

# People and Trust



Ryozo Yoshino

**Abstract** This chapter introduces a study of peoples' sense of trust in a paradigm of longitudinal and cross-national comparative survey, called CULMAN (Cultural Manifold Analysis). Firstly, I explain a history of the survey paradigm developed in the Japanese National Character Survey (JNCS) and the related cross-national survey for more than the past six decades. Secondly, fundamental social values of the Japanese and interpersonal trust as identified in the JNCS are summarized. Thirdly, a cross-national analysis of interpersonal trust and institutional trust is presented. Finally, I present some comments for future research.

**Keywords** Cultural Manifold Analysis (CULMAN) · Science of Data · Sense of trust · Japanese National Character Survey · Asia-Pacific Values Survey

## 1 Introduction: Longitudinal and Cross-National Surveys of National Character by ISM

This chapter introduces a study on longitudinal and cross-national comparative surveys by the Institute of Statistical Mathematics (ISM) over the past 65 years (see Table 1). The survey research covers many theoretical and methodological issues. Here I focus on peoples' sense of trust. The background and the significance of this study are as follows.

The ISM has been conducting a longitudinal nationwide social survey called the Japanese National Character Survey (JNCS) every 5 years since 1953 (Mizuno et al.

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This chapter is a shorter version of Yoshino [32] adapted for this book, with some updated data. See Yoshino [32], Yoshino et al. [36] and their references for detailed data with the following websites. [http://www.ism.ac.jp/ism\\_info\\_e/kokuminsei\\_e.html](http://www.ism.ac.jp/ism_info_e/kokuminsei_e.html) (Surveys) [http://www.ism.ac.jp/~yoshino/index\\_e.html](http://www.ism.ac.jp/~yoshino/index_e.html) (Cross-national Surveys) [http://www.ism.ac.jp/editsec/kenripo/contents\\_e.html](http://www.ism.ac.jp/editsec/kenripo/contents_e.html) (Survey Research Report).

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**Table 1** List of Main Surveys on National Character Conducted by ISM

1953–present	<i>Japanese National Character Survey (every 5 years)</i> (The most recent survey has been conducted in 2018.)
1971	Japanese Americans in Hawaii
1978	Honolulu residents and mainland Americans
1983	Honolulu residents
1988	Honolulu residents
1987–1993	<i>Seven-Country Survey</i> UK, FRG (West Germany) and France (1987), USA and Japan (1988), Italy (1992) and The Netherlands (1993)
1991	Japanese Brazilians in Brazil
1998	Americans of Japanese ancestry on the US West Coast (Seattle and Sant Clara)
1999	Honolulu Residents in Hawaii
2002–2005	<i>East Asia Values Survey (EAVS)</i> Japan, China (Beijing and Shanghai) and Hong Kong (2002), Taiwan and South Korea (2003), and Singapore (2004)
2004–2009	<i>Pacific Rim Values Survey (PRVS)</i> Japan, China (Beijing and Shanghai) and Hong Kong (2005), Taiwan and South Korea and USA (2006), Singapore and Australia (2007), and India (2008)
2010–2014	<i>Asia-Pacific Values Survey (APVS)</i> Japan and USA (2010), China (Beijing, Shanghai), Hong Kong and Taiwan (2011), South Korea, Singapore and Australia (2012), and India and Vietnam (2013)

(See [http://www.ism.ac.jp/ism\\_info\\_e/kokuminsei\\_e.html](http://www.ism.ac.jp/ism_info_e/kokuminsei_e.html) for the ISM Surveys)

[16]). By the term “national character,” we refer to characteristics reflected in peoples’ response patterns in questionnaire surveys (cf. Inkeles [13]). The survey covers various aspects of people’s attitudes and opinions in their daily lives. This research was closely related to the establishment of a scientific system of public opinion polling for the development of post-World War II democracy in Japan (Yoshino [32, 33]; Yoshino, Hayashi, & Yamaoka [35]). Stimulated by this survey, the now well-known surveys such as ALLBUS in Germany, the European Values Survey and the Eurobarometer in the EU, and the General Social Survey (GSS) in the USA have been initiated.

Since 1971, the JNCS has been expanded to cross-national surveys for a more advanced understanding of the Japanese national character in the context of comparative study. Our final goal is to develop a statistical study of civilizations that will give us fundamental information for the peaceful development of the world, under the paradigm of “Science of Data” (Yoshino & Hayashi [34]). Here, the Science of Data means a data-based exploratory and wholistic approach by which we overview a survey process starting from a survey design, preliminary survey, data collection based on statistical sampling survey, data analysis, to final report for policymaking. And, if necessary, we repeat the process and extend it to longitudinal survey or cross-national survey. Collecting data, we try to present multifaced survey data in order to facilitate

the understanding of the reality. This is closely related Tukey [24]’s “Exploratory Data Analysis” or Benzecri [2]’s “Correspondence Data Analysis”, although these three were independently developed.

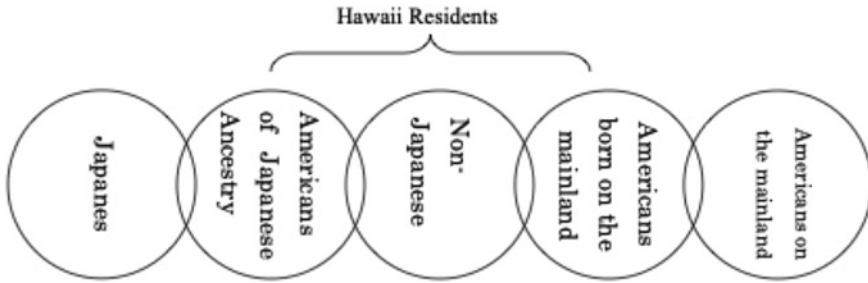
Cross-national survey must overcome multi-faceted methodological problems involving, e.g., different languages, different statistical sampling methods, and different peoples’ general response tendencies. There is no a priori knowledge regarding how these varying conditions influence peoples’ responses even in the cases where there is no substantive difference between the peoples. Thus, an important task for our study is to investigate those conditions under which meaningful cross-national comparability of social survey data is guaranteed. Many findings have been reported in our past publications (Hayashi [7]; Hayashi et al. [9]; Kuroda [15]; Yoshino [27–33]; Yoshino & Hayashi [34]; Yoshino, Hayashi, & Yamaoka [35]).

