

# Additional report about the validity of the Jung Psychological Types Scale

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**Abstract:** The Jung Psychological Types Scale (JPTS) is the most recently developed instrument for the measurement of Jung's psychological types. The JPTS conforms closely to Jung's orthogonal, three-dimensional model of psychological types: extraversion-introversion, thinking-feeling, and sensation-intuition. The JPTS uses 7-point Likert-scale items in a bipolar format. The appropriateness of item content was based on the judgments of two Jungian analysts. This study provides an additional assessment of the validity of the JPTS using data from Japanese university students. To investigate the concurrent validity of the JPTS, scores were compared with scores on the Gray-Wheelwrights Test/Jungian Type Survey (GW/JTS) and the Myers-Briggs Type Indicator (MBTI), using a categorical approach. Some data were obtained by using MBTI Form M scores from previous studies (Sato, 2003, 2005). Evidence for the concurrent validity of JPTS scores is presented based on the agreement of psychological types with the MBTI Form M. These findings suggest that the categorical approach provides additional support for the validity of the JPTS.

**Keywords:** psychological types, Jung Psychological Types Scale, Gray-Wheelwrights Test/Jungian Type Survey, Myers-Briggs Type Indicator, validity

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## Introduction

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Jung's psychological types (Jung, 1971) comprise one of the basic and classical theories of personality. For psychotherapists, Jung's typology is an essential component of analytical psychology. The concept of psychological types is defined by general attitudes and psychological functions. General attitudes refer to attitude types such as extraversion or introversion (E-I), and psychic functions refer both to judgement types of thinking or feeling (T-F), and perception types such as sensation or intuition (S-N).

Jung originally formulated his

psychological typology in order to provide (a) a critical tool to make possible methodical investigation and presentation of empirical material, (b) a great help in understanding the wide variations that occur among individual experiences, and (c) a method of determining the "personal equation" of the practicing psychologist who, armed with an exact knowledge of his or her differentiated and inferior functions, can avoid many serious blunders in dealing with clients (Jung, 1971, para.986). For Jung, psychological typology represented the compass for psychological voyages of discovery (Jung, 1971, para.959).

### ***Standardized instruments for assessment based on Jung's typology***

Based on Jung's typology, three instruments have been developed and are used in research and practice for the assessment of individuals. These are the Gray-Wheelwrights Test/Jungian Type Survey (GW/JTS; Wheelwright, Wheelwright & Gray, 1964), the Myers-Briggs Type Indicator (MBTI; Myers & Briggs, 1998), and the Singer-Loomis Type Deployment Inventory (SL-TDI; Singer et al., 1996)<sup>1)</sup>.

Sato (2005) developed the Jung Psychological Types Scale (JPTS) to reflect Jung's concepts as closely as possible, while overcoming some of the limitations of previous assessment instruments. Positive characteristics of the JPTS include its continuous scale format with bipolar scored items, which reflects the Jungian theory of typology, and its content validity, which was verified by two Jungian analysts. The JPTS was demonstrated to have an orthogonal, three-factor structure which confirmatory factor analysis showed to be appropriate. The internal consistency and stability were in a satisfactory range of reliability. The JPTS's concurrent validity was investigated with reference to the trait approach of the MBTI Form M. The traits of E-I, T-F and S-N corresponded to Extraversion (positive), Agreeableness (negative), and Openness (negative), respectively, on the NEO-FFI (NEO Five Factor Inventory).

#### ***Purpose***

The purpose of the present research was to evaluate further the validity of the JPTS. The JPTS has been validated using continuous scores on each subscale, similar to the manner in which the GW/JTS and the MBTI have been validated. But Jung's typological theory of personality is based on bipolar categories, not dimensions of

traits. It is therefore essential to investigate the validity of the JPTS by means of a typological analysis of personality rather than a trait approach. A few investigations of the validity of the MBTI and the GW/JTS have used a typological approach. For example, Karesh et al. (1994) investigated the degree of agreement of psychological types between the GW/JTS, MBTI Form G (earlier version of Form M), and the SLIP (the Singer-Loomis Inventory of Personality). They reported significant agreement of attitude type and function type between the GW/JTS and the MBTI Form G, and concluded that the constructs of the GW/JTS are more similar to the MBTI Form G than to the SLIP. On the other hand, the degree of agreement for the JPTS, the GW/JTS and the MBTI with respect to psychological types remains unknown. It has been hypothesized that psychological types as assessed by the JPTS are similar to those that emerge from the GW/JTS or the MBTI, but these are not equivalent because they differ slightly in the content of items and the concepts of typology.

In summary, the purpose of the present study was to investigate the concurrent validity of JPTS scores by examination of their relationships with scores on the GW/JTS and the MBTI Form M, using a categorical approach.

