One Test of the Validity of the 2008 version of the current *Global Leadership Profile (GLP)*

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One recent effort to establish the validity of the *Global Leadership Profile* (*GLP*) has involved the analysis of the factorial validity of the *GLP*.

The techniques of factor and cluster analysis are designed to assess the extent to which a measurement tool is able to capture qualitative differences that are conceptualized in the underlying theory that the tool is trying to measure. The procedure uses statistical tools to establish to what extent the scores assigned to the stems in any given *GLP* profile display and reflect the relational pattern and structure of the theoretical concepts underlying all the profiles of that type. This is done by applying a mathematical algorithm that identifies the sentence stem scores that are correlated across all profiles of a given sub-sample.

To assess whether (and what kind of) a qualitative difference exists between Conventional and Post-conventional action-logics, we analyzed the underlying pattern of two separate samples- 830 GLP protocols rated overall as 'Conventional' (Achiever action-logic and earlier), and 61 'Post-conventional' protocols (Redefining or later). We found a striking difference between the patterns derived from these two sub-samples, illustrating the qualitative difference between Conventional and Post-conventional action-logics.

For the Conventional action-logics, stems load on eight distinct factors, indicating that in each case some stems tend to present a similar pattern of answers and scores. Below we provide a graphic illustration of the cluster analysis for this set of protocols, eight clear groupings of different stems. Each node in the graph represents an aggregated score of stems built on our Conventional action-logic sub-sample. The closer the nodes are the more similar they are in

scoring. The further the nodes are the less similar in scoring. The lines in this graph represent the association among stems.



Figure 1: Cluster analysis of LDP scores on 36 stems of Conventional profiles

Figure 1 shows eight distinct clusters of stems that indicate a level of similarities within clusters and dissimilarities across clusters. For example, stems 3, 17, 20, 22, 24 that make up cluster 6 reflect the high correlation in scores assigned to this set of stems. Overall, this cluster analysis of the factors, or overarching themes, that emerge when analyzing Conventional GLPs is itself quite conventional statistically, in that distinct clusters or factors show up, with different sentence stems associated with a single factor.

In contrast, we found a strikingly different pattern emerging from Post-conventional profiles. For the Post-conventional action-logics (Redefining and later), stems loaded on 11

factors, but loadings were not confined to one factor per stem. More than half (52%) of the stems loaded on two factors or more (9 stems loaded on 2 factors, 7 loaded on 3 factors, and 3 loaded on 4 factors).



Figure 2: Cluster analysis of LDP scores on 36 stems of Post-conventional profiles

Above, we provide a graphic illustration of the cluster analysis of this set of protocols suggesting a complex grouping of stems. This "spaghetti and meatballs" graph illustrates that in contrast to the neat and carefully differentiated factors emerging in Conventional profiles, Post-conventional action-logics tend to exhibit a more complex, mutually-causal-and-inter-related-dynamic mental map.

For example, in the Conventional cluster analysis (Figure 1), stem 3 tends to be associated with stems 17, 20, 22, 24 (see cluster 6) but not with other stems. In the Post-conventional cluster analysis (Figure 2), we find that a given stem, such as stem 3, not only correlates with a different set of stems (e.g. stem 3 now correlates with stems 7, 10, 12, 21, and

28), but also (more often than not) with more than one such cluster of stems. This suggests that rather than think of stem themes (such as 'leadership,' 'power,' and 'rules'; or 'family,' 'feelings,' and 'mother') as grouped in stable compartments (such as 'work' or 'emotions'), the Post-conventional action-logics tend to link different stems together at one time or another, "flocking" differently at different moments.

These results illustrate a fundamental difference between the Conventional and Postconventional action-logics, echoing the adult developmental theoretical foundation on which the GLP is built (Kegan, 1982, 1994; Torbert, 1991; Torbert & Associates 2004). The stably-focused Conventional loadings represent a relatively simple mental map, with Aristotelian-ly distinct, independent categories ("nothing can be both A and not-A"), as one would theoretically expect of action-logics up through the Conventional. In contrast, the complexity of the Postconventional sets of loadings suggest that Post-conventionals hold a systems-oriented, interindependent, 'living' mental map.

Plato's two distinctive images for the nature of thought – as either 'marks on the wax tablet' of the mind or 'birds flying about in the aviary' of the mind seem remarkably apt as metaphorical summaries of the difference between Conventional and Post-conventional thought.

Reference

Herdman Barker, E. & Torbert, W. forthcoming. Generating and measuring practical differences in leadership performance at postconventional action-logics: Developing the *Harthill Leadership Development Profile*. In A. Coombs, A. Pfaffenberger & P. Marko (Ed.s) *The Postconventional Personality: Perspectives on Higher Development*. Albany NY: SUNY Academic Press.