MBTI® MANUAL GLOBAL SUPPLEMENT SERIES



# Canada (North American English) Supplement to the MBTI® Manual for the Global Step I™ and Step II™ Assessments

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### **CONTENTS**

Introduction	1
Data Collection	2
MBTI® Global Step I™ Assessment Results for	
the Canada (English) Sample	4
MBTI® Type and Preference Distributions	4
Relationships Between MBTI® Global Step I™ and Form M Preference Pair Results	4
Global Step I <sup>™</sup> Preference Pair Intercorrelations	6
Reliability and Validity of Global Step $I^{\scriptscriptstyle{T}}$ Results	6
MBTI® Global Step II™ Assessment Results for the Canada (English) Sample	17
Relationships Between MBTI® Global Step II®, Form	
and European Step II™ Facet Results	17
Global Step II <sup>™</sup> Facet Intercorrelations	17
Reliability and Validity of Global Step II <sup>™</sup> Results	17
Global Step II <sup>™</sup> Facet Distributions	20
Conclusion	22
Notes	23
References	24

### INTRODUCTION

As steward of the Myers-Briggs Type Indicator (MBTI°) assessment, The Myers-Briggs Company had two overarching goals in undertaking its revision to create global Step I™ and Step II™ forms: (1) preserve the integrity of the Step I and Step II assessments and (2) improve the reliability and validity of the MBTI assessment overall. More specifically, the company sought to update existing representative samples and compile new representative samples in additional countries based on translations (or adaptations) of the assessment into additional languages, use a statistical model consistent with type theory, and, if supported by data analysis, use the same scoring method globally, so that scores could be compared across all those countries and languages.

Broadening existing and compiling new representative samples was a high priority. The prior revision of the MBTI assessment culminated in the 1998 publication of MBTI Form M (Step I), which replaced the earlier Form G. Form Q (Step II) was subsequently published in 2001 and replaced Form K. In the United Kingdom, the European Step I assessment was published in 1997. The European Step II assessment was published in 2003 based on pan-European samples compiled by OPP Ltd. Although all these forms of the MBTI assessment served their audiences well, no additional representative samples in the United States or the UK had been compiled subsequent to their publication. It was therefore important to update the US and UK representative samples as well as expand the number of representative samples to include additional countries and languages, reflecting the increasingly global reach of the MBTI assessment.

To address this need, data were collected in targeted countries (see table 1), with specific demographic targets set by experts for all samples except those from Brazil and South Africa.<sup>1</sup> A consistent data collection effort yielded samples that responded to a common 230-item

MBTI research form containing all items on then-current forms of the assessment (i.e., MBTI Form M and Form Q, and European Step I and Step II); common demographic items; and other validation assessments. Respondents who completed North American English or European English versions of the assessment also completed an online interpretation session through The Myers-Briggs Company's MBTI®Complete website, making their verified, or "best-fit," type available for analysis.

In brief, the revision of the MBTI assessment provided the opportunity to collect a wealth of data, resulting in national representative samples that had not existed previously. These samples served the global research effort for the revised assessments themselves and also provided 4 new large and 19 new moderate-size samples. (Please note: In this manual supplement series, a particular sample may be referred to by either country or language for convenience in a particular context. Refer as needed to the sample names listed in table 1 when considering the results presented.)

Two different categories of samples were collected for this global project. Table 1 lists the 4 "large" samples— United States, Canada, and Australia (all North American English), and the United Kingdom (European English) and the 19 "moderate-size" samples from around the world, which were all combined to form the global sample. Large samples were targeted to have 1,000 or more respondents, to exceed the sample size of an existing representative sample (specifically, in the US and the UK), and to reflect the size of the market for the MBTI assessment. The moderate-size samples for the most part included targets to ensure that they were nationally representative; only 3 of these samples—Brazil (Brazilian Portuguese), South Africa (Afrikaans), and South Africa (North American English)—due in part to their smaller markets for the MBTI assessment, were distributor led and nonrepresentative.

The MBTI global sample consists of 16,773 individuals, as detailed and summarized in the MBTI® Manual for the Global Step I<sup>™</sup> and Step II<sup>™</sup> Assessments (Myers, McCaulley, Quenk, & Hammer, 2018). The global sample was used to develop the Global Step I and Step II assessments. It is critical to keep in mind that while analyses were conducted for each country/ language sample used in this supplement series and are summarized here, the focus of the analyses was on the global sample reported in the 2018 MBTI manual.

This supplement to the 2018 manual summarizes results obtained from responses of the Canada (North American English) sample—hereafter, Canada (English) sample—to the Global Step I and Step II assessments in North American English. Included in this supplement is a general description of the sample, along with statistical summaries, analyses, and type distributions based on those results.

Table 1 | List of large and moderate-size country/ language samples in the MBTI® global sample

Country/language sample	N
Large samples	
Australia (North American English)	776
Canada (North American English)	939
United Kingdom (European English)	2,831
United States (North American English)	3,578
Moderate-size samples	
Brazil (Brazilian Portuguese)*	839
Canada (Canadian French)	176
China (Simplified Chinese)	521
China (Traditional Chinese)	477
Denmark (Danish)	468
Finland (Finnish)	524
France (European French)	472
Germany (German)†	440
Greece (Greek)	277
Ireland (European English)	383
Italy (Italian)	458
Mexico (Latin American Spanish)	359
Netherlands (Dutch)	506
Norway (Norwegian)	493
Portugal (European Portuguese)	503
South Africa (Afrikaans)*	505
South Africa (North American English)*	189
Spain (European Spanish)	564
Sweden (Swedish)	495

Note: Global sample, N = 16,773.

†Germany sample includes one individual residing in Switzerland.

## DATA COLLECTION

Data for this revision of the assessment were collected almost exclusively online through two Myers-Briggs Company websites. The first site, built by the company's Research Division, accommodated the administration of the MBTI research form and other validity assessments, which were used for non-Englishspeaking research participants. The second site, for English-speaking participants, was a special modification of MBTI°Complete created for this research project using the 230-item MBTI research form, followed by MBTI®Complete's online interpretation session yielding respondents' best-fit type results. (For details on bestfit type, see chapter 7 in the 2018 MBTI manual.) MBTI research from data for the Canada (English) sample were collected using the MBTI Complete website; best-fit type data were collected at that time but are not reported here.

For the MBTI research form, specific sampling targets were set for each sample (table 2). Local MBTI distributors

<sup>\*</sup>Data collection for this sample was distributor led; it is not a representative sample.

helped determine the final targets for samples in their respective countries or regions by selecting appropriate official sources. In general, sampling targets were designed to mirror the working-age population.

Once the websites were prepared and the sampling targets were set, data collection began. For most samples, the majority of participants were provided with incentives by an external market research firm. Such

firms maintain panels of participants who have expressed willingness to participate in research. These participants were compensated for completing some combination of demographic items, the MBTI research form, and/ or other validity assessments. For some samples—for example, Brazil (Brazilian Portuguese)—the locally based MBTI distributor led the data collection effort. Once data were collected, all cases were thoroughly examined,

Table 2 | Demographic summary: Canada (English) sample

Demographic	Target %	Actual %	Demographic	Target %	Actua %
Age by gender			Province of residence (cont.)		
Females 18–24 years	6	6	New Brunswick	3	3
Males 18–24 years	6	5	Newfoundland and Labrador	2	2
Females 25–44 years	19	21	Prince Edward Island	<1	<1
Males 25–44 years	19	18	Yukon	<1	<1
Females 45–64 years	17	20	Northwest Territories		0
Males 45–64 years	17	16	Nunavut	<1	0
Females 65+ years	9	8	No response	_	15
Males 65+ years	8	6	<u>·</u>		
Mean age: 45 years	_	_	Education level		
			Secondary school not completed	15	2
Gender			Secondary school (diploma)	24	21
Female	_	54	Trade school	12	6
Male	_	46	College (non-university)	20	22
Ethnicity			University (no bachelor's degree)	5	7
<b>Ethnicity</b> White	80	73	University (bachelor's degree or higher)	23	27
Chinese	4	73 3	No response	_	15
Black		1	Form Larrow and adults		
2 Impleyment status		60	۲۵.		
Aboriginal South Asian	•	1	Working full-time	60	52
South Asian Southeast Asian	4	1	Working part-time	15	16
	1	<del>-</del>	Not working for income	15	14
Other	5	5	Retired	5	14
No response	_	15	Enrolled as full-time student	5	5
Marital status			General line of work		
Single, never married	29	22	Sales and related occupations	11	9
Married	39	41	Office and administrative support	18	8
Common-law partner	15	11	Education, training, and library occupations	7	7
Separated	3	3	Business and financial operations	5	6
Widowed	6	2	Production occupations	8	5
Divorced	8	6	Computer and mathematical occupations	3	4
No response	_	15	Transportation and materials moving	7	4
Dunyings of varidance			Healthcare practitioner and technical occupations	6	3
Province of residence	40	41	Food preparation and food service	9	2
Ontario	49	41	Healthcare support occupations	3	2
British Columbia	17	14	···	3	2
Alberta	13	9	Personal care and personal service	2	2
Manitoba	5	5	Architecture and engineering	5	2
Quebec	4	4	Construction and extraction occupations	13	12
Nova Scotia	4	4	Other	10	32
Saskatchewan	4	3	No response	_	52

Note: N = 939. Percentages in a given category may not total 100% due to rounding of decimals.

and invalid cases (e.g., those with too many response omissions or where a participant had selected only the "A" response option across 230 items) were removed. This cleanup step, while reducing final sample sizes, was required to ensure that only the highest-quality data remained for analysis.

