses data for the 22 items found by Vignoles et al. to best represent their seven dimensions across cultures.

To make the task of responding as specific as possible, participants were asked: "How well does each of these statements describe you." To reduce possible reference group effects (Heine et al., 2002) and encourage idiographic comparisons, participants were asked to think about the items in relation to each other, rather than comparing themselves with other persons within their cultural context. Nine-point response scales were used, ranging from 1 (*not at all*) to 9 (*exactly*), with three intermediate anchor-points (3 = *a little*, 5 = *moderately*, 7 = *very well*). Items were worded using "you," in order to make the task feel less introspective and to make it more natural where semi-literate participants were helped to read the questions by research assistants. Example items are "You like being different from other people" (difference), and "You always ask your family for advice before making a decision" (receptiveness to influence).

Vignoles et al. (in press) tested multi-level measurement models, decomposing variance in these items into individual and cultural levels of analysis and finding support for seven bipolar factors, as well as a separate method factor modelling acquiescence (Welkenhuysen-Gybels et al., 2003), at both individual and cultural levels of analysis. To reflect the decomposition of variance and differences in factor structure across levels, and to adjust for the method factor, our analyses used factor scores saved from this model.

Likert-type response styles

Three measures in our survey used six-point response scales from 1 (*completely disagree*) to 6 (*completely agree*): *contextualism beliefs* (from Owe et al., 2013: four positively worded and three reversed items, e.g., "To understand a person well, it is essential to know about his/her family"), *immutability beliefs* (Levy, Stroessner, & Dweck, 1998: three positively worded and three reversed items, e.g., "People can change even their most basic qualities"), and *community relations* (Eriksson, 2008: three positively worded and three reversed items, e.g., "I take part in social activities with the people in my neighbourhood"). Acquiescence was measured as the within-respondent mean across all 19 items. Extremity was measured as the number of items coded as 1 or 6. Sample means are provided in the Appendix.

Portrait-comparison response styles

We used the Human Values Scale, a short form of the Portrait Values Questionnaire (Schwartz, 2007). Participants read short descriptions of 21 target individuals with gender matched to the participant (e.g., "Thinking up new ideas and being creative is important to her. She likes to do things in her own original way"). Participants rated how similar each person was to themselves, from 1 (*very much like me*) to 6 (*not at all like me*), but we reversed these scores so that higher numbers indicated greater value endorsement. Schwartz's circumplex model covers a comprehensive range of values, each of which is diametrically opposed with other values within the scale. This enables the computation of acquiescence as the within-respondent mean of responses across all 21 items. Extremity was measured as the number of items coded as 1 or 6. Sample means are provided in the Appendix.

RESULTS

Table 1 shows individual-level means, and individual- and sample-level correlations between the different indicators of acquiescence, extremity and self-construals. With Likert-scale response format, acquiescence and extremity were independent of one another at both levels of analysis. With portrait-comparison format, acquiescence and extremity were positively correlated at both levels of analysis. The likely explanation for this difference is that while responses to Likert scales were more normally distributed, those for responses to portrait-comparison scales were skewed towards the "like me" scale point (participants checking points 1 and 6, respectively: 17%, 15% for Likert scales; 10%, 20% for portrait comparisons). All four response style measures showed substantial sample-level variance (ICCs: Likert-acquiescence = .254, Likert-extremity = .263; Portrait-acquiescence = .247, Portrait-extremity = .280).

The hypotheses were tested by multi-level modelling using HLM6 (Raudenbush, Bryk, & Congdon, 2007), with individuals at Level 1 and cultures at Level 2. Analyses use full maximum likelihood estimation and robust standard errors. As Table 1 shows that there was substantial interrelation between some of the different self-construal measures, especially at the sample level,

TABLE 1
Means, individual-level and culture-level correlations between response styles and self-construal dimensions

