

Controlling for Culture-Specific Response Styles in the Value of Children Study: Calibrated Sigma Method and Ipsatization Procedures

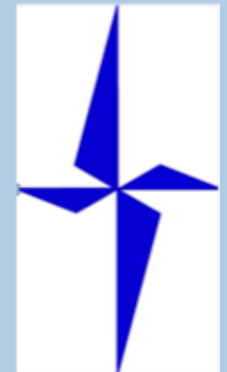
Boris Mayer & Walter Siegenthaler

University of Bern

9th European Conference of the **IACCP**, Warsaw, Poland, July 16-19, 2017

Symposium "Value of Children and Intergenerational Relations"

Convenors: Katarzyna Lubiewska & Gisela Trommsdorff



Response Styles in Cross-Cultural Research

> Acquiescent Response Style (ARS)

- “Yea-Saying” or tendency to agree with a statement irrespective of content
- No problem as long as comparing groups that do not differ in ARS
- ARS varies considerably across cultural groups and seems to have systematic relations to widely-used dimensions of cultural values
 - More pronounced in cultures high in collectivism and power distance
 - ➔ agreeing to items part of tendency to stay in harmony with one’s group
 - Methods for studying ARS vary:
 - a) Overall means across a large number of content-independent items that include both positively and negatively phrased items
 - b) Using pairs of positively and negatively phrased items with same content
 - Results mixed and partly contradictory
 - May be more pronounced for items carrying high personal relevance

Baumgartner & Steenkamp (2001) Baumgartner & Weijters (2015) Van Vaerenbergh & Thomas (2012)

Response Styles in Cross-Cultural Research

- > **Extreme Response Style (ERS) (vs. Middling Response Style)**
 - Tendency to use the extreme ends of a scale irrespective of item content (e.g., '*strongly disagree*' and '*strongly agree*' on a 5-point scale)
 - Cultural differences in ERS attributed to
 - Emphasis on sincerity vs. modesty in social interactions
 - Individualism because of its low concern with consequences of expressing strong opinions
 - Mixed results of studies linking cultural characteristics to ERS
 - ERS confounded with ARS when all (or most) items positively phrased

- > **Social Desirability Responding (SDR)**
 - Tendency to respond in a socially desirable way to get approval by significant others
 - Two processes: impression management (conscious) and self-deception (unconscious)
 - Linked to item content and therefore different from ARS and ERS

Benitez, He, Van de Vijver, & Padilla (2016) Harzing (2006) Johnson, Kulesa, Cho, & Shavitt (2005)
Kemmelmeier (2016) Morren, Gelissen, & Vermunt (2012) Smith et al. (2016)

Controlling for Response Styles

- > **Ipsatization (Within-Subject-Standardization)**
 - “Single Construct” (e.g. Schwartz values)
 - “All items of a questionnaire”
 - “Fixed Pie-Effect” – possibly controlling for content!
 - Psychological assessment literature: ipsatized measures appropriate with large number of constructs (> 10) and low intercorrelations among constructs (< .30)

- > **Representative Indicators Response Style Measures (RIRS-Method)**
 - Random selection of uncorrelated items measuring different constructs
 - Building RS-indicators by counting different categories
 - Residualization method: RIRS as ANCOVA control variables (adjusted means)
 - Alternative: Using Grand Means of RI as basis for ipsatization procedure

Baron (1996) Bartram (1996) Baumgartner & Steenkamp (2001) Baumgartner & Weijters (2015)
Fischer (2004) Fischer & Milfont (2010) Hicks (1970) Mayer (2015) Rammstedt & Farmer (2013)
Schwartz (1992) Van Vaerenbergh & Thomas (2012) Weijters, Schillewaert, & Geuens (2008)

Controlling for Response Styles

- > **Calibrated Sigma Values Method (CSVM)** (Weijters, Baumgartner, & Geuens, 2016)
 - Values recoded into z-scores (sigma values) derived from the relative endorsement frequency of the category in the group
 - Cumulative proportions recoded using the *inverse cumulative distribution function*

$$\sigma_{k,g} = \Phi^{-1} \left[\frac{1}{2} \times (P_{k,g} + P_{k-1,g}) \right]$$

