# Methodological Examination of Schwartz's Value Research:

## Through Data Analysis of the World Values Survey*

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## Ⅰ. Introduction

From the outset, Shalom H. Schwartz's value research has been grounded on the perspective of cross-national/cross-cultural comparison. This is attributable to the objective of Schwartz's value research－exploring basic human values. It is not possible to make generalizations regarding various aspects of people's values, and the structure thereof, when researching only a specific country/culture. Such generalizations become possible only after having carried out studies in a variety of countries/cultures. In Schwartz's value research, cross-national/cross-cultural comparative surveys have been carried out in different countries/cultures using identical questionnaires and methods, conducted under identical conditions. In this way, researchers attempt to discern aspects of commonly shared values, and the structure thereof, of people across countries/cultures. That is the definition of "basic human values."

Schwartz used Smallest Space Analysis (SSA) developed by Louis Guttman, a pioneer in the field of social measurement, to take the aspects and structures of values of such people and construct them in the form of a "circular continuum" (Figure 1).

In this paper, I attempt to analyze data from a different research focal point than Schwartz's value research described above. I describe further this research focal point, and how it differs, below.

Schwartz's research interest was more the commonality rather than the differences of people's values. He therefore focused on basic human values in empirical research on people's values. Needless to say, the contrasting concept to *basic* is *specific,* and the contrasting concept to *human (humanity as a whole)* is *specific people in actual countries/cultures who exist in time and space (populations).*

Unlike Schwartz's research, my inquiry focuses on differences as well as commonalities. Specifically, I am interested in where people demonstrate commonality and where differences in aspects of their values. In fact, such a line of inquiry also raises questions about the methodology used in Schwartz's value research.

With regard to a focus on confirming the commonality of people's values, Smallest Space Analysis is certainly effective. But what kinds of data analysis techniques are to be used to discover the differences? Of course, various statistical techniques have been developed for such a focus. However, I begin here with a more elementary level of data analysis. That is, methods for examining: (1) the frequency distribution of survey responses on the value items proposed by Schwartz; and (2) the correla-

*Key words: Schwartz's value research, circular continuum, World Values Suevey, mean value, correlation matrix

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tion matrix showing the interrelationships among the value items. These methods' elementary level makes them the most appropriate for the research focus on discovering differences in people's values by country/culture.

To empirically address methodological analysis issues that arise from this focus, empirical data is required－more specifically, survey data for making cross-national comparisons. Fortunately, in the 6th World Values Survey (WVS Wave 6), one of the world's largest cross-national comparative surveys, conducted in the years 2010-2014, questions were asked on Schwartz's 10 value items. In this paper, I attempt a methodological examination of Schwartz's value research through data analysis of this survey.

I have selected 10 countries from five regions to target for this data analysis, based on prior research, as listed below.

Western countries: Germany, US
Former Communist bloc countries: Russia
Islamic countries: Turkey
African countries: South Africa
Asian countries: Japan, South Korea, China, Thailand, Malaysia

## Ⅱ. Preliminary work for the analysis of data from the World Values Survey

I prepared the following for the analysis of the survey data to conduct a methodological examination of Schwartz's value research.
(1) Correspondence table of 10 value types (using Schwartz's terminology) and the motivations behind them
(2) Correspondence table of 10 value types and question items from the 6th World Values Survey
(3) Circular continuum model with fan-shaped/wedge-shaped regions of 10 value types and WVS question codes

First, regarding (1), since the value types were organized by Sagiv and Schwartz (1995) as shown in Table 1, this table is used as a starting point for the data analysis. An important issue here is how the value types, their explanations and question items are translated into Japanese. This is extremely important from the standpoint of the acceptance of Western social science in Japan.

**Table 1　Schwartz's 10 Basic Human Value Types and the Motivations behind Them**

| Value types | Motivational emphasis |
|---|---|
| Power | Social status and prestige, control or dominance over people and resources |
| Achievement | Personal success through demonstrating competence according to social standard |
| Hedonism | Pleasure and sensuous gratification for oneself |
| Stimulation | Excitement, novelty and challenge in life |
| Self-direction | Independent thought and action－choosing, creating and exploring |
| Universalism | Understanding, appreciation, tolerance and protection for the welfare of all people and for nature |
| Benevolence | Preservation and enhancement of the welfare of people with whom one has frequent personal contact |
| Tradition | Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide |
| Conformity | Restraint of actions, inclinations and impulses likely to upset or harm others and violate social expectations or norms |
| Security | Safety, harmony and stability of society, or relationships, and of self |