	Mean (SD)	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1. Acquiescence/Likert	3.63 (.48)	–	−.01	.04	.06	−.01	.00	−.03	.03	−.02	−.03	.04
2. Acquiescence/Portrait	4.08 (.72)	.11	–	.15	.38	.01	.00	.13	−.08	.05	.13	−.01
3. Extremity/Likert	5.38 (4.30)	.09	.51	–	.53	.04	.02	.08	−.07	.11	.12	−.04
4. Extremity/Portrait	5.79 (4.70)	.13	.74	.83	–	.06	.04	.14	−.07	.11	.15	−.02
5. Self-expression versus harmony	.00 (.37)	−.34	−.03	.06	.08	–	.44	.89	.61	.38	−.11	−.25
6. Self-direction versus receptiveness to influence	.00 (.17)	−.42	−.23	−.18	−.33	.62	–	.46	.80	−.06	.40	.62
7. Self-difference versus similarity to others	.00 (.51)	−.53	−.11	−.15	−.17	.59	.50	–	.28	.10	.15	.34
8. Self-containment versus connection to others	.00 (.29)	.04	−.13	.00	−.11	.53	.55	.41	–	−.10	−.71	.76
9. Self-consistency versus variability	.00 (.40)	.05	.62	.34	.50	.24	−.24	.20	−.34	–	.48	−.23
10. Self-reliance versus dependence on others	.00 (.16)	−.27	.36	.10	.25	.23	−.30	.54	−.01	.37	–	.14
11. Self-interest versus commitment to others	.00 (.50)	.57	.38	.34	.38	.54	−.28	−.40	.25	.12	−.32	–

Note: Means are for individual-level scores. Culture-level correlations below the diagonal: correlations >.33, $p < .01$; individual-level correlations above the diagonal: correlations >.04, $p < .001$, but note that the p values may not be trustworthy due to the clustered data structure.

TABLE 2
Individual and culture-level predictors of sample-level acquiescence and extremity

	Acquiescence						*Extremity*					
	Likert scales			*Portrait-comparison*			*Likert scales*			*Portrait-comparison*		
Predictors	γ	γ_{SD}	*t*	γ	γ_{SD}	*t*	γ	γ_{SD}	*t*	γ	γ_{SD}	*t*
Individual-level self-construals												
Self-expression versus harmony	−.009	−.015	−1.21	−.029	−.032	−1.85	.180	.034	1.82	.338	.060	4.12***
Self-direction versus receptiveness to influence	−.001	−.003	−0.27	−.025	−.043	−2.65**	.070	.021	1.22	.161	.044	3.17**
Difference versus similarity to others	−.020	−.037	−3.75***	.050	.062	3.29***	.420	.087	4.51***	.549	.106	8.57***
Self-containment versus connection to others	.014	.027	1.85	−.083	−.105	−5.95***	−.368	−.079	−4.23***	−.195	−.039	−3.01**
Self-consistency versus Variability	−.009	−.024	−2.32*	.017	.031	2.45*	.421	.130	8.11***	.370	.106	8.69***
Self-reliance versus dependence on others	−.018	−.032	−2.83**	.069	.082	5.82***	.637	.127	10.23***	.664	.123	8.60***
Self-interest versus commitment to others	.015	.035	2.54**	−.014	−.022	−1.25	−.207	−.053	−2.89**	−.091	−.022	−1.66
Culture-level models of selfhood:												
Self-expression versus harmony	−.158	−.373	−3.22**	.029	.047	0.44	−.220	−.055	−0.41	−.339	−.072	−0.71
Self-direction versus receptiveness to influence	−.393	−.463	−3.35***	−.103	−.083	−0.66	−1.387	−.173	−1.16	−2.563	−.272	2.76**
Difference versus Similarity to Others	−.170	−.578	−4.57***	−.004	−.010	−0.09	−.389	−.140	−0.96	−.475	−.146	−1.24
Self-containment versus connection to others	.012	.023	0.15	−.059	−.076	−0.63	−.006	−.001	−0.01	−.433	−.074	−0.63
Self-consistency versus Variability	.015	.040	0.27	.252	.451	5.10***	1.264	.350	3.77***	1.473	.348	4.18***
Self-reliance versus dependence on others	−.262	−.275	−1.9	.371	.266	2.85**	1.030	.114	0.77	1.707	.161	1.48
Self-interest versus commitment to others	.201	.607	5.86***	.098	.201	2.12*	1.075	.342	2.96**	1.090	.296	2.91**

