

# **VALIDATION STUDIES FOR THE HARTMAN VALUE PROFILE (and THE HARTMAN-KINSEL PROFILE)**

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## **The Hartman Value Profile**

The Hartman Value Profile is the creation of the late Dr. Robert S. Hartman and is owned by the Robert S. Hartman Institute, University of Tennessee. It is a paper and pencil exercise that requires that the subject rank order eighteen different statements in two different lists. This forced ranking of the statements requires that the subjects evaluate each statement and compare it to every other statement. The resultant rankings demonstrate the subjects' different capacities and biases in valuing. The Hartman Value Profile is based on the science of formal axiology. Dr. Hartman's theory of formal axiology is described in detail in his book, The Structure of Value: Foundations of Scientific Axiology, Southern Illinois University Press, 1967.

Axiology is the formal system of identifying and measuring value. The Hartman Value Profile is one means by which we are able to measure an individual person's propensity and capacity to value. It is the person's structure of value (the road map and filtration system a person uses to think, evaluate and make decisions) that results in personality, individual perceptions, and decisions. In common parlance, a person's structure of value is how that person thinks.

That we are able to simply and objectively measure a person's structure of value has significant ramifications for mental health and business. The Hartman Value Profile eliminates much of the need for arduous and expensive psychological testing for either clinical or business purposes. It provides an easy to use, objective, deductive, measurement that can be (and has been) used for counseling, training, and development. Businesses have used the Hartman Value Profile in candidate selection, designing of training, and measuring the efficacy of their training and development programs (before and after measurement of growth, change, or improved skills).

The most comprehensive book to date covering Dr. Hartman, formal axiology, and the uses of axiology is Drs. Rem B. Edwards' and John W. Davis's book: Forms of Value and Valuation, University Press of America, 1991.

## **Validation**

Validating tests is the multi-faceted discipline that determines the accuracy, dependability and the consistency of an instrument with the scientific theories supporting it. Validation measures how closely a testing instrument's scores correspond to measurable behaviors or characteristics. It also establishes the reliability of the instrument, insuring that the nature of the instrument does not significantly effect the outcomes. The process of validating an instrument is compartmentalized with each different process measuring different aspects about the instrument.

This booklet is a compilation of summaries of many different validation tests on the Hartman Value Profile. These summaries outline specifically the Hartman Value Profile's viable, replicable, objective, and reliable findings. They also demonstrate that the Hartman Value Profile meets the requirements of the E.E.O.C. for non-discrimination regarding race, sex, and age. All of the studies described within this booklet comply with the American Psychological Association's guidelines for analysis of psychometric instruments and follow industry-standard procedures for statistical analysis. The last section of this report shows the study that was completed that shows that all validation studies that apply to the Hartman Value Profile also can be applied to the Hartman-Kinsel Profile.

## **EEOC REQUIREMENTS**

The Equal Employment Opportunity Commission (E.E.O.C.) has established that screening instruments, psychological testing, personality tests, and all other evaluation procedures that are to be used in industry are to fulfill the Uniform Guidelines on Employment Selection Procedures (1978):

“Employer policies and practices which have an adverse impact on the employment opportunities of any age, race, sex, or ethnic group are illegal. ...

Employer decisions include, but are not limited to hiring, promotion, demotion, membership, referral, retention, licensing, and certification.”

[Federal Registry, Vol. 43, No. 166, 8/25/78]

**The conclusion from these studies is that the Hartman Value Profile does comply with the E.E.O.C. requirements insofar as it does not discriminate against persons of different racial origins, sexes, ages, and religion.**

## DISCRIMINATION BY AGE

The Age Discrimination in Employment Act of 1967 states that employers may not discriminate against employees and applicants older than 40 years old in their hiring and promotion practices. Therefore in order for a test to be legal, it must be found to have no statistical bias between people older than 40 years old and people under 40 years old.

### Age Study

This study was conducted by Kinsel Enterprises, Inc. using profiles compiled over the course of three years. Results were compiled and analyzed by Mr. Tom Spann in February 2002.

The sample population was 209 persons who were employed in the USA. The ages of the participants ranged in ages from below 18 to over 70 and were grouped into four groups of <25 (16 persons), 25 – 39 (66 persons), 40 – 55 (116 persons), and >55 (11 persons). Analyses of the results were completed both according to the individual ages and on four clusters of age groupings.

The null hypothesis used was: “that mean ranks for different aged persons for the following normative items will not be significantly statistically different when using the Hartman Value Profile.”

**The results proved that the Hartman Value Profile does not discriminate between people of different ages.** This is true with analysis being done either by individual ages or as part of an age grouping. All means rankings were proven to not be different with a very high statistical significance of  $p < .01$ .

## DISCRIMINATION BY SEX

Title VII of the 1964 Civil Rights Act stipulates that an employer may not discriminate in hiring and promotion practices or the terms and conditions of employment because of the individual's sex.

### Sex Study

This study was conducted by Kinsel Enterprises, Inc. using profile scores compiled over the course of three years. Results were compiled and analyzed by Mr. Tom Spann in February 2002.

The sample population was 209 persons who were employed in the USA. There were 141 men and 73 women in the study. Analysis of the results were completed using the F ratio between the groups and the  $E\ t^2$  which measures the proportion of the total variability in the dependent variable that can be accounted for by knowing the values of the independent variables.

The null hypothesis used was : “that mean ranks for men and women for the following normative items will not be significantly statistically different when using the Hartman Value Profile.”

**The results proved that the Hartman Value Profile does not discriminate between people of different sexes.** This is true with analysis being done on individual scores or computed scores as are found in all reports. All means rankings were proven to not be different with a very high statistical significance of  $p < .01$ .

