CONCURRENT VALIDITY

SUMMARY   This dimension of validity relied upon the judgment of the expert panel of 50 professionals. Between 32 and 48 experts responded to the various instruments and methodologies tested under concurrent validity. The experts reported that in their administrations, the number of *inaccurate* reports was zero (0%). The concurrent validity of the instrumentation and methodologies is judged to be high.

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  oncurrent validity is a subset of criterion validity—the assessment of an instrument or methodology against some standard or "criterion." Predictive validity judges the accuracy with which criterion measures to be obtained in the future can be estimated from earlier test data. A concurrent study serves the same purpose, but obtains prediction and criterion information at approximately the same point in time.

This section tests Organizational Engineering's concurrent validity on various individual and group levels. The reader is thus provided assurance that the consolidation methodology employed as well as individual estimates are accurate and valid.

Survey Instrument

The face validity section showed an overwhelming proportion of respondents found no reason to object to their strategic style characterization (significant at the .05 level of significance). It can be argued that this is a test of concurrent validity and, at the levels regis-

tered in this study, merits weighting as a factor testifying to the concurrent validity of the technology.

However, to extend the rigor even further, the 50 member expert panel was asked for their estimates of the accuracy of the behavioral preference implied by the various strategic styles. In other words, panel members were asked for a judgment on the outcomes that are expected to flow from the strategic style preferences with the question:

As far as you have been able to determine, do the individual preferences reported by the instrument fairly express the respondentes' "attitudes" or "feelings" toward the subjects identified (e.g., nature of goals sought, preferred detail, work environments preferences, etc.)?   No____   Yes ___

It might be noted that the question seeks judgment on the "feelings" of the respondents. This was an attempt to cause the expert to assess underlying beliefs as well as objective behavior. In other words, the experts were asked to overlay their judgment on the respondent's judgment.

Table 9

**EXPERT PANEL ESTIMATE OF CORRESPONDENCE
WITH INDIVIDUAL WORK PREFERENCES**

Number of experts responding	48	
Yes Agreed that preferences reported by the survey instrument were representative	48	100%
No Did not agree that preferences reported by the survey instrument were representative	0	0%

The responses given to this question are presented on Table 9. Two experts said they were themselves unable to answer the question. The balance, 48 experts, all agreed that, in their judgment, the

respondent's preferences corresponded to those that were projected to be present.

The level of agreement precludes statistical tests to demonstrate significance since statistical tests require there be members in both of the categories being compared. Attempting a statistical analysis would be the equivalent of trying to establish a failure rate on a machine in which a failure has never occurred. For purposes of this study, suffice it to say that the expert judgment reinforces the observed reaction of respondents and gives strong evidence of the concurrent validity of the survey instrument.

TeamAnalysis™

Organizational Engineering theory postulates that individual scores can be accumulated in such a manner that the overall character of the group or team as a whole can be accurately depicted. The methodology is described in the books on the subject (Salton, 1996, 2000) and is codified in a computer program that produces a report titled TeamAnalysis™.

The TeamAnalysis report describes both the current strengths and the vulnerabilities of the team or group. The presence of vulnerabilities (i.e., potential group deficiencies) in the report minimizes the "fortune teller" phenomena where agreement is obtained by focusing only on favorable attributes.

TeamAnalysis™ results are typically released to the team as a group and the content of the report is usually discussed in a group setting. The expert administering the survey is usually present at this debriefing and is positioned to judge the accuracy that the team or group accords to the results. This section of the study attempts to assess the level of group agreement with the strengths and vulnerabilities outlined in the TeamAnalysis™ with the question:

*In your opinion, does the TeamAnalysis™ report accurately reflect the posture of the group as a whole towards the subjects considered (e.g., degree of change being sought, level of analysis desired, action orientation, etc.)?
No____   Yes _____*

The expert responses given to this question are presented on Table 10. Again, 2 experts believed themselves unable to answer the question. The balance, 48 experts all agreed that, in their judgment, the TeamAnalysis™ report accurately characterized the group, as they knew it. This level of agreement again requires no statistical test to demonstrate significance. In the author's opinion, the concurrent validity of the TeamAnalysis™ report is demonstrated as viewed by the experts referenced in the study.