Note: $n = 7122$ participants within 55 samples; All analyses included individual-level controls for age and gender; Analyses with acquiescence as dependent measure included a control for extremity at Level 1; Analyses with extremity as dependent measure included a control for acquiescence at Level 1; values of γ_{SD} were derived as $(\gamma \times SD_{IV}) / SD_{DV}$, where SD_{IV} is the standard deviation of the predictor and SD_{DV} is the square root of the individual-level or culture-level variance component of the response style, derived from a null model.
*$p < .05$. **$p < .01$. ***$p < .001$.

so that testing all components of each hypothesis concurrently would risk the effects of multi-collinearity. Separate models relating each self-construal dimension to each hypothesis were therefore required, yielding a total of 28 models. To account for common variance between the two response styles, effects of each response style measure were controlled at Level 1 when testing hypotheses relating to the other. Individual-level effects of age and gender were also controlled. For greater clarity, the coefficients for these controls are not tabulated here, but are available from the first author. However, we note the presence of some significant effects: with Likert response scales, acquiescence was higher among older respondents ($\gamma = .002$; $p < .001$), whereas with "portrait-comparison" response scales, acquiescence was higher among younger respondents ($\gamma = -.004$; $p < .001$). Gender was not related to acquiescence. With extremity as dependent measure, there was no consistent relationship with age, but male respondents were more extreme with Likert scales ($\gamma = .509$; $p < .001$) and with portrait-comparison scales ($\gamma = .583$; $p < .001$) .

Tests of hypotheses regarding acquiescence are summarised in Table 2. With Likert response scales, significant individual-level predictors were similarity with others (supporting H1c), self-interest, dependence on others and variability. At the cultural level, there

were significant links with similarity with others (H1c), harmony (H1a) and receptiveness to influence (H1b), each of which is consistent with Hypothesis 1. However, there was again an unpredicted effect for self-interest. At neither level of analysis, did we find effects of connection to others (H1d).

With portrait-comparison response scales, there were significant individual-level effects for receptiveness to influence (H4b) and connection with others (H4d) as expected, and further effects for self-consistency and self-reliance. There was also an effect for difference from others (contrary to H4c) and no support for harmony (H4a). At the cultural level, none of the predicted effects were found, but there were significant effects for self-reliance, self-consistency and self-interest.

Table 2 also shows tests of the hypotheses relating extremity to self-construals. At the individual level, results were similar for the two different types of response scale. The same four strong effects were found in both cases: difference from others (supporting H2c and H5a), self-consistency (supporting H3 and H5b), self-reliance (supporting H5c) and connection with others (contrary to H2d). With Likert scales, the effect for commitment to others was also significant, but predicted effects of self-expression and self-direction (H2a,b) were unsupported. With portrait-comparison scales, there were additional effects for self-expression and self-direction.

At the cultural level, predicted effects for self-consistency (H3 and H5b), as well as an effect for self-interest, are found for both types of response scales. There is also an effect for receptiveness to influence where portrait-comparison scales were used.

DISCUSSION

We discuss our results in terms of the issues identified at the beginning of this paper. We first consider how our findings both illuminate and extend earlier characterisations of the types of individuals and cultures said to show greater acquiescence as well as extreme responding. We conclude by drawing out some implications of our findings for cross-cultural researchers seeking to avoid, or at least mitigate, the potential confounding effects of response styles.

Collectivism and acquiescence

Our findings help to explain previous observations that acquiescence on Likert scales tends to be higher in more collectivist cultures (Smith, 2004, 2011). At the cultural level, we found that acquiescence was higher where prevailing models of selfhood emphasised harmony (H1a), receptiveness to influence (H1b) and similarity to others (H1c), whereas connection to others (H1d) did not predict acquiescence. At the individual level, participants who saw themselves as similar to others (H1c) showed higher acquiescence. Thus, our results concur with those of Smith and Fischer (2008) in finding effects both in terms of cultural models of selfhood and of individuals' self-construals. We add value by identifying the specific aspects involved at each level. Our results suggest that the greater acquiescence observed in collectivist cultures may be due to communication norms, influence processes and a cultural norm favouring similarity to others, as well as individuals' desires for similarity. However, it appears not to be due to fuzziness of self-other boundaries, as represented by our measure of self-containment.

