



International Technical Brief for the FIRO-B® ASSESSMENT

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INTRODUCTION

The *Fundamental Interpersonal Relations Orientation–Behavior*[™] (FIRO-B[®]) instrument is a short self-report tool designed to measure behaviors arising from interpersonal needs. The instrument has utility for providing insight in a variety of contexts, including one-on-one relationships, team building, career development, organizational culture development, and leadership development (Waterman & Rogers, 1996). When used properly, it provides individuals and teams with increased insight into, and appreciation of, interpersonal behaviors. This in turn can lead to their increased interpersonal effectiveness and satisfaction when working with or relating to others. For a detailed discussion of the underlying theory and construction of the FIRO-B instrument, see Hammer and Schnell (2000) and Schutz (1958).

Since its inception, the FIRO-B instrument has been translated into a number of languages and administered globally. While a substantial research base has documented the technical properties of the instrument as used in the United States (e.g., Hammer & Schnell, 2000), technical documentation is more limited in international samples, with some exception

for European markets (OPP Ltd, 2010) and the FIRO Business[®] instrument (Herk, Thompson, Morris, & Schaubhut, 2009), which was derived from the original FIRO-B instrument. The purpose of this technical brief is to compile and update the relevant technical material available from international respondents. It builds on the international examinations of recent years by investigating a large amount of commercial and normative data that has accumulated in the intervening years.

BRIEF RECAP OF THE COMPONENTS OF THE FIRO-B[®] INSTRUMENT

As noted above, the goal of the FIRO-B instrument is to help individuals understand their interpersonal needs and behaviors. The instrument itself is derived from a theory of interpersonal needs outlined by Schutz (1958). The three fundamental interpersonal needs described by Schutz are *Inclusion*, *Control*, and *Affection*. Table 1 describes each of these interpersonal needs in more detail.

TABLE 1. DEFINITIONS OF THE THREE INTERPERSONAL NEEDS

Inclusion

The need to establish and maintain satisfactory interactions and associations with other people; describes the extent of contact one desires with others and the degree to which one wants to join others in shared activity.

Control

Describes an individual's behavior with respect to responsibility, power, influence, and decision making; reflects the degree to which one desires to influence or direct the behavior of others or the extent to which a person wants to be perceived as competent, decisive, and in charge.

Affection

Describes an individual's behavior in forming close, personal relationships and determines the degree of warmth and personal connections one seeks with others; applies primarily to one-on-one interaction rather than to group behavior.

Source: Adapted from *FIRO-B[®] Technical Guide* (pp. 3–4), by A. L. Hammer with E. R. Schnell, 2000, with permission of the publisher, CPP, Inc. Copyright 2000 by CPP, Inc. All rights reserved.

A second major component of Schutz’s theory refers to the extent to which each of the above interpersonal needs is *expressed* or *wanted*. Expressed needs refer to behaviors demonstrated toward others, while wanted needs are those behaviors that individuals want exhibited toward them (Schutz, 1958). The FIRO-B instrument combines these two major components to yield dimensional scores: Expressed Inclusion, Wanted Inclusion, Expressed Control, Wanted Control, Expressed Affection, and Wanted Affection. Additionally, the instrument calculates total scores for each of the underlying components of the model (i.e., Total Expressed, Total Wanted, Total Inclusion, Total Control, Total Affection, and Total Overall). While these scores are less useful for providing individual insight, they do provide additional indices for comparing populations of individuals.

SAMPLES

All translations of the original 54-item FIRO-B instrument referenced here followed the International Test Commission (ITC, 2000) guidelines. Existing translations were used to collect data from people who read and understood Canadian French or European English. New translations were developed for people who read and understood Simplified Chinese, Traditional Chinese, Danish, Dutch, French, German, Japanese, Brazilian Portuguese, Russian, or Swedish. Two separate Spanish translations were developed, one for Spanish as read and understood by people in Spain and one for Latin American Spanish (the version of Spanish that can be read and understood by Spanish speakers in the Western Hemisphere but not including all regional dialects). Additionally, a customized Spanish translation was developed. This customized version refers to a modified translation of Latin American and European Spanish that was developed for a specific customer. Finally, the original North American English version of the FIRO-B instrument was used in the United States.

The data in this report come from two sources. The primary sample collected for this study consists of participants using the instrument commercially between January 1, 2011, and August 1, 2013. This database is subsequently referred to as the *commercial sample*. A second sample, collected during the development of the FIRO Business instrument (Herk et al., 2009), which gathered normative data across several countries, was used here. It is referred to herein as the *international norm sample* (INS). The INS is included primarily

to serve as an independent check on the consistency of the commercial data. Given that the commercial database is a sample of convenience and not necessarily representative of an ideal cross section of our populations of interest, the INS allows us to determine whether any differences across samples may be meaningful or warrant further investigation. For example, if mean scores in our commercial sample differ substantially from mean scores in the corresponding translation in the INS, then further investigation is warranted. Conversely, if mean scores generally correspond, we can gain confidence that our commercial sample is not uniquely biased.

A review of the assessment languages represented in the commercial sample is presented in Table 2. As shown, reasonable sample sizes were obtained for a number of languages. Relatively small sample sizes were obtained for the Traditional Chinese translation and the Swedish translation. These smaller sample sizes were noted; however, both languages were included in all subsequent analyses. For comparison purposes, Table 3 shows the representation of assessment languages in the INS. Note that the commercial sample contains data from four countries not represented in the INS.

TABLE 2. LANGUAGES REPRESENTED IN THE COMMERCIAL SAMPLE

Assessment Language	<i>n</i>
Chinese, Simplified*	360
Chinese, Traditional*	75
Danish	436
Dutch	216
English, European	18,323
English, North American	112,975
French	661
German	688
Russian*	440
Spanish, Customized**†	662
Spanish, European	605
Spanish, Latin American	206
Swedish	91

Note: *N* = 135,738.

*Represented in the commercial sample but not the INS.

†A client-specific translation of Latin American and European Spanish.

These languages are marked with an asterisk in Table 2. A complete description of the INS can be found in Herk et al. (2009).

Again, given that the commercial sample is one of convenience, participants had the option of not providing demographic information during completion of the assessment. We attempted to compile as much demographic information as possible through partnerships with our highest-volume distributors. We are grateful to CCL and OPP for providing international demographic information from their databases to be merged with the commercial database. Even after this effort, demographic information was fairly limited across languages.

Table 4 suggests that male representation tends to be stronger across most languages. Since the INS was a targeted sample, gender distribution is nearly equal across assessment languages, as shown in Table 5.

Table 6 displays the age distribution by assessment language. As noted above, age data are limited in some cases. Nonetheless, a snapshot of this data is still useful for understanding our samples. Of greatest note, our Traditional Chinese sample had only five participants reporting age.

TABLE 4. GENDER COMPOSITION OF THE COMMERCIAL SAMPLE

Assessment Language	Women		Men	
	<i>n</i>	%	<i>n</i>	%
Chinese, Simplified	168	46.7	192	53.3
Chinese, Traditional	40	53.3	35	46.7
Danish	151	34.6	285	65.4
Dutch	53	24.5	163	75.5
English, European	7,438	40.6	10,885	59.4
English, North American	46,458	41.1	66,517	58.9
French	285	43.1	376	56.9
German	169	24.6	519	75.4
Russian	198	45.0	242	55.0
Spanish, Customized	218	32.9	444	67.1
Spanish, European	229	37.9	376	62.1
Spanish, Latin American	98	47.6	108	52.4
Swedish	46	50.5	45	49.5

Note: *N* = 135,738 (women *n* = 55,551; men *n* = 80,187).

TABLE 3. LANGUAGES REPRESENTED IN THE INTERNATIONAL NORM SAMPLE

Assessment Language	<i>n</i>
Danish	262
Dutch	272
English, European	367
English, North American	399
French	253
German	204
Portuguese, Brazilian	289
Spanish, European	252
Spanish, Latin American	257
Swedish	246

Note: *N* = 2,801.

TABLE 5. GENDER COMPOSITION OF THE INTERNATIONAL NORM SAMPLE

Assessment Language	Women		Men	
	<i>n</i>	%	<i>n</i>	%
Danish	131	50.0	131	50.0
Dutch	136	50.0	136	50.0
English, European	183	49.9	184	50.1
English, North American	200	50.1	199	49.9
French	127	50.2	126	49.8
German	103	50.5	101	49.5
Portuguese, Brazilian	145	50.2	144	49.8
Spanish, European	126	50.0	126	50.0
Spanish, Latin American	128	49.8	129	50.2
Swedish	123	50.0	123	50.0

Note: *N* = 2,801 (women *n* = 1,402; men *n* = 1,399).

TABLE 6. AGE DISTRIBUTION BY LANGUAGE FOR THE COMMERCIAL SAMPLE

Assessment Language	<i>n</i>	Mean Age	<i>SD</i>
Chinese, Simplified	146	35.07	7.73
Chinese, Traditional	5	24.60	1.82
Danish	410	44.11	8.00
Dutch	211	40.21	7.95
English, European	15,810	40.70	8.66
English, North American	81,993	41.22	10.20
French	164	39.57	7.31
German	604	41.29	7.66
Russian	239	37.10	6.47
Spanish, Customized	600	40.38	7.44
Spanish, European	532	42.11	9.36
Spanish, Latin American	153	41.13	8.69
Swedish	37	38.46	10.43

Note: *N* = 100,904.

