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Empirical Analyses of the Question of Validity of University Students Representing Populations of Employed Businesspeople in China and North Asia

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KEYWORDS: *Students, Employed Businesspeople, International Comparisons*

ABSTRACT

This study questions the congruence of values and behaviors of university students and businesspeople, discussing individual value characteristics and their behavioral implications of working businesspeople and university students. Empirical studies are presented discussing results of investigations of value priorities of students and businesspeople from several sets of data from the Schwartz Values Survey from university students and practitioners in China, with some comparisons with students from Japan, Korea, and the USA.

INTRODUCTION

Kapes & Strickler (1975) and Rokeach (1972) tell us values tend to change considerably during adolescence and young adulthood, particularly for students attending university; however they are generally quite stable in adulthood. As values are learned initially through social interactions, being exposed to a new social environment can lead to changes in one's values structure. For example, the values of newcomers to business organizations tend to become more like those of the organization through tenure (Cable & Parsons, 2001). Of course, as Weiss (1978) notes, not all employees respond equally to organizational socialization; some individuals are less willing to make changes in their values structures than others.

The foregoing provides us bases to question the congruence of values of university students and businesspeople, even when they are from the same societal culture. I discuss individual value characteristics and their behavioral implications of working businesspeople and university students, comparing value priorities of students and businesspeople from several sets of data from the Schwartz Values Survey from university students and practitioners in China, with some comparisons with students from Japan, Korea, and the USA.

I consider individual values as a starting point as they develop through individual and group social interactions with important role models, initially with close and extended family, then usually teachers and classmates, than a wider array of models, including customers, suppliers, owners, superiors, peers, and subordinates of those who work in business. As values are learned, there are similarities in values patterns and priorities within cultures, due to the values being passed from generation to generation (see, e.g., Meglina & Ravlin, 1998).

VALUES AND WORK BEHAVIOUR

Parks & Guay (2009) in their review identify two basic models in values research, values *as preferences* and *values as principles*. Values as preferences (work values) are essentially attitudes. They indicate the *preferences* that individuals have for various environments. For example, someone who values autonomy would be more satisfied with a job that provides considerable discretion. Values as preferences have been studied extensively in relation to career choice and within the context of fit to jobs. Results typically indicate that values as preferences are related to attitudes, such as job satisfaction. Values as principles, often termed individual or personal values, are guiding *principles* regarding how individuals ought to behave. For example, an individual who values honesty believes that all people ought to be honest, while an individual who values achievement believes that people ought to have many accomplishments that will be socially recognized. I focus on personal values (*values as principles*), as research and theory suggest that they are more closely linked to motivation. They are general beliefs that one *ought* to behave a certain way. In this symposium, therefore, any reference to values will implicitly refer to personal values, which I define as *learned beliefs that serve as guiding principles about how individuals ought to behave*.

In my view, values are learned habits of cognition, more stable, and more general than attitudes. Additionally, values are ordered by importance, such that one will tend to act according to the more important value when two values are in conflict. E.g., a man who values hedonism (pursuit of pleasure) more than benevolence (concern for interpersonal relationships), if forced to choose between golfing and helping his brother move, he would be more likely to golf, because he places greater importance on fulfilling personal desires than on relationships with others.

Taxonomies of Value Systems

Some important theoretical approaches to defining and assessing cultural value dimensions include Hofstede (1980, 2001); House, Hanges, Javidan, Dorfman & Gupta (2004); Inglehart's (n.d.) World Values Survey; Smith, Peterson, Schwartz, Ahmad, Akande, Anderson, et al. (2002); Minkov (2009, 2011), and Shalom Schwartz (1992, 1994, 2006), although other taxonomies of values certainly exist. I focus my discussions on the Schwartz Value Theory, a widely-used and well-developed value theory. While many prior values researchers, such as Milton Rokeach, developed models to assess values, Shalom Schwartz and his colleagues made great strides in recent years in improving values measurement by developing a theoretically-based values taxonomy based on a circumplex structure depicted in Figure 1. More highly correlated values are situated closer together, while lower correlations create more distance between the points. Values that are across from one another on the circumplex will tend to conflict, such that individuals who endorse one will typically not endorse the other. Those values that are adjacent to one another, however, are more similar and more likely to be endorsed similarly by individuals. Schwartz and his colleagues have tested the circumplex structure extensively and cross-culturally. Results from samples in several dozen countries (the total changes frequently) have yielded relatively consistent results for the placement of the values in the circumplex structure. Schwartz has identified 10 meaningful groupings of values. Although these 10 value domains are essentially "fuzzy sets" (Schwartz, 1994), conceptually they capture the values that tend to cluster together most closely, and therefore provide a meaningful and relatively simple way to group and organize individual values. The 10 value domains are Power (authority, wealth, social recognition); Achievement (ambition, competence, success); Hedonism (pursuit of pleasure, enjoyment, gratification of desires); Stimulation (variety, excitement, novelty); Self-direction (creativity, independence, self-respect); Universalism (social justice,

equality, wisdom, environmental concern); Benevolence (honesty, helpfulness, loyalty); Conformity (politeness, obedience, self-discipline/restraint); Tradition (respect for tradition and the status quo, acceptance of customs); and Security (safety, stability of society). Schwartz (1994, p. 25) aggregated the single values in to *value types*: Openness to Change vs. Conservation and Self-Enhancement vs. Self-Transcendence to provide “conceptually convenient decisions about where one fuzzy set ends and another begins in the circular structure.

