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Comparisons of Daily Behavior across 21 Countries

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Abstract

While a large body of research has investigated cultural differences in behavior, the typical study assesses a single behavioral outcome, in a single context, compared across two countries. The current study compared a broad array of behaviors across 21 countries (N=5,522). Participants described their behavior at 7:00 p.m. the previous evening using the 68 items of the Riverside Behavioral Q-sort (RBQ). Correlations between average patterns of behavior in each country ranged from r=.69 to r=.97 and, in general, described a positive and relaxed activity. The most similar patterns were USA/Canada and least similar were Japan/UAE. Similarities in behavior within countries were largest in Spain and smallest in the UAE. Further analyses correlated average RBQ item placements in each country with, among others, country-level value dimensions, personality traits, self-esteem levels, economic output, and population. Extraversion, openness, neuroticism, conscientiousness, self-esteem, happiness, and tolerant attitudes yielded more significant correlations than expected by chance.

Comparisons of Daily Behavior across 21 Countries

When we wonder how people around the world are similar and different, we are typically interested in what they value, how they think, and what they do. While the former two are relevant to differences in internal psychological processes, the latter speaks to the observable cultural environment in which daily life is lived. Investigation of daily life around the world by anthropologists and cross-cultural psychologists is not a new enterprise, however, researchers in these two disciplines approach this task differently. Anthropologists generally emphasize qualitative descriptions and avoid or completely eschew cross-cultural comparisons (Frake, 1980; Shweder, 1991), whereas cross-cultural psychologists typically assess a few dimensions of cultural variation (or even one) and rarely gather detailed information about any single culture. The present investigation seeks to bridge the gap between these approaches, by providing a snapshot of a wide array of individuals' behaviors in each of nearly two dozen countries on four continents.

Background

Over the last 40 years, the field of cross-cultural psychology has made impressive strides in understanding cross-national variation in a host of phenomena, including values (Bond & Smith, 1996; Earley, 1994; Hofstede, 1980; Hofstede & McCrae, 2004; Morling & Lamoreaux, 2008; Myers & Diener, 1995; Oyserman, 1993), personality (Allik & McCrae, 2004; Schmitt, Allik, McCrae, & Benet-Martínez , 2007), self-construal (Cross, 1995; Heine, 2001; Markus & Kitayama, 1991; Singelis & Sharkey, 1995), situational experience (Funder, Guillaume, Kumagai, Kawamoto & Sato, 2012; Guillaume et al., 2016), self-esteem (Bleidorn et al.; 2015), well-being (Diener, 2000), motivation (Duda & Allison, 1989; McInerney & Ali, 2006), and intelligence (Furnham & Fong, 2000). Cross-national investigations of behavior have not been

quite so comprehensive. Indeed, when cross-cultural researchers turn their attention to behavior, those interested in applied differences between countries often limit their investigation to assessing a single behavior, such as timeliness or aggression (Catalá-Miñana, Walker, Bowen, & Lila, 2014; Heine, Buchtel, & Norenzayan, 2008), in a single context, such as the workplace or the classroom (Lievens, Harris, Van Keer, & Bisqueret, 2003; Park & Huebner, 2005)[1]. Moreover, whether they focus on values, cognition, or behavior, studies in cross-cultural psychology usually compare a relatively small number of countries – often as few as two – along a limited set of constructs. In particular, many pioneering studies have focused on comparisons between the United States and Japan (Funder, Guillaume, Kumagai, Kawamoto & Sato, 2012; Markus & Kitayama, 1991; Tsujioka & Cattell, 1965; Yamaguchi, Kuhlman, & Sugimori, 1995) and have been organized around the value dichotomy of individualism-collectivism (Benet-Martínez & Karakitapoglu- Aygün, 2003; Hofstede, 1980, 2001; Hofstede, Hofstede, & Minkov, 1991; Oyserman & Lee; 2008; Schwartz, 1990).