## DISCRIMINATION BY RELIGION

Title VII of the 1964 Civil Rights Act stipulates that an employer may not discriminate in hiring and promotion practices or the terms and conditions of employment because of the individual's religion.

### Religion Study

This study was conducted by Kinsel Enterprises, Inc. using profile scores compiled over the course of three years. Results were compiled and analyzed by Mr. Tom Spann in February 2002.

The sample population was 209 persons who were employed in the USA. There were five religious categories used: Protestant (186), Roman Catholic (40), No Religion(24), Jewish(32), and Other Religion(20). Analysis of the results were completed using the F ratio between the groups and the  $E_{ta^2}$  which measures the proportion of the total variability in the dependent variable that can be accounted for by knowing the values of the independent variables.

The null hypothesis used was : "that mean ranks for people of different religions for the following normative items will not be significantly statistically different when using the Hartman-Kinsel Profile."

**The results proved that the Hartman-Kinsel Profile does not discriminate between people of different religions.** This is true with analysis being done on individual scores or computed scores as are found in all reports. All means rankings were proven to not be different with a very high statistical significance of  $p < .01$ .

## DISCRIMINATION BY RACE

Title VII of the 1964 Civil Rights Act stipulates that an employer may not discriminate in hiring and promotion practices or the terms and conditions of employment because of the individual's race.

### Race Study

This study was conducted by Kinsel Enterprises, Inc. using profile scores compiled over the course of seven years. Results were compiled and analyzed by Mr. Tom Spann in February 2002.

The sample population was 282 persons who were employed in the USA. There were five racial groups represented: Asian, African American, Middle Eastern, Hispanic, and Caucasian. Analysis of the results were completed using the F ratio between the groups and the  $E \eta^2$  which measures the proportion of the total variability in the dependent variable that can be accounted for by knowing the values of the independent variables.

The null hypothesis used was: "mean ranks for persons of different racial origins for the following normative items will not be statistically significant in differences when using the Hartman-Kinsel Profile."

**The results proved that the Hartman-Kinsel Profile does not discriminate between people of different races.** Of the 72 items tested, 68 had no statistical significance at all and the other 4, where the mean ranks of the subjects were significantly different, the  $E \eta^2$  indicated that less than 1% of the difference was due to racial difference (with statistically significant p values ranging from  $<.0213$  to  $<.005$ ).

## Reliability

Reliability is the measure of whether the results or assessments derived from an instrument are the result of chance. When an instrument is proven to be reliable, it can be used at different times, in different contexts with confidence that the presiding conditions did not affect the results with any statistical significance. Reliability is usually proven with a test/retest procedure within a ten-day period. The longer the period, the more reliable the instrument is found to be.

### Reliability Study

This study was conducted by John Davis, Ph.D., Glenn Graber, Ph.D., and Leon R. Pomeroy, Ph.D.

A sample size of 86 students at the University of Tennessee was given the Hartman Value Profile. Ten weeks later, the same students were again given the HVP. That the Hartman Value Profiles were given ten weeks apart and after the subjects completed a medical ethics course. This longer period between testings added to the rigorousness of the testing of the stability of the Hartman Value Profile.

**The results of this study prove the reliability and stability of the Hartman Value Profile.** All forty dimensions measured by the Hartman Value Profile were statistically the same between the first and second trials. “The reliability of the Hartman Value Profile was especially noteworthy in the most complex dimensions: value quotients, balance quotients, self-quotients, integration scores, and differentiation scores.” These more complex dimensions all had confidences above 99.9% with  $p < .01$ .

\*copies of this study are available through Clear Direction, Inc. at the request of Dr. John Davis.

**This study proves that the Hartman Value Profile is reliable.**

## Concurrent Validity

Concurrent validity is the test as to whether a particular instrument correlates significantly to other valid instruments. This validation provides an alternative means of validating an instrument by “piggy-backing” on the reams of validation of previously benchmarked, psychometric instruments.

This study was conducted by Leon Pomeroy, Ph.D. and John Davis, Ph.D., 1982.\*

This study incorporated six different psychological instruments as measuring rods to establish concurrent validation. The instruments were the MMPI, the Cattell 16PF, the CAQ, Ellis’s Personal Belief Inventory, the Cornell Medical Index, and the Auto Lethality Index. This study was completed in two phases over a period of more than a year. The first study had a sample size of 68 adults and compared the Hartman Value Profile with the MMPI, ALI, CMI, and the PBI. The second study had a sample size of 72 adults and compared the Hartman Value Profile to the 16PF and the CAQ.

The results of this two-part study are very comprehensive and can be summarized in the following manner:

Part I: The Hartman Value Profile correlated with a high degree of significance (  $.05 > p < .0001$  ) in thirty-six different specific measurements to the MMPI, CMI, AL, and PBI.

Part II: The Hartman Value Profile correlated with a high degree of significance (  $.05 > p < .0001$  ) in thirty-two different specific measurements to the 16PF and CAQ.

Dr. Pomeroy concluded: **“These data clearly establish a concurrent validity for the Hartman Value Profile... and that the Hartman Value Profile is a valid measure of various stress states that produce problems in living.”**

\*Used with permission of Dr. Davis.

## Criminal vs. Non-Criminal Study

This criminal vs. non-criminal validation compares convicted criminals with the normal population and analyzes the differences between these two groups. When the analysis is statistically significant, then that instrument is a valid tool for distinguishing the characteristics that separate criminals from non-criminals.