Group 1	1	2	3	4	5
h_k	0.10	0.15	0.15	0.25	0.35
P_k	0.10	0.25	0.40	0.65	1
$\frac{1}{2} (P_k + P_{k-1})$	0.05	0.175	0.35	0.525	0.825
σ_k	-1.645	-0.935	-0.385	0.063	0.935

Group 2	1	2	3	4	5
h_k	0.20	0.20	0.20	0.20	0.20
P_k	0.20	0.40	0.60	0.80	1
$\frac{1}{2} (P_k + P_{k-1})$	0.10	0.30	0.50	0.70	0.90
σ_k	-1.282	-0.524	0	0.524	1.282

Aim of Current Study

- > Comparing Different Response Style Adjustment Methods with the Example of Family Values in the VOC-Study
 - Family Values important indicator of collectivism
 - “Value-laden” construct → appropriate for studying response style adjustment

- > Methods to be Compared
 - Ipsatization using RIRS-Method
 - Calibrated Sigma Values Method
 - Residualization method using response style indicators based on RIRS

VOC-Project: Mothers and Adolescents from 17 Cultural Groups Trommsdorff & Nauck (2005)

Cultural Group	Mothers	Adolescents
Germany	310	311
Turkey	286	298
China	303	293
Indonesia	281	300
France	195	196
Ghana	238	285
India	162	287
Poland	575	574
USA	337	337
South Africa	315	312
Russia	228	221
South India	298	300
Estonia	300	300
Jamaica	311	
Israel	184	188
Palestinians & Israeli Arabs	169	175
Total	4492	4377

Family Values

- > Combination of five-item short scale based on Georgas et al. (2006) and family-adapted Interdependence-scale by Singelis (1994)

1	2	3	4	5
Strongly disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Strongly agree

1. One should maintain good relationships with one's relatives.
2. Children have an obligation to care for their parents when their parents are old.
3. A family's problems should be solved within the family.
4. We should honor and protect our family's reputation.
5. Children should obey their parents.
6. It is important to me to respect decisions made by my family.
7. I often have the feeling that my relation with my family is more important than my own accomplishments.
8. My happiness depends on the happiness of my family.
9. It is important for me to maintain harmony within my family.
10. I would sacrifice my self-interest for the benefit of my family.

Item Selection, RIRS Ipsatization and Response Style Indicators

- > Some items/constructs had to be discarded since...
 - not included all cultural groups
 - items of mothers / adolescents not identical
 - too many missings (e.g. relationship with grandparents)
- > 83 items (12 constructs)
- > Ipsatization across 2 extracted subsets of 12 items (excluding items from target construct)
 - Subtract grand mean (mean centering MC) + divide by grand SD (full ipsatization FIPS)
 - Same with grand mean / SD on culture level
- > Acquiescence and Extremity indicators based on two different subsets of 12 randomly selected items
 - ARS: $\text{double count } 5 + \text{count } 4 / \text{divide by number of items}$
 - ERS: $\text{count } 1 + 5 / \text{divide by number of items}$

Selection of Calibration Items

- > PCA (whole survey) (create 2 random groups in every component, exclude target construct / component)
- > (Squared) correlation matrix
→ subsequently remove items with largest row sum

RIRS calibration items 1

Item	Loadings on components 1-9 (composite)						
1	.60	-.04	.10	.00	.01	-.05	-.02
2	.03	.02	.56	.04	-.02	-.02	-.01
3	.15	.05	.47	.03	.07	-.02	-.01
4	.00	.03	.43	-.12	.11	.04	.01
5	.06	.08	.08	.59	.07	.02	.01
6	-.01	.15	-.02	.18	.57	.04	.01
7	-.03	.01	.03	-.09	.06	.58	.01
8	.01	.02	-.05	.07	.06	.54	.01
9	.03	.05	-.06	.07	.02	.08	.66
10	.04	-.02	.05	.04	-.01	.24	-.02
11	.06	.01	.00	-.05	.02	.09	.02
12	.03	.06	.22	.05	.07	.07	.01