INSERT FIGURE 1 ABOUT HERE

Why study values?

Difficulties in interpretation of studies of values can stem from the following (Parks & Guay, 2009):

Values can be prone to social influence due to being learned initially through social interactions. Bardi & Schwartz (2003, p. 1217) comment that “People may conform with norms even when the normative behavior opposes their own values.” However, though individuals may adjust their behavior somewhat based on external influences, those may not impact their underlying motivation, or the goals they prefer to pursue. If values impact motivation, then understanding that process may be beneficial to, for example, managers trying to increase goal commitment. Aligning those goals with the individual’s values could yield higher performance.

Expression of values may rely on cognitive control, meaning we may need to rationally consider options within the context of our values for our values to impact decision-making. This issue is quite complex, requiring knowledge and interpretation of cognitive behavior, reflexive behavior, and emotional feelings, which are difficult to measure accurately (Verplanken & Holland, 2002; Bardi & Schwartz, 2003).

Some researchers have been hesitant to study values because of measurement issues (Hitlin & Piliavin, 2004; Ravlin & Meglino, 1987b; Maio, Roese, Seligman, & Katz, 1996). Schwartz suggests using a normative scale and controlling for scale usage by calculating the mean value score across items for each subject and partialling it out of subsequent analyses (Schwartz, 1992). This is proposed to control for social desirability, in that each individual's response becomes a measure of how important that particular value is to him or her after taking into effect the importance of all the other values they have rated. That is, a person's absolute score on the value domain of benevolence is less important than knowing their benevolence score relative to the other rated values. One individual might rate all values around 6 on a 7-point scale, while someone else might rate all values around 4. A score of 5 for benevolence values would mean something completely different for these two individuals in terms of predicting how they might behave. Partialling out the mean score controls for this possible confound. Multiple researchers (e.g., Bardi & Schwartz, 2003) have used this approach with results that are somewhat consistent with theoretical expectations.

Parks & Guay (2009) review studies relating values to personality traits, and suggest studying values add incrementally to the prediction of motivation, and perhaps job performance and other work-related outcomes, because they are only modestly or weakly correlated (correlations less than 0.30) with personality factors.

Research on values, motivation, and behavior (Rokeach, 1973; Schwartz, 1992; Locke & Henne, 1986; Lewin, 1952; Mitchell, 1997) indicate an expectation that values impact the motivational processes of attention and direction (goals that individuals are attentive to and choose to pursue). Sheldon & Elliot (1999) propose that individuals are more likely to persist at goals consistent with their values.

In expectancy theory values are implicit in the concept of valence, the extent to which an outcome or goal is perceived to be important or attractive. Feather (1995) in a lab study found that the values of his respondents were related in theoretically predictable ways to the attractiveness of the options to the participant. Self-direction values were positively correlated with the valence of the job with more freedom ($r = .30$) and negatively correlated with the job with more security ($-.27$). Likewise, security values were positively correlated with the job with more security (.18) and negatively correlated with the job with more freedom ($-.27$). Feather also found that the valences were highly predictive of their choice behavior when participants were asked to choose their preferred option.

Dubinsky, Kotabe, Lim, and Wagner (1997) examined the extent to which values were related to the valence of various rewards for salespeople in the US and Japan. Not surprisingly, they found that security values were related to the desirability of increased job security as a reward in both samples. Achievement values were related to the desirability of promotions and the desirability of increased opportunities for personal growth in both samples. This study also found that achievement values were related to self-rated job performance, though the (standardized) beta coefficients achieved significance in the US sample only ($\beta = .25$ for the US sample, .18 for the Japanese sample). Interestingly, self-direction was related to job performance in the US sample only, while conformity was related to job performance only in the Japanese sample.

Development of Values

Research demonstrates interactive relationships between personal values and culturally-shared values (see, e.g., Oishi, Shimmack, Diener & Suh, 1998). In fact, Oishi et al. propose that investigation at the cultural level is the appropriate level for studying the patterns of relations

between values and other variables (p. 1186). Rokeach (1973) proposed that all values are initially viewed positively, as they are promulgated and demonstrated by important role models and caregivers. Rokeach (1972) states that over time individuals learn and develop a values structure, through learning from experiences in which two or more values are placed in conflict, forcing the individual to choose one over the other. Locke & Henne (1986) propose this process may also result from personal reflection and introspection. As values define valuable goals for us, we are motivated to obtain or attain what we value.

FACTORS AFFECTING JOB PERFORMANCE

In my literature review I find quite an array of influences on job performance that are related to differences between university students and working businesspeople, who tend to differ on levels of work experience. A brief list of some results:

- A meta-analysis conducted by Quiñones, Ford, and Teachout (1995) showed that work experience was positively related to job performance (at $r=0.27$).
- Dragoni, Oh, Vankatwyk & Tesluk (2011) find accumulated work experience positively relates to executives' strategic thinking competency after controlling for individual characteristics and other measures of work experience. Additionally, cognitive ability and accumulated work experience are the two most important predictors for executives' strategic thinking competency amongst other predictors.
- Ng and Feldman (2008, 2010a, 2010b) used meta-analysis to examine various aspects of age, job tenure, and job performance. Finding (1): the relationship between age (rather than organizational tenure) and performance; they found that age was largely unrelated to core task performance but demonstrated stronger relationships with citizenship performance and avoiding counterproductive activities (However, Ng and Feldman could

not rule out a possible explanation that it is longer tenure, rather than age, that accounts for these relationships.); (2) longer tenured employees, as a group, demonstrate higher performance on core-task behaviors, citizenship behaviors, and avoiding counterproductive behaviors, and tend to fulfill managers' expectations.