A representative sample of individuals in Canada who read North American English was obtained from a market research firm. Targets were set based on the English-speaking population of Canada and provided by Psychometrics Canada. Table 2 shows the demographic target and actual obtained percentages. The resulting Canada (English) sample consists of 939 individuals, 54.1% women and 45.9% men. The age range is 18-88, with an average of 45 years (standard deviation = 15.2). All individuals reported residing in Canada.

# MBTI® GLOBAL STEP I\* ASSESSMENT RESULTS FOR THE CANADA (ENGLISH) SAMPLE

The Global Step I assessment contains 92 items used to help determine individuals' personality type by identifying their preferences on four pairs of opposites (Extraversion-Introversion, Sensing-Intuition, Thinking-Feeling, and Judging-Perceiving). Combining an individual's four preferences yields 1 of 16 possible MBTI types. The Global Step I assessment replaces the Form M assessment and the European Step I assessment.

# **MBTI®** Type and Preference Distributions

MBTI type was computed for all participants in the Canada (English) sample. Type, preference, and preference combination distributions for this sample are presented in tables 3 and 4.

Table 3 shows that the most common types for this group are ISTJ, ISTP. and ISFJ. The least common types are ENTJ, ENFJ, and INTJ. Table 4 shows the distributions of preferences as well as four two-preference combinations: (1) orientation pairs, (2) process pairs, (3) orientation of energy and perceiving process pairs, and (4) judging process and external orientation pairs. The table shows that of the preferences, Is and Ss are more prevalent than Es or Ns. while Ts. Fs. Js. and Ps are more evenly distributed.

Tables 5–8 show type and preference distributions by gender.

# Relationships Between MBTI® Global Step I™ and Form M Preference Pair Results

Correlations between MBTI Global Step I and Form M preference pair results for the Canada (English) sample are shown in table 9.2 The overall agreement rate of whole types between the Global Step I and Form M assessments is 82%, higher than the 60% agreement rate between Form G and Form M reported in the 1998 MBTI® Manual (Myers, McCaulley, Quenk, & Hammer).

Table 3 | Reported MBTI° type distribution: Canada (English) sample

Sen	sing	Intui			
Thinking	Fee	Feeling			
<b>ISTJ</b> n = 146 15.5%	<b>ISFJ</b> <i>n</i> = 95 10.1%	INFJ n = 34 3.6%	<b>INTJ</b> n = 27 2.9%	Judging	Introv
<b>ISTP</b> <i>n</i> = 95 10.1%	<b>ISFP</b> n = 63 6.7%	INFP n = 86 9.2%	INTP n = 63 6.7%	Perceiving	Introversion
<b>ESTP</b> <i>n</i> = 45 4.8%	<b>ESFP</b> n = 40 4.3%	<b>ENFP</b> n = 71 7.6%	<b>ENTP</b> <i>n</i> = 39 4.2%	iving	Extrav
<b>ESTJ</b> <i>n</i> = 52 5.5%	<b>ESFJ</b> n = 40 4.3%	<b>ENFJ</b> n = 27 2.9%	<b>ENTJ</b> <i>n</i> = 16 1.7%	Judging	Extraversion

Note: N = 939.

Table 4 | Reported MBTI° type preference and preference combination distributions: Canada (English) sample

ı	Preferences		eferences Orientation pairs		Pı	Process pairs			Orientation of energy and perceiving pairs			Judging and external orientation pairs			
	n	%		n	%		n	%		n	%		n	%	
Е	330	35.1	EJ	135	14.4	ST	338	36.0	ES	177	18.8	TJ	241	25.7	
1	609	64.9	EP	195	20.8	SF	238	25.3	EN	153	16.3	TP	242	25.8	
S	576	61.3	IJ	302	32.2	NF	218	23.2	IS	399	42.5	FJ	196	20.9	
N	363	38.7	IP	307	32.7	NT	145	15.4	IN	210	22.4	FP	260	27.7	
Т	483	51.4													
F	456	48.6													
J	437	46.5													
Р	502	53.5													

Note: N = 939.

Table 5 | Reported MBTI° type distribution for men: Canada (English) sample

Ser	sing	Intui			
Thinking	Fee	ling	Thinking		
<b>ISTJ</b> <i>n</i> = 61 14.2%	<b>ISFJ</b> <i>n</i> = 24 5.6%	INFJ n = 10 2.3%	<b>INTJ</b> n = 15 3.5%	Judging	Introv
<b>ISTP</b> <i>n</i> = 66 15.3%	ISFP n = 30 7.0%	INFP n = 29 6.7%	<b>INTP</b> <i>n</i> = 32 7.4%	Perceiving	Introversion
<b>ESTP</b> <i>n</i> = 33 7.7%	<b>ESFP</b> <i>n</i> = 19 4.4%	<b>ENFP</b> n = 32 7.4%	<b>ENTP</b> <i>n</i> = 18 4.2%	iving	Extrav
<b>ESTJ</b> <i>n</i> = 31 7.2%	<b>ESFJ</b> <i>n</i> = 11 2.6%	<b>ENFJ</b> n = 8 1.9%	<b>ENTJ</b> <i>n</i> = 12 2.8%	Judging	Extraversion

Note: n = 431.

Table 6 | Reported MBTI° type preference and preference combination distributions for men: Canada (English) sample

F	Preferences Orienta		Orientation pairs Process pairs			airs	Orientation of energy and perceiving pairs			Judging and external orientation pairs				
	n	%		n	%		n	%		n	%		n	%
Ε	164	38.1	EJ	62	14.4	ST	191	44.3	ES	94	21.8	TJ	119	27.6
I	267	61.9	EP	102	23.7	SF	84	19.5	EN	70	16.2	TP	149	34.6
S	275	63.8	IJ	110	25.5	NF	79	18.3	IS	181	42.0	FJ	53	12.3
N	156	36.2	IP	157	36.4	NT	77	17.9	IN	86	20.0	FP	110	25.5
Т	268	62.2												
F	163	37.8												
J	172	39.9												
Р	259	60.1												

Table 7 | Reported MBTI° type distribution for women: Canada (English) sample

Ser	ising	Intui			
Thinking	Fee	ling	Thinking		
<b>ISTJ</b> <i>n</i> = 85 16.7%	ISFJ n = 71 14.0%	INFJ n = 24 4.7%	<b>INTJ</b> n = 12 2.4%	Judging	Introv
<b>ISTP</b> <i>n</i> = 29 5.7%	ISFP n = 33 6.5%	INFP n = 57 11.2%	INTP n = 31 6.1%	Perceiving	Introversion
<b>ESTP</b> <i>n</i> = 12 2.4%	<b>ESFP</b> <i>n</i> = 21 4.1%	<b>ENFP</b> n = 39 7.7%	<b>ENTP</b> $n = 21$ $4.1\%$	iving	Extrav
<b>ESTJ</b> <i>n</i> = 21 4.1%	<b>ESFJ</b> n = 29 5.7%	<b>ENFJ</b> <i>n</i> = 19 3.7%	<b>ENTJ</b> <i>n</i> = 4 0.8%	Judging	Extraversion

Note: n = 508.

Table 8 | Reported MBTI° type preference and preference combination distributions for women: Canada (English) sample

F	Preferences		Orientation pairs		Process pairs			Orientation of energy and perceiving pairs			Judging and external orientation pairs			
	n	%		n	%		n	%		n	%		n	%
Е	166	32.7	EJ	73	14.4	ST	147	28.9	ES	83	16.3	TJ	122	24.0
ı	342	67.3	EP	93	18.3	SF	154	30.3	EN	83	16.3	TP	93	18.3
S	301	59.3	IJ	192	37.8	NF	139	27.4	IS	218	42.9	FJ	143	28.1
N	207	40.7	IP	150	29.5	NT	68	13.4	IN	124	24.4	FP	150	29.5
Т	215	42.3												
F	293	57.7												
J	265	52.2												
Р	243	47.8												

Note: n = 508.

# Global Step I<sup>™</sup> Preference Pair **Intercorrelations**

Intercorrelations of Global Step I continuous scores in the Canada (English) sample are shown in table 10 below the diagonal. The highest correlation is between the S-N and J-P preference pairs. The next highest is between S-N and T-F. These correlations are very similar to those found for the global sample, shown in table 10 above the diagonal. The Canada (English) sample findings are likewise consistent with those reported for Form M in the 1998 MBTI® Manual (Myers et al.).

# Reliability and Validity of Global Step I™ Results

This section covers measurement properties for the North American English version of the MBTI Global Step I assessment used in Canada, including reliability and validity. For full reliability and validity information for the global sample, refer to the MBTI® Manual for the Global Step I<sup>™</sup> and Step II<sup>™</sup> Assessments (Myers et al., 2018).

Table 9 | Relationships between MBTI® Global Step I<sup>™</sup> and Form M preference pair results: Canada (English) sample

	Global Step I" and Form M preference pair results						
Preference pair	Correlation between continuous scores	Agreement rate (%)					
E-I	.97	95					
S-N	.96	93					
T-F	.98	97					
J-P	.96	94					
Overall agreement	rate	82					

Note: N = 939

Table 10 | Intercorrelations of Global Step I™ continuous scores: Canada (English) sample

Preference pair	E-I	S-N	T-F	J-P
E-I	_	20	15	15
S-N	23	_	.27	.48
T-F	17	.29	_	.23
J-P	16	.48	.12	_

Note: Correlations for the Canada (English) sample (N = 939) are below the diagonal; those for the global sample (N = 16,773) are above the diagonal.