For this study we assume that the judicial system of the State of Tennessee is a sound criteria selector in distinguishing violent criminals from the rest of the population. Criminals in general are people whose behavior stems from their inability to call upon strengths to overcome their weaknesses. Non-criminals are people who can and do rely on their strengths to overcome their weaknesses. To establish the validity of the Hartman Value Profile, an analysis of the profiles of the criminals and non-criminals should present a significant difference in their capacities to reason and function effectively in stressful situations.

This study was conducted by Drs. Mark Moore and Phil King, 1994.

The study included 44 convicted criminals serving their sentences at Brushy Mountain State Prison, the maximum-security state prison for the State of Tennessee. These criminals took the Hartman Value Profile while serving time for murder and violent rape. The normal population profiles were gathered from Dr. Moore's database of more than 500 functioning people, from all walks of life, throughout the United States. The null hypothesis was that no significant difference would exist between convicted criminals and the general population.

A summary of the results for the six key measures of the Hartman Value Profile (using Dr. Hartman's transfinite scoring methods [the lower the number the greater the capacity and ability to reason and function effectively in stressful situations]):

Capacities to	Criminal	Non-Criminal
Empathize (I1)	11.85	8.42
Reason Practically (E1)	14.76	9.08
Reason Logically (S1)	17.43	13.63
Value One's Self (I2)	18.26	11.45
Compare One's Self (E2)	19.02	14.30
Define One's Self (S2)	17.80	13.49

A summary of the results for the same six key measures of the Hartman Value Profile using Dr. Moore's vector analysis scoring method are (the higher the number the greater the capacity and ability to reason and function effectively in stressful situations):

Capacities to	Criminal	Non-Criminal
Empathize (I1)	4.86	7.44
Reason Practically (E1)	2.68	6.94
Reason Logically (S1)	0.67	3.53
Value One's Self (I2)	0.05	5.16
Compare One's Self (E2)	-0.52	3.03
Define One's Self (S2)	0.40	3.63

For both scoring methods, the differences are statistically significant with a  $p < .05$ .

**This study is significant in that it establishes a high statistical difference between people who are able to be effective in society from those who are unable to do so.** It provides an objective, resultant behavioral criterion against which the scores are compared. In as much as few people will ever have cause to encounter or profile murderers or violent rapists, this study does confirm that the Hartman Value Profile accurately measures a person's capacity to value by assessing people at the severely dysfunctional end of the behavioral spectrum.

## Concurrent Validity

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The results of this two-part study are very comprehensive and can be summarized in the following manner:

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Dr. Pomeroy concluded: **“These data clearly establish a concurrent validity for the Hartman Value Profile... and that the Hartman Value Profile is a valid measure of various stress states that produce problems in living.”**

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## **Construct and Concurrent Validation**

This joint construct and concurrent validation study determines both the individual and comparative validity of the instrument. Because the Hartman Value Profile is axiological in nature and therefore has more robust and useful applications than psychological instruments, it is necessary to insure its axiological validity by validating it against benchmark axiological instruments.

This study was conducted by Drs. John Austin and Barbara Garwood, 1976.

This study incorporated three different values instruments as measuring rods to establish concurrent validation. The instruments were the Rokeach Value Survey (RVS), the Allport-Lindzey Study of Values (AVL), and Kohlberg's Theory of Moral Development (KMD). The population was comprised of 65 university students with an average age of 23.5 years.

The results were obtained by using the nonparametric Median test of the significance of differences between the number of persons in two or more subgroups that scored above and below the median. The study indicated that the expected and obtained mean rankings was significant with a correlation of .95. For the compositional vs. transpositional items the confidence is highly significant with a  $p < .001$ . The individual items test indicated that no significant difference existed among individual items ( $p = .911$ ).

**The findings of this study prove that the Hartman Value Profile measures what it claims to measure and that it is a valid axiological instrument.**

Drs. Austin and Garwood presented this study and these findings at the National Association of School Psychologist Convention, March, 1977.

## Biomedical Validity

Biomedical validity is the measure of whether the results from an instrument correlate to results of biomedical tests (heart rate, blood pressure, components in the blood, etc.). When an instrument is proven to be biomedically valid, then a direct correlation has been found between the instrument's scores and physical conditions measured by medical tests. This particular validation proves the objective nature of the instrument and a corresponding relationship between the thinking process of the subject and his/her present physical condition or physical response.

This study was conducted by: Drs. Leon Pomeroy, Ph.D., Elaine Fox, Ph.D., Richard Bishop, Ph.D., and John Davis, Ph.D., 1983. It was published in the "VA Practitioner", July, 1986.

The sample was comprised of 150 volunteers at a private preventative medicine clinic in New York. Participants were informed that this was part of a study to measure the medical and psychological effects of stress. The study was conducted over a period of one year. The working hypothesis was based on Selye's work that the Hartman Profile results would correlate significantly with the blood components: creatinine, calcium, blood cholesterol, sodium, chloride, CO<sub>2</sub>, and BUN.

The results of this study are that the levels of the components: creatinine, calcium, blood cholesterol, sodium, CO<sub>2</sub> and BUN were significantly correlated to the Hartman Value Profile scales measuring: attitudes towards others, ability to concentrate, self-acceptance, self-insight, self-consciousness, anxiety, tendencies to distort things, and depression. The p values ranged from being less than .04 to less than .001.

**The results of the study prove that a direct correlation exists between the candidate's thinking structure, measured by the Hartman Value Profile, and compounds found in the blood.**

## **BUSINESS NECESSITY**

The E.E.O.C. requires that any instrument used in candidate selection must be able to prove “business necessity”:

*that it measures those traits and/or abilities that directly relate to what is needed to do the particular job.*

When an instrument has either predictive validity or criterion validity it fulfills the business necessity requirement.