These findings give rise to the hypothesis to test:

Hypothesis 1: There are no significant differences in individual value priorities of university students compared to businesspeople in China.

As I have data from China, South Korea, and Japan for university students, I am also able to test the following hypothesis:

Hypothesis 2: There will be no differences in individual value priorities among university students from China, South Korea, and Japan.

METHODS

Data were collected administering the SVS on paper from students at single universities in Wuxi and Shanghai China; Seoul, South Korea, and Jomonjibaru, Japan. Systematic random quota samples (volunteers and paid students randomly accessed businesspeople attempting to obtain 300 valid surveys) were collected, administered by collaborators in those countries. Business samples were collected in Macau SAR, Guangzhou City, Zhengzhou City, and Hangzhou City in China. Ns for samples are in Table 1.

INSERT TABLE 1 ABOUT HERE

RESULTS OF COMPARISON OF INDIVIDUAL VALUE STRUCTURES OF BUSINESSPEOPLE AND UNIVERSITY STUDENTS IN CHINA & NORTH ASIA

As noted in the introductory commentary, Knafo, Roccas & Sagiv (2011) identify several important theoretical approaches to defining and assessing cultural value dimensions. The one I focus my discussion on is the Schwartz Values Theory, operationalized by the Schwartz Values Survey (Schwartz, compiled by Littrell, 2008), which is widely-used and tested across a large number of countries. My data collection efforts in China have obtained SVS survey samples from businesspeople in Macau, Guangzhou City, Shenzhen City, and Zhengzhou City. University student samples have been collected from Wuxi City in China, Seoul in South Korea and Jumonjibaru, Beppu, Oita, Japan. I also have the raw data from Schwartz' 1995 sample of university students from Shanghai. The reliability of the survey results from the three student samples and the samples of businesspeople tested using Structural Equations Modeling goodness-of-fit analyses indicate a good fit to Schwartz' model, with the Guangzhou City business sample somewhat beyond the 0.05 probability for fit.

Multidimensional Scaling Smallest Space Analyses (MDS SSA) and Exploratory Factor Analyses from Samples

MDS SSA analyses indicate close correspondence of the item patterns for all the samples of businesspeople; however, the university student sample had a different values structure pattern from businesspeople. All the patterns were different from the proposed theoretical model from Schwartz' publications. Littrell (2010, pp. 208-284) discusses problems with lack of invariance of structure for different types of samples within a country, with inconsistency of dimension composition observed using MDS SSA and Cronbach scale and item-to-scale reliability analyses. Ralston, Egri, Raynaud, et al. (2011) published findings that question the validity of the ten-values circumplex model for business professionals samples that are more demographically and occupationally diverse than the student and school teacher samples that were used to develop the

values model, Hence, these findings have implications for cross-national individual-level research of samples of businesspeople, based on Schwartz' set of ten values dimensions. Such research may be a relatively high risk proposition in terms of reliability and validity of measures. Ralston et al.'s cross-society individual value dimensions results showed that there were only eight societies for which all ten sub-dimensions had high enough scale reliabilities for statistical analyses. ANOVA tests, Figure 2, indicate significant differences for means for several dimensions among samples.

Exploratory factor analyses (EFA) were run using the SPSS calculations for Varimax, Direct Oblimin and Promax rotations; Promax produced the most plausible sets of items. The two university student samples from Wuxi and Shanghai have different factor structures. As noted, the MDS SSA analyses indicate similar value structures for all samples of businesspeople in China, so they were combined for the EFA. The results are summarized in Table 2. Some items did not load above 0.35 on any factor. The lists are interesting in the context of contemporary society, and understandable given the age differences. Anecdotally, from my past experiences, the students' omissions can be construed to reflect less experience with the vicissitudes of working for a living. Items not present in dimensions for Businesspeople: SELF-INDULGENT (doing pleasant things); EQUALITY (equal opportunity for all). Items not present in dimensions for university students: HEALTHY (not being sick physically or mentally); SENSE OF BELONGING (feeling that others care about me); WISDOM (a mature understanding of life); CREATIVITY (uniqueness, imagination); FORGIVING (willing to pardon others).

INSERT FIGURE 2 ABOUT HERE

INSERT TABLE 2 ABOUT HERE

The results indicate significant differences between value priorities and between university students in China, South Korea, and Japan, and for both value priorities based upon Schwartz' theoretical model and for the structure of value systems for Chinese students and Chinese businesspeople from explorations using MDS SSA and factor analysis.

Hence, *Hypothesis 1*: There are no significant differences in individual value priorities of university students compared to businesspeople in China, is rejected, and *Hypothesis 2*: There will be no differences in individual value priorities among university students from China, South Korea, and Japan is rejected. Value priorities and structures appear to be different between businesspeople and students in China, and between students in China, South Korea, and Japan.

