Striving Instincts And Conative Strengths: Assessing The Test-Retest Reliability Of The
Kolbe A™ Index

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Abstract

Striving instincts have not been examined in recent academic research but scholars agree that more needs to be done to understand the conative domain of the mind. The Kolbe A ™ Index is an assessment of conative abilities that is based on several years of investigation into striving instincts and conative strengths. The Kolbe A Index is introduced and its development is explained. Test-retest reliability of the Index was assessed. Data were collected from participants who first took the Index as early as 1991 through 2006. Participants were requested to take the Index again in 2006. Correlation and nonparametric analysis indicated few or no differences between scores of participants at times 1 and 2.

The investigation of striving instincts has been limited and social psychologists have paid little attention to construct development or refinement. The measurement of striving instincts has been, for the most part, forgotten in most psychological research. The research that mentions conation is typically based in marketing (cf., Balasubramanian, Karrh, & Patwardhan, 2006) and is related to purchasing decisions and influences of advertising. There have been calls for more investigation into human instinct and Bagozzi (1992) suggested that understanding conative states is necessary to fully understand a person's motivation to act.

Kolbe (1989; 1997; 2004) asserted that the instinctive domain of the mind is an important part of understanding human behavior and has studied instinctive tendencies of human beings over several years. Although human instincts are considered subconscious and immeasurable, resulting conative actions driven by them are observable and can be objectively assessed. Kolbe developed a measure of conative abilities, entitled the Kolbe A Index, and has been consulting primarily with businesses, universities and government agencies to improve teamwork, productivity, organizational relationships, career development, and communication (Kolbe Statistical Handbook, 2001). While the Kolbe A Index has been used extensively in organizations, there has been no published academic research focused on assessing the reliability and validity of the Index. The purpose of this paper therefore, is to introduce the Kolbe A Index and assess the test-retest reliability of the instrument.

Test-retest Reliabilty

One important aspect of understanding the strength of a test or instrument is its reliability. Test-retest reliability refers to the similarity of scores obtained by the same person who takes a test at two different times. A test that is reliable will result in few or no differences between the two test scores. The longer the time interval between testing is also an important consideration. Obtaining similar scores across a short time interval, less than a year for example, indicates test-retest reliability but longer intervals between tests helps to more rigorously examine its reliability. This study shows similarity of Index scores across relatively short intervals of 2 years up to lengthy intervals of up to 15 years.

The Test-retest Reliability Study

This study was completed to assess the test-retest-reliability of Kolbe A Index scores from 282 participants who had taken the Kolbe A Index at different times prior to July 2006. Subjects were contacted via email request to participate in a retest of the Index. Participation in the retest was voluntary, but most of the respondents took the initial Kolbe A Index as part of their employment. The retest data were gathered by the Center for Conative Abilities (a non-profit entity in Phoenix) between March and July of 2006.

Participants were recruited in a way designed to maximize diversity of location (the subjects live in 3 continents and 10 countries), however, all participants took the Index in English. The researchers also collected data from subjects in diverse types of employment. Participants represented the following industries: consulting, education, banking, manufacturing, legal, government, automotive, insurance, and accounting. Among the participants, 80.7% reported ethnicity as Caucasian, 3.6% as Asian/Pacific, 1.2% as Native

American, and 14.5% who reported ethnicity as "Other." Forty-four percent of the participants reported gender as female, and 56% as male. The average reported age of participants was 47 years old, with a minimum age of 20 and maximum age of 78.

The overall sample size of 282 was broken down into 5 sub-samples, according to the length of time that had elapsed between the first and second administration of the Kolbe A Index. The five sub-samples were designed to represent samples roughly similar in size and representative of 18-23% of the entire sample. The five sub-sample years and sizes are: 1) 1991 – 1995, $n=65$; 2) 1996-1998, $n=55$; 3) 1999-2001, $n=51$; 4) 2002-2004, $n=60$; and 5) 2005-2006; $n=52$.

In 2002, revisions were made to some questions impacting the Implementor Action Mode score. The revisions were made in response to continued observation and application of the Kolbe A Index among respondents from varied industries. Kolbe noticed that, in some cases, Implementor mode scores of individuals were not congruent with observed behaviors. After review, some questions that impacted the Implementor score were revised in 2002. Therefore the sub-samples from 2002 to 2006 reflect use of the revised questions and this is noted in tables reporting results. The changes did not affect the other Action Mode scores and should not impact results reported for other modes.