## **CRITERION VALIDITY**

Criterion validity is a measure of the ability of an instrument to correspond to specific criteria or behaviors. This type of validation compares groups and analyzes the differences measured between the groups. When the analysis is statistically significant, then that instrument is a valid tool for distinguishing the characteristics that separate the members of those two groups.

## **CRITERION VALIDATIONS**

### **Customer Service**

For the following customer service study all of the members of sample groups were employed as customer service personnel. They were distinguished as those who were successful from those who were not successful in customer service. The objective criterion for distinguishing these people were letters of commendation from satisfied customers and management’s recognition of the person’s success in this role.

### **Management**

The first management study compared managers who had succeeded with managers who had failed in the Sara Lee Corporation outlet stores. The second and third management studies compared those who had advanced into management positions with those who had not advanced into management positions.

## Customer Service Criterion Validity

This study was conducted by Dr. Robert K. Smith and Virginia Harvey, Ph.D. and commissioned by James River Corporation, 1990.

A study sample of 41 customer service personnel working for James River Corporation. The criterion used to distinguish one group from the other was success in the customer service role. The sample was divided into the two groups: those who had been both commended for their service by customers and had been recognized by their colleagues within the company for their exemplary customer service, and those who had neither been commended by their customers nor their colleagues.

The marketplace distinguishes consistently good performers from mediocre and bad performers. This study measured the differences between those two groups as they functioned in customer service roles. General observations would lead one to conclude that those who are exemplary are better able to find practical solutions, communicate with others, instill confidence in their ability to perform, and be able to be persistent without being stubbornly insistent. To confirm the validity of the Hartman Value Profile, these abilities would have to be distinguished by statistically significant differences in the dimensional scores of measuring common sense, personal competence, and personal duty (E1, E2, and S2).

The results confirmed that those who were exemplary in customer service had greater abilities in all dimensions measured by the Hartman Value Profile and statically higher abilities to reason in the three dimensional areas noted above (noted by \* in the following chart).

	<u>% Higher of Excellent</u>	<u>p value</u>
Empathy	17%	.19
Common sense	21%	.02*
Logical solutions	15%	.18
Self esteem	13%	.26
Personal competence	30%	.05*
Personal duty	17%	.07*

**This study proves that the Hartman Value Profile scores correlate directly to behaviors, abilities, and attitudes that are required for excellence in customer service.**

## Management Criterion Validity

This study was conducted by Dr. Robert K. Smith in conjunction with the Sara Lee Corporation, 1990-92.

A sample of 150 managers of Sara Lee outlet stores was given the Hartman Value Profile in the Fall of 1990. All participants had been identified as qualified for management and had been managers of their respective stores for fewer than two years. They were given the Hartman Value Profile as part of their ongoing management training and education.

Two years later, in the Fall of 1992, the head of this division of Sara Lee divided the list of names from the sample into three groups (excellent, good, and failures). The criteria he used to distinguish the excellent managers from the good managers were: operations, sales, turnover, and ability to function within budget. At that time, Sara Lee had an annual management assessment program (completed by peers, subordinates and corporate management) which scored all managers on a numeric scale. These scores provided further distinctions by which the excellent managers (28) were distinguished from the good managers (79). Managers who were identified to be failures (43) had been removed or had quit from their positions prior to the Fall of 1992. They had failed for various reasons ranging from an inability to effectively lead and manage people, an inability to effectively and efficiently oversee operations, and an inability to plan and effectively execute those plans.

The results of this study are based on the differences between the excellent managers and failures. In this particular case, the unusual feature is that all participants (the excellent, good and failures) had been selected by management in 1990 as capable store managers. The profile scores that were compared are those from the testing completed prior to fall, 1990.

The final conclusions were reached by comparing the dimensional scores of the two groups. Previous management studies had shown that different personality types are able to function effectively in management roles. This was confirmed by this study, as well, in that the differences between the two groups were not those that manifest personality characteristics as much as they were those that manifest differences in functionality:

- a better ability to work with and be patient with people  
(Excellent were 18% more empathic with a valence of I1 of 54% positive vs. 54% negative),
- a greater tendency to work with others than do it herself  
(Excellent were 53% more inclined to delegate with a E1 valence of 28% vs. 43% positive),
- a greater tendency to be proactive rather than reactive  
(Excellent were 18% more planning oriented with S2 Dim of 11 vs. 13),

greater personal courage (resulting in less defensiveness)  
(Excellent had 42% healthier self-esteems with  
an I2 Valence of 25% vs. 16% positive),

and greater resiliency when under stress  
(Excellent were 50% better able to function in  
stressful situations with BQRs of 1.1 vs. 1.65).

All of the differences noted above are statistically significant with a  $p < .05$ .

**This study confirms that the Hartman Value Profile scores correlate directly to behaviors, abilities, and attitudes that are confirmed by the marketplace as crucial distinctions between those who succeed in managing a retail store from those who do not.**

### ***Management Criterion Validity (Study B)***

This study was conducted by Dr. Robert K. Smith, 1993.

A sample of 257 managers from eight different companies was given the Hartman Value Profile between 1988 and 1993. All participants were in management positions when they took the profile. They were given the Hartman Value Profile as part of their ongoing management development.

