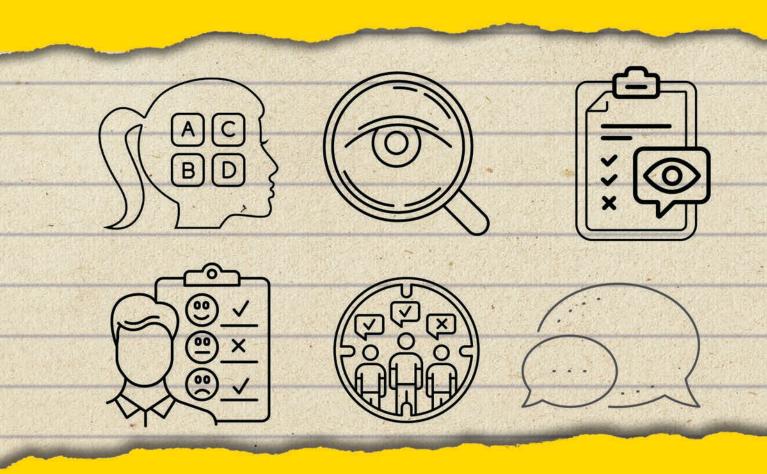
# WHY DOES THE PERSONALITY INSTRUMENT MATTER?



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#### **Table of Contents**

Why is Instrumentation Important?	1
Consistency and Standardization	2
Measurement Reliability as an Anchor for Consistency and Standardization	3
Validity or the Consistency and Standardization of Meaning and Language	4
What Does an Instrument Do?	5
The Proper Use of an Assessment of Personality Typology	6
FAQ's	7
Appendix: The Majors PTI History and Psychometrics	10
About Mark S. Majors, Ph. D.	21





## WHY IS

## **INSTRUMENTATION IMPORTANT?**

Instrumentation is a basic step in the process of self-discovery. It is important to think of the two components (instrumentation and self-discovery) as uniquely related.

Instrumentation at its very foundation is simply asking questions. Asking a question is always a meaningful endeavor, and it is always important, whether the question is oral or written. We need to remember that the mind treats both forms of questions (written or oral) similarly. With a written question, the reading occurs in the mind, whether it is read out loud or silently. Therefore, it is the same if I ask a question orally, or if a person reads it on a computer screen or a paper and pencil assessment. In instrumentation, when questions are given to an individual it leads to self-discovery no matter the form.

During instrumentation, the psychometric clarifying of the results, scoring, and generalizing of the different populations occurs, which is valuable. There is often a misconception in thinking that the results show some level of clarity for the individuals including what they think and know about themselves. However, this is an error of result interpretation. In truth, the results indicate a level of clarity of the instrument and its ability to assess the person.

Instrumentation is a form of self-discovery that some treat inappropriately. Misguided individuals may view it like a critical evaluation of the person, or that the instrumentation is a tool to somehow assess the value of the individual. This is grossly wrong. In the psychological measurements of personality typologies, that should never happen.

There is a fair amount of research on this topic and many people are uncomfortable with the notion, but it is soundly true. Should anyone want further reading, I encourage you to look at *Majors and Larson Journal of Vocational Assessment*, 2001.





## CONSISTENCY AND STANDARDIZATION

Some benefits of instrumentation are found in the psychometric quality, like standardization and consistency.

For instance, one of the key benefits of standardization is that questions are asked the same way every time. Because of this, we do not need to be concerned about the specific presenter, the discussant, or the counselor and the psychological condition. It does not matter how clear their voice is, the important thing is that the questions are asked the same way each time.

The knowledge and information that is being provided is consistently the same. It is important to keep in mind that the answer is related to the question (if there is not a presentation error). When a question is presented the same way each time, it is not a leap to think the answer will be accurately related to that question during each assessment.

To ensure individuals are exposed consistently to the same question, having the questions written in an assessment is critical for self-discovery. Some people might think that an assessment is in opposition to self-discovery, but it is actually fundamental to it. It is an exceptionally good foundation and starting point to become even more familiar with yourself.

Another point to consider regarding consistency and standardization is that it is uniformly the same across individuals, situations, and environments.

- · The questions are written down.
- The instructions are written down.
- · People read them.
- The questions are answered.

If both the questions and instructions are written correctly, the respondents will interpret the questions similarly and will respond with similar mindsets. So, you might say the mindset leading to the response to the questions will be meaningfully the same across all individuals.





# MEASUREMENT RELIABILITY AS AN ANCHOR FOR CONSISTENCY AND STANDARDIZATION

The psychometric term associated with consistency and standardization is called measurement reliability. The reliability, measured by the Cronbach coefficient Alpha, is what it uses as an anchor for consistency and standardization in instrumentation. If you are reading this book, you have likely had some training on a Level B Instrument like Majors PTI<sup>TM</sup> or MBTI® and should recognize the term Cronbach alpha as a measurement of internal consistency reliability.

Internal consistency is a way of statistically evaluating the questions that are being asked on the assessment to determine whether they are related to each other, or consistently gaining similar information. It is best used if your scale is measuring how much of something (not fit into a category).

An issue that can arise with coefficient Alpha is the assumption that the Alpha statistic indicates how well the measure works for all individuals. This is not the case. Early Type indicators and the Majors Type assessments were developed by Criterion Keying. This is the careful assessment of the items that form a scale or index to see if it can sort individuals into an element of type. Alphas can be determined after the scale is developed, but they may fall short in initially connecting the person with the item/question.

Test Re-Test reliability gives an indication of consistency of time. Given as a correlation, first administration with the second, that shows the strength of the consistency. Low correlations indicate to much inconsistency in the meaning of the items. Therefore, responses will vary from one time to the next. Innate Type will not vary over time.





# VALIDITY OR THE CONSISTENCY AND STANDARDIZATION OF MEANING AND LANGUAGE

During an assessment, we want to gather accurate information. To ensure this, we need the information to be asked consistently, in the same way, each time. Only then can we have a concrete foundation that the responses will be related in meaningful ways.

For instance, if we use paper and pencil assessments, we can be certain that the questions are being asked the same way. Psychometrics are how we evaluate whether the person who constructed the measure has been successful in gathering consistent results.