CONCLUSIONS

The results indicate that university students are not adequate surrogates for working businesspeople for research in China for research concerning individual value priorities. Additionally, based upon my data, value priorities appear to be different among student samples from the North Asia countries studied, China, South Korea, and Japan.

Obviously further studies must be conducted across a wider range of types of samples to ascertain the certainty of these conclusions. Further analyses of these data sets are planned focusing upon gender, age, and education comparisons.

REFERENCES AND FURTHER READING

Abbink, K., & Rockenbach, B. (2006). Option pricing by students and professional traders: A behavioral investigation. *Managerial and decision economic*, 27 (6): 497-510

Ahuja, M.K., Chudoba, K.M., Kacmar, C.J., McNight, D.H., & George, J.F. 2007. IT road warriors: Balancing work-family conflict, job autonomy, and work overload to mitigate turnover intentions. *MIS Quarterly*, 31: 1-17.

Alevy, J., Haigh, M.S., & List, J. (2005). **Information cascades: Evidence from an experiment with financial market professionals.** Working paper 12767, Cambridge, MA, USA: National Bureau of Economic Research. <http://www.nber.org/papers/w12767>

Alpert, B. (1967). Non-businessmen as surrogates for businessmen in behavioral experiments. *Journal of Business*, 40: 203-207

Ashton, R. H., & Kramer, S.S. 1980. Students as surrogates in behavioral accounting research: Some evidence. *Journal of Accounting Research*, 18: 1–15.

Barber, B., & Odean, T. 2001. Boys will be boys: Gender, overconfidence and common stock investment. *The Quarterly Journal of Economics*, 116: 261-292

Bazerman, M. 2005. *Judgment in managerial decision making*, 6th Ed. New York, NY, USA: Wiley.

Byrne, B.M., Shavelson, R.J., & Muthen, B. 1989. Testing for the equivalence of factor covariance and mean structures: The issue of partial measurement invariance. *Psychological Bulletin*, 105(3): 456-466.

Byrnes, J., & Miller, D. 1999. Gender differences in risk taking: A meta-analysis. *Psychological Bulletin*, 125: 367-383

Camerer, C., & Fehr, E. 2002. *Measuring social norms and preferences using experimental games: A guide for social scientists.* Working Paper No. 97, Zurich, Switzerland: Institute for Empirical Research in Economics, University of Zurich, <http://e-collection.library.ethz.ch/view.php?pid=eth:25600&lang=en>

Chen, F., Curran, P.J.; Bollen, K.A.; Kirby, J. & Paxton, P. 2008. An empirical evaluation of the use of fixed cutoff points in RMSEA test statistic in structural equation models. *Sociological Methods & Research*, 364: 462-494.

Chen, F., Drezner, Z., Ryan, J., & Simchi-Levi, D. 2000. Quantifying the bullwhip effect in a simple supply chain: The impact of forecasting, lead times, and information. *Management Science*, 46: 436-443

Covin, T. J., & Brush, C.C. 1993. A Comparison of student and human resource professional attitudes toward work and family issues. *Group and Organization Management*, 18: 29–49.

Croson, R. & Donohue, K. 2006. Behavioral causes of the bullwhip effect and the observed value of inventory information. *Management Science*, 52 (3): 323-336

Cunningham, W., Anderson, W., & Murphy, J. (1974). Are students real people? *Journal of Business*, 47: 399-409.

Davis, C. 2004. Breaking down the barriers of collaboration. *Supply Chain Europe*, 13(6): 11-14

Dickson, M.W., BeShears, R.S. & Gupta, V. 2004. The impact of societal culture and industry on organizational culture: Theoretical explanations. In R.J. House, P.J. Hanges, M. Javidan, P.W. Dorfman & V. Gupta (Eds.), *Culture, leadership, and organizations: The GLOBE study of 62 societies*. 74-90. Thousand Oaks, CA, USA: Sage.

Dickson, M.W., Resick, C.J. & Hanges, P.J. 2006. Systematic variation in organizationally-shared cognitive prototypes of effective leadership based on organizational form. *The Leadership Quarterly*, 17: 487-505.

Dill, W.R. 1964. Desegregation or integration? Comments about contemporary research on organizations. In *New Perspectives in Organization Research*, William W. Cooper

Eckel, C., & Grossman, P. 2003. *Forecasting risk attitudes: An experimental study of actual and forecast risk attitudes of women and men*. Unpublished manuscript, Virginia Polytechnic Institute and State University at Blacksburg, VA.

Elliott, W., Hodge, F., Kennedy, J. & Pronk, M. 2007. Are M.B.A. Students a Good Proxy for Nonprofessional Investors? *Accounting Review*, 82(1): 139-168.

Ennis, B., Cox, K., & Stafford, J. (1972). Students as subjects in consumer behavior experiments. *Journal of Marketing Research*, 9: 72-74.

Fischer, R., Vauclair, C.M., Fontaine, J.E.J., & Schwartz, S.H. 2010. Are individual-level and country-level value structures different? Testing Hofstede's legacy with the Schwartz Value Survey. *Journal of Cross-Cultural Psychology*, 41: 135–151.