In our search for conditions that could assure meaningful cross-national comparability of social survey data, we decided at the onset that a comparison of two nations (or groups) with some similarities (e.g., the Japanese in Japan and Hawaii residents with Japanese ancestry) would be more meaningful than attempting to compare two totally different nations (or groups). Some nations (or groups) share certain common features such as race or language. Therefore, they provide meaningful links for comparison. Extending these links may eventually create a chain for global cross-national comparison. By developing the idea of spatial comparison in relation to temporal and thematic comparisons, we eventually have formulated our methodology called Cultural Linkage Analysis (CLA) which incorporates (1) spatial linkages of cross-national comparison; (2) temporal linkages inherent in longitudinal analysis; and (3) item-structure linkages inherent in the commonalities and differences in item response patterns within and across different cultures (e.g., on modernization, religious attitudes, work values, etc.) (see Fig. 1). Furthermore, this has been developed as a paradigm of Cultural Manifold Analysis (CULMAN), which introduces hierarchical structures into the three types of linkages within the CLA framework (Yoshino [28]). For cross-national comparison, a global map consisting of a set of local charts (corresponding to links of CLA) may be constructed. Each local chart covers a particular area or region, and some of these may partially overlap. The whole set of charts covers the globe. The set of charts may compose a sort of hierarchical structure, where each level of charts may correspond to a certain expanse of coverage (e.g., Japan, Asia, Eurasia, or the world), and the larger chart corresponds to the higher level. Furthermore, the larger chart may be associated with the less restricted cross-national scalability. In this approach, the concept of a spatial chart can be extended to both the temporal and item-structure links.<sup>1</sup>

As for the study of trust, although there are various definitions of “trust,” they may be roughly classified as “trust in transactions” or “trust in normative philosophy”

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<sup>1</sup>This approach may be contrasted to Inglehart’s World Values Survey that covers culturally diverse countries worldwide, using a single set of question items. There are some significant differences between his model and CULMAN. For example, (1) Inglehart’s cultural map classifies the world by a set of clearly classified cultural zones with definite boundaries, but a cultural manifold may consist of overlapping charts with a hierarchical structure and each chart may expand or shrink or merged with the others over time.



**Fig. 1** Cultural Linkage Analysis (CLA). An example of spatial linkage. Extension of comparisons of local pairs will lead to a global comparison. Each neighboring (overlapping) pair of charts corresponds to a certain questionnaire (a set of question items). Longitudinal Survey: Japanese National Character Survey(JNCS) (“Nihon-jin no Kokkumin-sei Chosa”)

(Hosmer [12]). These may be closely related to Uslaner [25]’s distinction between “strategic trust” and “moralistic trust.” Zucker [41] points out three methods for the production of trust: (1) process-based trust tied to past exchanges; (2) characteristic-based trust tied to personal characteristics, such as family background and ethnicity; and (3) institution-based trust tied to formal societal structures. Shapiro [22] criticizes the third category because he believes that trust cannot be institutionalized. Further, Zucker [41] claims that trust is not directly measurable.

Although the Zucker’s three categories of trust are mutually interrelated, my focus in this study is mainly on the second, i.e., trust based on personal characteristics. Besides, I pay much attention to the ways people’s trust appears in social survey data under the influences of culture and general social values as well as general response tendencies due to gender or ethnic differences. See Yoshino [33] for more explanation on background of our research.

## 2 Social Values and Interpersonal Trust

Some researchers say that “trust” is not directly measurable. Fukuyama [5], for example, suggests to use a measure of distrust such as rates of divorce or murderer which are directly measurable. There may be no universal scale on sense of trust beyond differences in cultures and time. Or even if there is such a scale, it may not be linear with respect to various factors (cf., Yoshino [27]; Yoshino & Tsunoda [39]). I believe, however, that people’s responses in questionnaire surveys can reveal certain aspects of their sense of trust, if we can adequately analyze the following: (1) the time series patterns or cross-national patterns of responses, (2) possibility of nonlinear correlations between “trust” and other social variables (e.g., class, education, income, subjective health, etc.), and (3) general response tendencies associated with genders, nations, and personality types.

## 2.1 *Fundamental Dimensions of Japanese Social Values*

Hayashi [7] and Hayashi and Hayashi [8] show that three dimensions underlie the Japanese national character: (1) “Giri-Ninjo” interpersonal relationship, (2) contrast between the modern versus tradition in their way of thinking, and (3) religious attitudes (or heart/mind). Here “Giri” represents the obligation to uphold social duties and “Ninjo” represents the more visceral warm-heartedness.

The Japanese shows a particular attitude distressed in balancing “Giri” and “Ninjo” on the Giri–Ninjo continuum in their interpersonal relationships. Overall, basic Japanese interpersonal attitudes have been stable, at least over the last six decades, and probably much longer. Most likely, the basic interpersonal attitudes concerning human bonds, sense of happiness, life satisfaction, optimism, etc. tend to be stable in any country over time (Yoshino & Osaki [38]). On the other hand, certain aspects are sensitive to changes in economic or political conditions and more or less vary in the short term in most countries. In the study of JNCS data of 1953–2008, Sakamoto [21] points out remarkable changes of the response patterns in the periods of 1973–78, 1988–93, and 1998–2003. In all those periods, we have seen sudden changes of economic conditions due to, respectively, the oil shock, the collapse of bubbling economy, and the Asia Financial Crisis.

As for the second dimension, the Japanese had long been facing a sort of emotional and institutional conflicts between the modernization (effectively Westernization or Americanization) and the maintenance of Japanese tradition since the Meiji Restoration of 1868. In those days, the Japanese faced a situation necessarily to master Western science and technology and to adapt it into a Japanese style for national survival (security and prosperity). This situation was called as “Wakon–Yousai” (i.e., Use Western technology with Japanese spirit). This enduring effort had underlined the dimension of the traditional versus modern orientation in the Japanese way of thinking, at least, until the early 1970s or so. The then younger generation born more than 10 years after the end of World War II started to show some significant change. Their response patterns looked conservative on nature, science, and technology, so some people called it “the return to tradition.” The conservative attitudes looked a reaction to rapid industrial development and environmental changes in the 1970s or so.

Since signs of generational changes appeared around 1978, the Japanese ways of thinking became more complicated than ever. Since the early 1990s, Japan has been in a period of transition from the established social system to a system of a highly advanced information age. Parallel to the world order change after the end of cold war, this situation brought disruption not only to the fields of science and technology but also to the fields of economics and politics under the name of “globalization.” In this period of confusion, the majority of Japanese people came to distrust traditional systems such as banking and bureaucracy as well as the legislature, police, etc. (Yoshino [27]).

As for religion, about one-third of the Japanese have religious faith but most of the Japanese think that religious heart/mind is important (Hayashi & Nikaido [10]; Mizuno et al. [16]). In the world-wise secularization after the WWII up to the end of

cold war, the Japanese is not an exception on this trend, but their religious heart/mind seems not much changed. For more advanced arguments, we may need to face some significant differences of religion between the East and the West (Hayashi & Nikaido [10]).

## 2.2 *Interpersonal Trust of the Japanese*

The past decades have developed psychological studies of measures of interpersonal trust. Among others, a set of three items from the GSS has been used to measure people's sense of trust (Uslaner [25, 26]; Yoshino & Osaki [38]). Although the GSS started as a sort of American version of the JNCS, we have adopted the three items from the GSS for our survey since 1978. They are stated as follows (for the Japanese questionnaire, see <http://www.ism.ac.jp/kokuminsei/index.html><sup>2</sup>).