Data analysis

To assess the test-retest reliability of the Kolbe A Index, data from 282 participants who took the Index between 2002 and 2006 and again in 2006 were analyzed in terms of association between time one and two and in terms of differences in mode scores based on non-parametric analysis. Frequency distributions were calculated for the overall sample and each sub-sample to identify the number and percentages of scores that denoted a change in

zone. First to ensure that zone score changes were analyzed, data was recoded to reflect the zone at time 1, the original year in which the Kolbe A Index was taken and July 2006, time 2. A value of 1, 2 or 3 was recoded as 1 to reflect Preventing. Action Mode scores of 4, 5, and 6 were recoded as 2 to reflect Responding, and scores of 7 or higher were recoded as 3 to reflect Initiating. As shown in Table 1, the vast majority of participants remained in the same zone in the overall sample and within each sub-sample.

Table 1.
Frequency Distribution of Zone Scores and Percentages of Change

Time 1 Years (*n*)	Absolute value of zone change	Number (Percentage) of participants whose scores reflect a zone change			
		Fact Finder	Follow Thru	Quick Start	Implementor
1991-2006 (*n=282*)	0	201 (71.3)	189 (67.0)	199 (70.6)	208 (73.8)
	1	81 (28.7)	93 (33.0)	80 (28.4)	72 (25.5)
	2	0 (0)	0 (0)	3 (1.1)	2 (.7)
1991-1995 (*n=64*)	0	43 (67.2)	42 (65.6)	45 (70.3)	43 (67.2)
	1	21 (32.8)	22 (34.4)	17 (26.6)	21 (23.8)
	2	0 (0)	0 (0)	2 (3.1)	0 (0)
1996-1998 (*n=55*)	0	38 (69.1)	36 (65.5)	38 (69.1)	40 (72.7)
	1	17 (30.9)	19 (34.5)	17 (30.9)	14 (25.5)
	2	0 (0)	0 (0)	0 (0)	1 (1.8)
1999-2001 (*n=51*)	0	38 (74.5)	33 (64.7)	40 (78.4)	42 (82.4)
	1	13 (25.5)	18 (35.3)	11 (21.6)	9 (17.6)
	2	0 (0)	0 (0)	0 (0)	0 (0)
2002-2004* (*n=60*)	0	47 (78.3)	43 (71.7)	41 (68.3)	41 (68.3)
	1	13 (21.7)	17 (28.3)	18 (30)	19 (31.7)
	2	0 (0)	0 (0)	1 (1.7)	0 (0)
2005-2006* (*n=52*)	0	35 (67.3)	35 (67.3)	35 (67.3)	42 (80.8)
	1	1 (32.7)	17 (32.7)	17 (32.7)	9 (17.3)
	2	0 (0)	0 (0)	0 (0)	1 (1.9)

*Sub-sample reflects 2002 revision of some questions impacting the Implementor score

For example, over 60% of participants in each sub-sample remained in the same zone with few changes of 1 zone and rarely 2 zones. For example, in the overall sample of 282

participants, only 3 scores or 1.1% of the overall sample reflected a 2-zone change in the

Quick Start mode and 2 scores or .7% reflected a 2-zone change in the Implementor mode.

Next, data were analyzed in terms of each sub-sample and the correlation coefficient

of each mode score (i.e., 1 to 10 units) was calculated by comparing each person's time 1

score in each mode with the time 2 score in that same mode. The result is shown in Table 2.

Correlation coefficients for all scores between times 1 and 2 were significant at the $p \leq .05$

level. Therefore, it appears there is a strong relationship between scores at times 1 and 2.

Table 2.
Correlation Coefficients for Action Mode Scores*

Time 1 Years	*n*	Fact Finder	Follow Thru	Quick Start	Implementor
1991-1995	64	.66	.79	.77	.68
1996-1998	55	.75	.78	.84	.71
1999-2001	51	.74	.64	.90	.80
2002-2004	60	.77	.79	.81	.76
2005-2006	52	.71	.71	.79	.81
	282				
1991-2001	170	.72	.76	.84	.72
2002-2006	112	.74	.77	.79	.77

* All significant at the $p \leq .01$ level (two-tailed)

The last step was to compare changes in zones which denote a change in overall MO

or four-digit Index score. As noted, a score change that does not indicate a zone change is

not considered to be accompanied by observable behavioral differences (Kolbe Statistical

Handbook, 2001). Therefore, data were recoded to reflect zone only (i.e., Preventing,

Responding, and Initiating), so that zone changes were the focus.

Nonparametric analysis, the Wilcoxon Signed Ranks, was performed to determine if

statistically significant changes occurred in overall Index scores. A non-parametric analysis

accommodates data that are categorical and not necessarily from a normally distributed

population. Results indicated that, with few exceptions, there were no significant differences

between zone scores at times 1 and 2, as shown in Table 3. For example, only 2 sub-sample

scores were significantly different in the Quick Start and Implementor modes. All other

scores showed no difference in scores between times 1 and 2 at the $\underline{p} \le .05$ level (two-tailed).

When comparing the sample prior to 2002, the result indicated that all zone changes, except

those for Implementor mode, were not significantly different. However, for the sample

composed of participants from 2002 to 2006, all zone changes were found to be similar for

all four modes.