For comparison purposes, the demographics of the INS are presented in Table 7. Both sets of samples have mean ages in the thirties and early forties. The commercial sample tends to skew slightly older than the INS, with the strongest differences arising in the Spanish translations.

MEAN SCORES ACROSS LANGUAGES

One of the primary indicators that the assessment has been translated appropriately and is functioning adequately around the globe is whether mean assessment scores remain relatively consistent across languages. Certainly, due to sampling variations and other forms of non-construct-related error, some differences in mean scores are expected. Although a complex and varied academic literature has suggested that certain cultures may be expected to respond to instruments such as the FIRO-B differently than others, by and large we have observed consistency in the performance of our instruments

TABLE 7. AGE DISTRIBUTION BY LANGUAGE FOR THE INTERNATIONAL NORM SAMPLE

Assessment Language	<i>n</i>	Mean Age	<i>SD</i>
Danish	262	36.12	8.90
Dutch	272	35.63	8.61
English, European	367	34.62	10.35
English, North American	399	41.15	11.38
French	253	32.01	8.48
German	204	37.20	10.07
Portuguese, Brazilian	289	30.17	11.38
Spanish, European	252	33.04	7.63
Spanish, Latin American	257	31.53	8.73
Swedish	246	37.54	10.62

Note: *N* = 2,801.

across cultures. Table 8 shows means and standard deviations for scale scores in the commercial sample.

Figure 1 provides a different perspective on the distribution of scale scores by language. Scoring across languages tends to be fairly consistent; however, some interesting results are evident. Languages used in North America (Latin American Spanish and North American English) have uniformly lower mean scores than the other languages. The Danish results for Expressed Affection and Wanted Affection are also notable. Mean scores on those two scales are the lowest of all the languages and represent a substantial drop-off from Danish scores on the other scales. Despite a few anomalies, the trends observed with respect to the relative magnitude of each scale are consistent across languages. Similar trends are observed in the INS (see Table 9 and Figure 2). Again, languages used in North America tend to have lower means and are notably lower than the other languages on both Expressed Control and Wanted Control.

TABLE 8. MEANS AND STANDARD DEVIATIONS FOR SCALE SCORES IN THE COMMERCIAL SAMPLE

Assessment Language	n	Expressed Inclusion			Wanted Inclusion			Expressed Control			Wanted Control			Expressed Affection			Wanted Affection		
		Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d
Chinese, Simplified	360	5.64	1.80	0.58	4.98	3.28	-0.50	5.58	2.35	-0.59	4.30	2.05	-0.44	5.88	2.46	-0.71	6.58	2.37	-0.67
Chinese, Traditional	75	4.41	1.63	-0.02	3.91	3.53	-0.18	4.01	2.40	0.00	4.91	1.80	-0.73	4.72	2.41	-0.23	6.59	2.56	0.68
Danish	436	5.80	1.15	-0.65	3.19	1.54	0.04	6.05	1.23	-0.76	5.27	1.38	-0.90	2.78	2.08	0.57	3.33	1.78	0.67
Dutch	216	5.50	1.40	-0.52	4.52	1.89	-0.36	6.06	1.61	-0.77	5.65	1.40	-1.08	5.24	2.35	-0.44	6.42	2.01	-0.61
English, European	18,323	5.62	1.37	-0.60	4.12	1.92	-0.25	6.10	1.48	-0.82	5.02	1.46	-0.81	4.35	2.31	-0.08	4.93	2.04	0.01
English, North American	112,975	4.37	2.18	—	3.31	3.37	—	4.01	2.68	—	3.35	2.14	—	4.16	2.42	—	4.95	2.42	—
French	661	5.81	1.25	-0.66	4.55	1.93	-0.37	6.31	1.57	-0.86	5.06	1.60	-0.80	4.40	2.38	-0.10	5.23	2.10	-0.12
German	688	5.35	1.43	-0.45	4.14	1.86	-0.25	5.92	1.51	-0.72	4.72	1.21	-0.64	4.80	2.18	-0.26	5.40	1.99	-0.19
Russian	440	4.22	1.84	0.07	3.43	3.08	-0.04	6.20	2.36	-0.82	4.91	2.07	-0.73	4.46	2.32	-0.13	4.47	2.38	0.20
Spanish, Customized	662	5.71	1.33	-0.61	4.27	1.89	-0.28	6.08	1.48	-0.77	4.91	1.63	-0.73	4.86	2.35	-0.29	5.61	1.91	-0.27
Spanish, European	605	5.21	1.41	-0.38	4.18	1.71	-0.26	6.68	1.51	-1.00	5.49	1.56	-1.00	5.44	2.53	-0.53	5.75	2.05	-0.33
Spanish, Latin American	206	4.44	2.11	-0.03	2.84	3.11	0.14	4.20	2.51	-0.07	3.21	1.95	0.06	3.98	2.28	0.07	4.76	2.04	0.08
Swedish	91	5.44	1.67	-0.49	3.89	1.88	-0.17	5.40	1.82	-0.52	5.27	1.71	-0.90	5.51	2.25	-0.56	5.92	1.66	-0.40

Note: Cohen's *d* values were calculated in reference to the North American English sample.

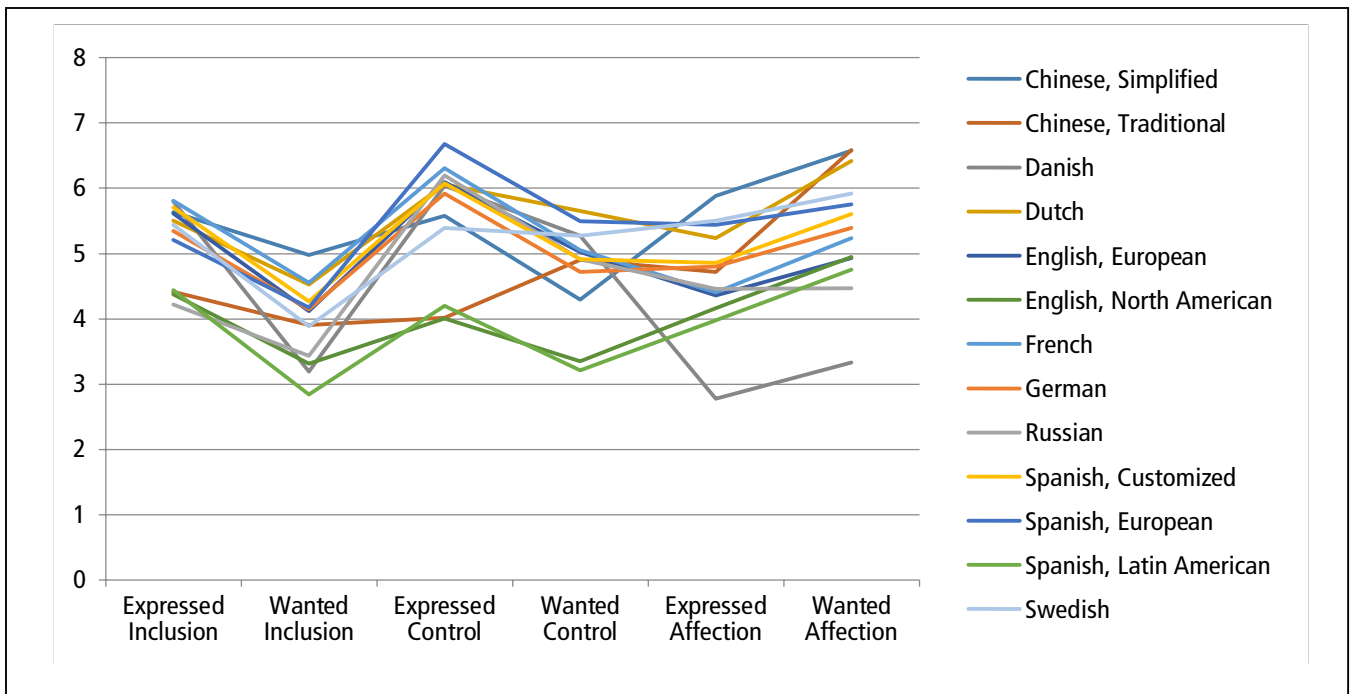


Figure 1. Mean Scale Scores Across Languages—Commercial Sample



Figure 2. Mean Scale Scores Across Languages—International Norm Sample

Tables 10 and 11 represent Total Need, Total Expressed, Total Wanted, and Overall scores. Since these scores are simple sums of the subscales, no significant new trends are observed. Table 10 shows total scores for the commercial sample. Again, Danish scores for Total Affection are substantially lower than for other languages. Table 11 shows total scores for the INS. As noted, limited demographic infor-

mation was available for the commercial sample. However, gender composes arguably the most important demographic information in our sample. Table 12 further describes the results above by showing mean scale scores broken down by gender for the commercial sample. Table 13 shows mean scale scores broken down by gender for the INS.