Q36. Would you say that, most of the time, people try to be helpful, or that they are mostly just looking out for themselves?

1. Try to be helpful, 2. Look out for themselves.

Q37. Do you think that most people would try to take advantage of you if they got the chance, or would they try to be fair?

1. Take advantage, 2. Try to be fair.

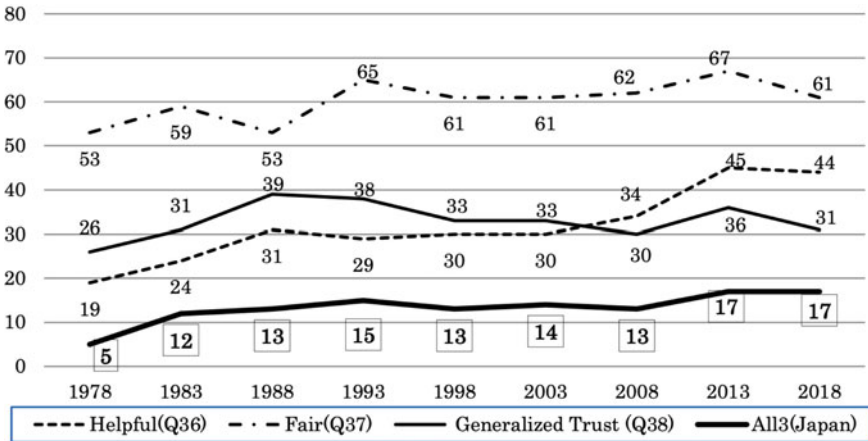
Q38. Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?

1. Can be trusted, 2. Can't be too careful.

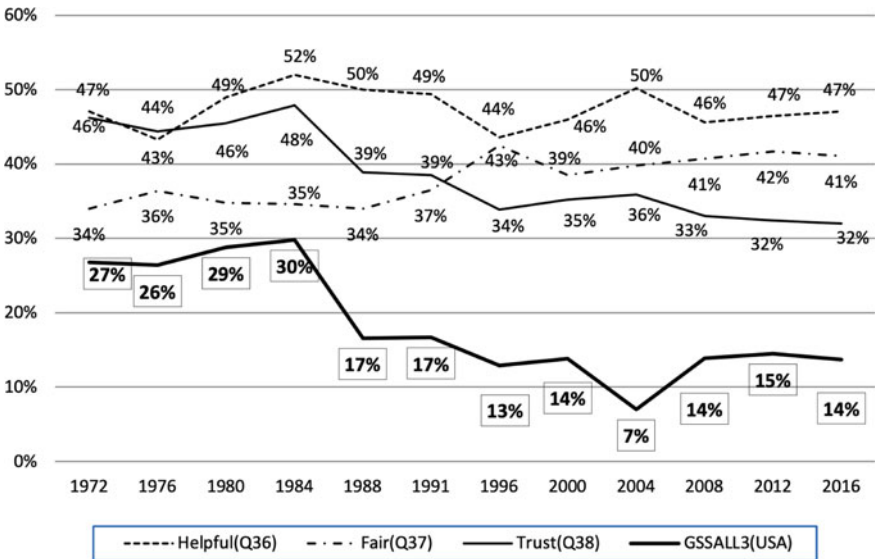
The source of these items was obtained by Rosenberg [20] selecting five items among hundreds of items when he constructed a Guttman scale called "Faith-in-People Scale" with a regeneration rate of 92% in a student survey. The items were on trustworthiness, honesty, goodness, genericity, and brotherliness. These items were used for research by Almond and Verba [1] and others, and then the ISR survey (the Survey Research Center, the University of Michigan) and the GSS (NORC, the University of Chicago). In the process, those items have been gradually modified and the abovementioned three items with binary response scales are survived (Uslaner [26]).

Each of the three items is supposed to capture somewhat different aspects of trust. That is, Q36 is related to trust in neighbors (or the norm of reciprocity), Q38 is related to general interpersonal trust, and Q37 is concerned with something in between the other two items. Our data repeatedly demonstrate that Q37 and Q38 are more correlated for the Japanese, whereas Q36 and Q37 are more correlated for

<sup>2</sup>Throughout this paper, codes such as Q36 correspond to the common item code of the APVS questionnaire. For the exact wording of items and the precise data, see [http://www.ism.ac.jp/editsec/kenripo/contents\\_e.html](http://www.ism.ac.jp/editsec/kenripo/contents_e.html) or [http://www.ism.ac.jp/ism\\_info\\_e/kokuminsei\\_e.html](http://www.ism.ac.jp/ism_info_e/kokuminsei_e.html). As for Q38, there are slight differences in wording between our cross-national Japan survey and the Japanese National Character Survey. In the process of translation and back-translation check to make a Japanese version of the cross-national survey questionnaire, we ended up with these two versions. This difference may produce some percentage differences in the response distributions, but the overall pattern is stable.



**Fig. 2** Percentages of positive responses of GSS trust items (Q36, Q37, and Q38) and percentage of positive response to all the three items in Japan. The data are from the Japanese National Character Survey, except the 1988 data from the Seven-Country Survey. *Note* Some papers, such as Yoshino [30, Fig. 1] and Yoshino [31, Fig. 7.3], included an error in the 1978 data, but it has been corrected here



**Fig. 3** Percentages of positive responses of GSS trust items (Q36, Q37, and Q38) and percentage of positive response to all the three items in USA. The data are from the SPSS format of GSS (downloaded from the website on May 23, 2019)

Americans. Some countries such as India may consistently show unique patterns of correlations, whereas other countries such as South Korea may show less-stable patterns over years. Yoshino [32] gives more details of cross-national differences on the three pairs of correlations between the three items.

The response distribution for the Japanese over the past decades (1978–2018) is shown in Fig. 2. As a measure on a sort of “total interpersonal trust,” I often use the percentage of those who choose positive categories to all of Q36, Q37, and Q38. (Because Q36 was missing in some of our past surveys, I sometimes use also the percentage of those who gave positive answers to both Q36 and Q38. The rankings on the two items and on the three items are mostly consistent over the countries/areas where the three items were used (See Fig. 4).