Response mode and acquiescence

Acquiescence on the portrait-comparison items showed little relation with Likert-scale acquiescence at either level of analysis, and revealed a strikingly different pattern of predictors: Portrait-comparison acquiescence was higher among individuals scoring higher in connectedness to others (H4d) and receptiveness to influence (H4b), but was not predicted by harmony (H4a) or similarity (H4c). Moreover, we found a striking contrast, whereby individuals who construed themselves as more self-reliant, more self-consistent and more different from others were *less* likely to agree with Likert items, but *more* likely to rate the portraits as similar to themselves. Although perhaps surprising, the latter result is consistent with evidence that those with a higher need for uniqueness are unwilling to rate themselves as similar to others, but may have less difficulty in rating others as similar to themselves (Dang, Xiao, Sun, Lee, & Mao, 2015). Additionally, portrait-comparison acquiescence was higher among samples emphasizing self-consistency, self-reliance and self-interest. Thus, there is no evidence that the portrait-comparison format is less prone to cultural variation in response styles—but clearly the cultural influences involved are very different from those that apply to traditional Likert scales.

Understanding extreme responding

Results in relation to extremity were more similar for the two types of response scale. Extreme responding was correlated at both levels of analysis, and both extremity measures showed similar patterns of predictors, with much stronger effects at the individual level than at the sample level. Thus, certain individuals—and members of certain cultures—tend to give more (or less) extreme responses irrespective of item format.

Our findings suggest that more extreme responding in monumentalist cultures may be due to an emphasis on self-consistency (supporting the converging predictions stated as H3 for Likert scales and H5b for portrait comparisons). Our predictions that extreme responding for

portrait comparisons would also be higher when individuals and cultures emphasised difference (H5a) and self-reliance (H5c) were supported at the individual level but not at the cultural level, and we found a converging pattern for Likert scales.

The results for H2 were more complex. At the culture level, there were unpredicted effects for commitment to others for both response formats and for receptiveness to influence for the portrait-comparison format. At the individual level, less extreme responding does appear to be due to individuals' desire for similarity (H2c). However, our predictions for harmony (H2a), receptiveness to influence (H2b) and connectedness to others (H2d) were unsupported. Furthermore, contrary to H2d, individuals construing themselves as more connected to others showed higher rather than lower extremity in their responses. Thus, although most of our individual-level predictions for extremity were unsupported, we did identify a clear pattern of individual-level predictors, which differed little between response formats.

Limitations

The design of the study does not control for item content, so we should consider alternative explanations for our results. However, contrasting findings for acquiescence and for extremity provide some assurance that the results obtained are not simply due to the differing item content of the Likert and portrait-comparison scales. If the results were simply attributable to differences in item content, the results for extremity should have differed between response modes just as they did those for acquiescence. Additionally, an even larger number of samples would have allowed us to model effects of the seven selfhood dimensions together, rather than in separate models, and thus distinguish their effects more precisely. Nonetheless, our findings already show some notable differences across the seven dimensions that could not have been detected with unidimensional measures of "collectivism".

Recommendations for researchers

What are the practical implications of our findings? Valid comparison of mean scores on survey items requires measurement equivalence, but response styles can contribute systematic method variance that will confound comparisons unless these styles are themselves an indicator of the attribute being measured. In most circumstances, it is therefore desirable to measure and control for response style before comparing means, but this is especially important across the widely divergent samples that are characteristic of cross-cultural investigations. Cross-cultural researchers such as Hofstede (2001) and Schwartz (2007) have controlled for acquiescence using procedures for within-subject standardisation, but others have not. Including reversed items in surveys such as those tapping Big Five personality dimensions (e.g., McCrae, Terracciano, & 79 Members of the Personality Profiles of Cultures Project, 2005) can reduce the impact of acquiescence where an adequate number of items is included. However, simply moving away from Likert response scales changes the profile of acquiescent responders rather than eliminating acquiescence. Furthermore, none of the best known cross-national surveys has taken account of variations in extremity, and we find that extremity also varies between populations. A particular implication of our results is that controlling for acquiescence when using Likert scales does not control extremity. However, controlling for acquiescence when using portrait comparisons may be sufficient to control for extremity, because the two effects are strongly correlated.

Controlling for both acquiescence and extremity is therefore necessary when comparing means across samples. However, separating "method variance" from "substantive variance" is especially difficult when the substantive variables are closely associated with particular response styles. Our fine-grained analysis of the relationships between models of selfhood and response styles for different scale formats and on different levels of analysis may assist future researchers in negotiating this issue.