Item	Loadings on components 1-9 (composite)								
1	.70	.00	.08	.01	.06	-.03	-.07	.02	-.04
2	.11	-.05	.55	.11	-.07	-.01	-.07	-.04	.23
3	.03	.06	.54	-.06	.06	.03	-.10	.06	-.27
4	.12	.04	.07	.60	.07	-.04	.00	.04	.11
5	-.08	.17	-.07	.01	.71	.08	.06	.00	.04
6	-.03	.03	.00	.15	-.01	.53	.09	.16	.05
7	-.03	.15	-.06	-.13	.11	.52	.01	.21	-.08
8	-.06	.10	-.10	.08	.07	.07	.75	-.04	.00
9	-.07	.27	-.20	-.03	.09	.01	.28	.14	.26
10	.04	-.07	.12	.04	-.01	.19	-.02	.56	.07
11	.11	-.01	.17	.10	-.02	.01	.01	-.11	.61
12	.01	.20	-.01	.04	.14	.11	-.03	.12	.43

RIRS calibration items 2

Loadings on components 1 - 9										
.78	-.07	.08	.04	-.05	-.03	-.06	-.02	.01	.01	.01
.76	-.13	.00	.03	-.03	.03	.01	.05	.01	.05	.01
.76	-.06	.05	-.01	-.04	-.03	-.05	.01	.00	.00	.00
.75	-.07	.04	.00	.02	-.03	.00	.01	.01	.01	.01
.73	-.06	.09	.07	-.05	-.02	-.04	.02	.04	.04	.04
.72	-.01	.08	.08	.04	-.06	-.01	-.01	-.01	-.01	-.01
.72	-.11	.04	-.03	-.09	.00	-.06	.04	.05	.05	.05
.70	.00	.08	.01	.06	-.03	-.07	.02	-.04	-.04	-.04
.67	-.04	.16	.22	-.11	-.01	.01	.02	.01	.01	.01
.66	-.12	.11	.14	-.03	.02	.05	.03	.06	.06	.06
.62	-.03	.15	.19	-.09	-.01	.05	.02	.03	.03	.03
.60	-.04	.10	.00	.01	-.05	-.04	.00	-.01	-.01	-.01
.56	-.05	.17	.22	-.13	-.02	.11	.00	.07	.07	.07
-.07	.65	-.02	-.06	.17	.05	.13	.08	.08	.08	.08
-.06	.63	-.02	.11	.09	.09	-.03	.07	-.13	-.13	-.13
-.02	.58	-.02	.11	.09	.05	.16	-.04	.14	.14	.14
-.05	.57	.04	.00	.10	-.06	.15	.06	.18	.18	.18
-.08	.56	.06	.20	-.02	.05	.01	-.09	-.05	-.05	-.05
-.04	.56	.04	.02	.14	-.04	.09	.12	.20	.20	.20
-.07	.55	-.06	.05	.09	.11	.04	-.01	.06	.06	.06
-.05	.54	-.04	.06	.07	.04	.01	.17	-.10	-.10	-.10
-.06	.54	-.03	.11	.09	.01	-.01	.06	-.06	-.06	-.06
-.09	.53	-.04	.06	.08	.32	.04	-.25	-.09	-.09	-.09
-.08	.49	.02	.08	.05	.39	-.05	-.19	-.04	-.04	-.04
-.08	.48	.00	.01	.09	.41	.03	-.19	-.11	-.11	-.11
-.04	.45	.05	.12	.07	-.03	.04	.01	.25	.25	.25
-.06	.36	-.08	-.07	.07	.10	.14	.20	.04	.04	.04
.07	-.02	.68	.09	-.05	-.03	.05	.01	-.07	-.07	-.07
.11	-.06	.64	.02	-.01	-.02	.04	.04	-.05	-.05	-.05
.10	-.05	.63	.10	-.08	-.03	.02	.04	-.02	-.02	-.02
.08	-.02	.61	.06	.04	-.02	-.10	-.07	.16	.16	.16
.07	.03	.61	.08	.02	-.03	-.12	-.01	.15	.15	.15
.10	-.03	.59	.11	-.04	-.01	-.09	-.05	.18	.18	.18
.05	-.01	.56	.09	-.05	.00	.13	.03	.01	.01	.01