On the measure of “total interpersonal trust,” both the Japanese and Americans (Fig. 3) have been fairly stable but the Japanese may be more stable than Americans, at least during 1983–2008. We need to pay attention to the changes in 1978 and in 2013. The Japanese experienced a nationwide panic trying to hoard necessities for their daily lives after the oil crisis and the Nixon shock (i.e., the unilateral cancellation of the direct international convertibility of the US dollar to gold) around 1973. Necessarily, this would have downgraded mutual trust. On the other hand, in the disaster of the Great East Japan Earthquake of 2011, people run to the devastated area from all over Japan to help the suffered people. Still under the lasting economic depression, many people considered how they could contribute to recovery of the area. Comparing to those suffered in the great disaster of earthquake and the succeeding nuclear plant accidents, all the Japanese must have felt that they must be satisfied with their lives and have to appreciate mutual assistances. Naturally, this would have raised mutual trust.<sup>3</sup> If Q36, Q37, and Q38 are separately studied, the Japanese data also show more changes over the years. The changes may confirm that the economic and political structural reformation damaged the Japanese sense of trust, roughly, during 1993–2008. Since the postwar time of WWII, the life-long employment system of Japan provided for better job security—workers’ salaries may become lower, but they can’t be so easily fired. This may explain the higher levels of trust (i.e., the relative stability of response patterns on Q36, Q37, and Q38) found in the Japanese samples than among the American ones, at least during 1983–2008.

But, in the early 1990s, the reformation under “globalization” started to force the Japanese to change economic, political, and social systems, looking for efficiency or internationalization disregarding of the Japanese structures rooted in historical background or culture. The change of the social systems attacked even interpersonal systems of family, school, and workplace, disturbing people’s heart and mind. The “lost two decades” since the collapse of bubbling economy around 1991, after all,

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<sup>3</sup>For the study of longitudinal survey data, as well as cross-national surveys, we need to be careful of changes of valid questionnaire returns over decades. Generally, respondents who participated in a survey might be biased to be more trustful than refusers. Thus, we tend to get more trustful respondents in surveys of the lower response rates. For the change of response rates of the JNCS over six decades, see: <https://www.ism.ac.jp/kokuminsei/en/page9/page13/index.html>. Also see Yoshino [33] for possible misunderstanding of longitudinal data on Japanese high school students’ happiness.



resulted in confusions and failures not only in the Japanese systems but also in foreign banks and commercial companies which attempted to take advantage of the opportunities in Japan. Meanwhile, the government has lost people's trust in the national pension system. Senior people rely on younger people for future financial support, but the population of younger generations has been decreasing, and the younger are less motivated to pay pension costs, in consideration of the balance. These situations, originally due to distrust on governmental institution, have necessarily led to a gap of consciousness on social institutions between the young and the senior people.

Incidentally, the new graduates during, roughly, 1993–2004 are called “Syusyoku Hyoga-ki Sedai” (Ice Age Generation of Job Market) or “lost generation” because they faced remarkable difficulties to get regular job positions under the rapid recession. They are now in their 30s or 40s, but still face difficulties of getting positions of regular employees, in spite of recent economic recovery. Because Japanese job market is mainly for new graduates, those of Ice Age Generation meet much more disadvantages than younger graduates. At last, the government started amending the situation, demanding the Japanese business world to employ them as regular employees.

Looking back over the last 30 years, during the prosperity of the 1980s, there was a shift of young men's social values toward individualism and then personal preference (give priority on personal matters). But the structural reforms of the 1990s led to the economic recession and the departure from lifetime employment. As a reaction, human relationships in the workplace seem reconsidered (regression to tradition), among others, in young people.

Yoshino [27] discussed several aspects of trust, such as trust in politics, science, and technology, as well as the work ethic of the Japanese. He concluded that some aspects of trust may be variable according to economic and political conditions, whereas some others may be more stable. Although the world used to have a stereotype of the Japanese workers called the “economic animal” in the 1980s, their attitudes and ethic toward work seem to be influenced by economic and political conditions.

### 3 Cross-National Surveys on Trust

#### 3.1 *Sense of Interpersonal Trust*

Our cross-national surveys also included the three items on interpersonal trust from the GSS. Table 2 is the data from the Asia-Pacific Values Survey (APVS) (2010–2014). Yoshino [32] and Yoshino, Shibai, and Nikaido [36] show the response distributions for most of the countries/areas that we have surveyed over the past four decades. See Figs. 2 and 3 also.

Miyake ([9], Chap. 7) presented an analysis on our Seven-Country Survey. He concluded that the trust scale had correlations with gender and religion and stronger

**Table 2** Percentages of positive responses to three GSS items on trust in the Asia-Pacific Values Survey (APVS)

Year	2011	2011	2011	2011	2012	2012	2013	2012	2010	2010
	Beijing	Shanghai	Hong Kong	Taiwan	South Korea	Singapore	India	Australia	USA	Japan
Q36	72	66	43	46	52	50	55	59	51	41
Q37	57	58	40	53	53	49	34	63	53	57
Q38	42	36	21	21	32	34	45	45	31	44

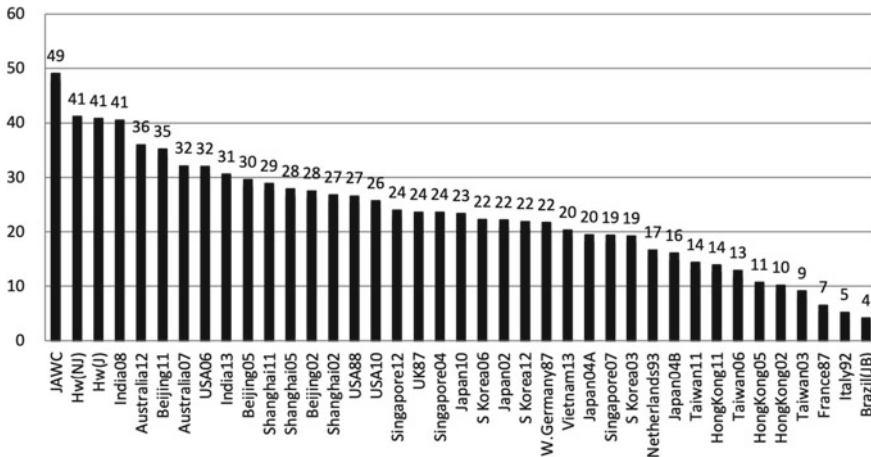
Q36 “People are always trying to be helpful to others.”

Q37 “People are trying to be fair.”

Q38 “People can be trusted”

correlations with family income, educational level, and social class. On this scale, West Germany, the UK, and the USA scored higher than Japan and the Netherlands, but the difference was small. The French and Italians clearly scored lower than in other countries. In addition, those who had religious faith gave more positive response rate (“try to be helpful”) to item Q36, irrespective of their religious affiliation. For Q37, women gave more optimistic answers (“they would try to be fair”) than men. As for item Q38, there was a clear difference between social classes in all seven countries. That is, the higher the social class, the more trustful the respondents were. The difference between classes was remarkably large in France and the USA. Observing that the higher level of education was associated with the greater trust, Miyake suspected that the association was caused by the correlation between education and social class. (Although there was a relatively strong correlation between education and social class, and between education and income in the USA, this was not necessarily the case for other countries.) Using the same data, Yoshino [27] showed positive correlations between trust and social class or income in the USA and the UK but nonlinear correlations in the other five countries, including Japan and West Germany (i.e., the middle social class shows the higher trust rate than the lower or the higher). Incidentally, Yoshino and Tsunoda [39] suggested nonlinear relationship between subjective health and sense of trust.