## **Methods**

### ***Instruments***

***Jung Psychological Types Scale:*** JPTS consists of 27 forced-choice items comprising three bipolar subscales: 9 items for extraversion-introversion (E-I), 9 items for thinking-feeling (T-F), 9 items for sensation-intuition (S-N). The respondent indicates on a seven-point

continuous scale how often he or she would make that response. The criterion scores for classifying psychological types on the JPTS are based on the midpoint of the subscale scores. Because the midpoint of each item is scored the 4-point by selecting the 7-point of Likert scale, total midpoints of 9-items on each scale is scored 36 points. For attitude types, subscale scores on E-I scale that are above 36 points are classified as the extraverted type, and scores below 36 points are classified as introverted type. For judgment types, 36 points on T-F are similarly used to classify the thinking or feeling types. Similarly, for perception types, 36 points on S-N are used to classify the sensation or intuition types.

**Gray-Wheelwrights Test/Jungian Type Survey:** The GW/JTS was developed by Jungian analysts, therefore the item content is closely based on Jung's concepts. The GW/JTS consists of 81 forced-choice items with three bipolar subscales: E-I, extraversion-introversion, 34 items; T-F, thinking-feeling, 21 items; S-N, sensation-intuition, 26 items. Each item has two options and receives a score of one point. Classification of psychological types from the GW/JTS was conducted according to the procedures described in the GW/JTS manual (Wheelwright, Wheelwright & Buehler, 1964). Permission to translate and use the GW/JTS was given by the Society of Jungian Analysts in San Francisco, which holds the copyright. The item content of the GW/JTS was translated into Japanese by the author and a native speaker of English (Sato, 2003).

**Myers-Briggs Type Indicator:** MBTI was developed by Isabel Briggs Myers (Myers & Briggs, 1998). Like the GW/JTS, the MBTI uses a forced-choice response format and assumes the bipolarity of the dimensions it measures. Participants are

asked to choose one of two self-descriptive items that consist of sentences or words. MBTI Form M, which is the latest version of the MBTI, consists of 21 items for E-I, 26 items for T-F, 26 items for S-N, and 22 items for judgment-perception (J-P). Classification of psychological types from the MBTI Form M was conducted according to the procedures described in the MBTI Form M manual (Myers et al., 1998). The MBTI Form M data used in this present study were taken from two previous research studies by the present author; Sato (2003) based on data from 271 undergraduates, and Sato (2005) from 245 undergraduate students<sup>2)</sup>.

#### **Participants**

A total of 188 Japanese undergraduate and graduate students with majors in the school of humanities (74 males, 114 females) volunteered to participate in this study. None had formal instruction about Jung's psychology. Their average age was 22.0 years ( $SD=1.9$ ).

#### **Procedure**

The purpose of the study was explained, and participants provided informed consent. The participants then completed a packet of questionnaires, including questions about demographics, the JPTS, and the GW/JTS.

## **Results**

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#### **Internal consistency**

The internal consistency of subscale scores for the JPTS and the GW/JTS was calculated using Cronbach's alpha. Table 1 shows the means, standard deviations, and alpha coefficients for the JPTS and the GW/JTS scores. The alpha coefficients for the JPTS were .80 for E-I, .85 for T-F, and .77

Table 1. Mean, standard deviation, and coefficient  $\alpha$  of the JPTS and the GW/JTS scores

Scale	Subscale	Number of pair items	$M$	$SD$	Coefficient $\alpha$
JPTS	E-I	9	29.64	9.75	0.80
	T-F	9	33.44	9.76	0.85
	S-N	9	35.33	8.29	0.77
GW/JTS	E-I	34	14.07	7.50	0.61
	T-F	21	10.98	4.46	0.31
	S-N	26	9.44	5.29	0.47

Note:  $n=188$ 

Table 2. Correlations of subscale scores between the JPTS, the GW/JTS, and the MBTI Form M

		JPTS <sup>a)</sup>			GW/JTS		
		E-I	T-F	S-N	E-I	T-F	S-N
GW/JTS <sup>a)</sup>	E-I	.36**	-.23**	-.30**	-		
	T-F	-.16*	.18*	.18*	-.11	-	
	S-N	-.09	.33**	.36**	.25**	-.09	-
MBTI Form M <sup>b) c)</sup>	E-I	.80**	-.30**	-.20**	-.62**	-.19*	-.15
	T-F	-.24**	.67**	.25**	.24**	.25**	.32**
	S-N	-.12	.16*	.62**	-.11	-.15	.45**
	J-P	-.08	.17*	.30**	.31**	.11	.57**

\* $p < .05$ , \*\* $p < .01$ 

<sup>a)</sup>  $n=188$ ; <sup>b)</sup>  $n=245$  (between the JPTS and the MBTI Form M),  $n=271$  (between the GW/JTS and the MBTI); <sup>c)</sup> Data for comparison of the JPTS and the MBTI Form M were taken from Sato (2005), the GW/JTS and the MBTI were reexamined using data from Sato (2003).

for S-N; the alpha coefficients for the GW/JTS were .61 for E-I, .31 for T-F, and .47 for S-N.