Next, the results of prior research can also be utilized for (2). As a matter of fact, a Japanese team has published a book on the 6th World Values Survey that could be considered a research report. Edited by Ken'ichi Ikeda, the book was issued by Keiso Shobo Publishing in 2016 as *Nihonjin no Kangaekata, Sekai no Hito no Kangaekata − Sekai Kachikan Chōsa Kara Mieru Mono* (How Japanese People Think, How People Around the World Think − What the World Values Survey Shows). In the book, Seiko Yamazaki, who was in charge of reporting the results of the survey on the Schwartz's value items, presents the correspondence between Schwartz's value types and the question items in the 6th World Values Survey in the form of Table 2.

**Table 2 Schwartz's 10 Value Types and the WVS Question Items**

| Value Types | WVS Question Items |
|---|---|
| (A) Self-direction | V 70. It is important to this person to think up new ideas and be creative; to do things one's own way. |
| (B) Power | V 71. It is important to this person to be rich; to have a lot of money and expensive things. |
| (C) Security | V 72. Living in secure surroundings is important to this person; to avoid anything that might be dangerous. |
| (D) Hedonism | V 73. It is important to this person to have a good time; to "spoil" oneself. |
| (F) Benevolence | V 74. It is important to this person to do something for the good of society. |
| (G) Achievement | V 75. Being very successful is important to this person; to have people recognize one's achievements. |
| (H) Stimulation | V 76. Adventure and taking risks are important to this person; to have an exciting life. |
| (I) Conformity | V 77. It is important to this person to always behave properly; to avoid doing anything people would say is wrong. |
| (J) Universalism | V 78. Looking after the environments is important to this person; to care for nature and save life resources. |
| (K) Tradition | V 79. Tradition is important this person; to follow the customs handed down by one's religion or family. |

Finally, for (3), Figure 1 is the circular continuum model adapted by Davidov, Datler, Schmidt and Schwartz (2011) with the WVS question codes that I added.

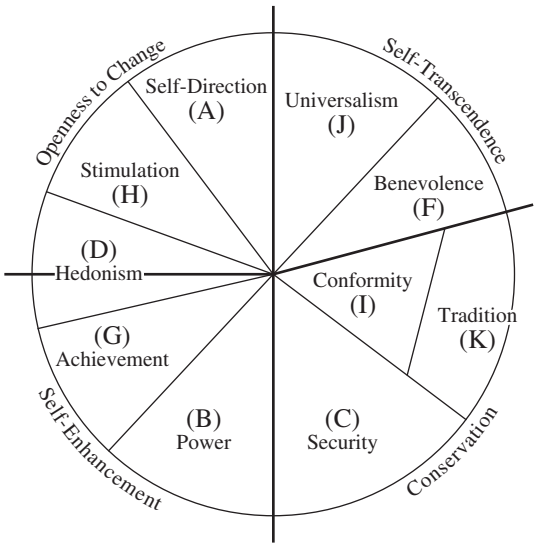


**Figure 1 Schwartz's Value Model with Alphabetical Codes of WVS Question Items**

With the above preliminary work in place, the data analysis of the World Values Survey could

begin.

## Ⅲ. Data Analysis of the World Values Survey

### 1. Examination of survey responses on Schwartz's 10 value items

The objective of the data analysis is to see what points of difference and what points of similarity pertaining to Schwartz's value items can be ascertained among the 10 countries targeted for this study by examining the survey responses in each country－China, Germany, Japan, South Korea, Malaysia, Russia, South Africa, Thailand, Turkey, and the United States.

Here, that examination was carried out by comparing the mean value for each Schwartz's value item in each country. The procedure was as follows.

(1) Eliminate from the analysis the response "No answer/ Don't know"

(2) Give the response categories the following point score.

| | |
|---|---|
| Very much like me | 5 |
| Like me | 4 |
| Somewhat like me | 3 |
| A little like me | 2 |
| Not like me | 1 |
| Not at all like me | 0 |

(3) For each question from A to K, the mean value was calculated for each country.

Using the mean value for each country calculated through the above procedure, we attempted two kinds of comparison. (A) Comparison of countries for each item from A to K; and (B) Comparison of 10 items from A to K for each country.