Table 3.
Wilcoxon Sign Ranks for Zone Score Changes Between Times 1 and 2

Time 1 Years	*n*	Fact Finder T (p)***	Follow Thru T (p)***	Quick Start T (p)***	Implementor T (p)***
1991-1995	64	-1.09 (.27)*	-.85 (.39)*	-.61 (53)*	-3.71 (.00)
1996-1998	55	-.24 (.80)*	-.22 (.81)*	-.72 (.46)*	-.47 (.63)*
1999-2001	51	-.27 (.78)*	-.94 (.34)*	-2.11 (.03)	-3.00 (.00)
2002-2004***	60	-.83 (.40)*	-1.69 (.09)*	-2.55 (.01)	-1.60 (.10)*
2005-2006***	52	-.24 (.46)*	-.24 (.80)*	-1.69 (.09)*	-.27 (.78)*
	282				
1991-2001	170	-.91 (.36)*	-.70 (.48)*	-1.78 (.07)*	-4.04 (.00)
2002-2006*	112	.00 (1.0)*	-1.02 (.30)*	-.80 (.42)*	-1.06 (.28)*

   * Null hypothesis denotes equivalence of scores between Times 1 and 2 (July 2006), failure
      to reject the null signifies similarity between scores at Times 1 and 2
  ** $\underline{p} <.05$ (two-tailed)
*** Sub-sample reflects 2002 revision of some questions impacting the Implementor score

Summary

        When comparing zone changes of participants from 2002 to 2006, there were *no*

significant differences among Index scores in any of the Action Mode scores. This is

important because the improvements to the Kolbe A Index questions related to the

Implementor mode were made in 2002. Therefore, after the revisions, no differences among

scores were found. From 1991 to 2006, no significant differences were found in any sub-

sample for Fact Finder and Follow Thru modes. Again, the strength of the Index's reliability

must be emphasized as it is rare to find an assessment that yields such stability over long time intervals between tests. The only differences that were found were among two sub-samples in the Quick Start mode. However it is important to keep in mind that the larger samples from 1991 to 2001 and 2002 to 2006 indicated no significant differences among Quick Start scores. Overall, given the rigor of testing small sub-samples and applying non-parametric analysis these findings provide strong support for the reliability of the Kolbe A Index.

As an assessment of conative strengths, the Kolbe A Index has extraordinary potential in future applications and investigation. According to Kolbe (1997), people working in a manner and environment that are aligned with striving instincts and in which conative abilities can be fully realized will experience greater effectiveness and less stress. While investigation of cognitive and affective measures of mental activity has been prominent in psychological research, more needs to be done to identify the conative domain of the mind and its impact on human behavior. A better understanding of striving instincts and resulting conative abilities will provide individuals with a better self-assessment tool and organizations with a useful means by which to develop teams and individuals to maximize effectiveness.

REFERENCES

Bagozzi, R.P. (1992). The self-regulation of attitudes, intentions, and behavior. *Social Psychology Quarterly*, 55:2, 178-204.

Balasubramanian, S.K., Karrh, J.A., & Patwardhan, H. (2006). Audience response to product placements: An integration framework and future research agenda. *Journal of Advertising*, 35:3, 115-141.

Digman, J.M. 1990. Personality structure: Emergence of the five-factor model. *Annual Review of Psychology.* 41, 417-440.

George, J. M. 1992. The role of personality in organizational life: Issues and evidence. *Journal of Management*, 18:2, 185-213.

Gerdes, K.A. (In Press). Conation: The missing link. *Social Work Journal*.

Hampton, S.J. (2004). The instinct debate and the standard social science model. *Sexualities, Evolution, & Gender*, 6:1, 15-44.

Kolb, D.A. (1974) management and the learning process. In D.A. Kolb, I.M. Rubin, & J.M. MIntyre (Eds.), *Organizational Psychology: A book of readings* (pp. 27-42). Englewood Cliffs, NJ: Prentice Hall.

Kolbe, K. (2008) Career MO+, Kolbe Corp, Phoenix, AZ.

Kolbe, K. (2004). Powered by Instinct: Five Rules for Trusting Your Guts. Phoenix, AZ: Monumentus Press.

Kolbe Statistical Handbook. (2001). Kolbe Corp.

Kolbe, K. (1997). Conative Connection: Uncovering the link between who you are and how you perform. Addison-Wesley.

Kolbe, K. (2004). Pure Instinct. NY: Random House.

Kolbe, K. (1989) Wisdom of the Ages, Kolbe Corp, Phoenix, AZ.

Leahey, T.H. (1991). A history of modern psychology. New Jersey, NY: Prentice Hall.

McDougall, W.D. (1908). An introduction to social psychology, London, Methuen.

Roget, P.M. (1857) Thesaurus of the English Language.

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