# About the PLSI

## Introduction:

The Paragon Learning Style Inventory includes a 52-item adult version and a student learning style inventory both of which can be self-scored and obtain reliable measures of the 4 Jungian psychological/learning dimensions. The Student version is written for ages 8 and older. Each of the PLSI versions were last revised in 2003 and are being used around the world by schools, businesses and individuals. For more about test interpretation and theory go to the interpretation page.

## Test Construction:

The 48-item version on this site was revised in 1992.  In 2003 another revision took place.  Less effective items were removed and more sound items were added so that latest version has 52 items in total.  Two advantages of 52 items are that first, it reduces the number of ties and second, raises the reliability slightly. The item functioning in the latest version has also been improved to produce higher reliability, and factorial properties. While reliability is the primary concern of many instruments of this type, as much attention was given to construct validity when developing the PLSI. The factors or dimensions are not only very independent, they reflect the proportions within the population. For example, the PLSI will obtain about 50-50 thinkers and feelers, and judgers and perceivers. This is not true of other instruments of this type.

## Reliability and Validity

Shortly we will provide information related to reliability and validity of the Paragon Learning Style Inventory (PLSI) on the website. This summer we are planning another round of testing, and will be able to report more precise reliability figures at that point. But let us informally address some of the concerns regarding the psychometric soundness of the PLSI.

1. Any self-report inventory is limited. That includes those like the MMPI that are developed by factorial constructs rather than beginning with theoretical constructs. The test-retest ability and the false positives of *any* inventory attempting to make inferences regarding behavior or personality using a self-report mechanism can never be perfect. The factors do not ever explain all of the variance, and the subject will never be able to know him or herself perfectly.  So like the MBTI the PLSI gets at "true type" pretty well, but it is not perfect.

2. Data from the Myers-Briggs suggests that 9 months later the retest stability of the MBTI is about 60-70% (and about .90 for any single dimension, page 163; *Manual for Use).* The PLSI has shown about the same level of stability. However, if a person has a strong preference in any dimension the test-retest reliability goes up to almost 1.00. An added benefit of the administration procedure for the PLSI is that the participant can see their score immediately and determine how close they are to the middle or either polar

point. If the score is close, the facilitator can help him/her understand that 2 things are important to do. First, they need to look at additional material in the packet, especially the pair-wise dimension lists to see if they can get further clarification to their preference (the MBTI is not designed to do this). Second, they can see that their preference is not that far to either side and will be able to interpret their score and behavior with that in mind.

3. Therefore, for a student or adult to be able to use the PLSi data to understand him or herself, it is important that they understand the dimensions enough to self-diagnose. This understanding will mitigate much of the problems arising from offering incorrect advice, or the participant making faulty assumptions.

4. Our most current analysis of the PLSI shows that the split half reliability of each of the dimensions is between .90 and .94. We plan to do further analysis in the coming year. Moreover, we use a series of analysis to determine the quality of an items functioning.

5. We have revised items periodically in the past 10 years to improve their performance. A good item has a high factor load (in a factor analysis) on the appropriate factor line. All of our items function above +.40 and most in the +.60 and +.70 range. In addition, all items are written to ensure that they obtain a correct proportion of response of each type. Items that do not perform within 15% of the mean are fixed or thrown out. For Example, you will see some changes between the new 52-item version and the 48-item version online. There were 3 items that were outside the acceptable range.

6. The primary analysis is done by item. If an item functions, the scale will function, and if the scale functions then the inventory does what it is intended to do. In essence, the PLSi (or MBTI or Keirsey) is 4 separate inventories. The scales are almost entirely independent (only the N/S and J/P scales have the slightest correlation).

7. One psychometric indication of theoretical validity is the evidence of a bi-modal distribution for the PLSI. This result shows up in each analysis. A random characteristic that exists naturally in the population (i.e., friendliness) exhibits a normal (bell) distribution, with the highest frequency being exhibited at the mean. If you examine the distribution PLSI scores, you will notice that the distribution is very flat (i.e., those with a 10-3 score will be about as common as those reporting a 7-6 score). And if the student were able to study the dimension a bit more and gain a greater degree of self-awareness, the 9-4 score would become more common than the 7-6 score. The null hypothesis would be that with 13 items, 3-4 students in 10 would score about in the middle on any scale. But as you will see, the reality is that only about 1 in 20 will not be able to break their tie on any scale (those student can be referred to as X's, and use interpretive material for both sides of that dimension).