- Frederickson, J., & Miller, J. (2004). The effects of pro forma earnings disclosures on analysts' and nonprofessional investors' equity valuation judgments. *The Accounting Review*, 79: 667-686.
- Garson, G.D. n.d. Structural equations modeling, from *Statnotes: Topics in multivariate analysis*. <http://www2.chass.ncsu.edu/garson/pa765/statnote.htm>, accessed 17 September 2008.
- Haig, M., & List, J. (2005). Do professional traders exhibit myopic loss aversion? An experimental analysis. *Journal of Finance*, 60: 523-534.
- Halek, M., & Eisenhauer, J. 2001. Demography of risk aversion. *Journal of Risk and Insurance*, 68: 1-24.
- Hampton, G.M. 1979. Students as subjects in international behavioral studies. *Journal of International Business Studies*, 10(2): 96-96.
- Harrison, G., & List, J. (2004). Field experiments. *Journal of Economic Literature*, 42: 1009-1055.
- Hieber, R., & Hartel, I. 2003. Impacts of SCM order strategies evaluated by simulation-based 'Beer Game' approach: The model, concept, and initial experiences. *Production planning & control*, 14: 122-134.
- Hofstede, G. 2001. *Culture's consequences, 2nd Ed*. Thousand Oaks, CA: Sage.
- Horn, J., & McArdle, J. 1992. A practical and theoretical guide to measurement invariance in aging research. *Experimental Aging Research*, 18: 117-144.
- Horn, J., McArdle, J., & Mason, R. 1983. When is invariance not invariant: A practical scientist's look at the ethereal concept of factor invariance. *The Southern Psychologist*, 1: 179-188.
- Hoskisson, R.E., Eden, L., Lau, C.M., & Wright, M. 2000. Strategy in emerging economies. *The Academy of Management Journal*, 43(3): 249-267.
- Jordan, J., & Kaas, K. (2002). Advertising in the mutual fund business: the role of judgmental heuristics in private investor's evaluation of risk and return. *Journal of Financial Services Marketing*, 7(2): 129-140.
- Kahneman, D., & Novemsky, N. 2005. The boundaries of loss aversion. *Journal of Marketing Research*, 42: 119-128.

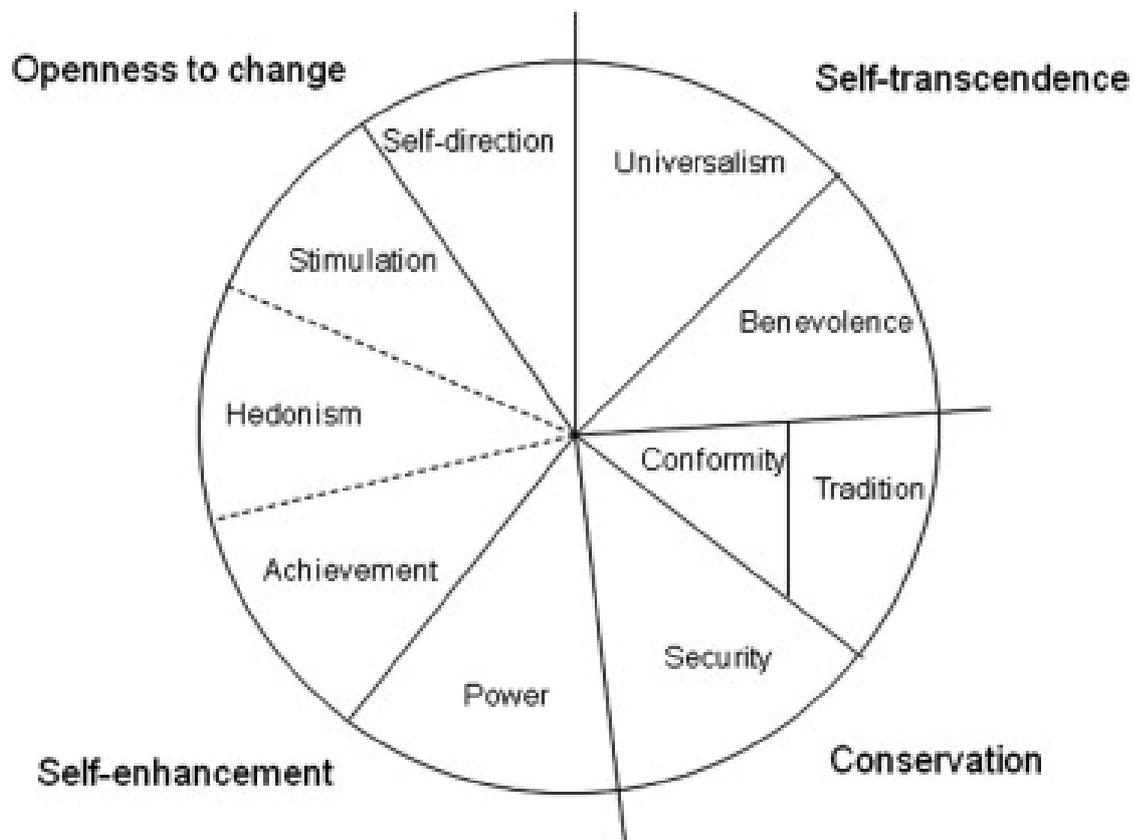
- Kahneman, D., & Tversky, A. 1979. Prospect theory: an analysis of decision under risk. *Econometrica*, 47: 263-291.
- Knafo, A., Roccas, S. & Sagiv, L. 2011 The value of values in cross-cultural research: A special issue in honor of Shalom Schwartz, *Journal of Cross-Cultural Psychology*, 42, 178-185.
- Kuzniarz, L., Staron, M., & Wohlin, C. Students as study subjects in software engineering experimentation. *Proceedings 3rd Conference on Software Engineering Research and Practice in Sweden*, pp. 19-24, Lund, Sweden, 2003, <http://www.wohlin.eu/Articles/SERPS03.pdf>.
- Lastovicka, J.L. 1982. On the validation of lifestyle traits: A review and illustration. *Journal of Marketing Research*, 19: 126-138.
- Lee, H., Padmanabhan, V., & Wang, S. 1997. The bullwhip effect in supply chains. *Sloan Management Review*, 38(3): 93-102.
- Libby, R., Bloomfield, R., & Nelson, M. (2002). Experimental Research in Financial Accounting. *Accounting Organizations and Society*, 27: 775-811.
- Littrell, R.F. 2010. *Comparative value priorities of Chinese and New Zealand businesspeople and their relationships to preferred managerial leader behavior*. PhD Thesis, Auckland, NZ; Auckland University of Technology Scholarly Commons, <http://aut.researchgateway.ac.nz/handle/10292/1198>.
- Maguire, K., Taylor, L., & Gurmu, S. 2003. Do students behave like adults? Evidence from valuation experiments. *Applied Economics Letters*, 10: 753-756.
- McNemar, Q. 1946. Opinion-attitude methodology. *Psychological Bulletin*, 43: 289-374.
- Oakes, W. 1972. External validity and the use of real people as subjects. *American Psychologist*, 27: 959-962.
- Odean, T. 1998. Volume, volatility, price and profit when all traders are above average. *The Journal of Finance*, 53: 1887-1934.
- Oehler, A., Heilmann, K., Lager, V., & Oberlander, M. 2003. Coexistence of disposition investors and momentum traders in stock markets: Experimental evidence. *Journal of International Financial Markets, Institutions and Money*, 13 (5): 503-524.