While such studies are valuable, they are limited in the information they provide about *broad* behavioral similarities and differences around the world. The present study aims to complement prior research by assessing and comparing an unusually wide array of behaviors across an unusually large number of countries. Specifically, we asked participants from 21 countries to rate the degree to which they performed each of the 68 diverse behaviors encapsulated in the Riverside Behavioral Q-sort (RBQ; Funder, Furr & Colvin, 2000) at 7:00 p.m. the previous night. We then evaluated the degree to which the enactment of different behaviors was, on average, associated with various cultural properties of the countries involved

[1] For exceptions, see Gelfand et al (2011) and Realo, Linnamägi, & Gelfand (2015)

in the study, including average personality trait levels, economic output, population and individual differences including self-esteem, happiness and tolerant attitudes, to name a few.

Our investigation has three concrete goals: It seeks to examine (a) similarities and differences in *average* behavior across countries, (b) the degree to which the behavior of different individuals is similar within compared to across countries, and (c) how the average expression of particular behaviors is associated with other aspects of cultural variation. These goals stem from the overriding motivation to capture and compare how individuals across the world live their lives. Because life is lived through one's actions moment by moment, assessing a wide array of behaviors in a single moment in time provides a glimpse into individuals' lives and the cultural environment they create through what they do. Thus, the current investigation increases our understanding of daily life around the world both at the level of the individual and the country.

The Present Study

The Riverside-Behavioral Q-sort

The present research seeks to assess behavior comprehensively across countries through the first cross-cultural use of the Riverside Behavioral Q-sort (RBQ; Funder, Furr & Colvin, 2000). The RBQ is an assessment tool in which participants can indicate the extent to which they enacted certain behaviors (e.g., smiles frequently) on a given occasion, by sorting each of 68 descriptive items into a quasi-normal, forced distribution of 9 categories ranging from *highly characteristic* (Category 9) to *highly uncharacteristic* (Category 1). The RBQ may be particularly appropriate for cross-cultural research because it alleviates or even eliminates some of the measurement biases that have long been of concern when comparing psychological phenomena across countries (Heine, Lehman, Peng & Greenholtz, 2002; Ross & Mirowsky,

1984). Specifically, because participants are forced to sort a limited number of behaviors into each rating category, the possible influences of extreme response sets and acquiescence are eliminated. The forced choice aspect of Q-sorts may also lessen the reference group effect[2] because each participant rates each behavior in terms of how characteristic it is of his or her behavior compared to the other 67 items in the set – not whether it is more characteristic of his or her behavior compared to the behavior of other people in the local culture. The data are thus ipsatized within persons and yield an entire behavioral profile (made up of 68 behaviors) for each individual as the unit of analysis (Ozer, 1993).

Despite the potential advantages of Q-sort methodology for cross-cultural psychology, the technique can be difficult to implement, especially across many languages and cultural contexts. This difficulty may explain why it has not been employed in an international context before. Recently, however, an online version of the RBQ and other Q-sort assessments was developed, enabling their worldwide dissemination (see Guillaume et al., 2016).

Research Goals

The current project utilizes the RBQ to explore the similarities and differences in behavior across countries as well as the distinctive qualities of each country's daily behaviors. More specifically, the present research has four goals:

(1) Estimate similarities and differences in behaviors across 21 countries. Here, we aim to understand which countries are, on average and overall, most and least behaviorally similar to one another as well as what people around the world are doing in general at the same time of day.

[2] The reference group effect is the tendency of people to make ratings in comparison to their local cultural norms, which could impede the detection of differences between cultures.

(2) Examine variation in individuals' behavior both between and within countries. We seek to discover which countries are the most and least behaviorally homogeneous and how this within-country variation compares to the variation in behavior between countries.

(3) Associate country-level average behavior with other country-level variables (i.e., cultural values, personality, self-esteem, and population size).