### **RELIABILITY**

Reliability refers to consistency of measurement. A measure is said to be reliable when it produces a consistent, though not necessarily identical, result. Scores, not assessments, are either reliable or unreliable for a particular population of respondents, as reliability is affected by both the sample and the items contained in the instrument (Capraro & Capraro, 2002). Because reliability hinges at least partially on total score variability, samples that are homogeneous on the characteristic being measured will likely yield a low total score variance, and the reliability of the scores regarding the characteristic may be poor. Conversely, participants in a sample that is heterogeneous with respect to the characteristic will likely score differently from each other, thereby increasing variability and providing stronger reliability (Dawis, 1987).

Internal consistency reliability measures the consistency of responses across items in a particular measure for a particular sample. The most commonly used estimator of internal consistency reliability is Cronbach's alpha (Cronbach, 1951). Table 11 shows the Cronbach's alphas for Global Step I preference pairs in the Canada

Table 11 | Internal consistency and test-retest reliabilities of Global Step I™ preference pair continuous scores: Canada (English) and global samples

		Cronbach's alpha				
Sample	N	E-I	S-N	T-F	J-P	
Canada (English) Global	939 16,773	.89 .89	.89 .87	.90 .89	.88 .88	
		Test-retest correlation				
Sample (interval)	n	E-I	S-N	T-F	J-P	
Canada (English) (<15 weeks)	68	.87	.79	.80	.72	
Global (≤15 weeks)	1,762	.86	.83	.82	.81	
		agı	Test-i		(%)	
Sample (interval)	n	E-I	S-N	T-F	J-P	
Canada (English) (<15 weeks)	68	85	87	81	69	
Global (≤15 weeks)	1,762	84	86	79	79	

Table 12 | Percentage of individuals with preferences the same at retest: Canada (English) sample

		Number of preference the same at retest (%)						
Sample (interval)	n	4	3	2	1	0		
Canada (English) (≤15 weeks)	68	50	32	10	4	3		

(English) sample and in the global sample for comparison purposes. The Canada (English) sample alphas range from .88 to .90.

Another form of reliability is test-retest, which estimates how stable a measure is over time. Test-retest reliability correlations of Global Step I continuous scores in the Canada (English) sample are also presented in table 11. The test-retest interval was ≤15 weeks. This table also shows the rate of test-retest agreement for each preference pair. Test-retest correlations and test-retest agreement rates are also shown for the global sample in this table for comparison purposes.

Table 12 shows the percentage of individuals who reported zero, one, two, three, or four preferences the same upon retest in the Canada (English) sample.

Eighty-two percent of individuals reported having either three or four preferences the same at time of retest.

### VALIDITY

An instrument is said to be valid when it measures what it has been designed to measure (Ghiselli, Campbell, & Zedeck, 1981; Murphy & Davidshofer, 2005). Validity can be demonstrated using a number of different approaches. Convergent validity and discriminant validity are often examined by looking at the patterns of relationships on different instruments. An initial examination of convergent and discriminant validity was conducted by analyzing relationships found between the North American English version of the MBTI Global Step I assessment and the Adjective Check List (ACL; Gough & Heilbrun, 1983) as well as the CPI 260° assessment (Gough & Bradley, 2005).

**ACL assessment.** A portion of the Canada (English) sample participants (n = 41) also completed the ACL when completing the research version of the MBTI assessment. The ACL consists of 300 different adjectives—such as intelligent, alert, clear-thinking, and noisy—encompassing a wide variety of behaviors. Respondents were asked to select the adjectives they

believed were self-descriptive (Gough & Heilbrun, 1983). According to Gough and Heilbrun, results for any respondent with fewer than 20 adjectives or more than 250 adjectives checked should be cautiously interpreted: those with fewer than 10 or more than 270 checked are almost always invalid. As a result, respondents with too many or too few adjectives were omitted prior to analysis. The more conservative approach was taken here, and respondents with fewer than 20 adjectives or more than 250 adjectives checked were removed from the analysis of the ACL. Scales on the ACL assessment result from combinations of adjectives. Selected ACL scale means, standard deviations, and Cohen's d (Cohen, 1992; mean differences expressed in units of standard deviation<sup>3</sup>) for MBTI preferences for the Canada (English) sample are presented in tables 13–16.

CPI 260° assessment. The CPI 260 assessment measures personality characteristics intended to provide a clear and accurate description of the respondent to increase self-awareness and understanding (Gough & Bradley, 2005). A portion of the Canada (English) sample (n = 208) also completed the CPI 260 assessment. CPI 260 scale means, standard deviations, and Cohen's d for each of the four preference pairs are shown in tables 17-20.

Table 13 | ACL scale means, standard deviations, and Cohen's d for Global Step I<sup>™</sup> E−I preferences: Canada (English) sample

		Extrave	ersion	Introve	ersion	
ACL scale	ACL scale description	М	SD	М	SD	Cohen's d
Sum of number checked	Total number of adjectives checked	70.11	19.97	66.75	29.41	-0.12
Sum of favorable checked	Total number of favorable adjectives checked	33.67	11.70	32.66	15.61	-0.07
Sum of unfavorable checked	Total number of unfavorable adjectives checked	7.11	6.15	5.09	4.85	-0.39
Communality	An indicator of providing common or similar responses compared to the responses of people in general	8.78	3.60	8.94	3.99	0.04
Achievement	To strive to be outstanding in pursuits of socially recognized significance	6.00	6.40	6.53	5.77	0.09
Dominance	To seek and maintain a role as leader in groups, or to be influential and controlling in individual relationships	4.78	3.83	1.56	5.61	-0.61
Endurance	To persist in any task undertaken	2.67	7.28	5.66	5.64	0.50
Order	To place special emphasis on neatness, organization, and planning in one's activities	2.00	5.61	5.41	4.74	0.69
Intraception	To engage in attempts to understand one's behavior or the behavior of others	8.44	3.24	9.88	5.22	0.29
Nurturance	To engage in behaviors that provide material or emotional benefits to others	8.11	5.21	8.97	7.14	0.13
Affiliation	To seek and maintain numerous personal friendships	12.00	5.52	12.91	7.31	0.13
Exhibition	To behave in such a way as to elicit the immediate attention of others	2.67	4.95	-0.66	3.62	-0.84
Autonomy	To act independently of others or of social values and expectations	5.22	3.03	1.34	4.04	-1.01
Aggression	To engage in behaviors that attack or hurt others	1.56	4.13	-2.38	3.87	-1.00
Change	To seek novelty of experience and to avoid routine	6.56	2.30	1.59	3.26	-1.61
Succorance	To solicit sympathy, affection, or emotional support from others	-1.00	2.78	0.13	2.92	0.39
Deference	To seek and maintain subordinate roles in relationships with others	-2.56	3.64	1.59	4.50	0.96
Self-Control	To control one's behaviors and emotions	-3.67	4.30	1.22	2.93	1.50
Self-Confidence	Poise, self-assurance, and belief in one's ability to achieve one's goals	6.67	4.12	4.25	4.89	-0.51
Personal Adjustment	The ability to cope with situational and interpersonal demands, and a feeling of efficacy	4.78	3.80	5.66	4.01	0.22
Ideal Self	Strong sense of personal worth; or harmony between what one is and what one wants to be	3.89	6.60	4.00	6.23	0.02
Creative Personality	The desire to do and think differently from the norm, and a talent for originality	5.56	3.97	3.13	3.53	-0.67
Military Leadership	Steadiness, self-discipline, and good judgment of the kind required in positions of military (or related) leadership	4.11	5.04	7.09	4.99	0.60
Adult	Attitudes of independence, objectivity, and industriousness associated with the concept of "mature adult"	4.22	5.49	5.66	5.08	0.28

Note: Extraversion, n = 9; Introversion, n = 32. For information on Cohen's d, see note 3 at the back of this supplement.