- Peterson, R.A. 2001. On the use of college students as subjects in social science research: Insights from a second-order meta-analysis. *Journal of Consumer Research*, 28: 450-461.
- Ralston, D.A., Egri, C.P. and 51 coauthors. 2011. A 21st century assessment of values across the global workforce. *Journal of Business Ethics*, 104(1): 1-31.
- Ralston, David A.; Egri, Carolyn P.; Reynaud, Emmanuelle, et al. 2011. A Twenty-First Century Assessment of Values Across the Global Workforce, *Journal of Business Ethics*, 104(1): 1-31.
- Remus, W.1986. Graduate students as surrogates for managers in experiments on business decision making. *Journal of Business Research*, 14: 19–25.
- Runeson, P. (2003). *Using students as experimental subjects – An analysis on graduate and freshmen student data*. Paper presented at the 7th International Conference on Empirical Assessment and Evaluation in Software Engineering (EASE'03).
- Schultz, D.P. 1969. The human subject in psychological research. *Psychological Bulletin*, 72: 214–228.
- Schwartz, S.H., compiled by Littrell, R.F. 2008. *Draft user's manual: Proper use of the Schwartz Value Survey*, revision 12 July 2008, posted online 14 February 2009, http://www.crossculturalcentre.homestead.com/DraftManual_SVS_14Feb2009.doc.
- Shuptrine, F. 1975. On the validity of using students as subjects in consumer behavior investigations. *Journal of Business*, 48: 383-390.
- Sterman, J. 1989. Modeling managerial behavior: misperceptions of feedback in a dynamic decision making experiment. *Management Science*, 35: 321-339.
- Vinson, D.E., & Lundstrom, W.J. 1979. The Use of Students as experimental subjects in marketing research. *Journal of the Academy of Marketing Science*, 6: 114-125.
- Walsh, G., Mitchell, V., & Henning-Thurau, T. (2001). German consumer decision-making styles. *Journal of Consumer Affairs*, 35(1): 73-95.
- Walter, F. & Bruch, H. 2009. An affective events model of charismatic leadership behavior: A review, theoretical integration, and research agenda. *Journal of Management*, 35:1428-1452.
- Weick, K. E. 1967. Organizations in the laboratory. In *Methods of Organizational Research*, Victor H. Vroom (Ed.), Pittsburgh, PA, USA: University of Pittsburgh Press, 1–56.

Wyld, D., & Jones, C. 1997. An empirical look at the use of managers and non-managerial student subjects for inquiries into ethical management. *Managerial Research News*, 20(9): 18-30.