- Have they asked questions in such a way that they are consistently getting the same information?
- Is each question asked in a similar construct or similar domain of understanding?
- Is the question worded in such a way that the response will be the same when you ask the same person on separate occasions?

There is also the repeated consistency measure of test/retest, which is another statistical evaluation to see if the assessment has been conducted correctly by the assessor.

So, reliability and consistency are important, but validity or consistency/standardization of meaning is critical. Validity refers to how consistently we have developed the test so that we are truly getting the results we intend to get. It is the

accuracy and reality of a theory applied directly to the individual with the instrumentation. Without validity and some concrete standard based in the reality of that person, problems can arise because we do not know what we're assessing.

A good self-assessment is using an instrument as a beginning point. This is what it should be used for. It depends on the accuracy (validity) of that instrument to find out what it is meant to.

So, you might ask, does the instrument really measure psychological type? The only way to find out the accuracy of a Type instrument is with best fit studies. This means the questions comprising the instrument must be developed with the thought that some people taking the assessment know their Type, and some are naïve and will learn their Type later. If there are both participants, you will be more accurate with your measure.

Failure to meet these criteria can create what I refer to as instrument drift or construct drift. The drift happens when test developers unknowingly drift away from the true meaning of the theory during test revision iterations.

Remember, we stated earlier that instrumentation is just a step in the process of self-discovery. Validity, consistency, and the standardization of meaning come from consistently asking questions that are connected to a reality that is intended to be measured over and over across administrations and individuals.





# WHAT DOES AN INSTRUMENT DO?

So, you might ask, what does an instrument actually do? If an instrument is valid and reliable, it provides a shortcut by asking consistent questions that are relatable to reality. If this is done, the instrument will provide consistent and reliable information that is directly connected with the foundation of the instrument and its theory. It will provide consistency in measurement and meaning for whatever that foundation is.

For the Jungian psychological Type, the questions must clearly assess one of the underlying mental functions (or Type dichotomies) that drive everything. A Type cannot truly be measured unless the instruments and underlying questions are directly connected to the reality of the individual. With that being said, the assessment should be developed on their understanding of themselves, or their personal reality. This provides an extremely valuable tool when it comes to self-assessment if done correctly.

The process of an instrument is:

- Taking a construct known to be representative of Jungian Type theory.
- · Asking questions related to that construct.
- Examining the responses for a score or dichotomous result.

The importance of the dichotomous result is that it gives a concrete answer if the individual prefers one side of the dichotomy over the other.

#### Validity and Accuracy

The accuracy of the instrument will yield how often results hit the bullseye (validity), and that person's reality is in harmony with the instrument (accuracy). It is important that instruments approach an accuracy of around 90%. The failure rate represents the 10% of people experiencing emotional or psychological distress at the time. Achieving accuracy around 90% is extremely difficult or impossible.

It is important to keep in mind that some people will not be in the frame of mind to answer the questions in a way that is congruent for them, but it is just a reality of the emotional/mental condition they are in.





# THE PROPER USE OF AN ASSESSMENT OF PERSONALITY TYPOLOGY

What is the proper use of an assessment of personality typology? First, the instrument must be reliable and valid to have any use. It also has to be based on a reality of the person matching with the theory.

When used correctly, the instrument is a fast method of collecting information. It is based upon reliable questions that provide meaningful indications of the preference for each of the four dichotomies, or 8-Process Scores in the case of the Majors PTI. The assessment is a starting point to get at a person's best fit Type through the dichotomies. The Type is then confirmed by discussing the eight functions, or 8-Process Scores, and then into the whole Type.

The process is built upon the foundation of simple dichotomies, psychological opposites, and the complexities of the eight functions. The focus of information gathering within any assessment of personality typology has to be clearly articulated. For instance, why do we do assessments? We must remember that it is for personal growth, and it is not evaluative. The person taking the instrument is not being rated upon a quality dimension. If they do not understand this, it can be a usage error.

The proper use of an assessment of personality typology is to help in the process of self-understanding. It is self-discovery. It can have auxiliary intentions like team building and meanings beyond self-discovery that are healthy and good, but all other utility functions flow out from that foundation that is part of self-discovery.





## FAQ'S

## Does the PTI measure the functions directly?

Yes. It provides the 8-Process Scores in the professional's report. These Scores are the reported level of access and utility that the individual has for each of the eight mental functions. The Scores are telling the professional how much they access and use a particular function. Frequently, the results will mirror the Type based static model of the Jungian mental functions. Jung felt that the observable functions were the mental functions impacted by life.

In other words, what we observe when looking at an individual is their innate mental functions expressed with life's influences added. He noted that we can spot the Dominant Function, and often the Secondary Function, but after that life impacts what is produced and seen.

What's your suggestion for people who look to the actual scores of the assessment? A lot of people say, you know, I'm a high S or a high J, or something like that. How would you suggest people frame the actual scoring?

This is a critical part of the feedback and self-assessment process. It must start before any information is given about what the psychological Type is. The respondent needs to know that the Type index score does not tell you how much you have; it just indicates your preference toward that particular end of that dimension.

Most people will say, "I do both on most of the dimensions," and that is a wonderful starting point. And yes, we all do both. However, the professional can help them understand that Type is an innate pull to prefer one side over the other. It does not diminish your ability; it does not mean that you are limited and cannot do the other end/side. It is an expression of a natural mental function and how you're wired inside.

People need to understand that a Type instrument is not like a common test, such as standardized school tests. This is not what a Type instrument is about. It is not an evaluation of skill. This needs to be the foundation of the opening statements of the presenter so that it is clear.

# What do you recommend doing when someone is unclear on the two preference attitudes since it affects how their dominant function will be determined?

This is often challenging unless you have the 8-Process Scores of the Majors PTI. Presenting as much information as possible helps the process. At times, the professional will not want to spend time discussing the Mental Functions (8-Process Scores) in the initial session. But, by discussing what the 8-Process Scores are, and the fact that the highest score is almost always the dominant, it is easy. When they know that the scores represent, what they have access to, and find usable they understand the connection.





When highest score is tied or close between two mental functions, it indicates that they use both of those functions similarly, and the professional should explore how this developed in their life. Never try to push them to decide between one function or the other. With time and exploration, they will make the decision on their own.