### (A) Comparison of countries' mean values for each item from A to K

Each country's mean value for each item might reflect "the social character." "modal personality." and "national character" of each country. The focus of interest here is that certain differences between the mean values among countries are seen.

According to Schwartz's circular continuum model of values, we examine each country's ranking for each value item, starting from the top of the circle and moving clockwise. For this purpose, for each item we created a line graph, arranging countries from the highest mean value (left end) to lowest (right end). The line graph connects these mean values with a solid line (Figures 2-1 to 2-10).

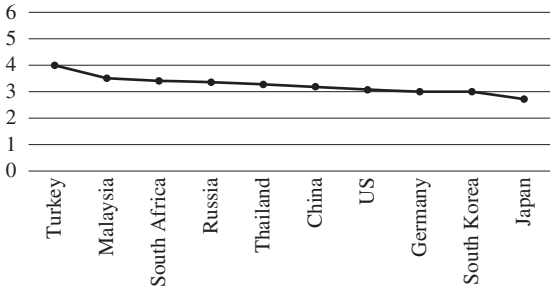


**Figure 2-1　Comparison of Countries' Average Values for the Item (J) Universalism**

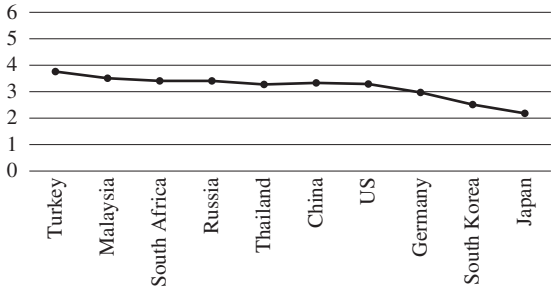


**Figure 2-2　Comparison of Countries' Average Values for the Item (F) Benevolence**

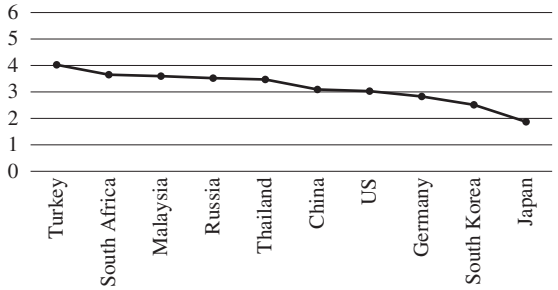


**Figure 2-3 Comparison of Countries' Average Values for the Item (K) Tradition**

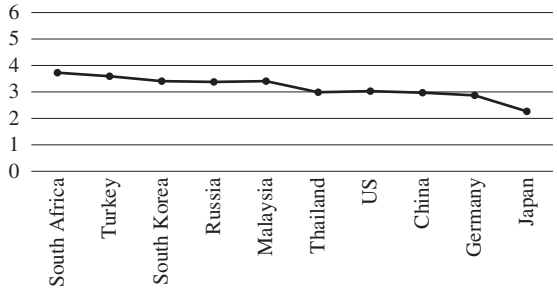


**Figure 2-4 Comparison of Countries' Average Values for the Item (I) Conformity**

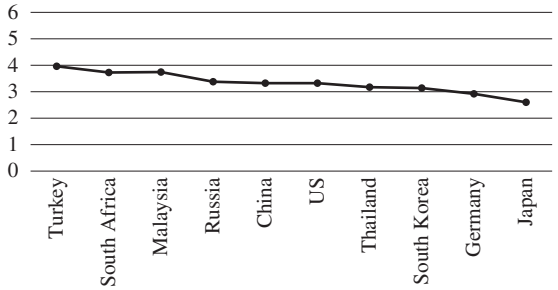


**Figure 2-5 Comparison of Countries' Average Values for the Item (C) Security**

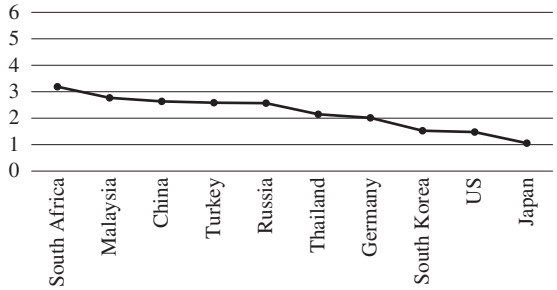


**Figure 2-6 Comparison of Countries' Average Values for the Item (B) Power**

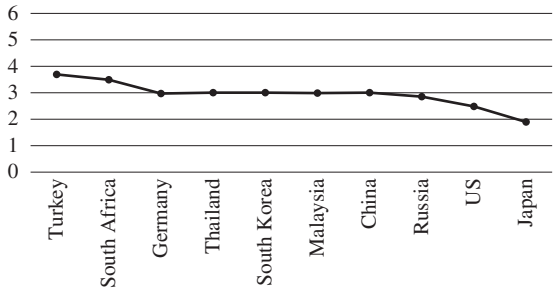


**Figure 2-7 Comparison of Countries' Average Values for the Item (G) Achievement**

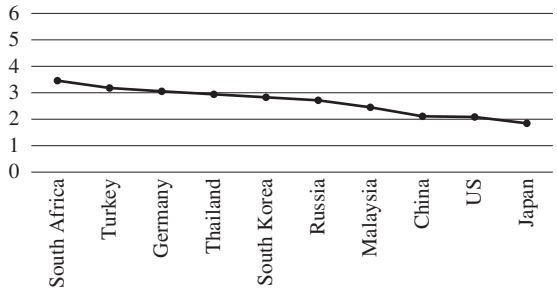


**Figure 2-8 Comparison of Countries' Average Values for the Item (D) Hedonism**

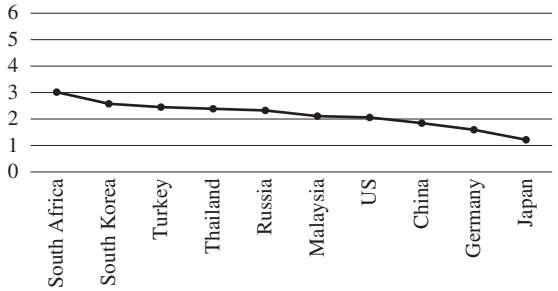


**Figure 2-9 Comparison of Countries' Average Values for the Item (H) Stimulation**

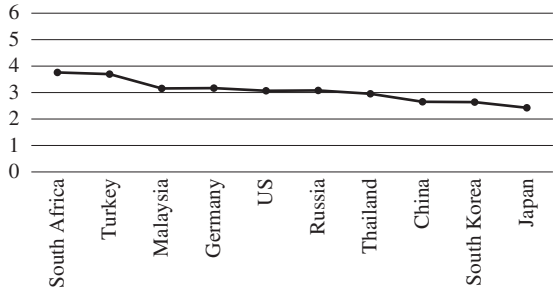


**Figure 2-10 Comparison of Countries' Average Values for the Item (A) Self-Direction**

These results show the following.

1) The highest mean value given for an item is for (K) Tradition (3.99) in Turkey, while the lowest is for (B) Power (1.06) in Japan. The important point here is that no items are rated at less than 1.00. That means that with respect to Schwartz's 10 value items, although differences in the degree of "likeness" are certainly observable from country to country, no country has a mean value corresponding to "Not at all like me" for any value item. This says that, at least with respect to this point, the similarity of the responses has been empirically confirmed.