TABLE 9. MEANS AND STANDARD DEVIATIONS FOR SCALE SCORES IN THE INTERNATIONAL NORM SAMPLE

Assessment Language	n	Expressed Inclusion			Wanted Inclusion			Expressed Control			Wanted Control			Expressed Affection			Wanted Affection		
		Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d
Danish	262	5.65	1.26	-0.88	3.61	1.89	0.05	5.69	1.60	-0.73	5.11	1.50	-1.02	4.58	2.47	-0.10	5.02	1.97	0.15
Dutch	272	5.39	1.45	-0.73	4.34	2.15	-0.20	5.35	1.79	-0.58	5.59	1.77	-1.21	5.26	2.25	-0.38	6.70	1.88	-0.62
English, European	367	5.23	1.46	-0.68	4.07	2.21	-0.11	5.48	1.77	-0.66	5.11	1.82	-0.98	3.89	2.23	0.19	4.86	2.06	0.22
English, North American	399	3.90	2.35	—	3.76	3.30	—	3.92	2.81	—	3.13	2.18	—	4.34	2.54	—	5.35	2.37	—
French	253	5.51	1.34	-0.80	4.63	2.19	-0.30	5.74	1.86	-0.73	4.53	1.82	-0.68	5.18	2.14	-0.35	5.49	2.03	-0.06
German	204	4.93	1.55	-0.49	3.91	2.32	-0.05	5.05	2.04	-0.44	4.71	1.83	-0.76	4.05	2.16	0.12	5.17	2.32	0.08
Portuguese, Brazilian	289	4.50	2.24	-0.26	4.36	3.23	-0.18	4.13	2.77	-0.08	2.67	2.03	0.21	4.95	2.82	-0.23	6.28	2.37	0.08
Spanish, European	252	5.07	1.51	-0.57	4.38	2.36	-0.21	4.99	1.84	-0.43	5.00	1.66	-0.93	4.27	2.39	0.03	5.71	2.15	-0.16
Spanish, Latin American	257	3.53	2.25	0.16	3.43	3.38	0.10	3.72	2.88	0.07	2.36	1.88	0.37	3.79	2.46	0.22	5.22	2.19	0.06
Swedish	246	4.72	1.47	-0.40	3.67	2.21	0.03	5.21	1.78	-0.52	5.03	1.92	-0.91	4.94	2.23	-0.25	5.85	1.85	-0.23

Note: Cohen's *d* values were calculated in reference to the North American English sample.

TABLE 10. COMMERCIAL SAMPLE TOTAL SCORES

Assessment Language	n	Total Inclusion			Total Control			Total Affection			Total Expressed			Total Wanted			Overall		
		Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d
Chinese, Simplified	360	10.62	4.44	-0.60	9.88	3.08	-0.74	12.46	4.36	-0.78	17.10	5.15	-0.86	15.86	5.60	-0.73	32.96	9.66	-0.90
Chinese, Traditional	75	8.32	4.46	-0.13	8.92	3.31	-0.46	11.31	4.06	-0.51	13.15	5.00	-0.11	15.40	5.63	-0.65	28.55	9.38	-0.45
Danish	436	8.99	2.22	-0.27	11.32	1.74	-1.16	6.11	3.45	0.70	14.62	3.00	-0.39	11.79	3.27	-0.03	26.42	5.31	-0.23
Dutch	216	10.03	2.82	-0.48	11.71	2.06	-1.27	11.66	3.80	-0.59	16.80	3.86	-0.80	16.60	3.63	-0.86	33.39	6.55	-0.95
English, European	18,323	9.74	2.81	-0.44	11.12	2.09	-1.15	9.28	3.89	-0.04	16.07	3.57	-0.69	14.07	3.85	-0.44	30.14	6.53	-0.64
English, North American	112,975	7.68	4.92	—	7.35	3.42	—	9.11	4.32	—	12.54	5.29	—	11.61	5.80	—	24.15	9.77	—
French	661	10.36	2.70	-0.54	11.36	2.20	-1.17	9.64	4.01	-0.12	16.52	3.59	-0.75	14.84	4.04	-0.56	31.36	6.71	-0.74
German	688	9.49	2.76	-0.37	10.64	1.83	-0.96	10.20	3.73	-0.25	16.07	3.62	-0.67	14.26	3.62	-0.46	30.33	6.37	-0.63
Russian	440	7.65	4.34	0.01	11.11	3.06	-1.10	8.93	4.10	0.04	14.88	4.73	-0.44	12.81	5.38	-0.21	27.70	8.81	-0.36
Spanish, Customized	662	9.97	2.78	-0.47	10.99	2.25	-1.07	10.47	3.71	-0.31	16.64	3.63	-0.78	14.79	3.86	-0.55	31.43	6.60	-0.75
Spanish, European	605	9.38	2.63	-0.35	12.18	2.18	-1.41	11.19	4.19	-0.48	17.33	3.90	-0.91	15.42	3.72	-0.66	32.75	6.81	-0.88
Spanish, Latin American	206	7.28	4.60	0.08	7.41	3.06	-0.02	8.74	3.69	0.09	12.62	4.98	-0.01	10.82	4.96	0.14	23.43	8.56	0.07
Swedish	91	9.33	3.08	-0.33	10.67	2.88	-0.97	11.43	3.54	-0.54	16.34	4.22	-0.72	15.09	3.94	-0.60	31.43	7.54	-0.74

Note: Cohen's d values were calculated in reference to the North American English sample.

TABLE 11. INTERNATIONAL NORM SAMPLE TOTAL SCORES

Assessment Language	n	Total Inclusion			Total Control			Total Affection			Total Expressed			Total Wanted			Overall		
		Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d	Mean Score	SD	d
Danish	262	9.26	2.58	-0.39	10.80	2.07	-1.32	9.61	3.92	0.02	15.92	3.65	-0.79	13.74	3.83	-0.29	29.66	6.12	-0.63
Dutch	272	9.73	3.16	-0.48	10.94	2.48	-1.31	11.96	3.56	-0.57	16.00	3.83	-0.80	16.63	3.87	-0.86	32.63	6.65	-0.97
English, European	367	9.30	3.13	-0.40	10.60	2.46	-1.22	8.74	3.81	0.23	14.60	3.60	-0.53	14.04	4.46	-0.35	28.64	6.88	-0.51
English, N. American	399	7.66	4.90	—	7.06	3.25	—	9.69	4.31	—	12.16	5.39	—	12.24	5.83	—	24.40	9.53	—
French	253	10.14	2.98	-0.58	10.26	2.49	-1.08	10.68	3.70	-0.24	16.43	3.59	-0.89	14.65	4.15	-0.46	31.08	6.66	-0.78
German	204	8.84	3.34	-0.27	9.75	2.69	-0.88	9.22	3.91	0.11	14.03	3.99	-0.38	13.78	4.88	-0.28	27.81	7.48	-0.38
Portuguese, Brazilian	289	8.85	4.79	-0.25	6.81	3.21	0.08	11.24	4.55	-0.35	13.58	5.72	-0.26	13.31	5.53	-0.19	26.90	9.64	-0.26
Spanish, Customized	662	5.71	1.33	-0.61	4.27	1.89	-0.28	6.08	1.48	-0.77	4.91	1.63	-0.73	4.86	2.35	-0.29	5.61	1.91	-0.27
Spanish, European	252	9.45	3.24	-0.41	9.98	2.49	-0.98	9.98	3.87	-0.07	14.33	3.98	-0.44	15.08	4.45	-0.53	29.41	7.29	-0.57
Spanish, Latin American	257	6.96	5.01	0.14	6.08	3.63	0.29	9.01	4.11	0.16	11.05	5.66	0.20	11.00	5.69	0.21	22.05	10.24	0.24
Swedish	246	8.39	3.04	-0.17	10.24	2.51	-1.06	10.80	3.53	-0.28	14.87	3.60	-0.57	14.56	4.27	-0.44	29.43	6.54	-0.59

Note: Cohen's d values were calculated in reference to the North American English sample.

TABLE 12. MEAN SCALE SCORES BY GENDER: COMMERCIAL SAMPLE

Assessment Language	Scale	Female			Male		
		<i>n</i>	Mean Score	<i>SD</i>	<i>n</i>	Mean Score	<i>SD</i>
Chinese, Simplified	Expressed Inclusion	168	5.68	1.73	192	5.60	1.86
	Wanted Inclusion	168	5.04	3.28	192	4.93	3.29
	Expressed Control	168	5.16	2.35	192	5.95	2.29
	Wanted Control	168	3.99	2.09	192	4.56	1.99
	Expressed Affection	168	5.86	2.38	192	5.90	2.54
	Wanted Affection	168	6.68	2.26	192	6.48	2.46
	Total Inclusion	168	10.72	4.37	192	10.53	4.50
	Total Control	168	9.15	3.02	192	10.51	3.00
	Total Affection	168	12.55	4.17	192	12.39	4.53
	Total Expressed	168	16.70	4.92	192	17.45	5.33
	Total Wanted	168	15.72	5.33	192	15.97	5.83
Total Overall	168	32.42	9.26	192	33.42	9.99	
Chinese, Traditional	Expressed Inclusion	40	4.38	1.55	35	4.46	1.74
	Wanted Inclusion	40	3.75	3.49	35	4.09	3.62
	Expressed Control	40	4.20	2.40	35	3.80	2.42
	Wanted Control	40	5.20	1.88	35	4.57	1.67
	Expressed Affection	40	4.30	2.36	35	5.20	2.42
	Wanted Affection	40	6.78	2.86	35	6.37	2.20
	Total Inclusion	40	8.13	4.15	35	8.54	4.85
	Total Control	40	9.40	3.14	35	8.37	3.46
	Total Affection	40	11.08	4.18	35	11.57	3.96
	Total Expressed	40	12.88	4.40	35	13.46	5.66
	Total Wanted	40	15.73	5.46	35	15.03	5.88
Total Overall	40	28.60	8.51	35	28.49	10.41	
Danish	Expressed Inclusion	151	5.76	1.11	285	5.82	1.17
	Wanted Inclusion	151	3.46	1.74	285	3.05	1.40
	Expressed Control	151	5.71	1.20	285	6.22	1.20
	Wanted Control	151	5.32	1.32	285	5.25	1.40
	Expressed Affection	151	3.13	2.27	285	2.59	1.95
	Wanted Affection	151	3.70	1.79	285	3.13	1.74
	Total Inclusion	151	9.22	2.47	285	8.87	2.08
	Total Control	151	11.03	1.64	285	11.47	1.78
	Total Affection	151	6.83	3.67	285	5.72	3.27
	Total Expressed	151	14.60	3.20	285	14.64	2.90
	Total Wanted	151	12.48	3.54	285	11.42	3.06
Total Overall	151	27.08	5.90	285	26.06	4.95	