## How is the PTI a new and different measurement?

The PTI, Majors Personality Type Inventory, inventories attitudes and behaviors in order to indicate an accurate Type. It came about due to frustration with working on other instruments. There was a need for change and evolution because there were too many assumptions being made.

The first difference is forced choice and measurement noise. There is an assumption that if you have forced choice responses, that somehow in the deep psychological recesses of the mind, the unconscious will pull, and they will respond correctly. However, talking with people about their difficulty in making a forced choice they would sometimes skip items. We explored why they chose to skip. What was their intent? Or, if they did make the forced choice, we would wonder how they made that choice. What was the thinking behind their response? They gave answers like, "I got tired of fighting with it, so I went all left or I went all right." Some people actually said, "I did eeny, meeny, miney, moe."

This is what is referred to as measurement noise.

Instead, the PTI instrument employs Neutral responding. They are instructed to only respond neutral if they cannot decide, or if they don't understand both sides of the equation. If they respond neutral, the response is not included in

the scoring for that Type. The neutral response, unlike a Likert scale, is simply an indication that the individual is saying that for some reason the question is not working for them.

Another improvement for the PTI was the levels of similarity. The scoring method on the PTI is referred to as Differential Intensity Weighting (DWI). First, they make an accurate differential choice. They can also select the neutral position, which prevents the question from being noise in the assessment. Besides the differential choice, is the intensity or how similar it is. This response style gives an element of how natural the choice is. Once they have decided for either side as a differential, it measures how Intense the response is for them, or how similar is it to them.

Respondents prefer not to be forced into a decision. They will typically heed instructions and avoid too many neutrals. The instrument is powerful and reliable enough that they can respond to quite a few neutrals and still have an accurate result.

# What if someone chooses too many neutrals related to one dichotomy? How do you deal with that?

The PTI has what is called a Type Clarification Module. It is a form of Computer Adaptive Testing. If the individual responds with too many neutrals, this will move them near the midpoint in the computer scoring. Then, a programmed trigger provides five unique questions to help the routine get an accurate result. These five questions are not consistent with the previous questions on that dichotomy; because to give five more of the same kind questions, would yield the same result. Using parallel, but uniquely different questions, helps the scoring routine





get a more accurate result for the individual. Therefore, the Majors PTI can give an accurate result even with many neutrals. The items on the Majors PTI are powerful questions. If you cut four or five questions out of each index and calculate the reliability alphas, results indicate a reliable scale

# Some individuals say that all other instruments are just MBTI knockoffs, or a copycat, or something. Is the PTI another knockoff?

Most individuals are aware he worked on both form M and form Q of the MBTI. He was the original director of research for the Step 3 Project, and the director of research while at CAPT. Therefore, he does not engage in negative discussion regarding his old work. He simply points to the improvements found in his new instruments. Dr. Majors states, "Isabelle Myers was a brilliant woman who did wonderful work, and if people wish to copy that work, I don't think that's necessarily a bad thing". The PTI and his other instruments do not do that, they refer back on Jung. The PTI is built on a passion in psychometrics and how it relates to the reality of the individual and gives an accurate assessment. Dr. Majors states that, "I just took my own research work and my own understanding and did my own path."





# APPENDIX: THE MAJORS PTI HISTORY AND PSYCHOMETRICS

# Majors PTI Development History and Process

The Majors PTI was developed in an iterative three-phase process: item selection and evaluation, best-fit evaluation, and scoring evaluation. This process was repeated until the final 52-item version was constructed. The two main goals were to produce a measure of personality that was based on best-fit accuracy, and to develop a concise tool, able to be completed in less than 10 minutes. As previously mentioned, the belief that the individual is the best judge of any instrument's ability to capture his/her personality was the foundation for establishing the validity of this measure. The 52-item final version began as a 250-item research questionnaire. Item reduction occurred through a gross evaluation phase by examining internal consistency alphas, followed by a more precise item selection based on best-fit data collected from confident sources (see reliability and validity sections below for sample details). The testing of different scoring processes and weighting systems led to the development of the Differential Intensity Weighting (DIW) method. The DIW method has provided the most accurate reporting of type. The sample used in the development of the Majors PTI was drawn from consultants' clients and from organizations throughout the United States. A total sample of 526 was collected during the instrument development process. Of that sample, 203 respondents provided best-fit information (the other portion of the sample was not available for the best-fit confirmation process).

Note: Specifics on the development psychometrics and norming of the Majors/Jungian 8-Process Scores is found in chapter nine.

Test-retest data was collected from a single source over two periods and the total sample size was 163. The mean age of the best-fit sample was 39 years, with a range of 20 to 72. The sample was 92% Caucasian with 37% males and 63% females. The balanced-bytype sample (randomly drawing from each of the sixteen types to produce a more balanced number of each type) had a mean age of 36 years, with a range of 22 to 72. The sample was 88% Caucasian, 8% Hispanic, and 4% African American, with 43% male and 57% female. The total sample had a mean age of 36 years, with a range of 16 to 73. The sample was 84% Caucasian, 8% Hispanic, 4% African American, and 3% Asian American with 32% male and 68% female. All of the samples were composed of voluntary participants who received no rewards for taking part in the research. A large (N = 1.391) post-development sample and a large 2009 publisher sample (N=2,557) were also collected, and psychometric results will be reported for these where appropriate.





#### **Majors PTI Psychometrics**

#### Reliability

Establishing the reliability of an instrument is accomplished by showing that the scales themselves are reliable. The two forms of reliability assessment most commonly used in instrument development are internal consistency and test-retest reliability. The internal consistency of an instrument is a statement of how well the items on a scale seem to be consistently measuring the same thing. It does not tell you what is being measured, just that all of the scale's items are measuring it. Test re-test reliability tells us how well the instrument measures consistently over time. The internal consistency alphas of the 51-item Majors PTI are presented in Table 3.

The measure of internal consistency was Cronbach's coefficient Alpha. All of the samples that were collected were included in the total sample (this does not include the post-development or 2009 publisher's sample). The best-fit sample is comprised of those individuals in the total sample who have reported and are known to understand their psychological types. The balanced-by-type sample was randomly drawn from the total sample and was also balanced by gender (N = 260). This sample provides a good indication of how well the internal consistency of the Majors PTI holds up across all types. The post-development sample data was collected over a three-year period and crosses gender, ethnic, and socioeconomic strata.