Where response styles are thought to be linked to the substantive constructs under investigation, a remaining problem is that with within-person standardisations, as well as controlling for external measures of response style, there is a risk of overcorrecting findings by removing substantive variance together with the method variance that is targeted. Where the study design permits, it may be better to use structural equation models including an acquiescence factor in the measurement part of the model. Crucially, provided that more than one substantive factor is measured with positive and reverse-scored items on the same response scale, an acquiescence factor can then be allowed to correlate with the substantive factors in the model, thus mitigating the risk of overcorrection (Welkenhuysen-Gybels et al., 2003). Adjusting for extremity in structural equation modelling is currently more challenging, but may become feasible as computational power and software capabilities increase further. It remains to be determined how existing understandings of culture-level differences will be affected when acquiescence and extremity are more fully estimated and researchers learn to adjust for them more effectively.

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REFERENCES

Bond, R., & Smith, P. B. (1996). Culture and conformity: A meta-analysis of studies using Asch's (1952b, 1956) line judgment task. *Psychological Bulletin*, *119*, 111–137.

Church, A. T., Willmore, S. L., Anderson, A., Ochiai, M., Porter, N., Mateo, N., … Ortiz, F. (2012). Cultural differences in implicit theories and self-perceptions of traitedness: Replication and extension with alternative measurement formats and cultural dimensions. *Journal of Cross-Cultural Psychology*, *43*, 1268–1296.

Condon, L., Ferrando, P. J., & Demestre, J. (2006). A note on some item characteristics related to acquiescent responding. *Personality and Individual Differences*, *40*, 403–407.

Dang, J., Xiao, S., Sun, X., Lee, N. Y. L., & Mao, L. (2015). Similarity as threat: A motivational explanation of self-other similarity judgment asymmetry. *European Journal of Social Psychology*, *45*, 336–341.

Eriksson, E. L. (2008). *Just another face in the crowd: Distinctiveness seeking in Sweden and Britain*. Unpublished honors thesis, University of Sussex, UK.

Gudykunst, W. B., Matsumoto, Y., Ting-Toomey, S., Nishida, T., Kim, K., & Heyman, S. (1996). The influence of cultural individualism-collectivism, self-construals and individual values on communication styles across cultures. *Human Communication Research*, *22*, 510–543.

He, J., van de Vijver, F., Dominguez Espinosa, A., & Mui, P. (2014). Toward a unification of acquiescent, extreme and midpoint response styles: A multi-level study. *International Journal of Cross Cultural Management*, *14*, 306–322.

Heine, S. J., Lehman, D. R., Peng, K. P., & Greenholz, J. (2002). What's wrong with cross-cultural comparisons of subjective Likert scales? The reference group effect. *Journal of Personality and Social Psychology*, *82*, 903–918.

Hinz, A., Michalski, D., Schwarz, R., & Herzberg, P. Y. (2007). The acquiescence effect in responding to a questionnaire. *Psycho-Social-Medicine*, *4*, 1–9.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: Sage.

House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., Gupta, V., & GLOBE associates (2004). *Leadership, culture and organizations: The GLOBE study of 62 nations*. Thousand Oaks, CA: Sage.

Inglehart, R., Foa, R., Peterson, C., & Welzel, C. (2008). Development, freedom and rising happiness: A global perspective (1981–2007). *Perspectives on Psychological Science*, *3*, 264–285.

Johnson, T. P., Kulesa, P., Cho, Y. I., & Shavitt, S. (2005). The relation between culture and response styles: Evidence from 19 countries. *Journal of Cross-Cultural Psychology*, *36*, 264–277.

Johnson, T. P., Shavitt, S., & Holbrook, A. (2011). Survey response styles across cultures. In D. Matsumoto & F. van de Vijver (Eds.), *Cross-cultural research methods in psychology* (pp. 130–175). Cambridge, UK: Cambridge University Press.

Levy, S. R., Stroessner, S. J., & Dweck, C. S. (1998). Stereotype formation and endorsement: The role of implicit theories. *Journal of Personality and Social Psychology*, *74*, 1421–1436.

McCrae, R. R., Terracciano, A., & 79 Members of the Personality Profiles of Cultures Project (2005). Personality profiles of cultures: Aggregate personality traits. *Journal of Personality and Social Psychology*, *89*, 407–425.