2) Some value items show a relatively large difference and others a relatively small difference between the mean values among countries. The type with the smallest difference in mean value among countries is (J) Universalism (1.17). However, for two items－(K) Tradition (2.14) and (B) Power (2.06)－that difference is nearly double. From the viewpoint of an cross-national comparison of people's values, the focus on items with either large or small differences in mean values as described above could be an interesting starting point for a discussion of the convergence and divergence of values in contemporary societies. To clarify, items with small differences between countries suggest a convergence of values with regard to aspects of such values, whereas items with large differences suggest a divergence.

3) If we look at the ranking of each country by mean value for each value item, for a relatively large number of items, we see that some countries consistently ranked high and other countries low. Examples of the former were Turkey and South Africa, and an example of the latter was Japan.

In the case of Turkey and South Africa, for nearly all value items, regardless of the specific content, they ranked the highest. These two countries could therefore be characterized as "highly expressive" countries. In stark contrast to these two countries, Japan ranks the lowest for all items. This may be considered a difference in *expressiveness* in responding such questions in the first place, beyond differences of content in the question items on values. This could be interpreted as a Japanese tendency toward moderate expressiveness. If such is the case, it suggests that people's values can be classified not only in terms of *content,* but additionally from the perspective of *modes of expression.* This frame of reference lies outside of Schwartz's value types, which had previously been ignored. It adds a new dimension to value research－one that could be proposed as "value expression types." instead of "value motivation types."