Table 14 | ACL scale means, standard deviations, and Cohen's *d* for Global Step I<sup>™</sup> S−N preferences: Canada (English) sample

		Sens	ing	Intui	tion	
ACL scale	ACL scale description	М	SD	М	SD	Cohen's d
Sum of number checked	Total number of adjectives checked	59.96	23.84	78.12	29.30	0.69
Sum of favorable checked	Total number of favorable adjectives checked	28.42	14.62	39.18	12.73	0.78
Sum of unfavorable checked	Total number of unfavorable adjectives checked	5.33	4.86	5.82	5.67	0.09
Communality	An indicator of providing common or similar responses compared to the responses of people in general	7.46	3.75	10.94	3.09	1.00
Achievement	To strive to be outstanding in pursuits of socially recognized significance	6.63	6.11	6.12	5.59	-0.09
Dominance	To seek and maintain a role as leader in groups, or to be influential and controlling in individual relationships	2.71	5.35	1.65	5.57	-0.20
Endurance	To persist in any task undertaken	4.96	6.66	5.06	5.32	0.02
Order	To place special emphasis on neatness, organization, and planning in one's activities	4.92	5.26	4.29	4.93	-0.12
Intraception	To engage in attempts to understand one's behavior or the behavior of others	8.58	4.70	10.94	4.88	0.49
Nurturance	To engage in behaviors that provide material or emotional benefits to others	7.08	6.88	11.18	5.85	0.63
Affiliation	To seek and maintain numerous personal friendships	10.33	6.47	16.06	6.21	0.90
Exhibition	To behave in such a way as to elicit the immediate attention of others	-0.75	3.85	1.24	4.34	0.49
Autonomy	To act independently of others or of social values and expectations	1.96	4.25	2.53	4.09	0.14
Aggression	To engage in behaviors that attack or hurt others	-1.54	4.11	-1.47	4.47	0.02
Change	To seek novelty of experience and to avoid routine	1.42	3.34	4.47	3.50	0.90
Succorance	To solicit sympathy, affection, or emotional support from others	-0.50	2.60	0.41	3.26	0.32
Deference	To seek and maintain subordinate roles in relationships with others	1.17	4.40	0.00	4.97	-0.25
Self-Control	To control one's behaviors and emotions	0.71	3.30	-0.65	4.42	-0.36
Self-Confidence	Poise, self-assurance, and belief in one's ability to achieve one's goals	4.67	4.78	4.94	4.94	0.06
Personal Adjustment	The ability to cope with situational and interpersonal demands, and a feeling of efficacy	4.96	4.06	6.18	3.76	0.31
Ideal Self	Strong sense of personal worth; or harmony between what one is and what one wants to be	2.29	6.30	6.35	5.44	0.68
Creative Personality	The desire to do and think differently from the norm, and a talent for originality	2.08	3.30	5.88	3.16	1.17
Military Leadership	Steadiness, self-discipline, and good judgment of the kind required in positions of military (or related) leadership	5.46	5.52	7.82	4.19	0.47
Adult	Attitudes of independence, objectivity, and industriousness associated with the concept of "mature adult"	4.83	5.44	6.06	4.74	0.24

Note: Sensing, n = 24; Intuition, n = 17.

Table 15 | ACL scale means, standard deviations, and Cohen's *d* for Global Step I<sup>™</sup> T−F preferences: Canada (English) sample

		Thinl	king	Feel	ing	
ACL scale	ACL scale description	М	SD	М	SD	Cohen's a
Sum of number checked	Total number of adjectives checked	78.89	31.19	57.64	19.48	-0.83
Sum of favorable checked	Total number of favorable adjectives checked	38.05	15.97	28.41	12.19	-0.69
Sum of unfavorable checked	Total number of unfavorable adjectives checked	7.05	6.24	4.23	3.64	-0.56
Communality	An indicator of providing common or similar responses compared to the responses of people in general	9.00	3.28	8.82	4.38	-0.05
Achievement	To strive to be outstanding in pursuits of socially recognized significance	8.68	6.98	4.45	3.79	-0.77
Dominance	To seek and maintain a role as leader in groups, or to be influential and controlling in individual relationships	4.37	5.99	0.45	4.16	-0.77
Endurance	To persist in any task undertaken	6.63	7.61	3.59	4.00	-0.51
Order	To place special emphasis on neatness, organization, and planning in one's activities	5.79	6.22	3.68	3.70	-0.42
Intraception	To engage in attempts to understand one's behavior or the behavior of others	10.00	5.04	9.18	4.78	-0.17
Nurturance	To engage in behaviors that provide material or emotional benefits to others	8.63	7.80	8.91	5.81	0.04
Affiliation	To seek and maintain numerous personal friendships	14.21	7.62	11.41	6.10	-0.41
Exhibition	To behave in such a way as to elicit the immediate attention of others	1.53	4.53	-1.18	3.36	-0.69
Autonomy	To act independently of others or of social values and expectations	4.37	4.09	0.32	3.23	-1.11
Aggression	To engage in behaviors that attack or hurt others	-0.11	4.42	-2.73	3.69	-0.65
Change	To seek novelty of experience and to avoid routine	3.42	4.23	2.05	3.11	-0.37
Succorance	To solicit sympathy, affection, or emotional support from others	-0.79	2.95	0.45	2.77	0.44
Deference	To seek and maintain subordinate roles in relationships with others	-1.37	4.79	2.45	3.74	0.90
Self-Control	To control one's behaviors and emotions	-0.95	3.61	1.09		0.55
Self-Confidence	Poise, self-assurance, and belief in one's ability to achieve one's goals	6.74	5.17	3.09	3.78	-0.81
Personal Adjustment	The ability to cope with situational and interpersonal demands, and a feeling of efficacy	5.74	4.82	5.23	3.09	-0.13
Ideal Self	Strong sense of personal worth; or harmony between what one is and what one wants to be	5.84	7.00	2.36	5.09	-0.57
Creative Personality	The desire to do and think differently from the norm, and a talent for originality	4.68	3.71	2.77	3.57	-0.53
Military Leadership	Steadiness, self-discipline, and good judgment of the kind required in positions of military (or related) leadership	6.89	5.32	6.05	4.98	-0.17
Adult	Attitudes of independence, objectivity, and industriousness associated with the concept of "mature adult"	6.21	5.74	4.59	4.55	-0.32

Note: Thinking, n = 19; Feeling, n = 22.

Table 16 | ACL scale means, standard deviations, and Cohen's *d* for Global Step I<sup>™</sup> J−P preferences: Canada (English) sample

		Judg	ging	Perce	iving	
ACL scale	ACL scale description	М	SD	М	SD	Cohen's a
Sum of number checked	Total number of adjectives checked	58.58	28.94	75.18	24.09	0.63
Sum of favorable checked	Total number of favorable adjectives checked	30.32	17.94	35.09	11.19	0.32
Sum of unfavorable checked	Total number of unfavorable adjectives checked	3.79	3.44	7.05	5.93	0.66
Communality	An indicator of providing common or similar responses compared to the responses of people in general	7.84	4.14	9.82	3.45	0.52
Achievement	To strive to be outstanding in pursuits of socially recognized significance	7.84	6.50	5.18	5.02	-0.46
Dominance	To seek and maintain a role as leader in groups, or to be influential and controlling in individual relationships	3.42	5.46	1.27	5.27	-0.40
Endurance	To persist in any task undertaken	6.32	5.79	3.86	6.20	-0.41
Order	To place special emphasis on neatness, organization, and planning in one's activities	5.95	4.82	3.55	5.12	-0.48
Intraception	To engage in attempts to understand one's behavior or the behavior of others	9.47	5.60	9.64	4.25	0.03
Nurturance	To engage in behaviors that provide material or emotional benefits to others	8.84	7.68	8.73	5.95	-0.02
Affiliation	To seek and maintain numerous personal friendships	11.79	7.55	13.50	6.37	0.25
Exhibition	To behave in such a way as to elicit the immediate attention of others	-0.42	3.58	0.50	4.59	0.22
Autonomy	To act independently of others or of social values and expectations	1.16	3.37	3.09	4.60	0.47
Aggression	To engage in behaviors that attack or hurt others	-1.26	3.83	-1.73	4.59	-0.11
Change	To seek novelty of experience and to avoid routine	0.95	3.50	4.18	3.22	0.96
Succorance	To solicit sympathy, affection, or emotional support from others	-0.63	2.34	0.32	3.29	0.33
Deference	To seek and maintain subordinate roles in relationships with others	1.68	4.11	-0.18	4.95	-0.41
Self-Control	To control one's behaviors and emotions	1.00	2.91	-0.59	4.38	-0.42
Self-Confidence	Poise, self-assurance, and belief in one's ability to achieve one's goals	5.42	4.97	4.23	4.67	-0.25
Personal Adjustment	The ability to cope with situational and interpersonal demands, and a feeling of efficacy	5.47	4.30	5.45	3.70	0.00
Ideal Self	Strong sense of personal worth; or harmony between what one is and what one wants to be	4.11	6.66	3.86	5.99	-0.04
Creative Personality	The desire to do and think differently from the norm, and a talent for originality	2.37	3.40	4.77	3.69	0.68
Military Leadership	Steadiness, self-discipline, and good judgment of the kind required in positions of military (or related) leadership	6.37	5.61	6.50	4.74	0.03
Adult	Attitudes of independence, objectivity, and industriousness associated with the concept of "mature adult"	6.21	5.45	4.59	4.85	-0.32

Note: Judging, n = 19; Perceiving, n = 22.