All of the alphas indicate that the Majors PTI has internal consistency. Given that the number of items on each scale range from 10 to 15, the alphas are high. The range of alphas was .92 to .95 for the best-fit sample, .90 to .91 for the balanced-by-type sample, .89 to .91 for the total development sample, .90 to .93 for the

post-development sample and .92 to .93 for the 2009 sample. In Table 4 below, the alphas for the four scales are given for the development sample divided by the range of level of clarity found in the reported type.

Table 4 shows that the scale reliabilities for all scales improve as the range of measured clarity moves to the Very Clear end. The improvements in reliability for the Slight + range (all individuals above Slight) are .02 for all scales. For the Clear + (all individuals Clear or above) it is an improvement of .03 for the SN scale and .02 for the other three. In the Very Clear category (all above Clear), the increase is again .02 for all scales. These results demonstrate the instrument's scale score relationship with scale reliability. As mentioned before, clarity of results indicates the measure's clarity in evaluating the type of certain individuals, not the clarity of individuals in reporting their type.

#### Test-retest reliability

Establishing the consistency or stability of measurement over time is known as test-retest reliability. Test-retest analysis is accomplished by correlating (Pearson product moment correlations) the raw scores on the Majors PTI that were collected using the same sample of people over a period of time (Table 5).

A test-retest (30-day interval) sample was collected from a Protestant church in a Florida town of moderate size. The sample was made up of 35% males and 65% females and had a mean age of 35 years with a range from 19 to 76. Results from the first administration of the instrument to this sample were included in the total sample use in the internal consistency analysis above.

The second column of Table 5 presents the percentage of agreement of the dichotomous results between administrations. Results from the





test-retest sample indicate that the Majors PTI is reliable over time. The range of Pearson correlations was .88 to .92.

The E/I scale demonstrates the greatest stability over time and the S/N and T/F scales have the lowest. However, even the .88 correlation for the two lower scales indicates stable measurement over time. The percentage of agreement presented in Table 5 is an indication of how often the Majors PTI provided the same preference (letter-code) result on each of the dichotomies. The results show that the Majors PTI is providing the same preference indication consistently over time.

#### Conclusion of Reliability Analysis

The reliability data that has been presented demonstrates that the Majors PTI has internal consistency and test-retest stability over a 30-day interval. Since the number of items on a scale greatly influences the statistical calculation of reliability (the more items the higher the alpha reliability), it is easier to make long instruments reliable than to make reliable short ones. Nevertheless, the internal consistency that is reported here is similar to other measures of nearly twice the length of the Majors PTI.

The validity of any instrument is the evidence that it measures the constructs that it purports to measure. The Majors PTI was developed by selecting items that demonstrate consistency with the known personality types of knowledgeable individuals (criterion-based validity). In other words, each item had to establish its own validity to be included on the psychological Type dimension that it was intended to be on.

A second form of validity is construct validity. This method tests the structure of the items and scales to prove that the measurement model that they represent is valid.

The only way to prove that a measure of psychological Type is accurate is with people who know their types. The key point is that the individuals involved in this form of research must know their Type. This is a process that involves time and education. People need to have experiences where they test their own personal Type hypothesis against the reality of their lives.

To apply the best-fit method of establishing validity to the Majors PTI, a sample of 203 individuals was collected from midwestern, southwestern, and southeastern cities. For the data to have been accepted for use in the bestfit study for the Majors PTI each person had to report their best-fit Type. Further, these participants had to present information on how they had come to know their Type, and how long they had been studying Type. Most, or 74% (Type aware), had been through some formal training or workshop that had introduced them into the thinking and conceptualization that is psychological Type. The other 26% (Type naïve) were individuals who had experienced Type in a feedback session, followed by months of experience and personal investigation, or were personally known by the Majors PTI test development team who helped them to establish their best-fit Type. Each participant had to report their confidence that they knew their Type across each of the four scales (1 no confidence to 10 complete confidence). Table 6 presents the best-fit data for the Majors PTI.

All of the disagreements between Majors PTI results and Best-fit Type were found to occur on one scale at a time (there were no occurrences of two type letters being different for an individual). All of the disagreements occurred when the continuous scores were less than 5, indicating slight clarity of preference. This occurred in both Type naïve and Type aware individuals.





In 2009, another best-fit sample (N = 204) was collected in the publisher data from professional user administrations. In this sample, the professional had to confirm the Type that the individual client identified as their best fit after feedback and consultation. The accuracy rate was 93.5% for all four letters of the Type code. No individuals were mistyped on more than one dichotomy, and the errors were distributed across all four of the dichotomy scales. There are currently no other measures of Jungian type that approach this level of accuracy.

Another method of assessing the validity of an instrument is known as construct validity. This form of validity is determined by using factor analvsis to confirm the existence of the constructed scales or factors. The items from the Majors PTI using the balanced by type and sex sample (N = 230) were subjected to a principal axis factor analysis using a Promax rotation. All of the items were allowed to freely load on four factors. In the factor analysis, the hypothesized model of the four scales and the items that formed them are expected to emerge. This matching of the relationships found between the variables to the scales establishes the validity of the underlying constructs. Simply put, it tests whether the items on the four scales really confirm the four-scale model that is intended

Results of the factor analysis indicate that the Majors PTI four scales are confirmed in the data. All of the items loaded strongly on their intended scales. The range of factor loadings was .57 to .84 for E/I, .43 to .81 for S/N, .51 to .75 for T/F and .365 to .83 for J/P. Cross loading (an item loading strongly on two or more factors) occurred in two J/P items that also loaded on S/N.

Another indicator that a measure has been properly constructed, is an evaluation of the relationship between the scales. The scales of

psychological type assessments should be independent, meaning they are measuring different constructs. The results of Pearson product moment correlation analysis across the four Majors PTI scales are presented in Table 7. The data indicates that the S/N and J/P scales correlate by a factor of r = .32. While this correlation is the highest one occurring between any of the scales, it does not however, represent more than a very weak relationship.