The sample was divided into three groups: excellent managers, good managers, and poor managers. The criteria used to distinguish the excellent managers from the good managers were: superlative operations in their respective fields, effectiveness with their people, lack of turnover, and ability to function within budget. All were also assessed by their peers, subordinates and superiors who identified them as excellent (70), good (100), or poor (87). In order for a manager to be identified as poor, s/he had to have ongoing significant problems, ineffectiveness or failures within business contexts in which others were succeeding.

The results of this study are based on the differences between the excellent and poor managers. The final conclusions were reached by comparing the dimensional scores of these two groups. Previous management studies had shown that different personality types are able to function effectively in management roles. This was confirmed by this study, as well, in that the differences between the two groups were not those that manifest personality characteristics as much as they were those that manifest functional capability. The poor managers did not score higher than the excellent managers in any dimension. The excellent managers were statistically superior to the poor managers in the following dimensions:

a better ability to work with and be patient with people  
(Excellent were 26% more empathic with a  
I1 valence of 59% vs. 43% positive),

a greater tendency to work with others than do it herself

(Excellent were 25% more inclined to delegate with an E1 valence of 32% vs. 44% positive),  
greater personal courage (resulting in less defensiveness) (Excellent had 13% healthier self-esteems with I2 Dim of 11 vs. 13),  
and a greater degree of reasonability when confronted (Excellent were 18% more reasonable and less stubborn than the poor managers were with an S2 dim of 12 vs. 14).

All of the differences noted above are statistically significant with a  $p < .05$ .

**This study confirms that the Hartman Value Profile scores correlate directly to behaviors, abilities, and attitudes that are confirmed by businesses as critical distinctions between those who succeed in management from those who do not.**

### ***Management Criterion Validity (Study C)***

This study was conducted by Kinsel Enterprises, Inc. (Dr. Robert K. Smith and Ken Bandy), 1996.

120 women in business were given the Hartman Value Profile from 1987 to 1991 as part of their ongoing training and development. They came from more than 20 different companies in 6 different states. Their ages ranged from mid-twenties to mid-fifties.

The sample was divided into two groups, those who were executives, currently serving in management roles in their companies (20), and those who were not in management roles (100).

The results of this study are based on the differences between the managers and non-managers. The final conclusions were reached by comparing the dimensional scores of the two groups. This study confirmed that the differences between the two groups were dramatic and significant in five areas. The non-manager group did not score higher than the managers in any category.

a greater ability to make decisions and use common sense (Managers were 23% clearer in their decision making and common sense judgment with a Dim E1 of 7.25 vs. 8.9),

greater personal courage (resulting in less defensiveness) (Managers had 20% healthier self-esteems with an I2 Val. of 22% vs. 19% and Dim of 10.1 vs. 12.5),

a greater ability to make accurate self-assessments of their own strengths, limitations, and competencies. (Managers were 12.5% clearer and more accurate assessing their own abilities and roles with a Dim E2 of 12.75 vs. 14.25),

and a greater degree of personal freedom to make mistakes, risk loss, and shift one's own priorities. (Managers were 13% more reasonable and less dogmatic than the non-managers were with a Dim S2 of 11.5 vs. 13.8).

All of the differences noted above are statistically significant with a  $p < .05$ .

**This study proves that the Hartman Value Profile scores correlate directly to behaviors, abilities, and attitudes that are confirmed by the marketplace as the significant distinctions between women who are promoted into management positions and those who are not promoted.**

# Discovering Thinking Biases That Lead to Lost-Time Injuries

## High Risk Employees

In conjunction with ACIG, Inc. and Zero Risk HR, Inc. (a division of the International Risk Management Institute), Clear Direction, Inc. has compiled a study comparing the thinking orientations of construction workers with lost-time injuries to those of construction workers who do not have lost-time injuries. Having completed many different studies and having used the Kinsel-Hartman Profile (the simple 15 minute exercise that measures how people think) in different industrial and professional service applications over the past 14 years, Clear Direction, Inc. has compiled a basis of understanding how different thinking biases and abilities affect a person's behavior. Specific to this study was a predictive validation for a Dallas based business that was completed in 1997. That validation confirmed that particular patterns of thinking could be statistically correlated to success and other patterns of thinking could be correlated to failure in that particular company.

A second finding from the predictive study was that individual thinking orientations provide a less reliable indication of a person's performance than the patterns formed by different scores. In other words, just as a person with one leg can run a race, so too, a person with only one glaring thinking bias is not necessarily going to be a failure. Many of the most successful people in business have one major weakness (dyslexia, ADD, poor self-image, low self-esteem, etc.) that actually serves as a motivator for the person to strive beyond his/her peers. So individual thinking biases must be viewed in relation to other biases in order to be able to attain significant levels of precision. This summary provides an analysis of those patterns along with a breakdown of key individual orientations.

## Assignment of Risk

All decisions have risk. No one has complete knowledge and the nature of the future includes unpredictability, chaos, and change. So decisions to hire people, use a jackhammer, or correct a spouse are fraught with risk. In this case, the concern was the risk of hiring construction workers who were likely to have lost-time injuries. The people at Zero Risk HR worked with their colleagues at ACIG, Inc. to compile Kinsel-Hartman Profiles of construction employees who had no lost-time injuries and of construction employees who had lost-time injuries.

Dr. Robert Kinsel Smith (the developer of the Zero Risk HR System and C.E.O. of Clear Direction, Inc.) analyzed the participants' scores and divided them into three categories of risk. He defined those groups as Low Risk, Some Risk, or High Risk.

The assignments to those different risk groups are displayed in the following charts.