.03	.02	.56	.04	-.02	-.02	.04	.12	.01	.01	.01
.11	-.05	.55	.11	-.07	-.01	-.07	-.04	.23	.23	.23
.03	.06	.54	-.06	.06	.03	-.10	.06	-.27	-.27	-.27
.14	-.02	.54	.13	-.06	.01	-.15	.04	.00	.00	.00
.15	.05	.47	.03	.07	-.02	-.14	-.03	.21	.21	.21
.00	.03	.43	-.12	.11	.04	.02	.12	-.38	-.38	-.38
.19	.04	.41	.66	.04	-.04	-.03	.03	.09	.09	.09
.10	.10	.06	.65	.12	-.01	-.01	.00	.03	.03	.03
.03	.07	.41	.64	.21	.03	.04	.02	.03	.03	.03
.11	-.04	.41	.63	.01	.01	.07	-.01	.14	.14	.14
.11	.15	.01	.60	.17	-.06	.03	.03	-.07	-.07	-.07
.12	.04	.07	.60	.07	-.04	.00	.04	.11	.11	.11
.06	.08	.08	.59	.07	.02	.08	-.08	.06	.06	.06
.04	.07	.12	.55	.14	.05	.00	.03	-.04	-.04	-.04
.08	.14	-.01	.51	.33	-.04	.00	.09	-.05	-.05	-.05
.02	.12	-.02	.43	.40	.05	-.03	.03	-.04	-.04	-.04
-.07	.13	-.05	.08	.74	.08	.04	.01	.05	.05	.05
-.08	.11	-.02	.15	.71	.05	.03	.02	.09	.09	.09
-.08	.17	-.07	.01	.71	.08	.06	.00	.04	.04	.04
-.07	.09	-.02	.17	.71	.07	.05	-.02	.11	.11	.11
-.01	.15	-.02	.18	.57	.04	.04	.01	.02	.02	.02
-.07	.08	.03	.31	.53	.11	.05	.10	-.09	-.09	-.09
-.03	.11	.02	.30	.51	.12	.05	.05	-.10	-.10	-.10
-.07	.15	.03	.39	.40	.07	.02	-.01	.07	.07	.07
.01	-.01	-.03	-.02	.07	.60	.08	.17	.12	.12	.12
-.03	.01	.03	-.09	.06	.58	.08	.15	.02	.02	.02
-.07	.16	-.04	-.09	.12	.55	.00	.22	-.08	-.08	-.08
.01	.02	-.05	.07	.06	.54	.06	.15	.13	.13	.13
.02	-.03	-.04	.06	.06	.54	.10	.16	.18	.18	.18
-.03	.03	.00	.15	-.01	.53	.09	.16	.05	.05	.05
-.03	.15	-.06	-.13	.11	.52	.01	.21	-.08	-.08	-.08
-.03	.32	.00	.00	.03	.48	.02	-.14	-.09	-.09	-.09
-.12	.37	.01	-.01	.01	.45	.00	-.16	-.12	-.12	-.12
-.01	.40	.05	.03	.06	.42	.09	-.12	-.15	-.15	-.15
-.06	.10	-.10	.08	.07	.07	.75	-.04	.00	.00	.00
.03	.05	-.06	.07	.02	.08	.66	.02	-.06	-.06	-.06
-.05	.32	-.09	-.02	.13	.05	.64	-.09	.02	.02	.02
-.01	.13	-.20	.03	.06	.16	.57	.06	.05	.05	.05
-.07	.27	-.20	-.03	.09	.01	.28	.14	.26	.26	.26
.04	-.02	.05	.04	-.01	.24	-.02	.60	.04	.04	.04
.04	-.07	.12	.04	-.01	.19	-.02	.56	.07	.07	.07
-.01	.18	.08	.07	.05	.14	-.05	.49	-.04	-.04	-.04
.01	.32	.05	.10	.11	.05	.04	.38	-.01	-.01	-.01
.06	.01	.00	-.05	.02	.09	.02	.38	-.01	-.01	-.01
.11	-.01	.17	.10	-.02	.01	.01	.61	.11	.11	.11
.03	.06	.22	.05	.07	.07	.01	.45	.03	.03	.03
.01	.20	-.01	.04	.14	.11	-.03	.12	.43	.43	.43