Figure 4 shows the ranking of the percentages in each country of those who gave positive answers to both Q36 and Q38. The measure seems fairly stable within the countries/ areas when repeatedly surveyed over years. Interestingly, the Japanese immigrants in the USA and Brazil are ranked, respectively, as the highest and the lowest. That is, JAWCS (Japanese Americans on the West Coast) is higher than the general Americans, whereas JB (Japanese Brazilian) is lower than the Latin countries (France and Italy). The percentages of positive response in the USA and the UK were high, whereas those in Italy and France were low. This may be consistent with Fukuyama’s [5] theory contrasting Japan, the USA, and Germany as highly trustful countries with China and Italy as less trustful countries. His arguments are based on the assumption that the former countries have well-developed intermediate civic organizations between the government and families, whereas the latter have established atmosphere of strict political centralization in the past long histories.



**Fig. 4** The percentages of positive responses to both Q36 and Q38 (GSS) Abbreviation: JAWCS: Japanese Americans on the West Coast (USA), HW(J) or (NJ): Hawaii Residents (Japanese) or (Non-Japanese), Brazil (JB): Japanese Brazilian in Brazil. Numbers (e.g., 88 or 03) show the survey years (e.g., 1988 or 2003). *Note* Fig. 2 of Yoshino [30] included an error of Australia 2012, but corrected in the figure above

A close look at this figure, however, shows a more complicated reality because the percentages of positive responses of Mainland China (Beijing and Shanghai) were higher than might have been expected by the Fukuyama’s argument. There may be several possible explanations for this. First, the data really do indicate that the Chinese have a higher sense of interpersonal trust. (Probably they may be focusing on in-group relationships when responding to those items). Second, the Chinese respondents might have tried to show a higher sense of interpersonal trust because they were sensitive to their international reputation, such as Fukuyama’s contention. Third, the questionnaire items were constructed as a trust scale for Americans, so they may not be suitable for the measurement of trust in other nations. Fourth, we need to be careful about the political and sociological implications of the trust scale. For example, Dogan ([3, p. 258]) states, “Erosion of confidence is first of all a sign of political maturity. It is not so much that democracy has deteriorated, but rather the critical spirit of most citizens has improved.” This suggests that we need to distinguish between the face value of a scale and its implications. In this context, trust and distrust may not be opposite on a unidimensional scale but instead may be closely related in a sort of multidimensional mind structure. Furthermore, people may give the same response for different reasons or different responses for the same reason. Therefore, for a more meaningful comparison of countries, it is necessary to consider peoples’ responses with objective measures on, e.g., economics and politics, as well as general response tendencies of those peoples. As such, I may in this study give some interpretations of response patterns on certain items, but they should necessarily be considered tentative.

Lastly, I note on general response tendencies (Yoshino, Hayashi, & Yamaoka [35]). Yoshino and Osaki [38] reviewed our past surveys on trust and subjective well-beingness, and concluded that the long-term tendency is relatively stable over time regardless of objective economic or political conditions (cf. Hofstead, Hofstead, & Minkov [11]) although a serious incident or disaster perturbs the stability.

As for general response tendency of each nation, for example, the Japanese tend to avoid polar answers and prefer intermediate response categories (or “Don’t Know”), the French tend to choose critical categories, and the Indians tend to choose optimistic categories. Furthermore, as to gender differences, women show stronger self-disclosure than men (Yoshino [30, Sect. 2]; Yoshino et al. [35, pp. 109–111]). This may lead a superficial contradiction, e.g., the women show higher sense of satisfaction when asked about their satisfaction, whereas they show higher sense of dissatisfaction when asked about their dissatisfaction.

### 3.2 *Trust of Social Institutions and Systems*

The questionnaires of the APVS included the same items on institutional trust used in the World Values Survey, with an additional item on trust in science and technology. The items are stated as in Table 3.

Table 4 shows the response distribution of the APVS. (Yoshino et al. [36] show all data from most of countries that we surveyed, which would be helpful to read the following explanation with them.) To reduce the effects of general response tendencies particular to individuals or countries, Yoshino [29] transformed the response data from the East Asia Values Survey (EAVS) (2002–2005) into standardized scores

**Table 3** Q.52. How much confidence do you have in the following? Are you very confident, somewhat confident, not confident, or not confident at all?

	Very confident	Somewhat confident	Not confident	Not confident at all
a. Religious organizations	1	2	3	4
b. The law and the legal system	1	2	3	4
c. The press and television	1	2	3	4
d. The police	1	2	3	4
e. Federal bureaucracy	1	2	3	4
f. Congress	1	2	3	4
g. NPO/NGO (nonprofit and nongovernmental organization)	1	2	3	4
h. Social welfare facilities	1	2	3	4
i. The United Nations	1	2	3	4
j. Science and technology	1	2	3	4

**Table 4** Institutional Trust of WVS Items

Item	2011		2011		2011		2011		2010		2012		2012		2013		2013	
	Beijing	Shanghai	Hong Kong	Taiwan	USA	South Korea	Singapore	Australia	India	Japan	India	Australia	India	Japan	India	Japan	Vietnam	
Q 52a	27	36	58	75	58	41	82	44	87	13	87	44	87	13	87	13	79	
Q 52b	85	82	86	53	56	51	83	78	78	72	78	78	78	72	78	72	94	
Q 52c	68	64	56	44	21	63	78	33	70	70	33	33	70	70	70	80	80	
Q 52d	75	72	69	59	65	46	92	89	59	70	92	89	59	70	59	70	85	
Q 52e	83	77	50	46	26	34	89	47	49	38	47	47	49	38	49	38	93	
Q 52f	83	75	53	38	22	17	88	46	55	25	46	46	55	25	55	25	95	
Q 52g	41	45	64	56	51	42	80	74	61	49	74	74	61	49	61	49	86	
Q 52h	78	70	81	69	48	59	83	79	75	71	83	79	75	71	75	71	88	
Q 52i	59	54	70	61	40	68	82	63	60	59	82	63	60	59	60	59	90	
Q 52j	95	89	85	86	76	75	91	92	90	83	91	92	90	83	90	83	95	

The figures show percentages of sum of positive categories “1. very much confident” and “2. confident somewhat.” APVS

country by country. Here “general response tendencies” mean, e.g., the Japanese tend to avoid polar responses than the Americans (a sort of variances of the range of responses). But let us use an easier way that Yoshino [30] used for the Pacific Rim Values Survey (PRVS) (2004–2009). First, the original response categories are re-categorized to sum up the percentage of responses to positive categories (“1” and “2”). Second, the percentages of positive responses are compared item by item within each country. This yields a rank order of items in each country. Third, the rank orders of all countries involved are compared. This procedure results in the loss of some information from the original data, but it may provide more stable cross-national comparability (unless the rank orders are unstable). Yoshino [32, Table 3a, 3b, and 3c] confirms the generally consistent patterns in the countries or areas participating in all three surveys of APVS, PRVS, and the East Asia Values Survey (EAVS). For example, the item-by-item differences of percentages between the Japan surveys in 2002 (EAVS), 2004 (PRVS), and 2010 (APVS) were almost within the margin of the sampling error. The maximum difference was about 10%, for example, on NPO/NGO (Nonprofit Organization/Nongovernmental Organization). (The percentage on NPO/NGO changed from 55% in 2002 to 45% in 2004 and then up to 49% in 2010. NPO/NGO activities had been increasing and some disguised NPO/NGOs had managed illegal businesses in the early 2000s. This was one of the reasons that the Japanese laws on registered organizations were substantially revised in 2008.)