Table 17 | CPI 260° scale means, standard deviations, and Cohen's d for Global Step I" E–I preferences: Canada (English) sample

		Extrave	rsion	Introve	rsion		
CPI 260° scale	CPI 260° scale description	М	SD	М	SD	Cohen's d	
Dominance (Do)	Prosocial interpersonal power and influence	21.62	5.60	15.20	6.88	-1.00	
Capacity for Status (Cs)	Ambition for challenge and social status	14.88	3.66	11.28	4.02	-0.93	
Sociability (Sy)	Social participation	15.90	3.51	10.27	4.22	-1.42	
Social Presence (Sp)	Poise and comfort with attention and recognition	18.44	3.80	14.66	4.01	-0.96	
Self-acceptance (Sa)	Sense of personal worth and self-confidence	14.90	3.16	11.74	4.11	-0.83	
Independence (In)	Self-sufficiency and self-directedness	14.19	4.05	11.93	4.34	-0.53	
Empathy (Em)	Capacity to understand and respond to others' needs	14.56	2.74	11.88	3.22	-0.88	
Responsibility (Re)	Conscientiousness and follow-through	15.55	3.55	15.23	3.65	-0.09	
Social Conformity (So)	Conformance with social norms and customs	19.43	4.30	18.05	4.36	-0.32	
Self-control (Sc)	Cautiousness and self-regulation	15.34	5.30	16.25	4.14	0.20	
Good Impression (Gi)	Tact and positive self-presentation	13.53	4.93	12.49	3.73	-0.25	
Communality (Cm)	Conventional behavior and attitudes	18.42	2.89	18.58	2.40	0.06	
Well-being (Wb)	Overall sense of health and optimism	14.64	3.98	12.78	4.35	-0.44	
Tolerance (To)	Open-mindedness and respect for others	11.95	4.02	10.97	3.58	-0.26	
Achievement via Conformance (Ac)	Motivation within organized settings	19.86	4.19	18.59	3.98	-0.31	
Achievement via Independence (Ai)	Motivation within unstructured settings	14.79	3.77	14.09	3.98	-0.18	
Conceptual Fluency (Cf)	Comfort with intellectual and conceptual matters	20.25	4.00	17.65	4.77	-0.58	
Insightfulness (Is)	Analytical insight into the motivations of others	12.77	3.22	11.94	3.06	-0.27	
Flexibility (Fx)	Adaptability and comfort with change	9.23	3.72	9.44	3.87	0.05	
Sensitivity (Sn)	Tough- versus tender-mindedness	12.16	3.46	15.11	4.13	0.76	
Managerial Potential (Mp)	Inclination for supervisory responsibilities	14.70	4.23	12.11	4.35	-0.60	
Work Orientation (Wo)	Sense of dedication to work	15.71	3.86	14.66	3.81	-0.27	
Creative Temperament (Ct)	Individualization and capacity for innovativeness	15.66	4.17	13.89	3.82	-0.45	
Leadership (Lp)	Initiative and effectiveness in leading others	25.75	6.34	20.11	7.04	-0.83	
Amicability (Ami)	Cooperation and friendliness	16.57	5.18	15.60	4.91	-0.19	
Law Enforcement Orientation (Leo)	Conventional and practical values	18.12	3.15	16.44	3.34	-0.51	
Vector 1 (v.1)	Extraversion versus introversion	8.64	4.27	12.24	4.31	0.84	
Vector 2 (v.2)	Rule-following versus rule-questioning	12.83	3.16	12.27	3.21	-0.18	
Vector 3 (v.3)	Fulfillment of personal potential	16.31	5.69	14.35	5.13	-0.37	

Note: Extraversion, n = 77; Introversion, n = 131. For information on Cohen's d, see note 3 at the back of this supplement.

Table 18 | CPI 260° scale means, standard deviations, and Cohen's *d* for Global Step I<sup>™</sup> S−N preferences: Canada (English) sample

		Sens	ing	Intuit	ion	
CPI 260° scale	CPI 260° scale description	М	SD	М	SD	Cohen's d
Dominance (Do)	Prosocial interpersonal power and influence	17.15	7.13	18.23	7.13	0.15
Capacity for Status (Cs)	Ambition for challenge and social status	11.61	4.04	14.16	4.14	0.62
Sociability (Sy)	Social participation	11.95	4.88	12.96	4.66	0.21
Social Presence (Sp)	Poise and comfort with attention and recognition	15.23	4.20	17.33	4.24	0.50
Self-acceptance (Sa)	Sense of personal worth and self-confidence	12.24	3.83	13.94	4.24	0.43
Independence (In)	Self-sufficiency and self-directedness	12.32	4.21	13.46	4.54	0.26
Empathy (Em)	Capacity to understand and respond to others' needs	12.26	3.19	13.80	3.31	0.48
Responsibility (Re)	Conscientiousness and follow-through	14.94	3.85	15.96	3.13	0.28
Social Conformity (So)	Conformance with social norms and customs	18.76	4.60	18.26	4.03	-0.12
Self-control (Sc)	Cautiousness and self-regulation	16.40	4.84	15.17	4.16	-0.27
Good Impression (Gi)	Tact and positive self-presentation	13.39	4.33	12.09	3.98	-0.31
Communality (Cm)	Conventional behavior and attitudes	18.47	2.82	18.60	2.19	0.05
Well-being (Wb)	Overall sense of health and optimism	13.37	4.41	13.61	4.17	0.05
Tolerance (To)	Open-mindedness and respect for others	10.75	3.81	12.23	3.54	0.40
Achievement via Conformance (Ac)	Motivation within organized settings	19.00	4.27	19.15	3.85	0.04
Achievement via Independence (Ai)	Motivation within unstructured settings	13.41	3.62	15.79	3.92	0.64
Conceptual Fluency (Cf)	Comfort with intellectual and conceptual matters	17.71	4.62	19.99	4.42	0.50
Insightfulness (Is)	Analytical insight into the motivations of others	11.91	3.12	12.76	3.11	0.27
Flexibility (Fx)	Adaptability and comfort with change	8.74	3.42	10.33	4.18	0.43
Sensitivity (Sn)	Tough- versus tender-mindedness	13.87	3.94	14.23	4.46	0.09
Managerial Potential (Mp)	Inclination for supervisory responsibilities	12.58	4.50	13.82	4.36	0.28
Work Orientation (Wo)	Sense of dedication to work	14.91	4.16	15.27	3.36	0.09
Creative Temperament (Ct)	Individualization and capacity for innovativeness	13.39	3.26	16.32	4.47	0.77
Leadership (Lp)	Initiative and effectiveness in leading others	21.48	7.29	23.30	7.23	0.25
Amicability (Ami)	Cooperation and friendliness	15.90	5.12	16.05	4.89	0.03
Law Enforcement Orientation (Leo)	Conventional and practical values	17.39	3.29	16.55	3.44	-0.25
Vector 1 (v.1)	Extraversion versus introversion	11.46	4.70	10.05	4.40	-0.31
Vector 2 (v.2)	Rule-following versus rule-questioning	12.90	3.08	11.82	3.26	-0.34
Vector 3 (v.3)	Fulfillment of personal potential	14.31	5.37	16.26	5.31	0.36

Note: Sensing, n = 126; Intuition, n = 82.

Table 19 | CPI 260° scale means, standard deviations, and Cohen's *d* for Global Step I<sup>™</sup> T−F preferences: Canada (English) sample

		Think	king	Feeli		
CPI 260° scale	CPI 260° scale description	М	SD	М	SD	Cohen's d
Dominance (Do)	Prosocial interpersonal power and influence	18.95	6.93	16.00	7.07	-0.42
Capacity for Status (Cs)	Ambition for challenge and social status	12.77	4.23	12.44	4.30	-0.08
Sociability (Sy)	Social participation	12.64	4.75	12.02	4.88	-0.13
Social Presence (Sp)	Poise and comfort with attention and recognition	16.64	4.22	15.39	4.38	-0.29
Self-acceptance (Sa)	Sense of personal worth and self-confidence	13.49	3.84	12.25	4.25	-0.31
Independence (In)	Self-sufficiency and self-directedness	13.97	4.10	11.39	4.27	-0.62
Empathy (Em)	Capacity to understand and respond to others' needs	13.06	3.39	12.65	3.23	-0.12
Responsibility (Re)	Conscientiousness and follow-through	15.22	3.58	15.49	3.66	0.08
Social Conformity (So)	Conformance with social norms and customs	18.91	4.52	18.16	4.20	-0.17
Self-control (Sc)	Cautiousness and self-regulation	15.82	4.49	16.02	4.77	0.04
Good Impression (Gi)	Tact and positive self-presentation	13.05	4.24	12.67	4.24	-0.09
Communality (Cm)	Conventional behavior and attitudes	18.53	2.87	18.51	2.23	-0.01
Well-being (Wb)	Overall sense of health and optimism	14.25	3.92	12.57	4.56	-0.40
Tolerance (To)	Open-mindedness and respect for others	11.48	3.53	11.16	4.04	-0.08
Achievement via Conformance (Ac)	Motivation within organized settings	19.53	4.20	18.52	3.93	-0.25
Achievement via Independence (Ai)	Motivation within unstructured settings	14.71	3.89	13.94	3.92	-0.20
Conceptual Fluency (Cf)	Comfort with intellectual and conceptual matters	19.23	4.42	17.91	4.86	-0.28
Insightfulness (Is)	Analytical insight into the motivations of others	12.77	3.02	11.64	3.17	-0.37
Flexibility (Fx)	Adaptability and comfort with change	9.40	3.82	9.33	3.80	-0.02
Sensitivity (Sn)	Tough- versus tender-mindedness	13.06	4.22	15.10	3.80	0.51
Managerial Potential (Mp)	Inclination for supervisory responsibilities	13.87	4.07	12.14	4.76	-0.39
Work Orientation (Wo)	Sense of dedication to work	15.59	3.53	14.44	4.14	-0.30
Creative Temperament (Ct)	Individualization and capacity for innovativeness	14.99	3.82	14.03	4.23	-0.24
Leadership (Lp)	Initiative and effectiveness in leading others	23.58	7.19	20.62	7.15	-0.41
Amicability (Ami)	Cooperation and friendliness	16.31	4.95	15.57	5.09	-0.15
Law Enforcement Orientation (Leo)	Conventional and practical values	17.31	3.48	16.77	3.23	-0.16
Vector 1 (v.1)	Extraversion versus introversion	10.45	4.77	11.42	4.42	0.21
Vector 2 (v.2)	Rule-following versus rule-questioning	12.81	3.29	12.09	3.05	-0.23
Vector 3 (v.3)	Fulfillment of personal potential	15.50	5.29	14.60	5.55	-0.17

Note: Thinking, n = 111; Feeling, n = 97.