RIRS Items Correlation Matrix (Itemset 2)

Mothers: Mean of corrected item-total correlations: .11 (vs. .23)

	1	2	3	4	5	6	7	8	9	10	11	12
1	.18***	.07***	.07***	.07***	-.03*	-.01	-.02	-.10***	-.06***	.04*	.06***	-.01
2	.10***	.12***	.11***	.11***	-.03	.03*	-.03*	-.08***	-.08***	.12***	.13***	.10***
3	.07***	.14***	.09***	.01	-.01	.01	.00	-.11***	-.11***	.05**	-.04*	-.04*
4	.08***	.06***	.00	.21***	.07***	.05**	-.08***	.03	.04**	.08***	.09***	.08***
5	-.01	-.05**	-.01	.07***	.10***	.06***	.09***	.09***	.12***	.02	-.04**	.14***
6	-.03	.00	.01	.06***	.05***	.11***	.21***	.08***	.05***	.13***	-.01	.06***
7	.00	-.06***	.02	-.04*	.11***	.24***	.10***	.08***	.06***	.11***	-.06***	.05***
8	-.06***	-.06***	-.13***	.07***	.10***	.06***	.05***	.14***	.18***	.00	.00	.07***
9	-.05**	-.10***	-.09***	.06***	.13***	.09***	.06***	.18***	.11***	-.01	.03	.20***
10	.03	.07***	.04**	.01	.03*	.14***	.13***	.00	.01	.11***	.02	.07***
11	.04**	.11***	.03*	.09***	.01	-.02	-.04*	.03*	.09***	.03	.09***	.13***
12	-.03	.06***	-.02	.05**	.14***	.10***	.11***	.04*	.18***	.11***	.11***	.11***

Adolescents: Mean of corrected item-total correlations: .12 (vs. .23)

Comparison of RIRS Methods

Mothers	Approach	RIRS Ipsatization				RIRS CSVM	RIRS ANCOVA Adjusted Means	
		MC RIRS 2 Culture	MC RIRS 2 Person	FIPS RIRS 2 Culture	FIPS RIRS 2 Person	RIRS2 Culture	ARS RIRS2 Person	AERS RIRS2(1) Person
Culture	Original							
Indonesia	4.70 ^a	1.21	1.21	0.94	0.96	0.87 ^a	4.66	4.68
South India	4.70 ^a	1.30	1.31	0.80	0.76	0.61 ^{cde}	4.59	4.51
South Africa	4.68 ^a	1.15	1.16	0.75	0.76	0.61 ^{cde}	4.56	4.49
Palestinians & Israel Arabs	4.65 ^{ab}	1.31	1.31	0.95	0.94	0.86 ^a	4.64	4.62
India	4.61 ^{ab}	1.15	1.15	0.81	0.81	0.69 ^{bc}	4.54	4.52
Ghana	4.54 ^{bc}	1.07	1.07	0.83	0.85	0.73 ^b	4.52	4.52
Jamaica	4.42 ^{cd}	0.91	0.91	0.62	0.61	0.50 ^{fg}	4.32	4.29
Israeli Jews	4.39 ^d	1.20	1.20	0.80	0.81	0.70 ^{bc}	4.40	4.38
Turkey	4.39 ^d	0.94	0.94	0.72	0.73	0.59 ^{def}	4.35	4.38
Poland	4.30 ^{de}	0.95	0.95	0.75	0.75	0.66 ^{bcd}	4.32	4.36
China	4.25 ^e	1.07	1.07	0.91	0.92	0.84 ^a	4.35	4.38
Russia	4.25 ^e	1.14	1.14	1.05	1.07	0.92 ^a	4.40	4.44
USA	4.23 ^e	0.98	0.98	0.66	0.67	0.56 ^{ef}	4.23	4.24
Estonia	4.03 ^f	0.88	0.88	0.77	0.78	0.67 ^{bcd}	4.15	4.19
France	3.98 ^f	0.91	0.91	0.67	0.68	0.58 ^{def}	4.08	4.06
Germany	3.90 ^f	0.73	0.73	0.56	0.57	0.46 ^g	3.98	4.00
Tertile changes	-	6	6	8	8	8	2	4
Rank changes	-	38	38	56	58	62	19	28
η^2 (η_p^2) Culture	.229	.105	.079	.11	.086	.128	(.147)	(.134)
Adolescents								
Rank changes	-	30	30	36	36	38	8	10
η^2 (η_p^2) Culture	.229	.192	.166	.166	.145	.172	(.187)	(.178)