<b>Non-Injured</b>	<b>Number (25)</b>	<b>Percentage of Whole</b>
Low Risk	13	52%
Some Risk	5	20%
High Risk	7	28%

<b>Lost-Time Injured</b>	<b>Number (47)</b>	<b>Percentage of Whole</b>
Low Risk	19	40.5%
Some Risk	9	19%
High Risk	19	40.5%

From these two charts it is safe to conclude that if a company were to use simple risk analysis to select candidates, it would reduce its lost-time injuries by 40.5% while reducing its "safe" candidate pool by 28%.

### Individual Thinking Orientations

In order to make the analysis of risk more accurate, Clear Direction, Inc. decided to combine the overall risk analysis with different individual thinking orientations. This practice combines particular biases or thinking abilities with the overall risk assignment that incorporates that bias or ability as part of its formulation. In effect this analysis magnifies those orientations that are known to be significant from other studies by including them in the overall risk analysis and then including them again as the significant individual orientation.

When one looks at the results of evaluating individual orientations with overall risk, the high-risk candidates get identified with significantly greater precision.

### Suspicious of Rules-Standards-Policies

This thinking orientation indicates that the person is inattentive to the value of rules, order, plans, standards, and policies imposed on them by others. They do see the systematic aspects of the world as bad and therefore are anxious about submitting to absolutes that others establish. On the ZeroRisk HR Profile, this would be an Adherence and Organization score below 5. None of the workers who were part of the group that did not have lost-time injuries had this score.

#### Lost Time Injured Workers Inattentive to Adherence and Organization

	Total Surveyed	Persons with this Score	% Of Whole
Low Risk	19	0	0
Moderate Risk	9	0	0
High Risk	19	3	<b>100%</b>

### Unaware of What is Going On

This thinking bias indicates a strong inattention to the practical, present time aspects of the world and of business. This is ones inability to see social and political dynamics, how one thing leads to another, and the dynamics and interplay of the physical world. On the ZeroRisk HR Profile, this would be a Practical Orientation and Decisiveness score below 4. None of the group of workers who did not have lost time injuries had this score.

#### Lost Time Injured Workers Inattentive to Results Orientation and Decisiveness

	Total Surveyed	Persons with this Score	% Of Whole
Low Risk	19	0	0
Moderate Risk	9	0	0
High Risk	19	1	<b>100%</b>

## Unaware of One's Own Worth

This thinking bias indicates a strong inattention to one's own unique, personal value. This indicates a significant devaluing of one's own worth as a person, a strong aversion to knowing or experiencing one's own feelings, or a strong disregard for one's own growth and development as a person. On the ZeroRisk HR Profile this is a Self View score below 3. Two of the workers who did not have lost time injuries and were high risk, had this score (representing 8% of the group of safe workers). 14 of the lost-time injury group fit these criteria, representing 87.5% of the injured group.

### Lost Time Injured Workers Who Devalue Their Own Individual Worth

	Total Surveyed	Persons with this Score	% Of Whole
Low Risk	19	0	0
Moderate Risk	9	2	12.5 %
High Risk	19	14	<b>87.5 %</b>

## Inaccurate Self Assessment

This thinking ability is actually an inability to think clearly about how good he/she is. This includes both ends of the spectrum: overconfidence and under confidence. In both cases, this aspect has to do with how easily the person is able to think about him/herself as a worker, as a person relating and comparing to others, and as a person who makes things happen. 38% of the people with ZeroRisk HR scores in the extremes (1-2 or 9-10) had lost-time injuries, while 28% of those without lost-time injuries had one of these extreme scores.

### Lost Time Injured Workers With Inaccurate Self Awareness

	Total Surveyed	Persons with this Score	% Of Whole
Low Risk	19	1	6.25 %
Moderate Risk	9	2	12.5 %
High Risk	19	13	<b>81.25 %</b>

## Lack of Personal Direction

This thinking bias indicates an inattention to one's own values, commitments, and sense of direction. This indicates that when these people are making choices their own future, commitments, or senses of accountability do not weigh heavily as concerns. 26% of those with lost-time injuries were inattentive to their Self Expectations while 12 % of the non-injured workers who were also in the high risk category were equally inattentive.

### Lost Time Injured Workers Who Are Inattentive to Their Self Expectations

	Total Surveyed	Persons with this Score	% Of Whole
Low Risk	19	0	0
Moderate Risk	9	5	42 %
High Risk	19	7	58 %

## Summary

While it is illegal to use the above information as the sole basis for selecting a candidate (the validation study must predict risk prior to employment rather than analyze the data after the injuries), certain combinations along with high-risk scores for particular dimensions provide a bright warning light to employers. When the following combinations occur in a candidate's Zero Risk HR Profile, the employer would be wise to do very thorough interviews and background checks.

### High Risk Overall Orientation along with:

#### Adherence and Organization score below 5:

Of the High Risk Safe Workers, none had this combination.

Of the Lost-time Injured Workers, 100% of those with the A & O score below 5 were also high risk. This group comprised 6.4% of total of those injured.

#### Results Orientation and Decisiveness score below 4:

Of the High Risk Safe Workers, none had this combination.

Of the Lost-time Injured Workers, 100% of those with the RO & D

score below 4 were also high risk. This group comprised 3.2% of total of those injured.

**Self View** score below a 3:

Of the High Risk Safe Workers, 8% had this combination.

Of the Lost-time Injured Workers, 87.5% of those with the SV score below 3 were also high risk. This group comprised 30% of total of those injured.

**Self-Awareness** score below 3 and above 8:

Of the High Risk Safe Workers, 28% had this combination.

Of the Lost-time Injured Workers 81% of those with the S-A score below 5 were also high risk. This group comprised 28% of total of those injured.

**Self-Expectations** score below 5:

Of the High Risk Safe Workers, 12% had this combination.