Table 1. Sample Locations and Sizes

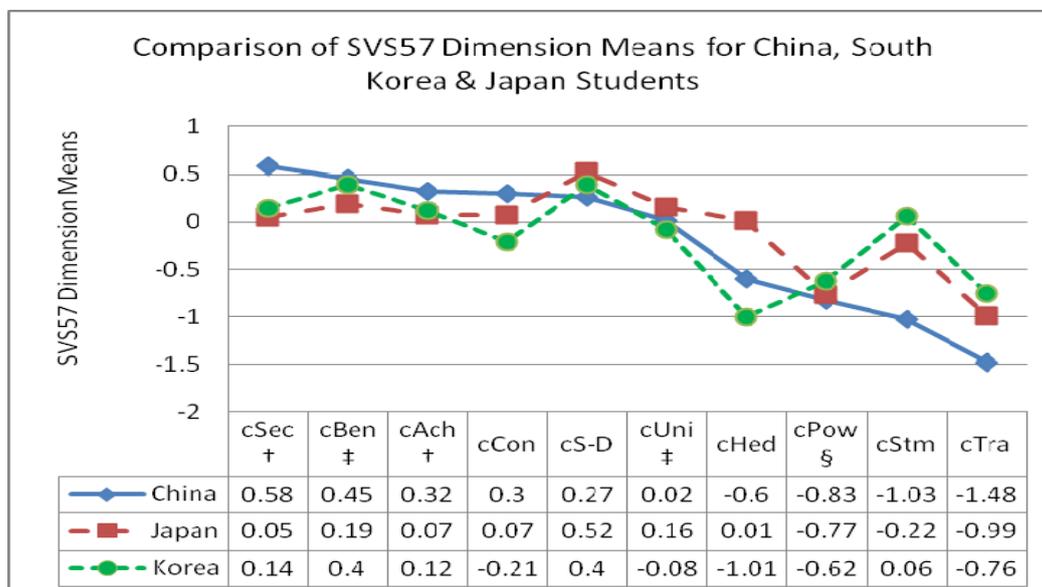
Sample	N
Businesspeople, China:	
Guangzhou City	343
Hangzhou City	92
Macau SAR	344
Zhengzhou City	222
Students:	
Jumonjibaru, Japan	492
Seoul, South Korea	201
Shanghai, China	212
Wuxi, China	364

FIGURE 1.**Schwartz' Individual Values Circumplex**

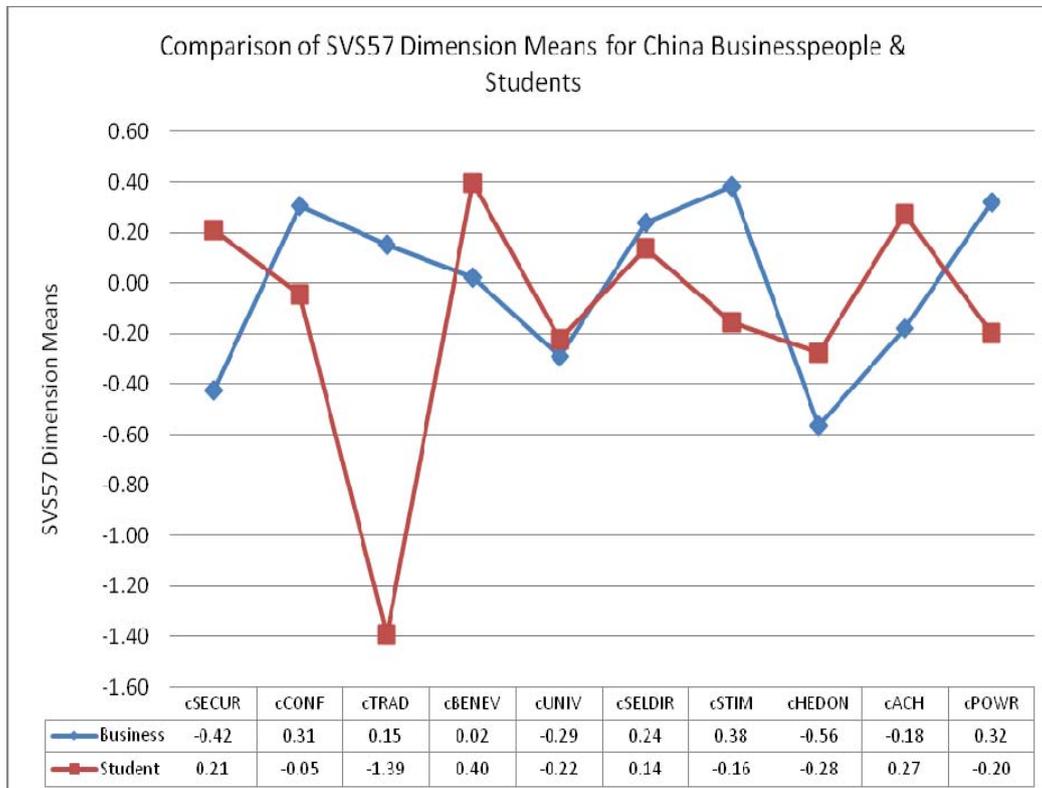
Provided by Shalom Schwartz, personal communication, 2001.

FIGURE 2.

Comparison of Dimension Means for Samples-Significance Tests from ANOVA



The lower case c indicates that the statistics are calculated using the Schwartz (2008) score centering process. Similarities: † Jp & Ko: NSD, ‡ Cn & Ko: NSD, § NSD: among all; no indicator, all sample means significantly different from one another



All sample means significantly different for all dimensions, $p < 0.03$

TABLE 2.