Table 20 | CPI 260° scale means, standard deviations, and Cohen's *d* for Global Step I<sup>™</sup> J−P preferences: Canada (English) sample

		Judg	ing	Percei	ving	
CPI 260° scale	CPI 260° scale description	М	SD	М	SD	Cohen's d
Dominance (Do)	Prosocial interpersonal power and influence	16.39	7.16	18.81	6.92	0.34
Capacity for Status (Cs)	Ambition for challenge and social status	11.47	4.09	13.80	4.12	0.57
Sociability (Sy)	Social participation	11.60	4.92	13.13	4.59	0.32
Social Presence (Sp)	Poise and comfort with attention and recognition	14.82	4.04	17.34	4.26	0.61
Self-acceptance (Sa)	Sense of personal worth and self-confidence	11.87	4.01	13.99	3.87	0.54
Independence (In)	Self-sufficiency and self-directedness	12.05	4.32	13.52	4.30	0.34
Empathy (Em)	Capacity to understand and respond to others' needs	12.02	3.25	13.75	3.16	0.54
Responsibility (Re)	Conscientiousness and follow-through	15.35	3.89	15.34	3.31	0.00
Social Conformity (So)	Conformance with social norms and customs	19.04	4.46	18.07	4.26	-0.22
Self-control (Sc)	Cautiousness and self-regulation	16.75	4.56	15.05	4.53	-0.37
Good Impression (Gi)	Tact and positive self-presentation	13.44	3.95	12.28	4.46	-0.28
Communality (Cm)	Conventional behavior and attitudes	18.61	2.78	18.42	2.38	-0.07
Well-being (Wb)	Overall sense of health and optimism	13.27	4.40	13.67	4.22	0.09
Tolerance (To)	Open-mindedness and respect for others	10.95	3.82	11.73	3.69	0.21
Achievement via Conformance (Ac)	Motivation within organized settings	19.64	4.23	18.45	3.88	-0.29
Achievement via Independence (Ai)	Motivation within unstructured settings	13.75	3.79	14.98	3.95	0.32
Conceptual Fluency (Cf)	Comfort with intellectual and conceptual matters	17.94	5.01	19.30	4.19	0.29
Insightfulness (Is)	Analytical insight into the motivations of others	12.08	3.28	12.42	2.98	0.11
Flexibility (Fx)	Adaptability and comfort with change	8.35	3.49	10.42	3.85	0.56
Sensitivity (Sn)	Tough- versus tender-mindedness	14.36	4.04	13.66	4.24	-0.17
Managerial Potential (Mp)	Inclination for supervisory responsibilities	12.52	4.82	13.64	4.03	0.25
Work Orientation (Wo)	Sense of dedication to work	15.18	4.02	14.92	3.69	-0.07
Creative Temperament (Ct)	Individualization and capacity for innovativeness	12.94	3.19	16.21	4.17	0.88
Leadership (Lp)	Initiative and effectiveness in leading others	21.21	7.68	23.23	6.78	0.28
Amicability (Ami)	Cooperation and friendliness	16.01	5.00	15.91	5.06	-0.02
Law Enforcement Orientation (Leo)	Conventional and practical values	17.45	3.56	16.65	3.12	-0.24
Vector 1 (v.1)	Extraversion versus introversion	11.76	4.62	10.01	4.48	-0.39
Vector 2 (v.2)	Rule-following versus rule-questioning	13.31	3.31	11.61	2.83	-0.55
Vector 3 (v.3)	Fulfillment of personal potential	14.55	5.69	15.63	5.09	0.20

Note: Judging, n = 106; Perceiving, n = 102.

# MBTI® GLOBAL STEP II™ ASSESSMENT RESULTS FOR THE CANADA (ENGLISH) SAMPLE

The Global Step II assessment contains all 92 Global Step I items plus an additional 51 items needed to score the Step II facets, for a total of 143. Step II results expand on descriptions of the four preference pairs by providing information about five facets of each pair (see table 21). The Global Step II assessment replaces the Form Q assessment and the European Step II assessment.

Table 21 | Relationships between Global Step II\*, Form Q, and European Step II<sup>™</sup> facet results: Canada (English) sample

	Correlation betw	een continuous scor
Global Step II" facet	Global Step II <sup>™</sup> and Form Q facet results	Global Step II* and European Step II* facet results
E-I facets		
Initiating-Receiving	.98	.96
Expressive-Contained	.99	.94
Gregarious-Intimate	.97	.99
Active-Reflective	.86	.88
Enthusiastic-Quiet	.99	.97
S-N facets		
Concrete-Abstract	.97	.96
Realistic-Imaginative	.99	.99
Practical-Conceptual	.84	.85
Experiential-Theoretical	.96	.98
Traditional-Original	.96	.96
T–F facets		
Logical-Empathetic	.95	.95
Reasonable – Compassionate	.94	.97
Questioning – Accommodating	.60	.74
Critical-Accepting	.84	.83
Tough-Tender	.98	.96
J-P facets		
Systematic-Casual	.95	.97
Planful-Open-Ended	.98	.98
Early Starting – Pressure-Prompted	.93	.93
Scheduled – Spontaneous	.95	.94
Methodical-Emergent	.96	.90

Note: N = 939

# Relationships Between MBTI® Global Step II®, Form Q, and European Step II™ Facet Results

Table 21 presents the relationships between MBTI Global Step II, Form Q, and European Step II facet results for the Canada (English) sample.

# Global Step II<sup>™</sup> Facet Intercorrelations

Intercorrelations of Global Step II facets are presented in table 22. Facets within each preference pair correlate higher with other facets of the same preference pair than with facets of different preference pairs.

# Reliability and Validity of Global Step II™ Results

This section covers measurement properties for the North American English version of the MBTI Global Step II assessment, including reliability and validity. For full reliability and validity information for the global sample, refer to the MBTI® Manual for the Global Step I™ and Step II<sup>™</sup> Assessments (Myers et al., 2018).

### RELIABILITY

Internal consistency and test-retest reliabilities for Global Step II facets in the Canada (English) sample are presented in table 23.

### VALIDITY

Reported here as evidence of the validity of the North American English version of the MBTI Global Step II assessment are the percentage of out-ofpreference facet scores for each preference pair, correlations between preference pairs and facets, and correlations between the MBTI assessment and two other assessments.

The five facets within each preference pair do not represent the entire conceptual domain of the preference pair. Further, it is not uncommon for individuals to have a facet score on the side opposite that of their preference in a given preference pair. For example, an Extravert may score toward the Intimate pole. This apparent inconsistency is referred to as an out-of-preference score and defined as a facet score from -2 to -5 when a respondent has preferences for I, N, F, or P; or from 2 to 5 when a respondent has preferences for E, S, T, or J. While it is not unusual to have a number of out-of-preference scores, it is relatively rare to have out-of-preference scores in three or more facets within any one preference pair. The percentage of out-of-preference facet scores for each preference pair in the Canada (English) sample is shown in table 24.

Table 22 | Intercorrelations of Global Step II facets: Canada (English) sample

Global Step II* facet	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	<b>15</b> .	<b>16</b> .	<b>17</b> .	18.	19.	20.
E-I facets																				
1. Initiating-Receiving	_																			
2. Expressive-Contained	.58	_																		
3. Gregarious-Intimate	.57	.52	_																	
4. Active-Reflective	.72	.59	.54	_																
5. Enthusiastic-Quiet	.65	.59	.60	.66	_															
S–N facets																				
6. Concrete-Abstract	17	17	08	12	25	_														
7. Realistic-Imaginative	13	14	09	14	27	.70	_													
8. Practical—Conceptual	12	08	07	08	25	.64	.72	_												
9. Experiential–Theoretical	13	12	09	09	18	.62	.58	.50	_											
10. Traditional—Original	23	11	13	12	28	.66	.61	.67	.53	_										
T–F facets																				
11. Logical-Empathetic	13	26	12	15	25	.36	.35	.23	.16	.14	_									
12. Reasonable – Compassionate	06	21	07	07	15	.29	.29	.18	.15	.09	.79	_								
13. Questioning-Accommodating	.09	11	.00	.05	.03	.06	.09	08	05	22	.49	.59	_							
14. Critical-Accepting	11	22	08	09	14	.26	.22	.12	.07	.05	.57	.64	.73	_						
15. Tough–Tender	01	15	03	02	04	.25	.24	.09	.08	.02	.64	.71	.70	.71	_					
J-P facets																				
16. Systematic–Casual	20	14	18	14	27	.52	.48	.44	.35	.54	.32	.29	.10	.24	.21	_				
17. Planful-Open-Ended	18	05	11	09	14	.27	.25	.26	.23	.35	.08	.03	03	.04	01	.62	_			
18. Early Starting-Pressure-Prompted	05	02	07	07	11	.17	.21	.16	.19	.21	02	03	08	11	08	.39	.46	_		
19. Scheduled-Spontaneous	17	06	15	13	20	.38	.38	.36	.31	.46	.14	.08	04	.04	.02	.75	.73	.53	_	
20. Methodical–Emergent	.01	01	.00	.02	03	.12	.13	.11	.16	.12	.05	.02	02	06	02	.41	.46	.54	.51	_

Note: N = 939.