#### Conclusion

Results of validity analyses indicate that the Majors PTI measures accurately the four psychological type constructs that it was developed to measure. The results of best-fit analysis are of particular importance due to its clear indication that the results of the Majors PTI instrument are consistent with the individual's self-understanding.

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# The Majors/Jungian 8-Process Scores

The Majors/Jungian 8-Process Scores represent reported indications of the individual's developmental condition, access, and usability of Jung's mental functions. This chapter will provide information regarding the historical impetus for developing these scores, the general process of developing the scoring along with its metric form and normative information for using the scores with clients. This is a completely new method of providing information regarding psychological type, and therefore, the professional is encouraged to read Psychological Types (Jung, 1971; specifically, the introduction and chapter 10). At one level, these scores give simple straight-forward information that can be provided to the client without the use of jargon or the complexity of the 16-type code. The scores also supply the professional with a richness about the individual's personality type that has not been available until now.

#### Historical Impetus for the Majors/ Jungian 8-Process Scores

OOver the past 30 to 40 years, much of the interest in psychological type has focused upon the 16-type four-letter code established by Isabel Myers. The mental functions, as described by Jung, were indicated through a process embedded in the four-letter code. For example, ENFP has as its dominant mental function, iNtuition, expressed in the Extraverted attitude (Ne). The second or auxiliary function is Feeling expressed in the Introverted attitude (Fi). No information about the level of development, accessibility, or usability could be extracted from the four-letter Type code. Consequently, the mental functions of Jung were left to be in one of 8 positions with

the assumption of a developmental order and usability applied without proof. The decision to develop a scoring method to directly access the Jungian mental functions was based upon the limitations of the 16-type method to provide the important information regarding developmental condition, access, and usability.

## Development of the Majors/Jungian 8-Process Scores

The 8-Process Scores were developed through a long analytic process involving evaluating the ability of the basic items on the Majors PTI to predict accurately the dominant function of a given type. The procedure involved using large samples of best-fit data that was balanced by type and gender (see the tables that follow). The items on the Majors PTI/PT-Elements have the response set of somewhat or very like me. This method (Differential Intensity Weighting, discussed previously) of self-reporting provides information about how closely the individual identifies with the item. The item in turn is directly connected with the developmental condition, access, and usability of one or more mental functions. The general steps in the development of the Majors/ Jungian 8-Process Scores are complex and highlighted below: The items on the Majors PTI/ PT-Elements were subjected to binary logistic regression with the individual's 16-type code assignment into a particular dominant function as the dependent variable.

- 1. An eight by eight by 51 item grid was constructed using the weighting derived from the regression analysis.
- 2. The grid of predictive data was subjected to a factor analytic process to establish the groupings of items for each of the 8-Process Score scales.





- 3. The process of weighting was streamlined when it was discovered that the scales could have a few general weights rather than the detailed weighting from the regression analysis and maintain the result integrity.
- 4. The raw scores were normed on a large sample that was balanced by type and gender. (T-Scores with a mean of 50 and standard deviation of 10.)
- 5. Separate gender norms were developed to ensure that there is no bias introduced for types that are disproportionately represented by either males or females. An average score for any of the 8-Process scores is 50 regardless of gender. This makes interpretation of the reported results much simpler.

#### BRIEF DESCRIPTIONS OF THE 8 JUNGIAN MENTAL FUNCTIONS

<b>Se</b> Acquiring information from the 5 senses. Prefers the objective facts with all of the details. Values the object itself.	<b>Ne</b> Sees future possibilities from objective current data. Recognizes the patterns to shape future.
<b>Si</b> Compares the present world with the past. Re-experiences past in vivid detail. Previous experience guides present thoughts and actions.	<b>Ni</b> Sees the patterns to understand the meaning. Has an abstract sense of relationships, and unpredictable flashes of insight.
<b>Te</b> Structures and organizes the external world into a logical system to take care of people and issues.	<b>Fe</b> Will create and maintain harmony. Has a concern for others' needs, desires, and values.
<b>Ti</b> Builds a subjective internal framework of principles and truth to structure analysis; seeks precision.	<b>Fi</b> Holds private, nonnegotiable core values deep inside. Is sensitive to inner life of others.

## Majors/Jungian 8-Process Scores Normative Information

On the following page is a table of the means and standard deviations of the Majors/Jungian 8-Process Scores for each of the 16 personality types. This data is normative information for evaluating the reported scores of individuals. Because they were created in two gender separate samples, each is balanced by type. Then a respondent's scores can be compared with those from this table to see if there are meaningful differences from others with the same type. It is important to note that such differences do not indicate anything more than the opportunity for discussion.