### Concurrent validity

Correlation coefficients for the subscales between the JPTS, the GW/JTS and the MBTI Form M are shown in Table 2. Correlation coefficients between the JPTS and the GW/JTS were obtained in the present study; those between the JPTS and the MBTI Form M are quoted from the results of Sato (2005); those between the GW/JTS and the MBTI Form M were reanalyzed from the data of Sato (2003). Moderate and strong correlational patterns

were clearly found between the JPTS and the MBTI Form M for the three subscales, although low correlational patterns were found between the JPTS and the GW/JTS.

The proportions of agreement for psychological types between the JPTS, the GW/JTS, and the MBTI Form M are shown in Table 3. Table 3 shows Cohen's kappa coefficients between attitude types, judgment types, and perception types for each instrument. The proportions of agreement and kappa coefficients between the JPTS and the GW/JTS are based on the present study; those between the JPTS and the MBTI Form M are based on Sato (2005); and those between the GW/JTS and the

Table 3. Proportion of agreement and kappa coefficients of attitude types, judgment types, perception types between the JPTS, the GW/JTS, and the MBTI Form M

Psychological type	Instruments	<i>n</i>	%	<i>k</i>
Attitude types (Extraversion or Introversion)	JPTS, GW/JTS <sup>a)</sup>	131	(69.7)	0.32**
	JPTS, MBTI Form M <sup>b)</sup>	204	(83.3)	0.59**
	GW/JTS, MBTI Form M <sup>c)</sup>	184	(77.0)	0.51**
Judgment types (Thinking or Feeling)	JPTS, GW/JTS <sup>d)</sup>	100	(53.2)	0.16*
	JPTS, MBTI Form M <sup>e)</sup>	192	(78.4)	0.40**
	GW/JTS, MBTI Form M <sup>f)</sup>	137	(53.5)	0.11
Perception types (Sensation or Intuition)	JPTS, GW/JTS <sup>g)</sup>	107	(56.9)	0.21**
	JPTS, MBTI Form M <sup>h)</sup>	172	(70.2)	0.39**
	GW/JTS, MBTI Form M <sup>i)</sup>	150	(65.5)	0.27**

\* $p < .05$ , \*\* $p < .01$ <sup>a)</sup>  $n=179$ , <sup>b)</sup>  $n=245$ , <sup>c)</sup>  $n=239$ , <sup>d)</sup>  $n=178$ , <sup>e)</sup>  $n=245$ , <sup>f)</sup>  $n=256$ , <sup>g)</sup>  $n=175$ , <sup>h)</sup>  $n=245$ , <sup>i)</sup>  $n=229$ <sup>b) e) h)</sup> Data samples from Sato (2005), <sup>c) f) i)</sup> Data samples from Sato (2003)

MBTI Form M are based on Sato (2003).

For attitude types, when the JPTS was compared with the GW/JTS, the degree of correspondence was poor ( $k = .32$ ,  $p < .01$ ). On the other hand, when the JPTS was compared with the MBTI, the degree of correspondence was fair to good ( $k = .59$ ,  $p < .01$ ). Similarly, when the GW/JTS was compared with the MBTI, the degree of correspondence was fair to good ( $k = .51$ ,  $p < .01$ ).

For judgment types, when the JPTS was compared with the MBTI Form M, the degree of correspondence was fair to good ( $k = .40$ ,  $p < .01$ ). On the other hand, when the JPTS was compared with the GW/JTS, the degree of correspondence was poor ( $k = .16$ ,  $p < .05$ ). When the GW/JTS was compared with the MBTI, the level of agreement did not exceed chance ( $k = .11$ , *n.s.*).

For perception types, when the JPTS was compared with the GW/JTS and the MBTI,

the degree of correspondence was slightly poor to fair ( $k = .21$ ,  $p < .01$ ;  $k = .39$ ,  $p < .01$ , respectively). The tendency was similar for comparison of perception types between the GW/JTS and the MBTI ( $k = .27$ ,  $p < .01$ ).

## Discussion

First, all scores of internal consistency for the JPTS were sufficient. This is consistent with my previous study (Sato, 2005). On the other hand, internal consistency for T-F for the GW/JTS was low. This is also consistent with previous research in Japanese samples (Sato, 2003) and North American samples (Davis & Mattoon, 2006).

Second, the correlational patterns between the JPTS and the GW/JTS were not as similar as those between the JPTS and the MBTI, which demonstrates the convergent and discriminant validity of the JPTS.