In Table 4, except for India, Singapore, Vietnam, the USA, and Hong Kong, in all the studied countries or areas, there was a low degree of confidence in religious organizations. Even in these five countries or area, the relative degrees of confidence were not very high compared with all the other items for each country, except for India. Japan and Mainland China indicated remarkably negative attitudes toward religious organizations. The percentage of positive responses among the Japanese was lower than among the Chinese. However, of the 10 items on Q50, the percentage of positive responses was the lowest for religious organization among Chinese. Most of the Japanese respect religions or the “religious heart/mind” even when they do not have religious faith (Hayashi & Nikaido [10]). However, they may keep cautious about “religious organizations” because some religious groups, such as the “Aum Shinrikyo” (a religious cult), caused disasters in the 1990s. In China, the government is very sensitive toward religious groups because, in the long history of China, religious groups frequently overthrew governments. In some countries, some religious groups are closely linked to terrorism.

The percentages of responses that show confidence in authority such as the “police,” “government,” and “Congress” may represent various patterns of attitudes; these are likely concerned with democracy. Because free criticism is allowed in democracy, a negative attitude does not necessarily mean the negation of such authority, and it may reflect a mature democracy in some countries (Dogan [3, p. 258]). Thus, the percentage of positive (or negative) responses may not be linearly proportional to the degree of political maturity. Table 4 shows, for example, the USA’s lower degrees of confidence in the press and TV and in Congress. This may be a critical attitude of matured democracy, or it may be a reflection of current confusions of democracy, or both.

As for science and technology, all the countries or areas showed a high degree of confidence. Hayashi [7] and Zheng and Yoshino [40] presented cross-national analyses of data on science and technology from our seven-country survey. Hayashi [7] concluded that the Japanese generally have positive attitudes toward science. They were, however, negative regarding scientific approaches toward the understanding of the human heart and mind (“kokoro” in Japanese), solving social and economic problems, and the possibility of living in space stations in the near future (at the time of the survey in 1988). The response pattern of West Germans in 1987 was similar to that of Japanese in the sense that they were also more negative about science and technology than those in other Western countries. However, they were not so negative toward the applications of science and technology to social problems as well as psychological problems of individuals as the Japanese were. This might be related to that the theories of Hegel and Marx and the psychological theories of Freud originated in the German culture area.

As for data from the APVS, all of the countries or areas were highly positive toward science and technology, with rates of positivity for that item being the highest among all items. In particular, the rates for Mainland China were remarkably close to 100% in both the PRVS and the EAVS, although the rates were slightly down in the APVS. There may be several possible explanations for this. On the one hand, the high rates may represent the fact that, since the late 1970s, China has been emphasizing the scientific reformation of government agencies, military systems, and social systems as a priority in their social planning. On the other hand, until recently, they had placed priority on economic development and they had not paid much attention to the negative impact of science and technology that advanced industrial countries have experienced in the past. After the Beijing Olympics in 2008 or even slightly earlier, the Chinese government started paying attention to the negative side of rapid economic and industrial development and began planning to improve environmental conditions, including serious air, soil, and water pollution. Incidentally, they started also paying attention to political issues, such as the social inequality between urban and rural areas. They are struggling to deal with these domestic problems, but complete solutions seem still far away to many observers’ eyes (Reuters [18, 19]), despite their rising power in international politics. Furthermore, under the recent slowdown of economic development, environmental improvement may not be on the government top priority. And serious pollutions in the urban areas sometimes go over to the neighboring areas and countries. More recently, however, certain steady environment improvements in some rural areas are reported [Y. Chen, personal communication, August 17, 2019].

As a final comment in this section, it should be noted that Sasaki and Suzuki [23, Chap. 11] concluded that “a single scale is not adequate to measure people’s sense of trust in science and technology because people’s attitudes differ from one issue to another within the fields of science and technology.” This is also the case with our study on people’s sense of trust. Note that we have Japanese Nobel Prize Laureates in the 1990s–2010s more than the past. The JNCS (Nakamura, Yoshino, Maeda, Inagaki & Shibai [17, p. 15]), however, shows a clear decrease of self-confidence in science & technology during “the lost decade (1993–2003 or so).” Thus, some

aspects of confidence are more variable due to economic or political conditions, whereas generalized interpersonal trust is more stable.

Incidentally, Yoshino [32] gives a summary on regional and generational differences among Japanese immigrants in Hawaii, Brazil, and the U.S. West Coast. It touches also ethnic differences (Chinese, Malays, and Indians) in Singapore, and between indigenous Taiwanese and Chinese mainlanders in Taiwan. Domestic ethnic differences on trust are often linked with domestic and international political issues. Mutual trust is a key for peace.

## 4 For Future Research—Universal Values of Human Bonds

This chapter has shown a longitudinal and cross-national study of peoples' sense of trust. As mentioned, however, we need to be cautious in interpreting the results because survey data on trust are often a compound of many variables, including general response tendencies and respondent biases on participation of survey.<sup>4</sup> Issues on cross-national comparability might never be completely solved because of significant differences of infrastructures on survey conditions unique to each country. But I believe that elucidations of those differences themselves reveal each country's situation on economy, politics, and social conditions, beyond superficial comparison of survey data. I present several comments for our future research as follows.

First, for mutual understanding between East and West, we need to pay much attention to methodological issues in measuring social values. Scaling of trust may caution us on the applicability of a certain "single" scale invented in Western cultures for Eastern cultures, or vice versa. Gallup ([6], p. 461) reported that, in their global survey, they could not find a very poor but still happy people. Later studies, however, have found examples not consistent with the pattern of Gallup report. For example, Brazilians were very optimistic even when Brazil was the worst debtor nation in the 1980s (Inkeles [13]). Inglehart reported a positive correlation between economic development and life satisfaction for some 20 countries in the 1980s (Inkeles [13, pp. 366–371]). However, life satisfaction of Japan in the 1980s was lower than it was in 2003 or in 2018, although Japan was prosperous in the 1980s but struggled with a recession in the 2000s–2010s. Thus, we need to be careful regarding peoples' general response tendencies in the measurement of social values.