**(B) Comparison of mean values for 10 items from A to K by country**

The results of Figures 3-1 to 3-10 show the following.

1) In Schwartz's circular continuum model (Figure 1), the types of items on the right half of the circle (J to C) contrast with those on the left half (A to B). From this point of view, it turns out that all countries show one point of similarity－how high its mean value is for each item. That is to say, in general, all countries have higher mean values for the items on the right side (Self-Transcendence and Conservation) than on the left side (Self-Enhancement and Openness to Change). The question is why? This could be a very interesting research topic for the future.

2) This study pays special attention to the mean value ranking of (B) Power and (H) Stimulation. These two items got a relatively low score in all countries. So, why does this deserve attention? Be-

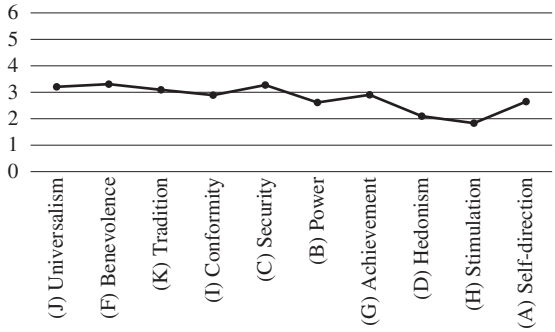


**Figure 3-1 Comparison of Average Values 10 Items in China**

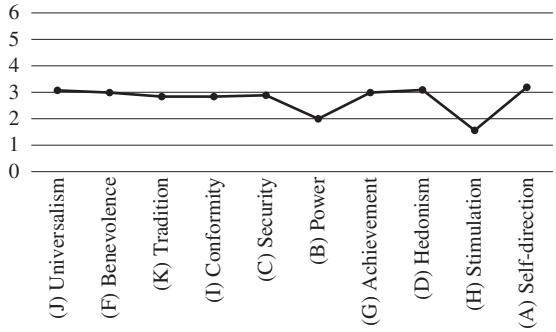


**Figure 3-2 Comparison of Average Values 10 Items in Germany**

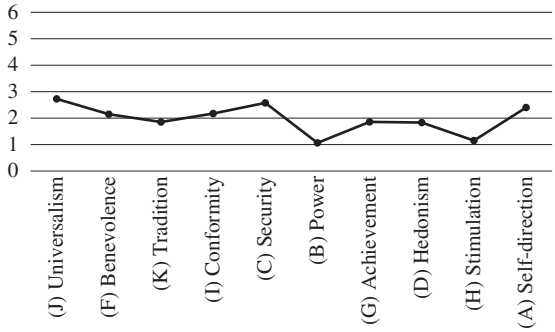


**Figure 3-3 Comparison of Average Values 10 Items in Japan**

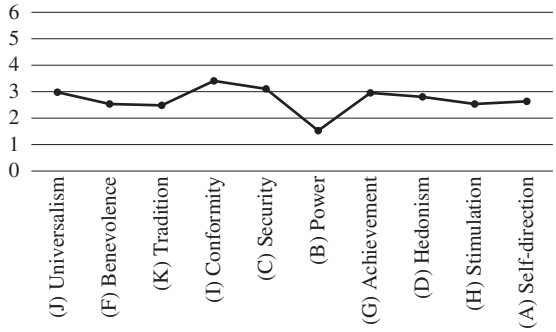


**Figure 3-4 Comparison of Average Values 10 Items in South Korea**

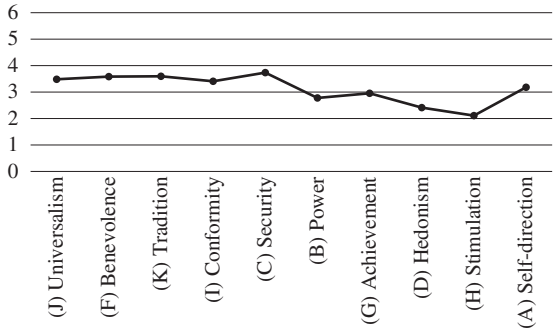


**Figure 3-5 Comparison of Average Values 10 Items in Malaysia**

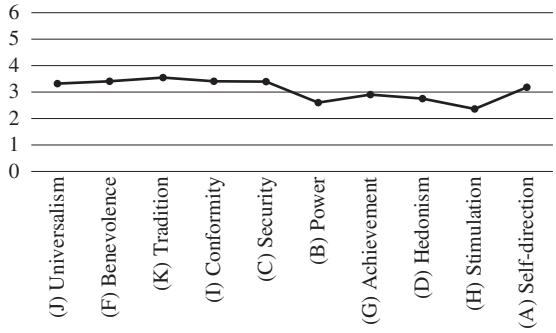