Table 23 | Internal consistency and test-retest reliabilities of Global Step II<sup>™</sup> facet continuous scores: Canada (English) sample

Global Step II <sup>™</sup> facet	Cronbach's alpha	Test-retest correlation
E-I facets		
Initiating-Receiving	.85	.85
Expressive-Contained	.76	.80
Gregarious-Intimate	.60	.76
Active-Reflective	.65	.82
Enthusiastic-Quiet	.71	.76
S-N facets		
Concrete-Abstract	.79	.72
Realistic-Imaginative	.75	.72
Practical-Conceptual	.67	.63
Experiential-Theoretical	.75	.58
Traditional-Original	.74	.68
T–F facets		
Logical-Empathetic	.83	.70
Reasonable-Compassionate	.78	.72
Questioning-Accommodating	.67	.78
Critical-Accepting	.65	.68
Tough-Tender	.76	.73
J-P facets		
Systematic-Casual	.79	.70
Planful-Open-Ended	.81	.62
Early Starting-Pressure-Prompted	.64	.63
Scheduled-Spontaneous	.83	.68
Methodical-Emergent	.67	.71

Note: N = 939; test-retest, n = 68.

Table 24 | Percentage of reported out-ofpreference Global Step II<sup>™</sup> facet scores: Canada (English) sample

Preference	Number of out-of-preference facet scores (%)												
pair	0	1	2	3	4	5							
E-I	71	24	4	<1	0	0							
S-N	73	21	5	1	0	0							
T-F	73	18	8	1	0	0							
J-P	59	28	12	1	0	0							

Note: N = 939.

Correlations between facets and preference pairs are presented in table 25. The correlation between each facet and its corresponding preference pair is significantly higher than those between the facet and the other three preference pairs. This is "compelling evidence for the theoretical hierarchical structure of the Step II facets in relation to the Step I scales" (Quenk, Hammer, & Majors,

Table 25 | Correlations between Global Step II<sup>™</sup> facets and preference pairs: Canada (English) sample

	Preference pair							
Global Step II <sup>™</sup> facet	E-I	S-N	T-F	J-P				
E-I facets								
Initiating-Receiving	.87	19	08	18				
Expressive-Contained	.77	16	24	07				
Gregarious-Intimate	.72	13	09	15				
Active-Reflective	.84	14	11	12				
Enthusiastic-Quiet	.82	31	17	20				
S-N facets								
Concrete-Abstract	20	.88	.32	.40				
Realistic-Imaginative	20	.86	.31	.40				
Practical-Conceptual	16	.80	.17	.38				
Experiential-Theoretical	16	.72	.14	.31				
Traditional-Original	21	.82	.08	.48				
T–F facets								
Logical-Empathetic	23	.34	.90	.17				
Reasonable – Compassionate	14	.28	.92	.11				
Questioning – Accommodating	.00	.00	.67	02				
Critical-Accepting	17	.22	.72	.07				
Tough-Tender	07	.20	.83	.04				
J-P facets								
Systematic-Casual	22	.58	.30	.83				
Planful-Open-Ended	13	.33	.05	.85				
Early Starting – Pressure-Prompted	06	.22	04	.59				
Scheduled-Spontaneous	16	.46	.09	.94				
Methodical-Emergent	.01	.16	.02	.57				

Note: N = 939.

2001, p. 104). The Canada (English) sample correlations are comparable to those reported in the MBTI° Step II $^{\sim}$ Manual (Quenk et al., 2001) and the MBTI® Step II® Manual, European Edition (Quenk, Hammer, & Majors, 2004). The lowest correlation between a facet and its corresponding preference pair is between Methodical-Emergent and J-P.

To further demonstrate convergent and divergent validity of the MBTI Global Step II facets using the North American English version in Canada, the facets were correlated with scales of two other assessments, the Adjective Check List (ACL) and the CPI 260° assessment. Descriptions of the relationships between the MBTI assessment and the other assessments follow.

ACL assessment. ACL scales correlated with the Global Step II facets; a selection of these correlations is presented in table 26. The relationships between

Table 26 | Selected correlations between Global Step II" facets and ACL scales: Canada (English) sample

							ACL sca	ile					
Global Step II <sup>™</sup> facet scale	Communality	Dominance	Endurance	Order	Nurturance	Affiliation	Exhibition	Change	Deference	Self-Control	Self-Confidence	Personal Adjustment	Creative Personality
E-I facet scales													
Initiating-Receiving	11	43	08	.04	09	16	43	45	.43	.43	43	22	47
Expressive – Contained	36	18	.10	.15	23	18	36	53	.07	.33	23	10	34
Gregarious-Intimate	31	20	04	.03	41	36	32	40	07	.30	40	28	39
Active-Reflective	17	38	01	.03	12	11	39	45	.24	.40	43	20	41
Enthusiastic-Quiet	12	09	.23	.23	12	11	34	47	.16	.45	21	09	35
S-N facet scales													
Concrete-Abstract	.28	30	08	10	.10	.21	.04	.29	09	05	13	05	.38
Realistic-Imaginative	.33	37	16	21	.08	.17	11	.30	.12	.06	26	12	.20
Practical-Conceptual	.37	17	01	11	.22	.33	.11	.31	02	03	01	.13	.39
Experiential-Theoretical	.24	02	08	17	.04	.16	.15	.41	27	20	02	.00	.41
Traditional-Original	.39	.02	.03	04	.09	.27	.31	.47	33	27	.11	.06	.57
T–F facet scales													
Logical-Empathetic	01	43	26	24	.17	04	30	13	.44	.34	37	.00	23
Reasonable-Compassionate	.01	49	19	14	.14	11	42	21	.52	.43	40	.00	26
Questioning-Accommodating	10	44	29	26	.20	02	37	19	.57	.37	30	.12	36
Critical-Accepting	.05	33	19	17	.33	.12	11	.00	.29	.12	11	.09	01
Tough-Tender	.00	40	27	21	.16	12	27	18	.50	.29	27	.04	20
J-P facet scales													
Systematic-Casual	.12	38	40	40	.00	.06	.01	.34	05	14	30	19	.21
Planful-Open-Ended	.23	23	30	33	.09	.20	.09	.39	18	23	11	02	.30
Early Starting-Pressure-Prompted	.00	23	21	21	02	.16	09	.19	15	09	22	05	.21
Scheduled-Spontaneous	.26	32	32	33	.05	.19	.11	.39	12	20	21	07	.33
Methodical-Emergent	.07	29	39	44	.04	.15	.02	.25	07	19	24	.03	.12

Note: n = 41.

the MBTI Global Step II assessment and the ACL are consistent with those reported in the MBTI® Step II\* Manual (Quenk et al., 2001) and the MBTI® Step II™ Manual, European Edition (Quenk et al., 2004).

CPI 260° assessment. Correlations between the global Step II facets and CPI 260 assessment scales for the Canada (English) sample are shown in table 27. The correlations reported here are similar to those found in the MBTI® Step II™ Manual for the CPI™ 434 assessment (Quenk et al., 2001), providing additional evidence of the validity of the MBTI Global Step II assessment.

### Global Step II<sup>™</sup> Facet Distributions

Determining whether a particular score is in-preference, midzone, or out-of-preference provides the basis for recognizing and understanding individual differences

among people of the same type. When giving feedback to respondents, for practitioners the most important verification issue is the accuracy with which the scores reflect their placement at either pole or in the midzone. If a respondent disagrees with results on a facet, interpretation will be affected. For example, a respondent may judge a facet score that was reported as midzone to be actually out-of-preference or in-preference. In such an instance, statements in the report will be incorrect for that facet, so the practitioner must provide appropriate interpretive information that corresponds to the respondent's verified placement.

Table 28 shows the percentages and rank order of in-preference, midzone, and out-of-preference scores for the 20 Global Step II facets for the Canada (English) sample. Interpreters may find this table useful because it shows which facets are more or less likely to yield scores

Table 27 | Correlations between Global Step II<sup>™</sup> facets and CPI 260° scales: Canada (English) sample