(cont'd)

TABLE 12. MEAN SCALE SCORES BY GENDER: COMMERCIAL SAMPLE (CONT'D)

Assessment Language	Scale	Female			Male		
		<i>n</i>	Mean Score	<i>SD</i>	<i>n</i>	Mean Score	<i>SD</i>
Dutch	Expressed Inclusion	53	5.64	1.21	163	5.46	1.46
	Wanted Inclusion	53	4.26	1.67	163	4.61	1.95
	Expressed Control	53	5.85	1.68	163	6.12	1.58
	Wanted Control	53	5.68	1.34	163	5.64	1.42
	Expressed Affection	53	4.87	2.19	163	5.36	2.39
	Wanted Affection	53	6.17	2.09	163	6.50	1.98
	Total Inclusion	53	9.91	2.47	163	10.07	2.93
	Total Control	53	11.53	2.23	163	11.77	2.01
	Total Affection	53	11.04	3.59	163	11.86	3.86
	Total Expressed	53	16.36	3.63	163	16.94	3.94
	Total Wanted	53	16.11	3.41	163	16.75	3.70
	Total Overall	53	32.47	6.08	163	33.69	6.69
English, European	Expressed Inclusion	7,438	5.64	1.35	10,885	5.60	1.38
	Wanted Inclusion	7,438	4.17	1.97	10,885	4.08	1.88
	Expressed Control	7,438	5.78	1.56	10,885	6.31	1.38
	Wanted Control	7,438	4.95	1.43	10,885	5.07	1.48
	Expressed Affection	7,438	4.51	2.21	10,885	4.25	2.37
	Wanted Affection	7,438	5.05	1.94	10,885	4.85	2.10
	Total Inclusion	7,438	9.82	2.86	10,885	9.69	2.78
	Total Control	7,438	10.73	2.14	10,885	11.39	2.01
	Total Affection	7,438	9.56	3.71	10,885	9.10	4.00
	Total Expressed	7,438	15.93	3.49	10,885	16.16	3.62
	Total Wanted	7,438	14.17	3.81	10,885	14.01	3.87
	Total Overall	7,438	30.10	6.43	10,885	30.17	6.59
English, North American	Expressed Inclusion	46,458	4.49	2.14	66,517	4.29	2.20
	Wanted Inclusion	46,458	3.39	3.40	66,517	3.26	3.34
	Expressed Control	46,458	3.56	2.64	66,517	4.32	2.67
	Wanted Control	46,458	3.33	2.10	66,517	3.36	2.17
	Expressed Affection	46,458	4.42	2.39	66,517	3.98	2.42
	Wanted Affection	46,458	5.22	2.30	66,517	4.76	2.48
	Total Inclusion	46,458	7.88	4.93	66,517	7.55	4.91
	Total Control	46,458	6.90	3.39	66,517	7.67	3.40
	Total Affection	46,458	9.64	4.19	66,517	8.74	4.36
	Total Expressed	46,458	12.48	5.20	66,517	12.58	5.36
	Total Wanted	46,458	11.94	5.78	66,517	11.38	5.80
	Total Overall	46,458	24.42	9.70	66,517	23.96	9.82

(cont'd)

TABLE 12. MEAN SCALE SCORES BY GENDER: COMMERCIAL SAMPLE (CONT'D)

Assessment Language	Scale	Female			Male		
		<i>n</i>	Mean Score	<i>SD</i>	<i>n</i>	Mean Score	<i>SD</i>
French	Expressed Inclusion	285	5.77	1.25	376	5.84	1.26
	Wanted Inclusion	285	4.36	1.83	376	4.69	1.99
	Expressed Control	285	5.93	1.68	376	6.59	1.42
	Wanted Control	285	5.05	1.67	376	5.06	1.54
	Expressed Affection	285	4.22	2.29	376	4.54	2.44
	Wanted Affection	285	5.13	2.09	376	5.32	2.10
	Total Inclusion	285	10.13	2.58	376	10.53	2.78
	Total Control	285	10.98	2.32	376	11.65	2.06
	Total Affection	285	9.35	3.95	376	9.85	4.05
	Total Expressed	285	15.92	3.50	376	16.97	3.60
	Total Wanted	285	14.54	3.97	376	15.07	4.08
	Total Overall	285	30.46	6.51	376	32.04	6.78
German	Expressed Inclusion	169	5.24	1.30	519	5.38	1.47
	Wanted Inclusion	169	4.14	2.08	519	4.14	1.79
	Expressed Control	169	5.54	1.47	519	6.05	1.50
	Wanted Control	169	4.67	1.17	519	4.73	1.23
	Expressed Affection	169	4.75	2.14	519	4.82	2.19
	Wanted Affection	169	5.60	1.92	519	5.33	2.01
	Total Inclusion	169	9.38	2.94	519	9.53	2.70
	Total Control	169	10.22	1.77	519	10.78	1.83
	Total Affection	169	10.35	3.75	519	10.15	3.72
	Total Expressed	169	15.53	3.29	519	16.25	3.71
	Total Wanted	169	14.42	3.81	519	14.21	3.55
	Total Overall	169	29.95	6.41	519	30.45	6.35
Russian	Expressed Inclusion	198	4.28	1.91	242	4.18	1.79
	Wanted Inclusion	198	3.42	3.09	242	3.44	3.09
	Expressed Control	198	5.89	2.37	242	6.45	2.32
	Wanted Control	198	4.76	2.00	242	5.04	2.13
	Expressed Affection	198	4.28	2.15	242	4.62	2.45
	Wanted Affection	198	4.59	2.24	242	4.37	2.49
	Total Inclusion	198	7.70	4.43	242	7.62	4.28
	Total Control	198	10.65	3.26	242	11.49	2.83
	Total Affection	198	8.87	3.83	242	8.98	4.32
	Total Expressed	198	14.44	4.77	242	15.24	4.67
	Total Wanted	198	12.78	5.41	242	12.84	5.36
	Total Overall	198	27.22	8.98	242	28.09	8.66

(cont'd)

TABLE 12. MEAN SCALE SCORES BY GENDER: COMMERCIAL SAMPLE (CONT'D)

Assessment Language	Scale	Female			Male		
		<i>n</i>	Mean Score	<i>SD</i>	<i>n</i>	Mean Score	<i>SD</i>
Spanish, Customized	Expressed Inclusion	218	5.72	1.29	444	5.70	1.35
	Wanted Inclusion	218	4.43	2.06	444	4.19	1.80
	Expressed Control	218	5.89	1.54	444	6.17	1.44
	Wanted Control	218	4.80	1.59	444	4.97	1.65
	Expressed Affection	218	4.76	2.29	444	4.91	2.38
	Wanted Affection	218	5.64	1.90	444	5.60	1.92
	Total Inclusion	218	10.15	2.87	444	9.89	2.73
	Total Control	218	10.69	2.24	444	11.14	2.23
	Total Affection	218	10.39	3.74	444	10.50	3.70
	Total Expressed	218	16.38	3.38	444	16.77	3.75
	Total Wanted	218	14.86	3.83	444	14.75	3.89
Total Overall	218	31.24	6.41	444	31.52	6.69	
Spanish, European	Expressed Inclusion	229	5.40	1.46	376	5.09	1.37
	Wanted Inclusion	229	4.53	1.93	376	3.96	1.53
	Expressed Control	229	6.51	1.54	376	6.79	1.49
	Wanted Control	229	5.33	1.53	376	5.59	1.57
	Expressed Affection	229	5.74	2.50	376	5.26	2.54
	Wanted Affection	229	6.13	1.97	376	5.52	2.07
	Total Inclusion	229	9.93	2.83	376	9.05	2.44
	Total Control	229	11.84	2.13	376	12.38	2.19
	Total Affection	229	11.86	4.03	376	10.78	4.25
	Total Expressed	229	17.65	4.02	376	17.14	3.82
	Total Wanted	229	15.99	3.81	376	15.07	3.63
Total Overall	229	33.63	6.92	376	32.21	6.70	
Spanish, Latin American	Expressed Inclusion	98	4.30	2.05	108	4.56	2.18
	Wanted Inclusion	98	2.79	3.00	108	2.90	3.21
	Expressed Control	98	4.11	2.66	108	4.28	2.38
	Wanted Control	98	3.22	1.73	108	3.20	2.13
	Expressed Affection	98	4.07	2.05	108	3.90	2.47
	Wanted Affection	98	5.03	1.80	108	4.51	2.22
	Total Inclusion	98	7.08	4.37	108	7.46	4.82
	Total Control	98	7.34	3.03	108	7.48	3.10
	Total Affection	98	9.10	3.14	108	8.41	4.10
	Total Expressed	98	12.48	4.65	108	12.74	5.29
	Total Wanted	98	11.04	4.66	108	10.61	5.23
Total Overall	98	23.52	7.82	108	23.35	9.21	