**Figure 3-6 Comparison of Average Values 10 Items in Russia**

cause in the past, it has been discussed in various forms how human beings live a power-oriented and stimulation-oriented existence, yet on a questionnaire survey that employs the self-rating method, it is shown that people have a tendency to give these values a relatively low rating. Such a phenomenon should be noted as a discrepancy between notions of discourse and self-realization. This, too, could be a very interesting topic to explore further in the future.

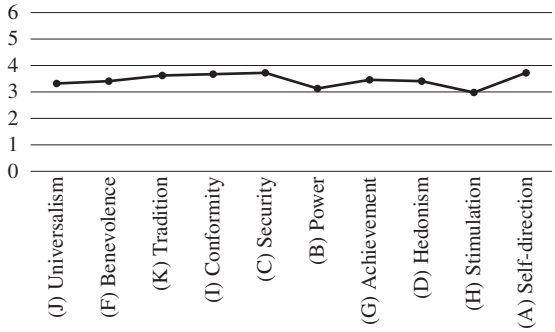


**Figure 3-7　Comparison of Average Values 10 Items in South Africa**

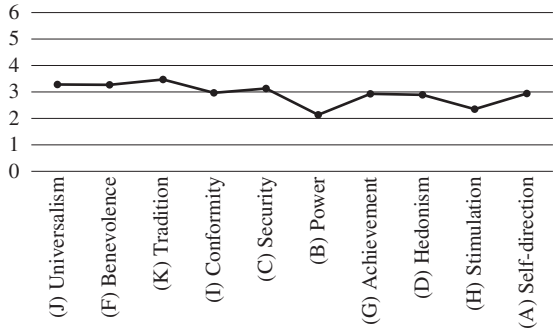


**Figure 3-8　Comparison of Average Values 10 Items in Thailand**

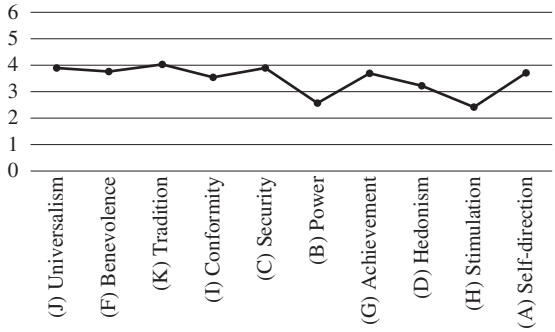


**Figure 3-9　Comparison of Average Values 10 Items in Turkey**

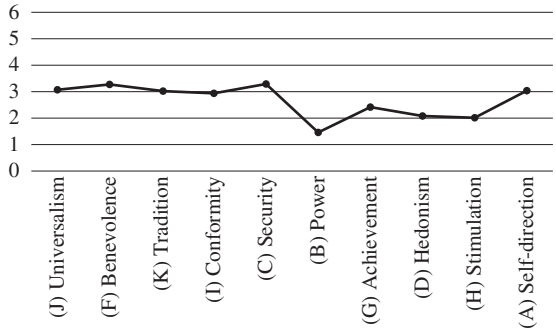


**Figure 3-10　Comparison of Average Values 10 Items in US**

## 2. Examination of interrelationships among Schwartz's 10 value items based on a correlation matrix

A correlation matrix was created for the ten countries targeted for data analysis. It is a very troublesome task to examine these ten correlation matrices in their original form, however. Therefore, for the purpose of our analysis, we created a table with the negative coefficients (shown by a minus sign) for each country and the values of those coefficients: (1) $r < -0.1$, (2) $-0.1 \leqq r < -0.2$, (3) $r \geqq -0.3$ (Table 3).