Minkov, M. (2011). *Cultural differences in a globalising world*. Bradford, UK: Emerald.

Owe, E., Vignoles, V. L., Becker, M., Brown, R., Smith, P. B., Lee, S. W. S., … Jalal, B. (2013). Contextualism as an important facet of individualism-collectivism: Personhood beliefs across 37 national groups. *Journal of Cross-Cultural Psychology*, *44*, 24–45.

Raudenbush, S. W., Bryk, A. S., & Congdon, R. T. (2007). *HLM 6: Hierarchical linear and nonlinear modeling*. Lincolnwood, IL: Scientific Software International.

Schwartz, S. H. (2007). Value orientations: Measurement, antecedents and consequences across nations. In R. Jowell, C. Roberts, R. Fitzgerald, & G. Eva (Eds.), *Measuring attitudes cross-nationally: Lessons from the European Social Survey* (pp. 161–193). London, U.K.: Sage.

Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin*, *20*, 580–591.

Smith, P. B. (2004). Acquiescent response bias as an aspect of cultural communication style. *Journal of Cross-Cultural Psychology*, *35*, 50–61.

Smith, P. B. (2011). Communication styles as dimensions of national culture. *Journal of Cross-Cultural Psychology*, *42*, 216–233.

Smith, P. B., & Fischer, R. (2008). Acquiescence, extreme response bias and culture: A multilevel analysis. In F. van de Vijver, D. van Hemert, & Y. Poortinga (Eds.), *Multilevel analysis of individual and cultures* (pp. 284–314). New York, NY: Erlbaum.

Smith, P. B., Fischer, R., Vignoles, V. L., & Bond, M. H. (2013). *Understanding social psychology across cultures*. London, U.K.: Sage.

Smith, P. B., Peterson, M. F., & Schwartz, S. H. (2002). Cultural values, sources of guidance and their relevance to managerial behavior: A 47 nation study. *Journal of Cross-Cultural Psychology*, *33*, 188–208.

Tafarodi, R. W., Lo, C., Yamaguchi, S., Lee, W., & Katsura, H. (2004). The inner self in three countries. *Journal of Cross-Cultural Psychology*, *35*, 97–117.

Vignoles, V.L., Owe, E., Becker, M., Smith, P.B., Easterbrook, M. J., Brown, R., … , Brambilla, M. (in press). *Beyond "West versus East": Global variation in cultural models of selfhood.* http://dx.doi.org/10.1037/xge0000175.

Welkenhuysen-Gybels, J., Billiet, J., & Cambré, B. (2003). Adjustment for acquiescence in the assessment of the construct equivalence of Likert-type score items. *Journal of Cross-Cultural Psychology*, *34*, 702–722.

APPENDIX

Table A1. Demographic details and response style indices for each cultural sample