Second, people's negative responses may not necessarily mean a lack of a sense of trust. As Dogan [3, p. 258] suggested, some people express distrust or complaint toward the government or political leaders, not because they lack trust, but because they know that it is a way to improve their own country and eventually our world in a democratic way.

Third, I give a comment on the CULMAN framework. The last century was the time of the expansion of Western civilization, and this century is said to be the time of Asian revival. Differences between cultures or civilizations occasionally

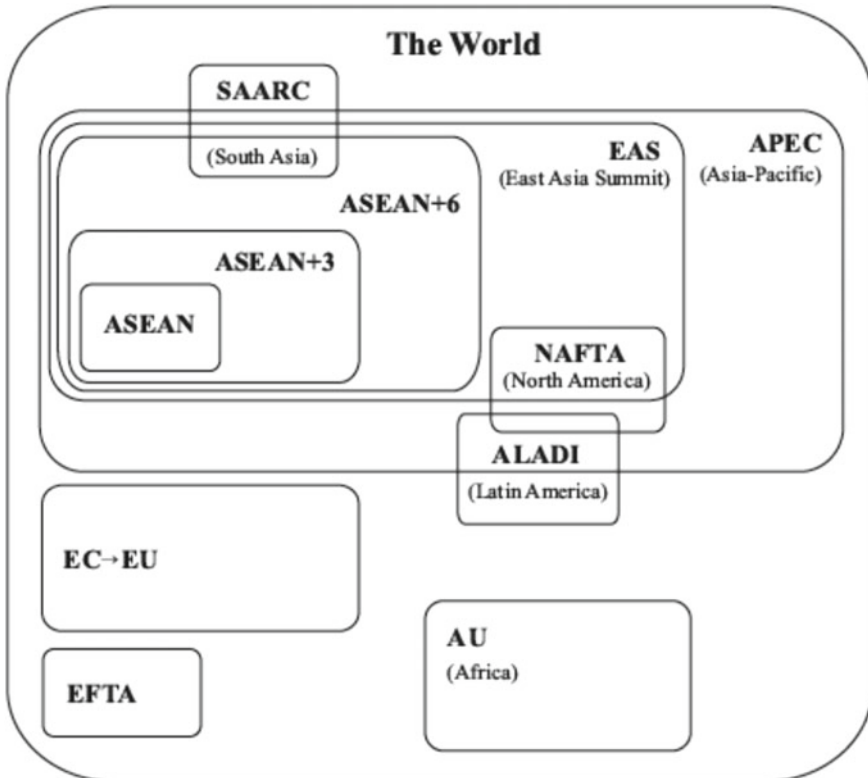
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<sup>4</sup>See Footnote 3.



prevent us from deeply understanding each other. In this time of globalization, world leaders should be knowledgeable about world geography and history, and sensitive to peoples' social values if they wish to take seriously their responsibility to develop and maintain world peace. In studying world history, we should remember that there are various ways of successful social development.

Some institutional systems or customs are changing, converging toward more universal ones under the influence of transnational exchange or trade. Other systems are, however, becoming more sensitive to cultural differences as a reaction to globalization. The last three decades has shown that, at least for the foreseeable future, globalization will not lead us to a single unified global culture. This is consistent with a theory of Cultural Evolution that more variations enhance chance of survival. (cf. Inglehart [14, p. 42] presents a theory of cultural evolution that the value systems of different cultures may not be converging but changing in the same direction on "self-expressive values.") I think CULMAN can be utilized to develop a framework of policymaking for the gradual development of, so to speak, a global cultural man-



**Fig. 5** A manifold of communities in the World. In order to have a steady, peaceful, and prosperous development, we may need a set of "soft" regulations to connect pairs of communities rather than a single restrictive global standard

ifold (GCM) (Fujita & Yoshino [4]; Yoshino [32, 33]; Yoshino et al. [36]; Yoshino, Shibai Nikaido, & Fujita [37]) (see Fig. 5).

The GCM is a set of hierarchical overlapping local charts, and each chart covers a certain area (region, country, national groups, civilization, etc.). In each chart, we may assume that people share a certain culture or social values; the larger chart corresponds to the less restrictive but more universal culture or social values. Together, the charts may comprise a sort of hierarchy. According to the size of the chart (area, region, or social group), people may be able to assess the degree to which decision-making or the extent of regulations concerning various types of exchanges (e.g., international trade within the members of the region) ought to be rigidly enforced. GCM charts are dynamic, so each chart may be enlarged, be shrunk, be split into two, or disappear over time. Some overlapping charts may be assimilated to make a larger chart. And a new chart may appear. For peaceful and steady integration and expansion of charts, a set of soft local rules to connect neighboring charts would be more effective, rather than a single strict global regulation. The set of local rules may make a hierarchical structure with respect to its coverage and strictness.

The history of the EU may exemplify the concept of GCM. Currently, the East Asia and the Asia-Pacific area may be presenting other examples. More than two decades ago, many people doubted such a unification in the East Asia as in the EU because the East Asia is too complicated on races, languages, religions, and political systems even in a country. Now, one could see a slow but a steady unification such as ASEAN, contrasted with the current confusion in the EU. There must be various ways to achieve successful developments. On March 11, 2011, the Great East Japan earthquake caused a huge tsunami and resulted in the Fukushima nuclear power plant disaster. The world media, however, reported the calm attitudes of the Japanese even in the tragedy. The devastated yet surviving Japanese kept an orderly line in front of grocery stores waiting to buy food. Many Japanese had a chance to reconsider the value of their own lives and works and to think of various ways of contributing to the people and area damaged by the quake. Many news, stories, and surveys reported on the human bond and the importance of family, relatives, and friends, not only on a domestic but also a worldwide scale. We have confirmed that the differences in ideology or religions are minor compared to the universal importance of human bonds and trust between peoples.

It is my sincere hope that mutual understanding among the various cultures and civilizations will prevent serious conflicts between nations and cultures and will lead us to a peaceful and prosperous world in the twenty-first century.

## References

1. Almond, G. A., & Verba, S. (1963). *Civic culture*. Boston: Little Brown.
2. Benzecri, J.-P. (1992). *Correspondence analysis handbook*. NY: Marcel Dekker Inc.
3. Dogan, M. (2000). Deficit of confidence within European democracies. In M. Haller (Ed.), *The making of the European Union* (pp. 243–261). Paris: Springer.