TYPE (N)	8-Process T-Scores								
		Se	Ne	Si	Ni	Te	Fe	Ti	Fi
Enfj (N=114)	Mean	46.08	54.76	46.41	55.08	50.34	61.78	40.11	51.54
	SD	8.29	6.69	6.85	8.05	7.08	8.82	6.41	6.82
Enfp (N=214)	Mean	52.29	62.18	36.95	48.47	42.44	56.15	44.58	58.21
	SD	6.97	7.59	5.64	6.02	5.39	7.14	5.55	7.11
Entj (N=99)	Mean	46.55	53.34	46.87	53.63	60.50	49.20	49.95	38.64
	SD	7.09	5.73	5.84	6.70	7.69	6.06	6.49	5.67
Entp (N=108)	Mean	52.92	61.98	38.95	49.92	55.68	44.39	57.39	46.00
	SD	7.94	7.88	6.48	6.37	7.66	6.52	8.08	5.69
Esfj (N=374	Mean	54.74	43.71	54.99	43.91	51.08	61.58	37.91	48.56
	SD	8.08	5.15	7.13	5.35	6.63	8.16	6.06	6.10
Esfp (N=76)	Mean	61.80	51.61	47.91	39.49	44.67	54.54	45.19	55.03
	SD	7.02	5.89	5.10	5.99	5.69	5.86	6.02	5.60
Estj (N=817)	Mean	55.47	41.23	58.15	43.47	62.13	51.13	48.04	37.01
	SD	8.65	5.05	8.66	5.37	8.92	7.29	6.90	5.51
Estp (N=109)	Mean	60.94	49.78	48.13	38.36	54.39	43.89	53.97	43.72
	SD	7.42	4.91	4.70	5.01	6.32	5.43	6.13	5.17
Infj (N=97)	Mean	38.24	49.33	50.73	60.21	43.80	56.14	43.59	55.99
	SD	7.53	6.02	6.06	9.01	5.29	7.98	5.98	7.16
Infp (N=180)	Mean	44.06	57.67	41.85	55.53	35.52	50.52	50.40	65.31
	SD	7.29	7.32	6.31	7.45	5.78	6.94	6.35	9.06
Intj (N=72)	Mean	39.03	49.19	52.61	61.26	56.71	44.47	56.37	44.11
	SD	6.92	5.39	5.62	8.46	7.04	5.00	7.67	5.62
Intp (N=82)	Mean	44.00	57.65	43.81	57.72	49.67	36.53	64.90	51.87
	SD	7.27	7.81	6.07	7.57	6.36	6.41	9.19	6.07
lsfj (N=310)	Mean	48.10	37.71	61.39	49.39	46.05	56.57	42.90	53.48
	SD	6.69	4.75	8.12	6.28	5.69	7.50	5.51	6.73
lsfp (N=52)	Mean	54.68	46.69	54.45	46.64	39.98	50.38	50.23	60.66
	SD	6.13	4.45	5.38	5.75	6.45	5.73	6.42	6.75
lstj (N=532)	Mean	49.53	36.90	63.54	49.09	57.45	45.54	53.34	41.54
	SD	7.48	4.64	8.70	6.10	7.61	6.24	7.48	5.23
Istp (N=75)	Mean	55.07	44.28	54.41	43.41	49.89	38.03	60.26	48.87
	SD	7.84	5.20	6.54	5.01	6.17	6.04	7.96	5.95
Total (N=3311)	Mean	51.40	45.73	53.94	47.89	52.99	51.47	48.17	46.69
	SD	9.33	9.98	11.08	8.20	10.70	9.47	9.15	10.41



Notice that the average score for the dominant mental function of each type is 10 points or more above the mean (always the highest average score), and that the inferior function for each type is 10 points or more below the mean (always the lowest average score). These results are indicative of the vast difference in developmental condition, access, and usability between the dominant and inferior functions that Jung states is to be found. The process that is dominant uses the bulk mental resources for a given mental function, resulting in a necessary blunting of the development of the inferior. For example, the most developed process (and the highest average score) for those preferring the ENFP type is 62.18; indicating a very well-developed Ne process. The resources for the development of the Perception function in ENFPs tend to go to the most genetically natural function (iNtuition) in the most natural attitude (Extraversion). This makes development of the opposite perceptual function, Sensing in the opposite or Introverted attitude, very difficult (and the lowest average score).

Some have hypothesized an order of development across the mental processes. All such theoretical suggestions are based upon the belief of a natural normal path of development that emerges for each type. The results presented in the table above give a clear picture of what is reported. Jung, while indicating an order of development, points out that the Auxiliary function, the second most developed, accessible, and usable, may be consistently develop as planned. However, the impact of life on the development of other mental processes results in more of an individual difference (less predictable). As with Jung's descriptions of the mental processes he observed in his clients, these scores are intended to be used to describe what is presented by the individual as they respond to the Majors assessment. Any fulfillment of theoretical position is left to research. The Majors/Jungian

8-Process Scores represent the first opportunity for such theoretical notions to be investigated with an accurate assessment.

#### **Examples of Utility**

Following are some examples of Majors/Jungian 8-Process scores presented along with the scoring on the four dichotomies. They have been chosen for their range of implication for interpretation. These results indicate the independence of the two sets of scores, as well as the utility in providing information for the client regarding their unique developmental pattern. Keep in mind that the scores on the four dichotomies represent a dichotomous result, innate Type. The Type of an individual may be different than one would expect to see based upon the 8-Process Scores. This is consistent with Jung's supposition of life impacting each one of in a unique way. This disparity is at times an indication of flexibility in the individual and sometimes it represents the distortions that occur due to the individual being forced to accommodate powerful environmental forces.

#### **SCORE EXAMPLE 1:**

Demographics: These results are from a female career counseling client. She is 19 years old, unmarried and lives at home with her parents and younger siblings. She is employed part-time as a food service person in a local restaurant. She confirmed her preferences for ISTJ.

Four Dichotomous Type Scores

Е	I	S	N	Т	F	J	Р
2	11	18	0	12	5	21	2





#### 8-Process Scores

Se	Ne	Si	Ni	Te	Fe	Ti	Fi
55.3	31.7	71.6	47.8	57.7	48.3	53.1	43.6

What is revealed in the 8-Process Scores is a clear dominant preference for using Sensing in the Introverted attitude (consistent with 16type prediction). Even though the preference for Introversion is expressed as a clear type, this person is aware of and using Extraversion as revealed in average or higher (scores around or above 50) scores for Te, Se and Fe processes. When discussing these results, she described how important her gregarious social life was to her. Yet, she admitted that she saves those activities for the weekends and avoids them during the week (referring to them as an intrusion during the weekdays). Jung's observations concerning development of personality types maintain that one mental function develops first and is most accessible. Her result of Si at 71.6 or more than two standard deviations above the average of 50, which is consistent with the development process at this age for this type (ISTJ). This individual has an interest in statistics and accounting, but yet wants to be able to interact with others during the day. At the same time, she wants control of the access that others would have to her (avoiding the intrusion and having contact when she is energized). She admits having little patience with Ne type possibilities that slow down the mental work that she enjoys. She also admits to being somewhat closed off to alternative views. She became aware during the career counseling sessions of the need to at least look as though she was interested

in alternative viewpoints. This posture will reduce the friction she reports with peers that results from her rigid rejecting of statements inconsistent with her views.

#### **SCORE EXAMPLE 2:**

Demographics: These results are from a male client in couple's counseling. He is 51 years old, married with three adult sons living out of the home. He is employed in customer service for a large manufacturing company (position held for 20 years). He confirmed his preferences for ESTJ.