		Age				*Acquiescence*		*Extremity*	
Cultural group	N	*Mean*	*SD*	*% Fem*	*Language*	*Likert*	*Portrait*	*Likert*	*Portrait*
Belgium high SES	183	43.78	8.17	48	French	3.59	4.14	6.09	5.61
Belgium low SES	175	28.57	9.25	47	French	3.64	4.19	7.41	6.71
Brazil Central	178	33.6	13.77	44	Portuguese	3.53	4.03	6.76	6.10
Brazil North East	150	38.95	11.66	73	Portuguese	3.50	4.12	6.75	7.22
Brazil South	164	25.97	9.67	56	Portuguese	3.48	4.15	5.90	6.78
Cameroon Bafut	100	26.07	6.10	67	English	3.97	4.10	5.70	5.77
Chile Majority	147	44.97	12.46	58	Spanish	3.53	4.39	5.64	6.46
Chile Mapuche	144	38.16	14.83	55	Spanish	3.70	4.36	7.19	8.77
China East	116	31.66	8.27	69	Chinese	3.78	3.81	5.33	3.46
China West	135	31.15	8.70	68	Chinese	3.75	3.83	4.79	3.86
Colombia rural	147	35.23	13.37	62	Spanish	3.66	4.29	5.50	5.67
Colombia urban	144	38.72	11.52	62	Spanish	3.56	4.25	6.09	6.47
Egypt	157	31.12	9.98	52	Arabic	3.57	4.23	7.29	7.81
Ethiopia highlanders	149	33.11	9.23	38	Amharic	3.66	4.52	6.88	8.90
Ethiopia urban	150	35.02	9.00	46	Amharic	3.68	4.45	6.79	9.04
Georgia Baptists	77	44.85	17.27	78	Georgian	3.42	4.13	5.28	8.27
Georgia Orthodox	136	39.16	12.08	46	Georgian	3.58	4.00	6.87	5.01
Germany East	152	40.26	14.73	59	German	3.61	3.89	4.13	3.84
Germany West	102	39.71	15.74	59	German	3.56	3.88	4.42	4.63
Ghana Ashanti	113	28.58	5.09	24	English	3.94	4.08	6.48	7.47
Hungary Majority	151	36.83	12.78	46	Hungarian	3.42	4.05	3.69	4.91
Hungary Roma	90	33.37	11.70	48	Hungarian	3.57	3.86	4.51	5.60
Iceland	119	35.19	13.30	69	Icelandic	3.60	3.96	4.02	4.29
Italy rural	90	40.30	13.69	72	Italian	3.50	3.86	4.73	5.81
Italy urban	81	37.59	12.42	69	Italian	3.49	3.88	4.54	5.40
Japan Hokkaido	70	50.87	12.50	66	Japanese	3.52	3.36	3.01	2.56
Japan Mainland	204	41.43	15.51	61	Japanese	3.50	3.55	3.82	3.02
Lebanon Christians	130	35.45	13.36	54	Arabic	3.55	4.27	7.54	7.99
Lebanon Moslems	120	34.76	14.74	43	Arabic	3.53	4.28	7.96	8.47
Malaysia	150	28.05	7.92	63	Malay	3.93	3.96	3.00	4.68
Namibia Damara	69	25.14	6.40	61	English	3.64	4.30	8.49	9.43
Namibia Owambo	135	24.34	5.30	68	English	3.75	4.37	6.96	7.61
New Zealand Pakeha	202	34.91	13.06	50	English	3.47	3.94	3.94	3.60
Norway	98	37.01	13.54	59	Norwegian	3.42	3.69	5.02	4.01
Oman	159	25.21	4.99	45	Arabic	3.72	4.36	5.56	6.29
Peru rural	68	41.31	13.47	66	Spanish	4.01	3.91	6.93	7.41
Peru urban	76	30.65	14.64	52	Spanish	3.86	4.13	1.72	4.05
Philippines Christian	146	32.01	12.23	52	English/Tausug	3.73	4.24	3.85	4.87
Philippines Muslim	138	24.97	8.82	51	English/Tausug	4.03	4.00	4.90	5.71
Romania rural	162	37.02	15.04	59	Romanian	3.77	4.15	6.40	6.65
Romania urban	318	35.18	12.12	58	Romanian	3.63	4.13	5.69	5.70
Russia Caucasians	128	32.26	11.95	81	Russian	3.72	3.95	6.14	6.45
Russia Russians	121	29.43	12.33	76	Russian	3.49	4.00	3.84	4.07
Singapore	110	34.95	12.74	54	English	3.56	3.90	2.94	3.22
Spain rural	74	38.61	16.14	47	Spanish	3.70	4.28	5.65	7.17
Spain urban	105	41.16	13.39	55	Spanish	3.45	4.07	4.04	4.79
Sweden	101	45.18	16.01	65	Swedish	3.56	3.76	3.78	3.76
Thailand	70	27.99	6.71	69	Thai	3.51	4.40	2.58	4.27
Turkey Alevi	107	38.88	11.02	64	Turkish	3.88	4.12	5.81	6.45
Turkey majority	129	40.62	9.94	58	Turkish	3.71	4.20	4.71	5.57
Uganda Baganda	146	34.43	6.30	59	English	3.92	3.71	3.15	3.07
UK rural	94	51.82	16.15	72	English	3.43	3.81	4.22	4.17
UK urban	133	43.92	17.43	62	English	3.46	3.85	4.02	4.63
US Colorado	90	37.07	14.05	59	English	3.49	3.94	5.30	4.97
US Hispanics	122	27.57	11.08	71	Spanish	3.54	4.39	5.45	6.94
Total	7122	35.27	13.39	57		3.63	4.08	5.38	5.79

SES = Socio-Economic Status.