13 Personality, Culture, and Field Sensitivity

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The relationship between culture and personality variables is complex and not yet well-understood. As we attempt to explore this relationship, it is vital that we have confidence in the instruments we use to measure personality traits and in the comparability of results across cultures. Is the Myers-Briggs Type Indicator (MBTI), in particular, an appropriate instrument for cross-cultural investigations of personality? That is, do the constructs tapped by the MBTI's four scales measure the universally applicable personality parameters posited by Carl Jung (1961), or is the Inventory "culturally oriented as it was designed and targeted for Americans, that is, the responses assume a specific cultural experience" (Corman & Platt, 1988, p. 506)?

One way to resolve this question is to correlate the scores on other psychometric instruments of mainstream North Americans having particular personality types with the scores on the same measures of people having the same personality types but who come from different cultures. That is, do North American Ns and, say, Korean Ns perform similarly on measures of cognitive style? If the scores of both groups are statistically comparable, we can be reasonably sure that the MBTI is tapping the same personality constructs across cultures. The following study, investigating the correlations between the Group Embedded Figures Test (GEFT) (which measures the cognitive variable of field sensitivity) and MBTI preferences, was designed to explore this question.

Past investigations into the relationship between personality type, as measured by the MBTI, and field sensitivity, as measured by the GEFT, have yielded a variety of results for North Americans. At one end of the spectrum, Lusk and Wright (1983) found no significant correlations between scores on the four bipolar scales of the MBTI and scores on the GEFT. For a sample of 162 students at the University of Denver and the Wharton School of the University of Pennsylvania, these researchers concluded that the two instruments tap independent cognitive skills.

On the other hand, studies by other scholars have demonstrated significant relationships between specific MBTI preferences and field sensitivity. For example, Thomas (1983), working with a group of 42 undergraduates majoring in technology, found the correlation between MBTI thinking-feeling scores and GEFT scores to be significant ($r = .37$, $p < .02$) with thinking related to Field Independence and feeling to Field Dependence. However, he did not find any significant correlation between field sensitivity and any of the other MBTI dimensions (extraversion-introversion, sensing-intuition, thinking-feeling or judging-perceiving).

In an attempt to clarify this association between field sensitivity and the MBTI, Schmidt and McCutcheon (1988) sought to go beyond examining the bivariate relationships between GEFT scores and scores on the four MBTI scales which were investigated in the previous studies. Instead, they explored the relationship between

personality types, which are interactions between preferences on each of the four scales, and field sensitivity scores. They administered the MBTI and the GEFT to 210 undergraduate and graduate students majoring in elementary, secondary, special education or music education. In analyzing the data, they first computed Pearson product-moment correlations between the EI, SN, TF, and JP scores and GEFT scores and found a slight, but significant, correlation ($r = .14$, $p < .05$) between the SN scale and field sensitivity. They then went on to investigate the field sensitivity scores of each of the sixteen personality types and found that ENTPs and INFPs were significantly ($p < .05$) more field-independent than the other types. The authors concluded that these results, which show slight correlations between individual personality dimensions and field dependence and more robust correlations when interactions among the different dimensions are examined, are in agreement with the underlying theory of these personality and field sensitivity constructs.

In an attempt to extend knowledge about the relationships between scores on the MBTI and the GEFT to demographic variables, Corman and Platt (1988) administered the MBTI and the GEFT to 226 North American undergraduate and graduate students enrolled in marketing and information systems classes at a major southwestern university. They found a significant positive correlation ($r = .193$, $p < .01$) between MBTI sensing-intuition scores and GEFT scores, suggesting that Ns tend to be field-independent. This corroborates the relationship between a preference for intuition and high GEFT scores found by Schmidt and McCutcheon (1988). However, when they looked at male and female students in the sample separately, only the correlation of women's N scores with the GEFT scores was significant ($r = .241$, $p < .01$).

Despite the diversity of these results, what these studies have in common is that they were conducted on subjects from the United States. Whether or not these results can be generalized to populations other than mainstream North Americans is the subject of this investigation. If the MBTI is culture-bound as Corman and Platt (1988) believe, these studies should not be generalizable to populations other than the mainstream North Americans for whom the tests were constructed. Conversely, if, as Jung believed, the roots of personality type are largely innate characteristics possessed by all humans (Kroeger & Thuesen 1988, Engler 1979), the results of these investigations of North Americans should be generalizable to subjects who come from other cultures.

The aim of this paper is to extend the body of research on North American samples to populations from cultures other than the United States by investigating a sample of ESL (English as a Second Language) students who are native speakers of Spanish. It is expected that this investigation will yield results that are statistically comparable to those found by previous investigators working with mainstream North American samples.

The MBTI and the GEFT were administered to 74 ESL students (45 women and 29 men, whose native language is Spanish) at Montclair State College in suburban New Jersey. Several statistical procedures of increasing power were performed on the data. First, a series of t-tests for difference of means in field sensitivity scores and demographic and personality variables were performed. There was no significant difference of means for men and women as Table 13.1 shows:

Table 13.1
t-Test Results for Difference of Means of GEFT Scores between Males and Females

Mean for Males = 10.9	Mean for Females = 6.5
Two-Tailed Probability p = .284	N = 74

Next, t-tests for differences of means of GEFT scores for each of the four bipolar scales of the MBTI were calculated. None of these differences was significant as can be seen in Table 13.2:

When no significant differences of means were found, Pearson product-moment correlations were computed for each of the eight preferences. The results of these computations are set forth in Table 13.3.