Of the Lost-time Injured Workers, 58% of those with the S-E score below 5 were also high risk. This group comprised 15% of total of those injured.

Looking Back... If the companies that had participated in the study had decided to not hire everyone who fell into the High Risk category and had one of the following scores: an A&O score lower than 5, or an RO & D score lower than 4, or a SV score lower than 3, then:

their upside would have been:

**36.4% fewer lost-time injury accidents**

and their downside would have been:

they would have not hired 2.2% of safe workers who had been hired.

furthermore:

if they added the SA and SE dimensions to their selection criteria their upside would have had the same 36.4% fewer lost-time injury accidents yet their downside would have risen significantly because they would have not hired 28% of safe workers who had been hired.

## Appendix

The six major dimensions measured by Zero Risk HR Profile are Empathy and Intuition, Results Orientation and Decisiveness, Adherence and Organization, Self View, Self Awareness, and Self Expectations. Each is plotted on a 0-10 scale that uses 6 as the center point. A score decreasing from 6 (moving to the left on the scale) indicates a greater ignoring or distaste for things in that dimension. A score increasing from 6, indicates a greater attention to and reliance on things in that dimension. So one person with a score of 3 in Adherence and Organization hates rules and order imposed on him, while a person with a 9 in the same dimension craves rules, order and structure.

The assignment of the risk categories follows consistent patterns or ranges of scores for each person's profile. When a person's profile scores fit one of the below sets of criteria, then s/he is assigned to that risk group. The criteria are as follows:

### High Risk:

- a. At least two scores below 4 or
- b. Empathy score above 7, the difference between the Practical and Adherence scores greater than 4, and Self View score below 3 or
- c. Self View score below 3 and Self Assessment score above 8 or
- d. Self View score below 2 or
- e. The difference between Self Assessment and Self Expectations greater than 5.

### Some Risk:

- a. 2 different Self scores below 4 or
- b. Self Expectations below 5 or
- c. Self View below 5 and Self Assessment above 8 or
- d. Self View below 4 and Self Assessment below 5 and Self Expectations above 8.

### Low Risk:

Everyone who does not fall into one of the above groups.

*This study was completed under the impetus of ACIG, Inc. and Zero Risk HR. Twelve different construction companies provided the profiles of those with lost-time injuries and with safe employment records. Dr. Robert Kinsel Smith, of Clear Direction, Inc. (Dallas, Texas) compiled and analyzed the results. ZeroRisk HR (Dallas, Texas) is the sole source for the Zero Risk Hiring System, which Dr. Smith developed and was used for this study.*

## **The Revised Hartman Value Profile**

The Hartman Value Profile, while being fully validated, has met with significance resistance in the marketplace. The resistance has come because specific statements on Task A are either offensive, politically, racially, and religiously biased, or difficult for people to understand. Zero Risk HR and Clear Direction, Inc., two providers of commercial applications products utilizing the Hartman Value Profile, decided to rewrite the offensive statements and conduct a study to demonstrate that a newly revised Task A was statistically the same as the original Task A.

Zero Risk HR conducted the testing of almost one hundred people, most of whom had taken the Kinsel-Hartman Profile within the previous three years as a result of their companies using the Profile for personal training and development. The participant group was divided into three groups. Each member of Group A was given a copy of Hartman's Task A to complete. Each member of Group B was given a copy of a revised copy of Hartman's Task A that had been written by Dr. Robert Kinsel Smith (cf. Appendix). And each member of Group C was given a copy of Task A of the Research Edition of the Hartman Value Profile. They were asked to complete the ranking of the Tasks that they had been given and handed them in to the project administrator. The next week each group was given a different of the three Task A's to complete. The following week, each group was given the Task A that they had not yet completed. At the end of the three weeks, each participant had taken all three different Task A's, in different order, one week apart.

Each person's answer sheets were attached based on their personal identifying codes. Each participant's answers for each of the three tests were entered into a spreadsheet. The answers were compiled and compared. Dr. Smith analyzed the results and found that one of the revised statements was eliciting a response which was significantly different from the responses for the same value statement on the HVP. He also observed that the same value statement on the research edition was eliciting a response comparable to the responses to that item on the HVP. So Dr. Smith substituted the research edition statement ("a thief") and asked Mike Poskey (head of Zero Risk HR) to have the same people take the newly revised Task A. Mr. Poskey was able to get most of the original participants to take the newly revised Task A and resubmitted the answer sheets to Clear Direction, Inc. for entry into the spreadsheet.

Clear Direction, Inc. then ran all of the Task A's of the HVP and the newly revised Task A through their software that scores and compiles the rankings into composite scores. These scores combine the person's dim scores for each dimension of value with the participant's bias valences. The resultant scores reflect the attitudinal and behavior outcomes of the participants for each of the dimensions. Composite scores are much easier to understand, while retaining sufficient distinctiveness to have useful meaning for commercial applications. Approximately twenty tests were excluded from the database

because they either did not have a reliable rho (reliability index below 80% reliable) or did not have all four task A's by the same person. Clear Direction, Inc. then sent that spreadsheet with all of the respondents' answers and the resulting composite scores to Dr. Mark Moore (former Chairman of the Robert S. Hartman Institute and President of Phaedo Corporation, Savannah, Georgia) for statistical analysis. The analysis of the different Task A's, the analysis of the composite scores and Dr. Moore's analysis of the answers to the HVP and the newly revised HVP follow.