(cont'd)

TABLE 12. MEAN SCALE SCORES BY GENDER: COMMERCIAL SAMPLE (CONT'D)

Assessment Language	Scale	Female			Male		
		<i>n</i>	Mean Score	<i>SD</i>	<i>n</i>	Mean Score	<i>SD</i>
Swedish	Expressed Inclusion	46	5.48	1.39	45	5.40	1.92
	Wanted Inclusion	46	4.17	2.09	45	3.60	1.62
	Expressed Control	46	5.24	1.54	45	5.56	2.07
	Wanted Control	46	5.70	1.30	45	4.84	1.97
	Expressed Affection	46	5.67	2.12	45	5.33	2.39
	Wanted Affection	46	6.07	1.45	45	5.78	1.86
	Total Inclusion	46	9.65	3.07	45	9.00	3.09
	Total Control	46	10.93	2.14	45	10.40	3.49
	Total Affection	46	11.74	3.19	45	11.11	3.89
	Total Expressed	46	16.39	3.28	45	16.29	5.05
	Total Wanted	46	15.93	3.50	45	14.22	4.20
	Total Overall	46	32.33	6.16	45	30.51	8.70

An additional perspective on the internal validity of an instrument across cultures is evident through intercorrelations among its scales. As shown above, mean scores, save for a small number of anomalies, are consistent across translations of the FIRO-B instrument. Scale intercorrelations provide another lens on the interrelationships among scales, and

their consistency, across translations. These intercorrelations are presented in Tables 14 and 15. Across both samples, patterns of correlations are generally similar across translations. Further, these patterns are also similar to those observed by Hammer & Schnell (2000) and Schutz (1958).

TABLE 13. MEAN SCALE SCORES BY GENDER: INTERNATIONAL NORM SAMPLE

Assessment Language	Scale	Female			Male		
		<i>n</i>	Mean Score	<i>SD</i>	<i>n</i>	Mean Score	<i>SD</i>
Danish	Expressed Inclusion	131	5.69	1.26	131	5.62	1.26
	Wanted Inclusion	131	3.72	1.91	131	3.50	1.86
	Expressed Control	131	5.26	1.55	131	6.11	1.53
	Wanted Control	131	4.99	1.53	131	5.23	1.45
	Expressed Affection	131	5.13	2.40	131	4.04	2.43
	Wanted Affection	131	5.27	1.95	131	4.78	1.98
	Total Inclusion	131	9.40	2.72	131	9.11	2.43
	Total Control	131	10.25	2.11	131	11.34	1.88
	Total Affection	131	10.40	3.76	131	8.82	3.93
	Total Expressed	131	16.08	3.58	131	15.77	3.72
	Total Wanted	131	13.98	3.99	131	13.50	3.68
	Total Overall	131	30.05	6.12	131	29.27	6.12

(cont'd)

TABLE 13. MEAN SCALE SCORES BY GENDER—INTERNATIONAL NORM SAMPLE (CONT'D)

Assessment Language	Scale	Female			Male		
		<i>n</i>	Mean Score	<i>SD</i>	<i>n</i>	Mean Score	<i>SD</i>
Dutch	Expressed Inclusion	136	5.49	1.46	136	5.29	1.45
	Wanted Inclusion	136	4.20	1.92	136	4.49	2.36
	Expressed Control	136	5.02	1.66	136	5.68	1.85
	Wanted Control	136	5.79	1.69	136	5.38	1.83
	Expressed Affection	136	5.44	2.19	136	5.08	2.29
	Wanted Affection	136	6.80	1.75	136	6.60	1.99
	Total Inclusion	136	9.68	2.98	136	9.78	3.33
	Total Control	136	10.82	2.35	136	11.06	2.60
	Total Affection	136	12.24	3.35	136	11.68	3.76
	Total Expressed	136	15.95	3.70	136	16.05	3.97
	Total Wanted	136	16.79	3.61	136	16.47	4.13
	Total Overall	136	32.74	6.21	136	32.52	7.09
English, European	Expressed Inclusion	183	5.34	1.51	184	5.12	1.40
	Wanted Inclusion	183	4.27	2.36	184	3.88	2.04
	Expressed Control	183	5.13	1.74	184	5.84	1.74
	Wanted Control	183	5.17	1.81	184	5.05	1.83
	Expressed Affection	183	4.26	2.16	184	3.52	2.24
	Wanted Affection	183	5.12	2.03	184	4.60	2.06
	Total Inclusion	183	9.61	3.30	184	8.99	2.93
	Total Control	183	10.30	2.52	184	10.89	2.37
	Total Affection	183	9.38	3.72	184	8.11	3.81
	Total Expressed	183	14.72	3.53	184	14.47	3.67
	Total Wanted	183	14.56	4.68	184	13.53	4.18
	Total Overall	183	29.28	6.94	184	28.00	6.78
English, North American	Expressed Inclusion	200	4.19	2.35	199	3.61	2.31
	Wanted Inclusion	200	3.75	3.38	199	3.77	3.22
	Expressed Control	200	3.57	2.68	199	4.28	2.90
	Wanted Control	200	3.07	2.08	199	3.20	2.28
	Expressed Affection	200	4.77	2.48	199	3.91	2.54
	Wanted Affection	200	5.48	2.27	199	5.22	2.46
	Total Inclusion	200	7.94	4.98	199	7.38	4.82
	Total Control	200	6.64	3.08	199	7.48	3.37
	Total Affection	200	10.25	4.23	199	9.13	4.32
	Total Expressed	200	12.52	5.41	199	11.80	5.37
	Total Wanted	200	12.30	5.85	199	12.18	5.82
	Total Overall	200	24.82	9.67	199	23.98	9.40

(cont'd)

TABLE 13. MEAN SCALE SCORES BY GENDER: INTERNATIONAL NORM SAMPLE (CONT'D)

Assessment Language	Scale	Female			Male		
		<i>n</i>	Mean Score	<i>SD</i>	<i>n</i>	Mean Score	<i>SD</i>
French	Expressed Inclusion	127	5.49	1.38	126	5.54	1.31
	Wanted Inclusion	127	4.65	2.38	126	4.60	2.00
	Expressed Control	127	5.35	2.05	126	6.13	1.55
	Wanted Control	127	4.39	2.00	126	4.67	1.61
	Expressed Affection	127	5.05	2.13	126	5.32	2.14
	Wanted Affection	127	5.30	1.94	126	5.69	2.11
	Total Inclusion	127	10.14	3.19	126	10.14	2.76
	Total Control	127	9.74	2.81	126	10.79	2.00
	Total Affection	127	10.35	3.60	126	11.01	3.78
	Total Expressed	127	15.88	3.69	126	16.98	3.41
	Total Wanted	127	14.35	4.24	126	14.96	4.05
	Total Overall	127	30.23	6.77	126	31.94	6.46
German	Expressed Inclusion	103	4.97	1.48	101	4.89	1.62
	Wanted Inclusion	103	4.10	2.46	101	3.71	2.16
	Expressed Control	103	4.76	1.99	101	5.35	2.06
	Wanted Control	103	4.60	1.83	101	4.81	1.83
	Expressed Affection	103	4.26	2.01	101	3.83	2.28
	Wanted Affection	103	5.37	2.21	101	4.97	2.42
	Total Inclusion	103	9.07	3.36	101	8.60	3.31
	Total Control	103	9.36	2.75	101	10.16	2.58
	Total Affection	103	9.63	3.72	101	8.80	4.07
	Total Expressed	103	13.99	3.68	101	14.07	4.30
	Total Wanted	103	14.07	4.83	101	13.50	4.93
	Total Overall	103	28.06	7.19	101	27.56	7.80
Portuguese, Brazilian	Expressed Inclusion	145	4.43	2.24	144	4.57	2.25
	Wanted Inclusion	145	4.08	3.22	144	4.64	3.23
	Expressed Control	145	3.85	2.78	144	4.42	2.74
	Wanted Control	145	2.79	2.10	144	2.56	1.96
	Expressed Affection	145	4.93	2.74	144	4.97	2.92
	Wanted Affection	145	6.21	2.27	144	6.35	2.46
	Total Inclusion	145	8.50	4.75	144	9.21	4.82
	Total Control	145	6.64	3.31	144	6.98	3.11
	Total Affection	145	11.14	4.40	144	11.33	4.72
	Total Expressed	145	13.21	5.53	144	13.97	5.89
	Total Wanted	145	13.08	5.51	144	13.55	5.55
	Total Overall	145	26.29	9.41	144	27.51	9.85

(cont'd)