#### Four Dichotomous Type Scores

Е	I	S	N	Т	F	J	Р
10	8	17	4	20	0	21	5

#### 8-Process Scores

Se	Ne	Si	Ni	Te	Fe	Ti	Fi
61.1	43.1	71.1	52.4	73	48.9	62.2	37.2

Examining the 8-Process Scores reveals that this person has developed a strong access to four processes. In the course of conversations with this individual, the Thinking judging/decision making function in the Extraverted attitude, as well as the Sensing perceptual function in the Extraverted attitude is readily apparent. His work requires communication of detail and resolution of issues. This style of interaction with the world around him is challenging for his INFP spouse.





He has a recall of past relational detail, Si, that was often intrusive in the relationship intervention (bringing up the past information). This individual was challenged by his inability to let go of the past and move on in the relationship. He did express some understanding of the need to focus on harmony. However, he insisted that precise explanations for prior situations be presented first before he would entertain or accept change in his spouse. Inaccessibility to Fi can be viewed as contributing to this position.

#### **SCORE EXAMPLE 3:**

Demographics: These results are from a female client in a professional coaching situation. She is 27 years old, married with no children. She is employed as an office manager in a manufacturing company (6 years in this profession). She confirmed her preferences for ENFP.

#### Four Dichotomous Type Scores

Е	I	S	N	Т	F	J	Р
9	5	3	17	1	14	1	20

#### 8-Process Scores

Se	Ne	Si	Ni	Te	Fe	Ti	Fi
52.8	68.7	36.7	55	36.4	53.1	47.4	64

The 8-Process Scores for this individual reveal that both Ne and Fi are well developed and accessible. During the coaching she reported that she is challenged by her own belief that peace and harmony with everyone was the ultimate priority. Further, this unrealistic belief was keeping her from performing the portions of her job that may result in other being unhappy. The coaching work helped her to recognize that she was frustrating herself by her own internal relationship demands (Fi) and would experience more efficiency in her work and personal joy by looking to better outcomes (Te and Ti) for the office without allowing relationship concerns to dominate. The understanding of inferior Si and that process's immaturity and contribution to her periods of burnout helped her say "no" more often and gain a better balance in her work and leisure activities.

#### **SCORE EXAMPLE 4:**

Demographics: These results represent a male client in a life coaching situation. He is 47 years old, married with two adult children living out of the home. He is employed is in a human services occupation that he has held for 4 years (23 years total in HR and human services). He confirmed his preferences for INFJ.

#### Four Dichotomous Type Scores

Е	I	S	N	Т	F	J	Р
1	13	5	9	1	22	10	6

#### 8-Process Scores

Se	Ne	Si	Ni	Te	Fe	Ti	Fi
36	44.3	49.4	55.2	35.4	66.6	40	70.3





Note that the 8-Process Scores are NOT consistent with the predictions based upon the 16-type determination of what would be found. Genetic prediction based upon type would have Ni be first or dominant and Fe be second or auxiliary. The 8-Process Scores reveal that this individual focuses on achievement of happiness and satisfaction from and with others. This was the main issue that he brought into the life coaching process. He reports not feeling competent in meeting the external demands of always being available, and yet recognizing that he was the person who most placed that demand upon him (Fi). He desires time to write professionally (newsletters for the company) and personally (Ni; creative writing), but until coaching pushed him to do so he would deny himself this joy by maintaining that he must be interacting with others all the time to be seen as competent. He viewed his "believed to be available," as not making sense but needed external confirmation to objectively reconsider his stance (help in developing Ti). The inferior poorly accessible process Se contributed to the inability of external practical details in his environment from impacting his position on being perfectly available to meet all needs.

#### **General Discussion of Examples**

The above examples present information from four healthy well-adjusted individuals who are very successful in life. All of them have challenges based upon mental processes that they wish to overcome, yet there is no emotional disturbance or serious issues for any of them. The Majors/Jungian 8-Process Scores give a portrait of the individual's level of development, accessibility, or usability across all of the Jungian mental functions. Even though there are various hypotheses of developmental patterns and order of development, what we see in these individuals is what is

natural or genetic for them; impacted by environmental/ relational push and pull. These results do not deny any theoretical structure. Rather they simply describe what is occurring with the individual at the time they took the assessment.

It is important not to see any deviation from a "normal" presentation of 8-Process Score results as a problem. Most often the variations in process expression represent adaptation and adjustments made by the individual to experience. Further, it is important to recognize that some aspects of the Jungian mental functions will change over time. This is developmentally normal but does not change the genetic nature of type itself. Changing levels of Process Scores do not mean that the 16-type results will change at all.

The complexity of the mind is far beyond the descriptions of Jung psychological types. The knowledge of the meaning of the processes and utility of the Majors/Jungian 8-Process Scores gives insights into the expression of important aspects of natural personality. It is important to recognize the utility and limitations of these valuable scores. As mentioned throughout this manual, the scores are not proof of anything. They do represent opportunities to discuss the potential meaning with the client. Only the client can confirm the validity and meaning of any score.





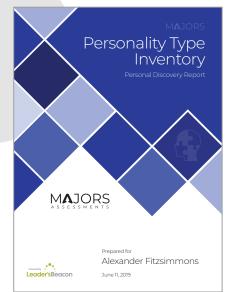
#### **About Mark S. Majors, Ph.D.**

Dr. Mark S. Majors is a counseling psychologist with extensive psychometric credentials. His Ph.D. in Counseling Psychology and Multicultural Studies is from the University of Nebraska-Lincoln, and he earned a MS and BS in Psychology (with distinction) from Iowa State University. He is the author and developer of the Majors Personality Type Inventory™ (Majors PTI™), Majors Occupational Environment Measure™ (Majors OEM™), Majors Elements of Personality Type™ (Majors Elements™), the Majors SGI (Majors Spiritual Gifts Inventory) and principal developer of the Interstrength X-Styles Assessment. Mark also provided the data analysis on the 1994 Strong Interest Inventory, the MBTI® Form M and Form Q, as well as the development of the IRT scoring for the MBTI® Form Q. and coauthor for the MBTI® Form Q Manual. While a research scientist at Consulting Psychologist Press, he led the psychometric and scoring development of the Strong Interest Explorer. In addition to the test development, Mark trains pastoral counselors with an emphasis on the use of personality assessment for conflict resolution through the acceptance of differences and personal growth. He has also developed and presents leadership training seminars that train leaders to serve others by using personality and individual differences to facilitate optimum performance. He has provided 25 years of successful individual and couples/marital counseling using personality differences and has authored numerous books, manuals and articles on personality differences and Biblical psychology (Notably: Dichotomies for Dyads: A Handbook for Recognizing and Resolving Personality Conflicts In Relationships). Mark lives in the Ozark Mountains and is happily married with 2 children 10 grandchildren and 4 great-great grandchildren. His published instruments are available on leadersbeacon.com.