**Table 3　The Number of Negative Coefficients on a Correlation Matrix for Each Country**

| | $r < -0.1$ | $-0.1 \leqq r < -0.2$ | $r \geqq -0.3$ | Total |
|---|---|---|---|---|
| China | 4 | 1 | 0 | 5 |
| Germany | 9 | 2 | 1 | 12 |
| Japan | 4 | 0 | 0 | 4 |
| South Korea | 0 | 0 | 0 | 0 |
| Malaysia | 3 | 1 | 0 | 4 |
| Russia | 1 | 0 | 0 | 1 |
| South Africa | 0 | 0 | 0 | 0 |
| Thailand | 0 | 0 | 0 | 0 |
| Turkey | 4 | 0 | 0 | 4 |
| US | 0 | 0 | 0 | 0 |

These results show the following.

(1) In South Korea, South Africa, Thailand, and the United States, there are no negative coefficients.
(2) In the other countries, although there are negative coefficients, there are not many (less than 10%), except for the case of Germany.
(3) Furthermore, even when we saw negative coefficients, most of those are extremely small coefficients at less than -0.1.

So, what do the above results mean? Here we discuss the following methodological issue. Schwartz explains the circular continuum model as follows.

> In the circular continuum model, the values that are located in adjacent regions have similar meanings. The values located in the regions on the opposite side of the circular continuum model have the opposite meanings.

The issue here is this "opposite meaning" part. Does "opposite" mean incompatible? Certainly, from a logical standpoint, that would be the case. However, it seems that a deeper discussion is required on this point. Let's use proverbs to illustrate. That proverbs offer opposing concepts has been discussed in numerous ways to date. Specifically, there is an Eastern saying, "Tap even a stone bridge before crossing," which is contradicted by the saying, "You cannot catch a tiger cub unless you enter the tiger's den." Similarly, there is a saying, "A wise man does not court danger," which is contradicted by, "Not to do what is right in one's sight argues a want of courage."

In response to such proverbs, which are contradictory and incompatible in meaning, have we been lodging an objection from the viewpoint of logical consistency? In fact, no. We support the idea that the incongruent nature of those proverbs represents the flexibility of people's attitude toward life, reflecting the toughness of human beings able to address situations with both hardness and softness, as well as with duplicity. This idea supports the coexistence of opposite motivations. So, if opposite motivations can coexist, then with regard to Schwartz's value items, a person identifying with both of these question items − *Living in secure surroundings is important to this person; to avoid anything that might be dangerous;* and *Adventure and taking risks are important to this person; to have an exciting life* − is displaying a kind of dual nature, which is fully possible.

So, looking once again at correlation coefficients showing the relationship between these two question items in each country (Table 4), we see a negative correlation in four countries, Germany (-0.321), Japan (-0.063), Malaysia (-0.142), and Turkey (-0.059), while in the other six countries we see positive correlations. In the case of Japan and Turkey, even though the signs are negative, the numerical values are extremely small − at 0.063 and 0.059, respectively. In these two countries, the correlation between the two items could be less a negative relation than one that is almost no relation. Also, the value of 0.142 for Malaysia must be considered a small value by general standards.

From the above, we see that the two question items are positioned in an opposing relationship only in Germany. Germany is the only monistic country in terms of logical consistency. The other countries can be characterized as pluralistic. Thus, while it is literally true that "opposite meaning" means "incompatible" as mentioned above, in terms of what we learn from the questionnaire survey, it is clear that people do not always see it that way.

**Table 4　The Relationship between (C) "Living secure surroundings is important to this person; to avoid anything that might be dangerous" and (H) "Adventure and taking risks are important to this person; to have an exciting life"**

| | Correlation Coefficient |
|---|---|
| China | 0.105 |
| Germany | −0.321 |
| Japan | −0.063 |
| South Korea | 0.149 |
| Malaysia | −0.142 |
| Russia | 0.008 |
| South Africa | 0.393 |
| Thailand | 0.120 |
| Turkey | −0.059 |
| US | 0.013 |

## Ⅳ. Conclusion

Through data analysis on the ten value items in the World Values Survey above, several methodological issues arise with Schwartz's value research－especially with regard to the structure of the circular continuum model. Below, I would like to summarize the issues in itemized form.

A. From the examination of survey responses on Schwartz's value items, the following issues arise.

1. While points of similarity and points of difference pertaining to the content of values in each country are seen, the issue is how to interpret the results in light of the circular continuum model.