Several interesting relationships between GEFT scores and MBTI personality preferences are revealed by this procedure. First, the significant correlations between GEFT scores and the N preference scores corroborate the findings of Schmidt and McCutcheon (1988) and Corman and Platt (1988), which suggest that people who prefer to look for relationships and possibilities in incoming data rather than focusing on sensory details (Myers & McCaulley, 1985) also have a more Field-Independent cognitive style.

Second, these data reveal significant relationships between field sensitivity and both poles of the JP scale that have not been previously reported. The correlation between the P preference and scores on the GEFT indicates that, at least for this sample, people who are adaptable and attuned to incoming information (Ps) (Myers & McCaulley, 1985) are more likely to score higher on measures of field independence than people who are concerned with organizing, planning, and seeking closure (Js) (Myers & McCaulley, 1985). This finding is corroborated by the significant and *negative* correlation between J scores and GEFT scores. This relationship suggests that the more decisive and organized a person is, the more Field-Dependent his/her cognitive style. Interestingly, this finding can also be interpreted as supporting the findings of Schmidt and McCutcheon that ENTPs and INFPs were significantly more Field-Independent.

Table 13.3.
Pearson's r Correlations between Field Sensitivity Scores

Table 13.2
t-Test Results for Difference of Means of GEFT Scores
for the Eight MBTI Personality Preferences

		N = 74 Mean GEFT Score			two-tailed probability
EI:	I	8.71	E	7.88	p = .771
SN:	S	4.54	N	11.25	p = .673
TF	T	8.29	F	7.73	p = .248
JP:	J	7.21	P	10.20	p = .436

and MBTI Personality Preferences

Preferences	GEFT	Continuous Scores			
		EI	SN	TF	JP
E	.03	-.97**	.11	.02	.13
I	-.01	.58**	-.23	-.03	-.03
S	-.25	.14	-.97**	-.19	-.24
N	.32*	-.14	.93**	.18	.29*
T	-.05	.06	-.23	-.98**	-.41**
F	-.03	.03	.12	.95**	.39**
J	-.31*	.12	-.30*	-.42**	-.99**
P	.33*	-.11	.23	.39**	.99**

Note: *$p < .05$, **$p < .01$, N = 74

To corroborate these findings, the data were subjected to regression analyses. Again, significant relationships between the SN and JP scales and GEFT scores were found. Table 13.4 presents the results of this analysis.

This more precise procedure also indicates significant relationships between the scores on the GEFT and N, J and P preferences. In addition, it demonstrates that the relationship between S scores and GEFT scores is also significant.

In order to determine the amount of variance in GEFT scores explained by personality preferences, partial correlation was next applied to the data. The results of this computation can be seen in Table 13.5:

When the JP scores, the variable with the strongest simple correlation with GEFT scores, are entered into the equation first, they explain 10% of the variance in GEFT scores. The EI scores explain only 0.1% more of the variance; but when the SN scores are entered, they explain almost 5% more of the variance in GEFT scores. This indicates a strong relationship since the amount of change approaches significance at the .05 level even though this variable is in the third position. The last variable, the TF scores add only 1.4%, a non-significant contribution. Thus, of the total of 17% of the variance explained by MBTI preferences, 10% is explained by the JP preference, alone, and 15% is explained by the JP and SN preferences taken together.

Significant correlations between MBTI preferences and GEFT scores found in some earlier research on mainstream North Americans were replicated in this sample of Spanish speakers, and most of the significant correlations in these non-North American data were anticipated by that earlier research on North Americans. The unique finding in this study was the significant correlation of JP preference and GEFT scores. There is no reason, in either Jungian theory or in contrastive studies of North American and Hispanic cultures, to believe that a significant cultural difference would incline native speakers of Spanish to a greater interaction along these dimensions. Whether this involvement is peculiar to native speakers of Spanish or is a fluke of this sample not certain. Future studies using samples of Spanish speakers will elucidate this relationship.

Table 13.4.
Correlations of MBTI Scores with GEFT Scores

Preference	R	R^2	Significance
E	0.028	0.0008	p = .81
I	0.012	0.0001	p = .92
S	0.248	0.0615	p = .03*
N	0.315	0.0996	p = .006**
T	0.052	0.0028	p = .66
F	0.025	0.0006	p = .83
J	0.308	0.0943	p = .008**
P	0.333	0.1109	p = .004**
EI	0.027	0.0008	p = .82
SN	0.291	0.0844	p = .01**
TF	0.023	0.0005	p = .85
JP	0.325	0.1057	p = .005**

Note: *p < .05, **p < .01

Since the correlations between North American samples and this sample of Spanish-speaking ESL students are statistically comparable, these data suggest in a preliminary way that the MBTI is an appropriate measure of personality variables at least for this particular sample of non-North Americans. Of course, native speakers of Spanish are culturally more similar to North Americans than, say, the members of Asian cultures are. Thus, before firm conclusions can be drawn about the applicability of the MBTI to populations outside North America (or, perhaps, European-based cultures), more research involving culturally diverse samples is called for.

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Table 13.5
Partial Correlations between MBTI Personality Preferences and GEFT Scores

Preference	r	R^2	Change in R^2	Probability
JP	.325	.106	.106	.005**
EI	.012	.107	.001	.918
SN	.222	.155	.048	.059*
TF	-.128	.169	.014	.277

Note: *p < .05, **p < .01

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