Exploratory Factor Analysis of China Businesspeople & Wuxi University Student Sample

Businesspeople Dimensions & Items	Student Dimensions & Items
<p>CONFUCIAN VALUES</p> <p>AMBITIOUS (hard-working, aspiring) CAPABLE (competent, effective, efficient) MEANING IN LIFE (a purpose in life) SUCCESSFUL (achieving goals) HONEST (genuine, sincere) LOYAL (faithful to my friends, group) TRUE FRIENDSHIP (close, supportive friends)</p> <p><i>A WORLD OF BEAUTY (beauty of nature and the arts)</i></p> <p><i>BROADMINDED (tolerant of different ideas and beliefs)</i> <i>CLEAN (neat, tidy)</i> <i>FORGIVING (willing to pardon others)</i> <i>HELPFUL (working for the welfare of others)</i> <i>HONOURING OF PARENTS AND ELDERS (showing respect)</i> <i>HUMBLE (modest, self-effacing)</i> <i>INTELLIGENT (logical, thinking)</i> <i>RESPONSIBLE (dependable, reliable)</i> <i>WISDOM (a mature understanding of life)</i></p>	<p>PERSONAL COMPETENCE-CONFUCIAN IDEALS</p> <p>AMBITIOUS CAPABLE MEANING IN LIFE SUCCESSFUL <i>CHOOSING OWN GOALS</i></p> <p>FRIENDSHIP HONEST LOYAL TRUE FRIENDSHIP (close, supportive friends)</p> <p><i>SOCIAL RECOGNITION (FACE)</i></p>
<p>NATIONAL SECURITY</p> <p>A WORLD AT PEACE (free of war and conflict) NATIONAL SECURITY (protection of my nation from enemies) PROTECTING THE ENVIRONMENT (preserving nature) SOCIAL ORDER (stability of society) SOCIAL JUSTICE (correcting injustice, care for the weak)</p> <p><i>POLITENESS (courtesy, good manners)</i> <i>HONOURING OF PARENTS AND ELDERS (showing respect)</i></p>	<p>NATIONAL SECURITY</p> <p>A WORLD AT PEACE NATIONAL SECURITY</p> <p>PROTECTING THE ENVIRONMENT</p> <p>SOCIAL ORDER SOCIAL JUSTICE</p> <p><i>RESPECT FOR TRADITION</i></p>

Businesspeople Dimensions & Items	Student Dimensions & Items
STIMULATION	STIMULATION
A VARIED LIFE (filled with challenge, novelty and change) AN EXCITING LIFE (stimulating experiences) DARING (seeking adventure, risk) <i>FREEDOM (freedom of action and thought)</i> <i>UNITY WITH NATURE (fitting into nature)</i> <i>CREATIVITY (uniqueness, imagination)</i>	A VARIED LIFE AN EXCITING LIFE DARING <i>CURIOUS (interested in everything, exploring)</i> <i>SELF-INDULGENT (doing pleasant things)</i>
POWER	POWER
AUTHORITY (the right to lead or command) WEALTH (material possessions, money) SOCIAL POWER (control over others, dominance) <i>SOCIAL RECOGNITION (respect, approval by others)</i> <i>OBSERVING SOCIAL NORMS (to maintain face)</i>	AUTHORITY WEALTH SOCIAL POWER <i>ENJOYING LIFE (enjoying food, sex, leisure, etc.)</i> <i>PRESERVING MY PUBLIC IMAGE (protecting my "face")</i>
INNER PEACE	SELF-DIRECTION
A SPIRITUAL LIFE (emphasis on spiritual not material matters) FREEDOM (freedom of action and thought) INNER HARMONY (at peace with myself) PLEASURE (gratification of desires)	A SPIRITUAL LIFE FREEDOM INNER HARMONY PLEASURE <i>INDEPENDENT (self-reliant, self-sufficient)</i>
MODERATION/HUMILITY	MODERATION/HUMILITY
ACCEPTING MY PORTION IN LIFE (submitting to life's circumstances) MODERATE (avoiding extremes of feeling & action) OBEDIENT (dutiful, meeting obligations) <i>DEVOUT (holding to religious faith & belief)</i> <i>PRESERVING MY PUBLIC IMAGE (protecting my "face")</i>	ACCEPTING MY PORTION IN LIFE MODERATE OBEDIENT

Businesspeople Dimensions & Items	Student Dimensions & Items
<p>FAMILY SECURITY</p> <p>FAMILY SECURITY (safety for loved ones)</p> <p>RECIPROCATION OF FAVOURS (avoidance of indebtedness)</p> <p>PRIVACY (the right to have a private sphere)</p> <p><i>INDEPENDENT (self-reliant, self-sufficient)</i></p> <p><i>MATURE LOVE (deep emotional & spiritual intimacy)</i></p> <p><i>SELF-DISCIPLINE (self-restraint, resistance to temptation)</i></p>	<p>FAMILY SECURITY</p> <p>FAMILY SECURITY</p> <p>RECIPROCATION OF FAVOURS</p> <p>PRIVACY</p> <p><i>CLEAN (neat, tidy)</i></p> <p><i>HONOURING OF PARENTS AND ELDERS (showing respect)</i></p> <p><i>POLITENESS (courtesy, good manners)</i></p> <p><i>SELF RESPECT (belief in one's own worth)</i></p>