TABLE 13. MEAN SCALE SCORES BY GENDER: INTERNATIONAL NORM SAMPLE (CONT'D)

Assessment Language	Scale	Female			Male		
		<i>n</i>	Mean Score	<i>SD</i>	<i>n</i>	Mean Score	<i>SD</i>
Spanish, European	Expressed Inclusion	126	5.31	1.46	126	4.83	1.52
	Wanted Inclusion	126	4.34	2.29	126	4.42	2.43
	Expressed Control	126	4.65	1.89	126	5.33	1.72
	Wanted Control	126	5.04	1.50	126	4.95	1.81
	Expressed Affection	126	4.56	2.26	126	3.98	2.49
	Wanted Affection	126	5.72	2.08	126	5.69	2.22
	Total Inclusion	126	9.65	3.16	126	9.25	3.31
	Total Control	126	9.69	2.57	126	10.28	2.38
	Total Affection	126	10.28	3.62	126	9.67	4.10
	Total Expressed	126	14.52	4.07	126	14.13	3.88
	Total Wanted	126	15.10	4.34	126	15.06	4.58
	Total Overall	126	29.62	7.26	126	29.20	7.34
Spanish, Latin American	Expressed Inclusion	128	3.58	2.33	129	3.49	2.18
	Wanted Inclusion	128	3.63	3.50	129	3.23	3.25
	Expressed Control	128	3.65	2.97	129	3.80	2.80
	Wanted Control	128	2.50	2.14	129	2.22	1.58
	Expressed Affection	128	3.59	2.41	129	3.99	2.51
	Wanted Affection	128	5.36	2.10	129	5.08	2.27
	Total Inclusion	128	7.20	5.27	129	6.72	4.75
	Total Control	128	6.15	3.97	129	6.02	3.28
	Total Affection	128	8.95	3.98	129	9.07	4.25
	Total Expressed	128	10.81	5.95	129	11.28	5.37
	Total Wanted	128	11.48	5.90	129	10.53	5.46
	Total Overall	128	22.30	10.78	129	21.81	9.71
Swedish	Expressed Inclusion	123	4.92	1.35	123	4.51	1.56
	Wanted Inclusion	123	3.84	2.14	123	3.51	2.27
	Expressed Control	123	4.84	1.74	123	5.59	1.74
	Wanted Control	123	5.00	2.04	123	5.06	1.81
	Expressed Affection	123	5.15	2.08	123	4.74	2.37
	Wanted Affection	123	5.98	1.76	123	5.72	1.95
	Total Inclusion	123	8.76	2.84	123	8.02	3.19
	Total Control	123	9.84	2.58	123	10.64	2.38
	Total Affection	123	11.13	3.23	123	10.46	3.80
	Total Expressed	123	14.90	3.41	123	14.84	3.80
	Total Wanted	123	14.82	4.36	123	14.29	4.19
	Total Overall	123	29.72	6.39	123	29.13	6.69

TABLE 14. SCALE INTERCORRELATIONS IN THE COMMERCIAL SAMPLE

Assessment Language	Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Chinese, Simplified	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.48	—										
	3. Expressed Control	.34	.34	—									
	4. Wanted Control	.14	.04	-.02	—								
	5. Expressed Affection	.59	.55	.31	.09	—							
	6. Wanted Affection	.42	.64	.27	.03	.63	—						
	7. Total Inclusion	.76	.94	.39	.09	.65	.64	—					
	8. Total Control	.35	.28	.75	.65	.30	.23	.35	—				
	9. Total Affection	.56	.66	.33	.06	.91	.90	.72	.29	—			
	10. Total Expressed	.79	.59	.72	.08	.83	.57	.75	.60	.78	—		
	11. Total Wanted	.51	.87	.30	.40	.62	.81	.85	.50	.79	.61	—	
	12. Total Overall	.72	.82	.56	.28	.80	.77	.90	.61	.87	.89	.91	—
Chinese, Traditional	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.42	—										
	3. Expressed Control	.40	.35	—									
	4. Wanted Control	.20	.21	.22	—								
	5. Expressed Affection	.46	.47	.35	.11	—							
	6. Wanted Affection	.27	.40	.17	-.04	.33	—						
	7. Total Inclusion	.69	.94	.42	.24	.54	.41	—					
	8. Total Control	.40	.37	.85	.71	.31	.10	.44	—				
	9. Total Affection	.44	.53	.31	.04	.80	.83	.58	.25	—			
	10. Total Expressed	.74	.53	.78	.23	.80	.33	.69	.68	.68	—		
	11. Total Wanted	.45	.87	.37	.43	.48	.69	.85	.50	.72	.55	—	
	12. Total Overall	.66	.81	.64	.38	.72	.59	.88	.67	.80	.87	.90	—

TABLE 14. SCALE INTERCORRELATIONS IN THE COMMERCIAL SAMPLE (CONT'D)

Assessment Language	Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Danish	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.36	—										
	3. Expressed Control	-.01	.05	—									
	4. Wanted Control	.11	.25	-.10	—								
	5. Expressed Affection	.40	.29	.00	.02	—							
	6. Wanted Affection	.26	.32	-.09	.10	.60	—						
	7. Total Inclusion	.77	.88	.03	.23	.40	.36	—					
	8. Total Control	.08	.23	.62	.72	.01	.02	.20	—				
	9. Total Affection	.38	.34	-.05	.07	.91	.88	.43	.02	—			
	10. Total Expressed	.65	.36	.40	.02	.85	.48	.58	.30	.76	—		
	11. Total Wanted	.36	.75	-.07	.59	.47	.74	.70	.42	.66	.44	—	
	12. Total Overall	.59	.66	.19	.37	.77	.72	.76	.43	.83	.83	.86	—
Dutch	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.45	—										
	3. Expressed Control	.24	.32	—									
	4. Wanted Control	.07	.05	-.06	—								
	5. Expressed Affection	.37	.40	.18	-.03	—							
	6. Wanted Affection	.23	.46	.14	-.02	.52	—						
	7. Total Inclusion	.80	.90	.34	.07	.46	.42	—					
	8. Total Control	.24	.28	.74	.63	.12	.09	.31	—				
	9. Total Affection	.35	.49	.18	-.03	.89	.85	.50	.12	—			
	10. Total Expressed	.69	.54	.61	-.02	.82	.46	.71	.47	.75	—		
	11. Total Wanted	.39	.79	.22	.40	.49	.79	.73	.44	.72	.53	—	
	12. Total Overall	.62	.76	.48	.21	.75	.71	.82	.52	.84	.88	.87	—

TABLE 14. SCALE INTERCORRELATIONS IN THE COMMERCIAL SAMPLE (CONT'D)

Assessment Language	Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
English, European	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.45	—										
	3. Expressed Control	.10	.17	—									
	4. Wanted Control	.11	.11	.01	—								
	5. Expressed Affection	.39	.38	.07	.08	—							
	6. Wanted Affection	.26	.49	.03	.06	.60	—						
	7. Total Inclusion	.79	.90	.17	.13	.45	.46	—					
	8. Total Control	.15	.20	.71	.71	.10	.07	.21	—				
	9. Total Affection	.37	.48	.06	.08	.91	.88	.51	.10	—			
	10. Total Expressed	.68	.49	.50	.10	.83	.50	.66	.42	.75	—		
	11. Total Wanted	.41	.80	.11	.47	.54	.80	.74	.40	.74	.55	—	
	12. Total Overall	.61	.74	.34	.33	.77	.75	.80	.47	.85	.87	.89	—
English, North American	1. Expressed Inclusion												
	2. Wanted Inclusion	.55	—										
	3. Expressed Control	.23	.22	—									
	4. Wanted Control	.17	.15	-.01	—								
	5. Expressed Affection	.55	.46	.14	.08	—							
	6. Wanted Affection	.39	.55	.09	.07	.59	—						
	7. Total Inclusion	.82	.93	.25	.17	.56	.55	—					
	8. Total Control	.28	.26	.78	.62	.16	.11	.30	—				
	9. Total Affection	.52	.57	.13	.09	.89	.89	.62	.15	—			
	10. Total Expressed	.78	.55	.66	.10	.75	.47	.72	.58	.69	—		
	11. Total Wanted	.54	.87	.16	.48	.54	.77	.83	.43	.73	.55	—	
	12. Total Overall	.75	.81	.45	.34	.73	.71	.88	.57	.81	.87	.89	—

TABLE 14. SCALE INTERCORRELATIONS IN THE COMMERCIAL SAMPLE (CONT'D)

Assessment Language	Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
French	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.41	—										
	3. Expressed Control	.16	.15	—									
	4. Wanted Control	.14	.13	-.04	—								
	5. Expressed Affection	.40	.45	.03	.14	—							
	6. Wanted Affection	.24	.51	.00	.10	.61	—						
	7. Total Inclusion	.76	.91	.18	.16	.51	.48	—					
	8. Total Control	.22	.20	.69	.70	.12	.07	.25	—				
	9. Total Affection	.36	.53	.01	.14	.91	.88	.55	.11	—			
	10. Total Expressed	.68	.51	.51	.13	.81	.48	.68	.46	.74	—		
	11. Total Wanted	.38	.80	.06	.51	.58	.80	.74	.41	.77	.54	—	
	12. Total Overall	.60	.75	.31	.38	.79	.74	.81	.49	.86	.86	.89	—
German	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.40	—										
	3. Expressed Control	.13	.13	—									
	4. Wanted Control	.10	.02	-.11	—								
	5. Expressed Affection	.41	.43	.15	.09	—							
	6. Wanted Affection	.34	.53	.08	.04	.59	—						
	7. Total Inclusion	.79	.88	.16	.06	.50	.53	—					
	8. Total Control	.18	.12	.75	.58	.18	.09	.17	—				
	9. Total Affection	.42	.53	.13	.07	.90	.88	.58	.16	—			
	10. Total Expressed	.69	.47	.56	.05	.82	.53	.67	.49	.76	—		
	11. Total Wanted	.43	.81	.08	.37	.58	.84	.77	.31	.78	.55	—	
	12. Total Overall	.64	.73	.36	.24	.80	.77	.82	.45	.88	.88	.88	—