2. Beyond the content of values in each country, differences are seen in the expressive tendencies in responding such questions－highly expressive or moderate. The issue is how to interpret such tendencies in light of the circular continuum model.

B. From the examination of the correlation matrix showing the interrelationships among Schwartz's value items, the following issues arise.

1. In Schwartz's circular continuum model, value items located on opposite sides of the circle are considered to have opposite meaning, but when positive correlation coefficients in the correlation matrix are indicated, how are we to understand "opposite meaning"?

2. Some negative correlation coefficients are found in the correlation matrices, but in L. Guttman's Smallest Space Analysis used to construct Schwartz's circular continuum model, it is assumed that all relationships among the items in the correlation matrix are positive or zero. How should we understand this point?

**References**

Davidov, Eldad, Schmidt, Peter and Billiet, Jaak eds. (2011). *Cross-Cultural Analysis*: Methods and Applications, Routledge.

Schwartz, Shalom H. (1992). Universal in the Content and Structure of Values: Theory and Empirical Tests in 20 Countries, in M. Zanna ed., *Advances in Experimental Social Psychology.* Volume 25, San Diego: Academic Press.

Schwartz, Shalom H. et al. (2012). *Refining the Theory of Basic Individual Values.* Journal of Personality and Social Psychology, Volume 103(4).

**Appendix: WVS Question Wordings**

Now I will briefly describe some people. Using this card, would you please indicate for each description whether that person is very much like you, like you, somewhat like you, not like you, or not at all like you? *(Code one answer for each descriprion):*

| | | Very much like me | Like me | Somewhat like me | A little like me | Not like me | Not at all like me |
|---|---|---|---|---|---|---|---|
| V 70. | It is important to this person to think up new ideas and be creative; to do things one's own way. | 1 | 2 | 3 | 4 | 5 | 6 |
| V 71. | It is important to this person to be rich; to have a lot of money and expensive things. | 1 | 2 | 3 | 4 | 5 | 6 |
| V 72. | Living in secure surroundings is important to this person; to avoid anything that might be dangerous. | 1 | 2 | 3 | 4 | 5 | 6 |
| V 73. | It is important to this person to have a good time; to "spoil" oneself. | 1 | 2 | 3 | 4 | 5 | 6 |
| V 74. | It is important to this person to do something for the good of society. | 1 | 2 | 3 | 4 | 5 | 6 |
| V 75. | Being very successful is important to this person; to have people recognize one's achievements. | 1 | 2 | 3 | 4 | 5 | 6 |
| V 76. | Adventure and taking risks are important to this person; to have an exciting life. | 1 | 2 | 3 | 4 | 5 | 6 |
| V 77. | It is important to this person to always behave properly; to avoid doing anything people would say is wrong. | 1 | 2 | 3 | 4 | 5 | 6 |
| V 78. | Looking after the environments is important to this person; to care for nature and save life resources. | 1 | 2 | 3 | 4 | 5 | 6 |
| V 79. | Tradition is important this person; to follow the customs handed down by one's religion or family. | 1 | 2 | 3 | 4 | 5 | 6 |

# Methodological Examination of Schwartz's Value Research:

## Through Data Analysis of the World Values Survey


### ABSTRACT

The purpose of this paper is to conduct a methodological examination of the value research of Shalom Schwartz from a cross-national comparative perspective through a data analysis of the 6th World Values Survey (WVS). Schwartz's "circular continuum of values" is a structural model that shows the mutual relationships between the ten motivationally distinct types of basic human values: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security.

The 10 countries were selected for conducting a data analysis, namely Germany, US, Russia, Turkey, South Africa, Japan, South Korea, China, Thailand, and Malaysia.

In this paper, I have conducted the following methodological examinations.

1. The examination of survey response patterns on Schwartz's value items.
2. The examination of the correlation matrix showing the interrelationships among Schwartz's value items.

From the former examination, one issue arises. Beyond the content of values in each country, differences are seen in the expressive tendencies in responding such questions—highly expressive or moderate. The issue is how to interpret such tendencies in light of the circular continuum model.

From the latter examination, another issue arises. In Schwartz's circular continuum model, value items located on opposite sides of the circle are considered to have opposite meaning, but when positive correlation coefficients in the correlation matrix are indicated, how are we to understand "opposite meaning"?


**Key Words**: Schwartz's value research, circular continuum, World Values Survey, mean value, correlation matrix