Culture-level Correlations with External Value Indicators (Hofstede, World Values Survey)

RIRS 2	Mothers				Adolescents				
	n = 15-16	Hofstede PDI	Hofstede IND	WVS TradSec	WVS SurvSelf	Hofstede PDI	Hofstede IND	WVS TradSec	WVS SurvSelf
Family Values		.32	-.46	-.79**	-.50	.37	-.46	-.71**	-.46
MC		.35	-.38	-.52*	-.45	.34	-.4	-.39	-.44
FIPS		.63*	-.61*	-.33	-.79**	.51	-.61*	-.43	-.61*
CSVM		.58*	-.62*	-.29	-.76**	.52	-.66*	-.42	-.62*
ADJ Means ARS		.44	-.57*	-.76**	-.63*	.45	-.54*	-.64*	-.54*
ADJ Means AERS		.50	-.64*	-.78**	-.72**	.48	-.58*	-.65**	-.57*

* $p < .05$ ** $p < .01$.

Hofstede (2001) World Values Survey (2009)

Discussion

- > Very similar results for RIRS ipsatization, CSVM and RIRS response style indicators (ANCOVA adjusted means)
 - Adj. Means most conservative method
 - Full ipsatization and CSVM very similar
 - Small differences between application level (culture vs. person)
- > Similar results when using two different calibration item samples
 - Selection of 2 x 12 uncorrelated items from only 83!
 - Differences may be smaller in larger / more heterogeneous surveys
- > Rank order of original means **not** strongly affected by controlling for culture-specific response styles (RIRS approach)
 - But: Single specific cultural groups strongly affected
- > Cross-cultural differences attenuated (from $R^2 \approx .23$ to $R^2 \approx .08 - .15$)
- > RIRS ipsatization / CSVM useful approach for controlling response bias

Acknowledgements

This work uses data from the Cross-Cultural Project

“Value of Children and Intergenerational Relations”

Principal Investigators: Prof. Dr. G. Trommsdorff & Prof. Dr. B. Nauck

Team leaders and team members in the collaborating countries:

China: Prof. Dr. Gang Zheng, Dr. Shaohua Shi, Dr. Hong Tang

Estonia: Dr. Kairi Kasearu

France: Prof. Dr. Colette Sabatier, Dr. Lyda Lannegrand-Willems

Germany: Prof. Dr. Gisela Trommsdorff, Prof. Dr. Bernhard Nauck, PD Dr. Beate Schwarz, Dr. Isabelle Albert, Dr. Daniela Klaus, Dr. Boris Mayer, Dr. Jana Suckow

Ghana: Prof. Dr. David Lackland Sam

India: Prof. Dr. Ramesh Mishra (Varanasi), Dr. Arun Tipandjan (Pondicherry)

Indonesia: Prof. Dr. Kusdiratri Setiono, Dr. Lieke Wisnubrata, Prof. Dr. Samsunuwijati Marat, Peter R. Nelwan, MA

Israel and the Palestinian Authority: Dr. Asher Ben-Arieh, Dr. Muhammad M. Haj-Yahia

Jamaica: Annkatrin Bock, MA

Poland: Dr. Katarzyna Lubiewska

Russia: Prof. Dr. Zarethkan Saraliewa, Prof. Dr. Vladimir Blonin, Prof. Dr. Alexander Iudin