## **Comparing the Different Task A's**

The original three Task A's that were taken were the HVP, the revised HVP, and the Research Version of the HVP. The second group of Task A's comprise the HVP and the newly revised HVP. Because the worst five statements on Task A were the only ones that were changed and the participants took the different Task A's in different order, one week apart, variance was found in the statement rankings of the unchanged statements by the same participants. In other words, there is an expected range of variation in how people rank the Profile statements when they rank them multiple times, over a period of time, without feedback concerning their answers. Such a variance was found in this study and was used as an expected variance for changed statement rankings. Therefore, the rankings of the changed statements could display at least as much variance as the unchanged statements and still meet the criteria of statistical sameness.

## **Findings – Group I**

The first group of scores provided important information and direction to the researchers. This study provided a number for an expected standard deviation of participants' rankings of the same sets of statements over a period of seven or fourteen days. Since the HVP and the revised HVP had exactly the same statements for the 1-13 value statements, we could measure how much variation comes as a result of time, circumstances, et. al. The variance found was statistically insignificant which serves as further confirmation that the tests are reliable.

## **Statistical Analysis of the Results**

We hired Mark Moore, PhD. (under Dr. Robert S. Hartman), to analyze the results to determine whether the newly written test was statistically the “same” as the HVP. By assessing “confidence” he shows that the revised profile test is statistically the same as the HVP, which enables us to conclude that all of the validations that were completed on the HVP can be applied to the revised Profile. His conclusion is as follows:

## Dr. Mark Moore's Analysis

Confidence measures the degree of certainty that an average is confined within a range under a curve. Using a standard of 95% confidence, we can measure the spread under the curve. The smaller the spread the better the confidence interval. This is driven by the standard deviation. The smaller the standard deviation, the greater the confidence. (The sample size is also a factor.) In the above comparison, the Smith standard deviation is smaller in 4 of the five items. The HVP standard deviation is better in item 14. The Smith standard deviation in item 7 is only slightly better but not significant. Thus, the Smith confidence index is better in 3 of the 5 items. These are items 8, 12, & 16. However, the confidence index is equal to HVP in items 7 & 14. In these two items, there is no statistical improvement in the Smith version. However, there may be face validity improvements that would prefer the Smith version over the HVP. Put otherwise, the Smith version **does no harm in any item**, and is **an improvement in 3 of the 5**.

## **The Hartman-Kinsel Profile**

The Hartman-Kinsel Profile differs from the Hartman Value Profile (copyright: The Hartman Institute) in that it adds two (in some cases three) tasks to the Hartman Profile. Studies in statistics show that randomness of a person's answers can be reduced dramatically if that person repeats a particular action the same way two times. This same principle is why NASA required for their lunar modules that five computers agree in order for a computation to be deemed reliable. In the case of the Hartman Value Profile, a person is asked to rank two lists of eighteen statements, one indicating that person's perspective on the world and other people, and the second one indicating that person's perspective on him/herself. The Hartman-Kinsel Profile provides a second world-orientation and a second self-orientation list. This provides a higher degree of reliability in the respondent's resulting report, because randomness is reduced significantly.

A second way in which the Hartman-Kinsel Profile differs from the Hartman Value Profile is that it uses the above referenced "Revised Profile" instead of the Hartman Value Profile. Dr. Hartman's statements were outdated and therefore unknown by 21<sup>st</sup> Century professionals ("burn a heretic at the stake"), or were politically incorrect leading to an unwillingness to use the Profile ("slavery" or "blow up an airliner in flight"). Clear Direction, Inc. and ZeroRisk HR revised these five statements in 2001 and validated that they correlated to the original statements on the HVP. Clear Direction, Inc., ZeroRisk HR, and the Bob Pike Group are the exclusive users of Hartman-Kinsel Profile.

## Conclusion

The theory behind the Hartman Value Profile is subject to scrutiny and testing as are all other scientific theories. Based on observations about the nature of our world, the scientist posits principles that define and categorize those observed behaviors or characteristics. Then a mathematical system with the same properties is associated to that system. That mathematical system is then able to model that world, without the scientist actually entering that world. This is why engineers on earth can design a ladder that will work on the moon. This establishing of a theory and finding a mathematical system that has an isomorphic relationship to that theory is what Dr. Robert S. Hartman did from 1945 through 1973 in his discovery of formal axiology. One practical result of that work was the Hartman Value Profile, and another practical result of this work was his nomination for the Nobel Prize in 1973.

As for all other sciences, once the theory is defined, the proofs of the theory are based on its consistency and ability to be applied to all relevant aspects. So a physicist does not have to fly a plane or observe planes to be able to design one that flies. He mathematically models the flight of a large airplane by using formula of flight to model the real plane. He then proves his design (and thus the theories, as well) by having the actual plane fly.

So, too, with formal axiology. The proof of the science comes in the validity and reliability of axiological instruments. The cornerstone axiological instrument is the Hartman Value Profile. These validation studies, spanning 15 years, being completed by 19 individuals, prove that the Hartman Value Profile is reliable, is valid, complies with the EEOC requirements, and is useful in multiple applications for industry and social sciences.

## Copyright Information

This compendium is a summary of studies conducted on groups of people that took the Hartman Value Profile. This compendium is possible because of the countless hours and dedication of the researchers noted in this booklet and because of the cooperation of their subjects. It is designed to serve as a general introduction and index to studies that prove the validity and reliability of the Hartman Value Profile. The complete write-ups of these studies are available from the respective authors. The addresses of the authors of these reports are listed in the appendix.

This booklet summarizes studies that measured sixteen different aspects of the Hartman Value Profile. They present clear, objective proof that the Hartman Value Profile is reliable, valid, and useful for applications in business, psychology, and human development.