														CPI	260° s	cale													
Global Step II" facet scale	Do	Cs	Sy	Sp	Sa	ln	Em	Re	So	Sc	Gi	Cm	Wb	То	Ac	Ai	Cf	ls	Fx	Sn	Мр	Wo	Ct	Lp	Ami	Leo	v.1	v.2	٧.
E-I facet scales																													
Initiating-Receiving	59	45	73	53	60	37	48	02	12	.12	07	08	27	09	19	07	31	20	.11	.40	32	13	24	51	09	27	.47	09	0
Expressive-Contained	32	31	46	38	31	18	35 ·	08	24	.03	14	09	23	14	18	04	22	07	.10	.21	21	18	09	29	17	23	.30 -	09	1
Gregarious-Intimate	33	33	45	34	29	17	29	02	12	.05	09	03	19	12	10	07	23	10	.01	.26	24	13	17	27	12	25	.25 -	08	1
Active-Reflective	51	44	61	49	48	29	39	04	22	.14	10	03	26	12	16	02	26	12	.19	.38	32	18	17	43	13	28	.50 -	20	1
Enthusiastic-Quiet	49	48	58	54	47	31	42	03	11	.25	.04	07	20	03	16	12	30	13	.05	.36	23	07	24	41	01	17	.49	05	0
S-N facet scales																													
Concrete-Abstract	.15	.33	.21	.26	.29	.15	.32	.16	10	12	13	02	01	.11	.03	.28	.24	.14	.18	.02	.13	01	.33	.16	06	10	20 ·	20	.1
Realistic-Imaginative	.01	.27	.07	.14	.15	.04	.20	.16	11	14	15	05	06	.09	.02	.29	.20	.13	.15	.11	.01	03	.24	.07	08	16	11	10	.С
Practical-Conceptual	.20	.39	.24	.28	.34	.20	.28	.14	06	22	16	.02	.04	.07	.08	.25	.27	.18	.09 -	08	.14	.02	.31	.24	07	08	30 ·	06	.(
Experiential-Theoretical	.14	.29	.17	.26	.21	.13	.31	.12	18	15	18	08	.01	.09	.03	.33	.24	.18	.28	03	.15	03	.36	.15	09	17	18	17	
Traditional-Original	.22	.39	.23	.34	.31	.26	.33	.07	09	23	20	05	.08	.10	02	.33	.29	.25	.23 -	09	.15	.01	.41	.25	09	09	30 ·	20	.1
T–F facet scales																													
Logical-Empathetic	16	.01	02	07	08	25	.02	.04	07	.01	04	07	16	01	12	08	09	17	.07	.32	15	12	01	15	03	09	.06	18	C
Reasonable – Compassionate	20	03	09	14	13	24	.00	.12	.01	.15	.05	.03	10	.08	06	.00	09	08	.14	.31	10	04	.00	15	.07	07	.15	12	.0
Questioning – Accommodating	36	24	25	26	34	33	11	.01	.10	.29	.16	.03	05	.09	10	09	19	18	.02	.36	16	.02	18	27	.20	11	.35	02	.0
Critical-Accepting	14	03	06	08	12	14	.12	.18	.15	.24	.14	.15	.05	.14	.07	.11	.03	02	.10	.31	.00	.07	.00	04	.20	03	.16	01	.1
Tough–Tender	25	10	17	23	23	28	06	.16	.05	.26	.12	.07	07	.12	06	.04	07	13	.09	.35	10	.00	14	20	.13	03	.25	07	.0
J-P facet scales																													
Systematic-Casual	.07	.24	.12	.29	.22	.12	.29	.02	11	21	19	.00	.03	.08	16	.16	.10	.05	.29	.01	.03	03	.39	.09	01	15	18	35	.1
Planful-Open-Ended	.15	.18	.15	.24	.21	.20	.20	08	13	20	18	06	.05	.00	20	.04	.07	.03	.21 -	08	.01	06	.37	.13	05	13	18	27	.0
Early Starting— Pressure-Prompted	.02	.20	04	.11	.11	.10	.16	.01	02	17	21	16	.01	.06	13	.17	.05	.05	.36	01	.04	06	.36	01	06	19	11	28	.0
Scheduled-Spontaneous	.16	.28	.15	.29	.23	.16	.30	02	12	24	24	09	.00	.05	22	.17	.12	.05	.33	03	.05	08	.46	.12	09	17	25	33	.(
Methodical-Emergent	.04	.12	.02	.14	.13	.09	.14	04	12	18	15	10	.01	01	18	.03			.26 -	04	.03	03	.27	.01	06	09	09	35	.0

Note: n = 208.

Table 28 | In-preference, midzone, and out-of-preference percentages and rankings for the Global Step II™ facets: Canada (English) sample

	In-pre	ference	Mid	zone	Out-of-preference		
Global Step II <sup>™</sup> facet	%	Rank	<b>%</b>	Rank	<b>%</b>	Rank	
E-I facets							
Initiating-Receiving	66.03	5	29.82	13	4.15	17	
Expressive-Contained	58.25	15	33.33	6	8.41	7	
Gregarious-Intimate	59.85	13	30.99	10	9.16	6	
Active-Reflective	60.70	11	34.82	5	4.47	16	
Enthusiastic-Quiet	66.24	3	26.20	18	7.56	8	
S-N facets							
Concrete-Abstract	59.32	14	35.04	4	5.64	12	
Realistic-Imaginative	64.22	6	30.99	10	4.79	15	
Practical-Conceptual	61.87	10	32.16	7	5.96	11	
Experiential-Theoretical	60.38	12	27.80	16	11.82	4	
Traditional-Original	54.42	19	40.36	1	5.22	14	
T–F facets							
Logical-Empathetic	67.73	1	29.93	12	2.34	18	
Reasonable-Compassionate	66.99	2	31.20	8	1.81	19	
Questioning-Accommodating	52.08	20	37.17	2	10.76	5	
Critical-Accepting	57.08	17	27.05	17	15.87	3	
Tough-Tender	61.98	9	31.10	9	6.92	10	
J–P facets							
Systematic-Casual	63.26	7	29.61	14	7.14	9	
Planful-Open-Ended	66.24	3	28.12	15	5.64	12	
Early Starting-Pressure-Prompted	55.80	18	23.75	19	20.45	2	
Scheduled-Spontaneous	62.30	8	36.42	3	1.28	20	
Methodical-Emergent	57.61	16	21.09	20	21.30	1	

Note: N = 939.

in these three categories. There are wide variations in the frequency with which facet scores are likely to be out-ofpreference. Here, the facet with the highest percentage of out-of-preference scores is Methodical-Emergent at 21.30%, followed by Early Starting-Pressure-Prompted at 20.45%. The Scheduled-Spontaneous facet (1.28%) and the Reasonable-Compassionate facet (1.81%) appear least likely to elicit out-of-preference responses.

Gender differences on the Step II facets in the Canada (English) sample are presented in table 29.

# CONCLUSION

Initial analyses of the North American English versions of the MBTI Global Step I and Step II assessments used in Canada demonstrate that they each have good internal

consistency and test-retest reliabilities and are consistent with those of prior forms of the MBTI assessment (i.e., Form M and Form Q, European Step I and Step II). Validity was established in several ways. First, included in this supplement are mean ACL and CPI 260 scale differences between Global Step I preferences. The differences show meaningful and expected relationships between the assessments. Next, correlations of the Global Step Il assessment with two other assessments (the ACL and CPI 260) show anticipated relationships. The percentage of out-of-preference facet scores is also presented. While more research should be conducted, all these analyses show that the North American English versions of the MBTI Global Step I and Step II assessments have adequate reliability and validity and are appropriate for use with individuals in Canada who read and understand North American English.

Table 29 | Means, standard deviations, and Cohen's d of the Global Step II<sup>™</sup> facets by total sample and gender: Canada (English) sample

	Total s (N =		<b>M</b> (n =		<b>Wor</b> (n =	Gender difference	
Global Step II <sup>™</sup> facet	М	SD	М	SD	М	SD	Cohen's c
E-I facets							
Initiating-Receiving	0.22	0.94	0.17	0.88	0.27	0.98	-0.11
Expressive-Contained	0.13	0.87	0.11	0.83	0.14	0.90	-0.03
Gregarious-Intimate	0.26	0.74	0.17	0.75	0.33	0.73	-0.23
Active-Reflective	0.22	0.82	0.16	0.83	0.27	0.81	-0.14
Enthusiastic-Quiet	0.28	0.85	0.26	0.82	0.30	0.87	-0.05
S-N facets							
Concrete-Abstract	-0.09	0.94	-0.14	0.89	-0.04	0.98	-0.11
Realistic-Imaginative	-0.18	0.88	-0.20	0.86	-0.17	0.90	-0.04
Practical-Conceptual	-0.15	0.81	-0.15	0.77	-0.15	0.84	-0.01
Experiential-Theoretical	-0.03	0.87	0.03	0.85	-0.08	0.88	0.12
Traditional-Original	-0.19	0.89	-0.17	0.81	-0.20	0.95	0.03
T–F facets							
Logical-Empathetic	-0.08	0.93	-0.35	0.87	0.14	0.92	-0.54
Reasonable-Compassionate	0.06	0.90	-0.17	0.85	0.25	0.89	-0.48
Questioning-Accommodating	0.14	0.84	-0.04	0.79	0.29	0.85	-0.40
Critical-Accepting	0.15	0.80	-0.08	0.79	0.34	0.75	-0.56
Tough-Tender	0.01	0.87	-0.19	0.87	0.17	0.83	-0.42
J-P facets							
Systematic-Casual	0.05	0.92	0.02	0.88	0.08	0.95	-0.06
Planful-Open-Ended	0.09	0.90	0.21	0.86	0.00	0.93	0.24
Early Starting-Pressure-Prompted	0.06	0.80	0.17	0.76	-0.03	0.82	0.25
Scheduled-Spontaneous	-0.02	0.92	0.09	0.87	-0.11	0.96	0.22
Methodical-Emergent	0.05	0.83	0.17	0.79	-0.05	0.85	0.26

Note: For information on Cohen's d, see note 3, below.

# NOTES

- 1. Originally, samples from India (North American English) and Saudi Arabia (Arabic) were collected, but these were later dropped from the global sample due to sample composition and psychometric concerns.
- 2. Correlation coefficients range from -1 to 1 and can be squared and used as effect sizes (measures of the practical significance of the relationship between the two variables in question). Cohen's guidelines regarding effect sizes indicate that  $r^2$  = .10 is a small effect size,  $\vec{r}$ = .30 is medium, and  $\vec{r}$ = .50 is large (Cohen, 1988, 1992).
- 3. Cohen's d is an estimate of an effect size computed by taking the difference between the means of two groups and dividing by their pooled standard deviations. Because the metric is in standard deviation units, effect sizes can easily be compared to evaluate the magnitude of a difference. Cohen (1992) provides an overview of the computation of a variety of effect sizes, along with guidance on interpretation. Cohen proposed that d = .20be considered small, d = .50 be considered medium, and d = .80 be considered large. In psychological research, small to medium effect sizes are typical.

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