TABLE 14. SCALE INTERCORRELATIONS IN THE COMMERCIAL SAMPLE (CONT'D)

Assessment Language	Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Russian	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.52	—										
	3. Expressed Control	.24	.29	—									
	4. Wanted Control	.20	.17	-.05	—								
	5. Expressed Affection	.46	.34	.18	.09	—							
	6. Wanted Affection	.29	.45	.11	.06	.52	—						
	7. Total Inclusion	.80	.93	.31	.21	.43	.44	—					
	8. Total Control	.32	.34	.74	.64	.20	.13	.38	—				
	9. Total Affection	.42	.45	.17	.08	.87	.88	.50	.19	—			
	10. Total Expressed	.73	.51	.68	.10	.76	.42	.68	.59	.68	—		
	11. Total Wanted	.51	.84	.20	.51	.46	.72	.81	.50	.68	.52	—	
	12. Total Overall	.70	.79	.48	.36	.69	.67	.86	.62	.78	.85	.89	—
Spanish, Customized	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.47	—										
	3. Expressed Control	.07	.22	—									
	4. Wanted Control	.15	.11	.04	—								
	5. Expressed Affection	.51	.44	.04	.05	—							
	6. Wanted Affection	.30	.51	.09	.11	.51	—						
	7. Total Inclusion	.80	.91	.19	.15	.54	.49	—					
	8. Total Control	.16	.23	.69	.75	.06	.14	.23	—				
	9. Total Affection	.47	.54	.07	.09	.90	.84	.60	.11	—			
	10. Total Expressed	.72	.55	.46	.11	.85	.48	.72	.38	.78	—		
	11. Total Wanted	.44	.79	.17	.53	.49	.79	.75	.50	.72	.55	—	
	12. Total Overall	.66	.76	.35	.37	.75	.73	.83	.50	.85	.87	.89	—

TABLE 14. SCALE INTERCORRELATIONS IN THE COMMERCIAL SAMPLE (CONT'D)

Assessment Language	Score	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.41	—										
	3. Expressed Control	.13	.12	—									
	4. Wanted Control	.07	-.03	.01	—								
	5. Expressed Affection	.45	.45	.10	.10	—							
	6. Wanted Affection	.38	.59	.08	.05	.67	—						
	7. Total Inclusion	.80	.87	.15	.02	.54	.59	—					
	8. Total Control	.14	.07	.70	.72	.14	.09	.12	—				
	9. Total Affection	.46	.56	.10	.08	.93	.90	.61	.13	—			
	10. Total Expressed	.70	.49	.50	.09	.85	.60	.70	.41	.81	—		
	11. Total Wanted	.43	.77	.10	.43	.62	.84	.73	.38	.79	.60	—	
	12. Total Overall	.64	.70	.34	.29	.83	.81	.80	.44	.89	.90	.89	—
Spanish, European													
	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.54	—										
	3. Expressed Control	.22	.18	—									
	4. Wanted Control	.10	.00	-.08	—								
	5. Expressed Affection	.54	.39	.11	-.01	—							
	6. Wanted Affection	.39	.51	.07	.07	.45	—						
	7. Total Inclusion	.82	.92	.23	.05	.51	.52	—					
	8. Total Control	.25	.15	.77	.57	.09	.10	.22	—				
	9. Total Affection	.55	.52	.11	.03	.87	.83	.61	.11	—			
	10. Total Expressed	.78	.50	.65	.00	.74	.41	.70	.53	.69	—		
	11. Total Wanted	.54	.84	.11	.42	.43	.76	.81	.36	.68	.48	—	
	12. Total Overall	.77	.78	.44	.25	.68	.68	.88	.52	.80	.86	.86	—
Spanish, Latin American													
	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.54	—										
	3. Expressed Control	.22	.18	—									
	4. Wanted Control	.10	.00	-.08	—								
	5. Expressed Affection	.54	.39	.11	-.01	—							
	6. Wanted Affection	.39	.51	.07	.07	.45	—						
	7. Total Inclusion	.82	.92	.23	.05	.51	.52	—					
	8. Total Control	.25	.15	.77	.57	.09	.10	.22	—				
	9. Total Affection	.55	.52	.11	.03	.87	.83	.61	.11	—			
	10. Total Expressed	.78	.50	.65	.00	.74	.41	.70	.53	.69	—		
	11. Total Wanted	.54	.84	.11	.42	.43	.76	.81	.36	.68	.48	—	
	12. Total Overall	.77	.78	.44	.25	.68	.68	.88	.52	.80	.86	.86	—

TABLE 14. SCALE INTERCORRELATIONS IN THE COMMERCIAL SAMPLE (CONT'D)

Assessment Language	Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.50	—										
	3. Expressed Control	.21	.35	—									
	4. Wanted Control	.26	.42	.34	—								
	5. Expressed Affection	.57	.51	.14	.31	—							
	6. Wanted Affection	.48	.49	.04	.09	.63	—						
	7. Total Inclusion	.85	.88	.33	.40	.62	.56	—					
	8. Total Control	.28	.47	.83	.80	.27	.08	.44	—				
	9. Total Affection	.59	.56	.11	.24	.93	.87	.66	.21	—			
	10. Total Expressed	.79	.62	.58	.41	.82	.54	.81	.61	.78	—		
	11. Total Wanted	.55	.87	.33	.67	.65	.70	.83	.61	.74	.71	—	
	12. Total Overall	.73	.80	.50	.58	.80	.67	.89	.66	.82	.93	.92	—
Swedish													

TABLE 15. SCALE INTERCORRELATIONS IN THE INTERNATIONAL NORM SAMPLE

Assessment Language	Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Danish	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.32	—										
	3. Expressed Control	.07	.00	—									
	4. Wanted Control	.03	.24	-.11	—								
	5. Expressed Affection	.45	.30	.00	-.12	—							
	6. Wanted Affection	.30	.45	-.07	.05	.55	—						
	7. Total Inclusion	.72	.89	.03	.19	.44	.48	—					
	8. Total Control	.08	.17	.70	.64	-.09	-.02	.16	—				
	9. Total Affection	.43	.42	-.03	-.05	.91	.85	.52	-.06	—			
	10. Total Expressed	.68	.31	.46	-.12	.83	.45	.56	.27	.75	—		
	11. Total Wanted	.32	.82	-.08	.53	.38	.76	.76	.33	.62	.34	—	
	12. Total Overall	.61	.70	.23	.26	.74	.74	.74	.81	.37	.84	.81	—
Dutch	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.51	—										
	3. Expressed Control	.15	.24	—									
	4. Wanted Control	.23	.04	-.03	—								
	5. Expressed Affection	.38	.29	.13	.00	—							
	6. Wanted Affection	.22	.40	.06	.03	.49	—						
	7. Total Inclusion	.81	.92	.23	.13	.37	.37	—					
	8. Total Control	.27	.20	.70	.69	.09	.07	.26	—				
	9. Total Affection	.35	.39	.11	.02	.89	.84	.43	.09	—			
	10. Total Expressed	.67	.48	.60	.07	.79	.40	.64	.49	.71	—		
	11. Total Wanted	.50	.77	.15	.49	.40	.72	.75	.46	.63	.49	—	
	12. Total Overall	.68	.72	.43	.33	.69	.65	.80	.55	.78	.86	.87	—

TABLE 15. SCALE INTERCORRELATIONS IN THE INTERNATIONAL NORM SAMPLE (CONT'D)

Assessment Language	Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
English, European	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.43	—										
	3. Expressed Control	.05	.11	—									
	4. Wanted Control	.03	.11	-.06	—								
	5. Expressed Affection	.40	.42	-.02	.06	—							
	6. Wanted Affection	.25	.59	-.05	.16	.57	—						
	7. Total Inclusion	.77	.91	.10	.09	.48	.54	—					
	8. Total Control	.06	.16	.68	.70	.04	.08	.14	—				
	9. Total Affection	.37	.57	-.04	.12	.90	.88	.57	.06	—			
	10. Total Expressed	.68	.49	.50	.02	.77	.43	.66	.38	.69	—		
	11. Total Wanted	.34	.81	.01	.53	.50	.82	.73	.40	.74	.45	—	
	12. Total Overall	.57	.78	.27	.36	.73	.76	.82	.46	.84	.82	.88	—
English, North American	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.50	—										
	3. Expressed Control	.13	.19	—									
	4. Wanted Control	.09	.17	-.17	—								
	5. Expressed Affection	.56	.44	.06	-.03	—							
	6. Wanted Affection	.37	.58	.00	.12	.54	—						
	7. Total Inclusion	.81	.91	.19	.16	.57	.57	—					
	8. Total Control	.17	.28	.75	.52	.03	.09	.27	—				
	9. Total Affection	.54	.58	.04	.05	.89	.87	.65	.07	—			
	10. Total Expressed	.77	.52	.60	-.06	.75	.42	.72	.48	.67	—		
	11. Total Wanted	.47	.86	.04	.52	.46	.78	.80	.39	.70	.44	—	
	12. Total Overall	.72	.82	.37	.28	.70	.71	.90	.51	.81	.84	.86	—