Table 10
EXPERT PANEL ESTIMATE OF CORRESPONDENCE
WITH ACTUAL GROUP WORK PREFERENCES

Number of experts responding	48	
Yes Agreed that preferences reported by the survey instrument were representative	48	100%
No Did not agree that preferences reported by the survey instrument were representative	0	0%

OrgAnalysis™/LeaderAnalysis™

Organizational Engineering postulates individual and group information processing propensities are fractals. In other words, a group's processing patterns are directly comparable to those of an individual. Therefore, it is possible to compare an individual person such as the leader, with the group as a whole.

This methodology is outlined in the books on the subject (Salton, 1996, 2000) and codified in a computer program titled either OrgAnalysis™ or LeaderAnalysis™. The program compares the leader to the individuals in the group and to the group as a whole. The report is usually done in conjunction with a TeamAnalysis™ but is much more detailed and specific on the expected relationships of the leader with the group. The concurrent validity of this methodology was tested with the following question:

Does the interaction of the leader and the group follow the descriptions defined in the LeaderAnalysis™?
No____   Yes ____

The responses given to this question are presented on Table 11. Of the 50 experts available, 16 had not used OrgAnalysis™ /LeaderAnalysis™ technology or otherwise believed themselves unable to responsibly answer the question.

Table 11
EXPERT PANEL ESTIMATE OF THE ACCURACY
OF ORGANIZATION/LEADER ANALYSIS

Number of Org/Leader Analyses	482	
Number of experts reponding	34	
Yes Agreed that the interactions followed the descriptions predicted	34	100%
No Did not agree that the interactions followed the descriptions predicted	0	0%

The balance, 34 experts had conducted 482 of these analysis and all agreed that, in their judgment, the respondent's preferences corresponded to those that were projected to be present. Once again, the absence of entries in the negative category precludes statistical tests. Also again, the author believes the results to be sufficiently strong to demonstrate the concurrent validity of the Org/LeaderAnalysis™ at a high level of certainty.

TwoPerson™/One-to-One:

The theory of Organizational Engineering can be applied to describe the relationship of two people. The report identifies the structural strengths and vulnerabilities imbedded in their joint pursuits. The presence of comparative vulnerabilities in the report once again limits the operation of the "fortune teller" phenomena.

The methodology is outlined in the books on the subject (Salton, 1996, 2000) and codified in a computer program titled either TwoPerson Analysis™ or "One-on-One" Analysis™. The concurrent validity of this methodology was tested with the following question:

In your best estimate, what proportion of the interactive behavior described in the TwoPersonAnalyses was
    Highly Accurate   %
    Reasonably Accurate   %
    Inaccurate   %

The results of the expert judgment on the concurrent accuracy of the TwoPerson Analysis are given in Table 12. Fully 100% of the 32 experts who had administered 1,005 of the analysis judged the results to be accurate—either at a high or reasonable level.

The existence of a "reasonably accurate" category allows us to adopt a stringent view and test the data for its concurrent validity. The "reasonably accurate" category can be combined with the "inaccurate" on the grounds that "reasonably accurate" implies a degree of inaccuracy. A two-sided, one-sample sign test can then be applied to determine if the two categories—"highly accurate" and "inaccurate"—are statistically distinct. In other words, we seek to dismiss the possibility that both categories are simply random variations within a single category (i.e., "reasonably accurate.")

The sign test resulted in p < .0001. Thus it is reasonable to assert that the "highly accurate" category represents a distinctly different judgment even under conditions of extreme interpretive stringency.

In the author's opinion, the overwhelming weight of expert judgment is in favor of according the TwoPerson Analysis™ or "One-on-One" Analysis™ a very high level concurrent validity.

Overall, the concurrent validity of both the individual survey instrument and the consolidation methodology appears to have met all reasonable tests of concurrent validity. Both the theory and the consolidation methodology appear well founded in terms of their ability to reflect current conditions of both individuals and groups.

Table 12

ONE-ON-ONE™/TWOPERSON ANSLYSIS™ CONCURRENT VALIDITY

Experts Reponding	32	
Number of Analyses Conducted	1,005	100%
Method Highly Accurate	990	99%
Method Reasonably Accurate	15	1%
Method Inaccurate	0	0%