4. Fujita, T., & Yoshino, R. (2009). Social values on international relationships in the Asia-Pacific region. *Behaviormetrika*, *36*(2), 149–166.
5. Fukuyama, F. (1995). *Trust*. NY: Free Press.
6. Gallup, G. H. (1977). Human needs and satisfactions: a global survey. *Public opinion quarterly*, winter, 459–467.
7. Hayashi, C. (1993). Nihon-jin no kokuminsei [Japanese national character]. *Phase '93*, 64–96.
8. Hayashi, C., & Hayashi, F. (1995). Kokumin-sei no kokusai-hikaku [Cross-national comparison of national character]. In *Proceedings of Institute of Statistical Mathematics*, *43*(1), 27–80.
9. Hayashi, C., Yoshino, R., Suzuki, T., Hayashi, F., Kamano, S., Miyake, I., et al. (1998). *Kokuminsei nanaka-koku hikaku [cross-national comparison of seven nations]*. Tokyo: Idemitsu-syoten.
10. Hayashi, F., & Nikaido, K. (2009). Religious faith and religious feelings in Japan: Analyses of cross-cultural and longitudinal surveys. *Behaviormetrika*, *36*(2), 167–180.
11. Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Culture and organizations—software of the mind* (3rd ed.). NY: McGraw-Hill.
12. Hosmer, L. T. (1995). Trust: The connecting link between organizational theory and philosophical theory. *Academy of Management Review*, *20*(2), 379–403.
13. Inkeles, A. (1997). *National character*. New Brunswick: Transaction Publishers.
14. Inglehart, R. D. (2018). *Cultural evolution: People's motivations are changing, and reshaping the world*. London: Cambridge University Press.
15. Kuroda, Y. (2002). The rainbow model of American ethnic groups. *Behaviormetrika*, *30*(1), 39–62.
16. Mizuno, K., Suzuki, T., Sakamoto, Y., Murakami, M., Nakamura, T., Yoshino, R., et al. (1992). *Dai 5 Nihon-jin no Kokuminsei [the fifth volume Japanese National Character Survey]*. Tokyo: Idemitsu-syoten.
17. Nakamura, T., Yoshino, R., Maeda, T., Inagaki, Y., & Shibai, K. (Eds.). (2017). A study of the Japanese national character—The thirteenth nationwide survey (2013)—English Edition. *ISM Survey Research Report*, No. 119. Tokyo: The Institute of Statistical Mathematics.
18. Reuters. (2013). China struggling to meet 2011–2015 environment goals (December 25, 2013). Retrieved March 14, 2015, from <http://www.reuters.com/article/2013/12/25/china-environment-idUSL3N0K40YK20131225>.
19. Reuters. (2015). China orders two local governments to punish polluting steel mills. (March 2, 2015). Retrieved March 14, 2015, from <http://www.reuters.com/article/2015/03/02/us-china-steel-environment-idUSKBN0LY0C120150302>.
20. Rosenberg, M. (1956). Misanthropy and political ideology. *American Sociological Review*, *21*(6), 690–695.
21. Sakamoto, Y. (2010). Memories of a statistical study on the Japanese national character: Looking back on 36 years of being a researcher at the Institute of Statistical Mathematics [in Japanese]. *Proceedings of the Institute of Statistical Mathematics*, *58*(1), 61–82.
22. Shapiro, S. (1987). The social control of interpersonal trust. *American Journal of Sociology*, *93*, 623–658.
23. Sasaki, M., & Suzuki, T. (2000). *Social attitudes in Japan*. Boston: Brill.
24. Tukey, J. W. (1977). *Exploratory data analysis*. Massachusetts: Addison Wesley Publishing Company (Re-published by Pearson, 2019).
25. Uslaner, E. M. (2011). Measuring generalized trust: in defense of the ‘standard’ question. In F. Lyon, G. Moellering, & M. N. K. Saunders (Eds.), *Handbook of methods on trust*, Chapter 7.
26. Uslaner, E. M. (2018). *The Oxford handbook of social and political trust*. Chapter 2. Oxford University Press.
27. Yoshino, R. (2002). A time to trust—a study on peoples’ sense of trust from a viewpoint of cross-national and longitudinal study on national character. *Behaviormetrika*, *29*(2), 231–260.
28. Yoshino, R. (2013). On the trust of nations: The world as a hierarchical cultural manifold. In N. I. Dryakhlov, et al. (Eds.), *Japan-Russia conference on trust in society, business and organization* (pp. 213–250). Moscow: National Research University.

29. Yoshino, R. (2005). A time to trust in the East Asia—A Behaviormetric study on the sense of trust in the East Asia Values Survey [in Japanese]. *Japanese Journal of Behaviormetrics*, 32(2), 147–160.
30. Yoshino, R. (2009). Reconstruction of trust on a cultural manifold: Sense of trust in longitudinal and cross-national surveys of national character. *Behaviormetrika*, 36(2), 115–147.
31. Yoshino, R. (2014). Trust of nations on cultural manifold analysis (CULMAN): sense of trust in our longitudinal and cross-national surveys of national character. In M. Sasaki (Ed.), *Cross-national studies on sense of trust*, Ch. 7. Tokyo: Chuo-University Press.
32. Yoshino, R. (2015a). Trust of nations: Looking for more universal values for intrapersonal and international relationships. *Behaviormetrika*, 42(2), 131–166.
33. Yoshino, R. (2015b). Cultural manifold analysis CULMAN as a paradigm of cross-national comparative surveys on national character [in Japanese]. *Proceedings of the Institute of Statistical Mathematics*, 63(2), 203–228.
34. Yoshino, R., & Hayashi, C. (2002). An overview of cultural link analysis of national character. *Behaviormetrika*, 29(2), 125–142.
35. Yoshino, R., Hayashi, F., & Yamaoka, K. (2010). *Kokusai- hikaku deta no kaiseki [Analysis of cross-national comparative survey data]*. Tokyo: Asakura-syoten.
36. Yoshino, R., Shibai, K., & Nikaido, K. (Eds.). (2015). The Asia-Pacific Values Survey—Cultural Manifold Analysis (CULMAN) on People’s Sense of Trust: Summary Report. *ISM Survey Research Report*, No. 117.
37. Yoshino, R., Shibai, K., Nikaido, K., & Fujita, T. (2015). The Asia-Pacific values survey 2010–2014-cultural manifold analysis (CULMAN) of national character. *Behaviormetrika*, 42(2), 99–130.
38. Yoshino, R., & Osaki, H. (2013). Subjective social class, sense of satisfaction, and sense of trust—a note on psychological scales of social surveys [in Japanese]. *Japanese Journal of Behaviormetrics*, 40(2), 97–114.
39. Yoshino, R., & Tsunoda, H. (2010). A note on social capital—from a viewpoint of cross-national comparative methodology [in Japanese]. *Japanese Journal of Behaviormetrics*, 37(1), 3–17. Retrieved January 11, 2016, from [https://www.jstage.jst.go.jp/article/bhmk/42/2/42\\_99/\\_article](https://www.jstage.jst.go.jp/article/bhmk/42/2/42_99/_article).
40. Zheng, Y., & Yoshino, R. (2003). Diversity patterns of attitudes toward nature and environment in Japan, USA, and European nations. *Behaviormetrika*, 30(1), 21–37.
41. Zucker, L. G. (1986). Production of trust: institutional sources of economic structure. 1840–1920. *Research in Organizational Behavior*, 8, 53–111.