South Africa: Prof. Dr. Karl Peltzer

Turkey: Dr. Bilge Ataca, Prof. Dr. Cigdem Kagitcibasi

United States: Prof. Dr. Wolfgang Friedlmeier, Prof. Dr. Mihaela Friedlmeier

References

- Baron, H. (1996). Strengths and limitations of ipsative measurement. *Journal of Occupational and Organizational Psychology*, 69, 49-56.
- Bartram, D. (1996). The relationship between ipsatized and normative measures of personality. *Journal of Occupational and Organizational Psychology*, 69, 25-39.
- Baumgartner, H., & Steenkamp, J. B. E. M. (2001). Response styles in marketing research: A cross-national investigation. *Journal of Marketing Research*, 38, 143-156.
- Baumgartner, H., & Weijters, B. (2015). Response biases in cross-cultural measurement. In N. Sharon & A. Y. Lee (Eds.), *Handbook of culture and consumer behavior* (pp. 150-180). New York, NY: Oxford University Press.
- Benitez, I., He, J., Van de Vijver, F. J., & Padilla, J. L. (2016). Linking extreme response style to response processes: A cross-cultural mixed methods approach. *International Journal of Psychology*, 51, 464-473.
- Fischer, R. (2004). Standardization to account for cross-cultural response bias: A classification of score adjustment procedures and review of research in JCCP. *Journal of Cross-Cultural Psychology*, 35, 263-282.
- Fischer, R., & Milfont (2010). Standardization in psychological research. *International Journal of Psychological Research*, 3, 88-96.
- Georgas, J., Berry, J. W., van de Vijver, F. J. R., Kagitcibasi, C., & Poortinga, Y. H. (Eds.). (2006). *Families across cultures*. Cambridge, England: Cambridge University Press.
- Harzing, A.-W. (2006). Response styles in cross-national survey research. *International Journal of Cross-Cultural Management*, 6, 243-266.
- Hicks, L. E. (1970). Some properties of ipsative, normative, and forced-choice normative measures. *Psychological Bulletin*, 74, 167-184.
- Hofstede, G. H. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations* (2nd ed.). Thousand Oaks, CA: Sage.
- Johnson, T., 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.
- Kemmelmeier, M. (2016). Cultural differences in survey responding: Issues and insights in the study of response biases. *International Journal of Psychology*, 51, 439-444.

References (cont'd)

- Mayer, B. (2015, July). Controlling for culture-specific response bias using ipsatization and response style indicators: Family orientation in seventeen cultures and two generations. In F. J. R. van de Vijver (Convenor), *Cross-cultural assessment*. Invited Symposium at the 13th European Conference on Psychological Assessment, Zurich, Switzerland.
- Morren, M., Gelissen, J. P. T. M., & Vermunt, J. K. (2012). Response strategies and response styles in cross-cultural surveys. *Cross-Cultural Research*, *46*, 255-279.
- Rammstedt, B., & Farmer, R. F. (2013). The impact of acquiescence on the evaluation of personality structure. *Psychological Assessment*, *25*, 1137-1145.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. P. Zanna (Ed.), *Advances in experimental social psychology*, Vol. 25 (pp. 1-65). San Diego, CA: Academic Press.
- Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin*, *20*, 580-591.
- Smith, P. B., Vignoles, V. L., Becker, M., Owe, E., Easterbrook, M. J., Brown, R., . . . Harb, C. (2016). Individual and culture-level components of survey response styles: A multi-level analysis using cultural models of selfhood. *International Journal of Psychology*, *51*, 453-463.
- Trommsdorff, G., & Nauck, B. (Eds.). (2005). *The value of children in cross-cultural perspective*. Lengerich, Germany: Pabst Science.
- Van Vaerenbergh, Y., & Thomas, T. D. (2012). Response styles in survey research: A literature review of antecedents, consequences, and remedies. *International Journal of Public Opinion Research*, *25*, 195-217.
- Weijters, B., Baumgartner, H., & Geuens, M. (2016). The calibrated sigma method: An efficient remedy for between-group differences in response category use on Likert scales. *International Journal of Research in Marketing*, *33*, 944-960.
- Weijters, B., Schillewaert, N., & Geuens, M. (2008). Assessing response styles across modes of data collection. *Journal of the Academy of Marketing Science*, *36*, 409-422.
- World Values Survey. (2009). WORLD VALUES SURVEY 1981-2008 OFFICIAL AGGREGATE v.20090901, 2009. World Values Survey Association (www.worldvaluessurvey.org). Aggregate File Producer: ASEP/JDS, Madrid.