The main objective of the present study

was to provide evidence for the concurrent validity of the JPTS from a typological perspective. The results of the categorical approach indicated that the JPTS has almost satisfactory concurrent validity. For attitude and judgment types, the results showed fair support for concurrent validity for the assessment of attitudes and judgments on the JPTS. For perception types, the results showed partial support for concurrent validity of the assessment of perceptions on the JPTS. Because no previous research has investigated the concurrent validity of the JPTS with other questionnaires based on Jung's types, these results provide moderate confirmation of the concurrent validity of the JPTS.

On the other hand, since the degree of agreement between the JPTS and the MBTI Form M is not strong, they are not equivalent. The results of this study support the hypothesis that psychological types as assessed by the JPTS are similar to those assessed by the MBTI, although they differ slightly in the content of the items and concepts of typology.

In contrast to the similarities found between the JPTS and the MBTI Form M, comparisons of the JPTS and the GW/JTS revealed poorer agreement, especially for T-F. The results suggest that the content of the JPTS is more different from the GW/JTS than that of the JPTS is from the MBTI Form M. Perhaps the poor agreement between the JPTS and the GW/JTS is attributable to the content of the items on each scale and the limited reliability and validity of the T-F on the GW/JTS (Davis & Mattoon, 2006), although the construction of each scale is based on Jungian ideas.

The results show fair to good agreement about attitudes between the GW/JTS and the MBTI Form M. This is consistent with previous research that reported similar

levels of agreement about attitudes between the GW/JTS and the MBTI Form G (Karesh et al., 1994). For comparisons of judgments and perceptions between the GW/JTS and the MBTI Form M, agreement was poor, again similar to previous research comparing the GW/JTS and the MBTI Form G (Karesh et al., 1994). The results suggest that Japanese and North American samples have similar patterns of psychological types, regardless of cultural differences.

In conclusion, these findings suggest that the categorical approach provides additional support for the validity of the JPTS. However, this study is limited because it only involved Japanese university students. Additional research is necessary to examine applications of the JPTS to various other adult samples and to explore the possible contributions of Jung's typology in Japan.

## Notes

1) The Singer-Loomis Inventory of Personality (SLIP), was developed by two Jungian analysts, June Singer and Mary Loomis. It departs from the dubious assumption regarding the bipolar function of the GW/JTS and the MBTI. Therefore, the response format of the SLIP is continuous and not forced choice. The most recent version of the SLIP is the Singer-Loomis Type Deployment Inventory (SL-TDI; Singer et al., 1996). The SL-TDI consists of 20 different hypothetical situations, each followed by a list of 8 possible reactions to the situation, yielding a total of 160 response items.

2) Permission for use of the previous results and reexamination of the data from Sato (2003) was granted by the editorial board of the Journal of Japanese Clinical Psychology, and from Sato (2005) was granted by the

editorial board of the Journal of Japanese Psychology.

## References

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- Davis, M., & Mattoon, M. A. (2006). Reliability and validity of the Gray-Wheelwrights Jungian Type Survey. *European Journal of Psychological Assessment*, **22**, 233-239.
- Jung, C. G. (1971). *Psychological types. The collected works of C.G. Jung, Volume 6*. Princeton, NJ: Princeton University Press.
- Karesh, D. M., Pieper, W. A., & Holland, C. L. (1994). Comparing the MBTI, the Jungian Type Survey, and the Singer-Loomis Inventory of Personality. *Journal of Psychological Type*, **30**, 30-38.
- Myers, I. B., & Briggs, K. C. (1998). *The Myers-Briggs Type Indicator Form M*. Palo Alto, CA: Consulting Psychologist Press.
- Myers, I. B., McCaulley, M. H., Quenk, N. L., & Hammer, A. L. (1998). *MBTI manual (3rd ed.): A guide to the development and use of the Myers-Briggs Type Indicator*. Palo Alto, CA: Consulting Psychologist Press.
- Sato, J. (2003). A study on Jung's psychological type scale: Construction of Japanese versions of GW/JTS, MBTI & SL-TDI and examination of their reliability and validity. *Journal of Japanese Clinical Psychology*, **21**, 410-415.
- Sato, J. (2005). Construction of Jung Psychological Types Scale. *Journal of Japanese Psychology*, **76**, 203-210.
- Singer, J., Loomis, M., Kirthart, L., & Kirthart, E. (1996). *The Singer-Loomis Type Deployment Inventory Version 4.1*. Gresham, OR; Moving Boundaries.
- Wheelwright, J. B., Wheelwright, J. H., & Buehler, J. A. (1964). *Jungian Type Survey: The Gray-Wheelwrights Test manual (16th revision)*. San Francisco: Society of Jungian Analysts of Northern California.
- Wheelwright, J. B., Wheelwright, J. H., & Gray, H. (1964). *Jungian Type Survey*. San Francisco: Society of Jungian Analysts of Northern California.

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