TABLE 15. SCALE INTERCORRELATIONS IN THE INTERNATIONAL NORM SAMPLE (CONT'D)

Assessment Language	Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
French	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.38	—										
	3. Expressed Control	.12	.14	—									
	4. Wanted Control	.02	.04	-.08	—								
	5. Expressed Affection	.34	.42	.07	.16	—							
	6. Wanted Affection	.10	.49	.08	.04	.58	—						
	7. Total Inclusion	.73	.91	.16	.04	.46	.41	—					
	8. Total Control	.11	.13	.69	.67	.16	.09	.14	—				
	9. Total Affection	.25	.51	.08	.11	.89	.88	.49	.14	—			
	10. Total Expressed	.64	.46	.60	.06	.76	.42	.63	.49	.67	—		
	11. Total Wanted	.26	.79	.08	.48	.57	.77	.70	.41	.75	.48	—	
	12. Total Overall	.51	.74	.37	.33	.76	.71	.77	.52	.83	.84	.88	—
German	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.47	—										
	3. Expressed Control	.12	.08	—									
	4. Wanted Control	.12	.23	-.03	—								
	5. Expressed Affection	.47	.47	.09	.05	—							
	6. Wanted Affection	.28	.56	-.07	.21	.53	—						
	7. Total Inclusion	.79	.91	.11	.22	.54	.52	—					
	8. Total Control	.17	.22	.74	.65	.11	.09	.23	—				
	9. Total Affection	.42	.59	.01	.15	.87	.88	.60	.11	—			
	10. Total Expressed	.70	.48	.61	.06	.77	.36	.66	.50	.64	—		
	11. Total Wanted	.40	.83	-.01	.58	.49	.82	.76	.39	.76	.42	—	
	12. Total Overall	.64	.79	.32	.41	.73	.73	.85	.52	.83	.81	.88	—

TABLE 15. SCALE INTERCORRELATIONS IN THE INTERNATIONAL NORM SAMPLE (CONT'D)

Assessment Language	Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Portuguese, Brazilian	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.52	—										
	3. Expressed Control	.17	.25	—									
	4. Wanted Control	-.05	.05	-.13	—								
	5. Expressed Affection	.63	.49	.12	-.08	—							
	6. Wanted Affection	.36	.60	.05	.05	.54	—						
	7. Total Inclusion	.82	.92	.24	.01	.63	.58	—					
	8. Total Control	.11	.25	.78	.52	.05	.08	.22	—				
	9. Total Affection	.58	.62	.10	-.03	.90	.85	.69	.07	—			
	10. Total Expressed	.79	.56	.61	-.13	.80	.43	.75	.45	.72	—		
	11. Total Wanted	.44	.86	.12	.42	.49	.80	.79	.37	.72	.47	—	
	12. Total Overall	.72	.83	.43	.17	.75	.71	.90	.48	.84	.86	.85	—
Spanish, European	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.37	—										
	3. Expressed Control	.10	.24	—									
	4. Wanted Control	.05	.02	.01	—								
	5. Expressed Affection	.43	.43	.10	.01	—							
	6. Wanted Affection	.28	.67	.14	-.01	.46	—						
	7. Total Inclusion	.74	.90	.22	.04	.51	.62	—					
	8. Total Control	.10	.19	.74	.67	.08	.10	.19	—				
	9. Total Affection	.42	.64	.13	.00	.87	.84	.66	.10	—			
	10. Total Expressed	.68	.51	.56	.03	.81	.44	.69	.43	.74	—		
	11. Total Wanted	.35	.86	.20	.38	.45	.84	.79	.40	.74	.49	—	
	12. Total Overall	.58	.80	.42	.25	.72	.75	.86	.48	.86	.85	.88	—

TABLE 15. SCALE INTERCORRELATIONS IN THE INTERNATIONAL NORM SAMPLE (CONT'D)

Assessment Language	Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Spanish, Latin American	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.57	—										
	3. Expressed Control	.26	.28	—									
	4. Wanted Control	.30	.17	.13	—								
	5. Expressed Affection	.63	.52	.17	.09	—							
	6. Wanted Affection	.46	.65	.19	.10	.56	—						
	7. Total Inclusion	.83	.93	.30	.25	.64	.65	—					
	8. Total Control	.36	.31	.86	.62	.18	.20	.37	—				
	9. Total Affection	.62	.66	.20	.11	.90	.87	.73	.22	—			
	10. Total Expressed	.80	.60	.68	.22	.77	.52	.76	.66	.74	—		
	11. Total Wanted	.61	.90	.28	.47	.55	.81	.88	.47	.76	.63	—	
	12. Total Overall	.78	.83	.53	.39	.73	.74	.91	.62	.83	.90	.90	—
Swedish	1. Expressed Inclusion	—											
	2. Wanted Inclusion	.34	—										
	3. Expressed Control	.07	.02	—									
	4. Wanted Control	.20	.17	-.08	—								
	5. Expressed Affection	.38	.29	-.01	.07	—							
	6. Wanted Affection	.24	.58	-.04	.00	.49	—						
	7. Total Inclusion	.73	.89	.05	.22	.39	.54	—					
	8. Total Control	.20	.15	.65	.71	.04	-.02	.21	—				
	9. Total Affection	.36	.49	-.03	.05	.89	.84	.53	.01	—			
	10. Total Expressed	.67	.33	.51	.08	.77	.38	.56	.43	.68	—		
	11. Total Wanted	.37	.85	-.04	.54	.40	.73	.79	.39	.64	.37	—	
	12. Total Overall	.61	.73	.25	.40	.68	.69	.83	.49	.79	.80	.86	—

RELIABILITY

Reliability was assessed by examining the internal consistency of responses to items within each scale. To the extent that items within a scale are highly correlated, further evidence is provided that these items are all measuring the specific construct of focus. Cronbach’s alpha reliabilities were calculated for each of the scales. Reliabilities for the commercial sample are presented in Table 16. Similarly, Table 17 shows Cronbach’s alpha reliabilities for the INS.

A general benchmark for determining acceptable internal consistency reliability is approximately .80. Tables 16 and 17 show that scales in both samples consistently reach and exceed this benchmark.

SUMMARY

The body of evidence displayed above by and large shows construct equivalence across the languages in which the FIRO-B has been translated. Nonetheless, there are some anomalies within the data that may warrant further evaluation, including two results of note. The commercial Danish subsample showed significant drop-offs in the scales of Expressed Affection and Wanted Affection. These results were not consistent with those observed in the INS. It is possible that the particular demographic composition of the Danish sample is responsible for the observed results; however, this is an open, empirical question. Another anomaly is that North American translations tended to have lower average scores relative to their international counterparts. Although similar patterns in term of the trends of scores were similar, there appeared to be a legitimate mean score difference across scales.

TABLE 16. ALPHA RELIABILITIES WITHIN THE COMMERCIAL SAMPLE

Assessment Language	Expressed Inclusion	Wanted Inclusion	Expressed Control	Wanted Control	Expressed Affection	Wanted Affection
Chinese, Simplified	.84	.96	.91	.81	.87	.87
Chinese, Traditional	.81	.97	.90	.73	.88	.89
Danish	.84	.94	.91	.86	.83	.73
Dutch	.85	.94	.89	.85	.81	.84
English, European	.80	.91	.87	.81	.85	.84
English, North American	.89	.96	.92	.85	.88	.86
French	.82	.94	.90	.85	.87	.85
German	.79	.93	.89	.81	.84	.87
Russian	.82	.94	.85	.80	.82	.82
Spanish, Customized	.87	.96	.92	.85	.87	.85
Spanish, European	.80	.90	.76	.78	.86	.84
Spanish, Latin American	.87	.95	.93	.78	.88	.82
Swedish	.88	.95	.91	.87	.86	.80
Mean	.83	.94	.89	.82	.86	.84

TABLE 17. ALPHA RELIABILITIES WITHIN THE INTERNATIONAL NORM SAMPLE

Assessment Language	Expressed Inclusion	Wanted Inclusion	Expressed Control	Wanted Control	Expressed Affection	Wanted Affection
Danish	.82	.93	.94	.90	.89	.78
Dutch	.85	.93	.93	.93	.78	.84
English, European	.84	.94	.93	.89	.87	.86
English, North American	.90	.96	.93	.88	.89	.87
French	.75	.93	.90	.89	.81	.83
German	.81	.95	.94	.92	.85	.89
Portuguese, Brazilian	.81	.93	.92	.86	.88	.86
Spanish, European	.84	.96	.93	.84	.86	.87
Spanish, Latin American	.87	.96	.94	.84	.85	.84
Swedish	.81	.95	.91	.92	.85	.83
Mean	.83	.94	.93	.89	.85	.84

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