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The next generation of personality assessment, the Majors Personality Type Inventory (Majors PTI), is a concise assessment tool that builds on 80 years of research about psychological type. Although it produces the four-letter personality type code that the MBTI® is known for, the code used by counselors and organizations worldwide, it does so via a radically different route than the MBTI®. The Majors PTI is web-based for ease of access and accuracy. The Majors PTI uses newer methods of asking and weighting the questions, which result in improved accuracy with fewer questions than standard measures of psychological type—only 52 basic items and the innovative Type Precision Module (a form of computer adaptive assessment) for even greater accuracy. This dynamic process can add up to 20 additional items (5 per dichotomy as necessary), which helps to boost instrument validity/accuracy for a wide range of clients.

#### **Differential Intensity Weighting**

The Majors PTI™ was created to take advantage of recent advances in the field of psychometric and theoretical thought about personality type. These advances include using a nonforced choice format and respondent-based weighting methods. The purpose of using these new measurement techniques is to create an instrument that more accurately determines Jungian type, as identified by the standard (Myers) four-letter type code; as well as provide a direct accurate scoring of the 8 Jungian mental functions (Majors/Jungian 8-Process Scores).

The Majors PTI™ uses levels of similarity to provide clarity of results and increased precision. By using graduated response scales (somewhat like me, very like me), not only do you receive information about a choice decision (direction), but you also have knowledge of the level of similarity between the person and the response (intensity). This new form of scoring is called Differential Intensity Weighting. The addition of levels in the response format, and the corresponding Differential Intensity Weighting scoring, adds new information that improves the precision of identifying the individual's natural preference.

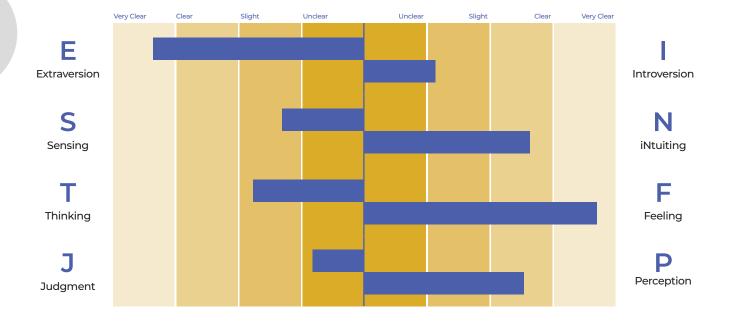






#### The 4-Letter Type Code

The Majors Personality Type Inventory<sup>™</sup> (PTI<sup>™</sup>) is an instrument designed to help your clients learn valuable information about how they direct their energy, take in information, make decisions, and how they orient themselves to their environment. The result is the popular 4-letter personality type code that is based on Jungian Type Theory (16 Personality Types).



Personality type theory can help individuals understand why some situations are enjoyable and energizing, while others are uncomfortable and draining. Developed by Dr. Mark Majors, the Majors PTI™ is intended to help individuals in the process of self-understanding and continued personal and professional growth.



#### **Type Precision Module**

In addition to the unique scoring method, the Majors PTI introduced the Type Precision Module—a clarification step, when necessary, to ensure the accuracy of the instrument and to further help your clients get to best-fit-type. If a client's preferences are still unclear as reported by the instrument, a second "also read" type will be created for the client to explore.

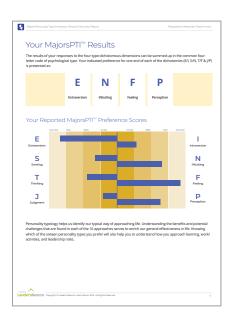
#### Developed by Mark Majors, Ph.D.

Dr. Mark S. Majors is a counseling psychologist with extensive psychometric experience that includes data analysis on the 1994 Strong Interest Inventory and the MBTI® Form M, as well as the development of the IRT scoring. He was coauthor for the MBTI® Form Q Manual. Mark is also the developer of the Majors Occupational Environment Measure (MajorsOEM).

#### **Key Features:**

- Less expensive than other psychological type instruments.
- Shorter, but more accurate, instrument with only 51 Questions
- **Differential Intensity Weighting** this allows the individual to both choose the response that is most natural for them and rate how similar the choice is to them.
- The Neutral Response the use of a neutral response removes the measurement error that is found in other forced choice psychological type assessments.
- **The Type Precision Module** is a form of Computer Adaptive Assessment that adapts the scoring method based upon the individual's responses.



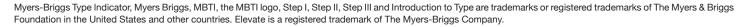






#### Comparing the Majors PTI™ to the Myers-Briggs Type Indicator®

Characteristic	Majors PTI™	MBTI®
Version	Personal Discovery Report	Form M
Number of items	51 items	93 items
Time	7-9 minutes	15-25 minutes
Basic Report	10 pages	3 pages
Number of Scales	4-letter type	4-letter type
Reliability (ranges)	Alpha: .8995	Alpha: .8993
	Test-Retest: .8892	Test-Retest: .8393
Validity (methods)	Correlations with other tools such as the MBTI® assessment.	Correlations with other tools; factor analytic studies; experimental studies.
Administration System	Shift Platform: \$99 annual license fee plus per adminstration fee.	Elevate®: \$195 annual license fee, plus per administration fee.
Instrument Cost	\$15.49 (1-99) \$13.15 (100-499) \$10.84 (500+)	\$21.95 (1-99) \$20.30 (100-499) \$18.66 (500+)
Other	Professional receives scores for eight mental processes.	Interpretative Booklets available from the publisher, The Myers- Briggs Company







#### **ABOUT Leader's Beacon**

Leader's Beacon is a provider of software for psychometric assessments and experience management surveys for human resource, career development, and organizational development professionals.

Our suite of assessment solutions and experience management tools enables our customers to facilitate individual growth and development through a deeper understanding of self and others, adapt continuously to market needs, and make a difference.

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