(4) Interpret the behavioral manifestation of various cultural and personality dimensions by considering the customs and social norms of particularly distinct countries.

The research project described here aimed to gather an unprecedented body of descriptive data. It was exploratory; thus, we did not have pre-existing hypotheses that we set out to confirm. While there is a general theoretical basis for expecting geographic variation in behavior (e.g., biological and social differences across individuals and physical differences across environments; see Rentfrow et al., 2008), we did not have any a priori hypotheses on what these would be. Likewise, we did not include or omit particular countries on the basis of hypothesized geographic variation. Venturing into a research territory not widely explored by previous studies, we simply aimed to explore similarities and differences in a variety of behaviors across many countries as a foundation for further, empirically-based theory building (see Haig, 2005).

Method

Participants

We sought to collect as many participants as possible in as many countries as possible. This effort led to data collected in 21 countries with a total N = 5,522 (female = 3,523, male = 1,999; mean age = 22 years, SD = 4.25, range: 16-30 years). All participants were members of college communities recruited by research collaborators in each country. Table 1 provides

demographic information and recruitment procedures for each of the data collection sites.

Table 1

Samples from 21 countries.

Country	University	Compensation	*N*	Female	Male	Mean Age (*SD*)
Australia	University of Queensland	Course credit	141	109	32	20 (3.85)
Austria	University of Innsbruck	Volunteer	87	71	16	25 (5.12)
Canada	University of British Columbia	Course credit	191	126	65	21 (4.40)
China	Several universities	$0.67 USD per person	1565	854	711	22 (2.22)
Czech Republic	7 Universities	Volunteer	220	159	61	28 (5.48)
Denmark	University of Copenhagen	Volunteer	118	96	22	23 (4.76)
Estonia	17 colleges and universities	Volunteer	314	251	63	26 (7.42)
Germany	Humboldt University of Berlin	Course Credit	70	55	15	27 (7.66)
Italy	University of Milano-Bicocca	Course credit	144	75	69	23 (4.58)
Japan	Ritsumeikan University	Volunteer	227	107	120	21 (1.05)
Netherlands	Tilburg University; Utrecht University	Course credit	258	220	38	20 (2.30)
Poland	Kazimierz Wielki University	Volunteer	97	73	24	24 (5.07)
Russia	Ural Federal University	Course credit	101	80	21	22 (5.59)
Singapore	National University of Singapore	Course credit	158	109	49	21 (2.05)
Slovakia	Comenius University; University of Trnava; Catholic University	Volunteer	98	86	12	22 (3.00)
South Africa	University of Cape Town	Volunteer/lottery	114	62	52	23 (4.62)
South Korea	Chonnam National University	Course credit	103	69	34	22 (3.82)
Spain	University of Barcelona	Volunteer	108	78	30	22 (6.82)
UAE	American University of Sharjah	Course credit	83	41	42	20 (1.67)
UK	University of Edinburgh	Course credit	107	75	32	21 (4.72)
US	UC Riverside	Course credit	1218	727	491	20 (2.27)

Note. Countries including samples from multiple universities or colleges: China, Estonia, Slovakia, Czech Republic. *Total N = 5522; Females: 3523; Males: 1999*

Procedure

Collaborators in each country directed their participants to our custom-made website (www.internationalsituationsproject.com), where participants were prompted to select their language of assessment by clicking on their respective country's flag and then to enter their assigned study and participant ID numbers. Participants then provided demographic information and described what they were doing at 7:00 p.m. the evening before. Specifically, they were asked to write a brief description of: (1) Who they were with, (2) where they were, and (3) what they were doing. We chose 7:00 p.m. as the time of assessment under the assumption that people are typically not at work or in school and are therefore more unconstrained to do what they wish relative to other hours of the day. We expected this tendency to enhance situational and behavioral variation. After providing their open-ended descriptions, participants quantified their situational experience using the RSQ and, subsequently, their behaviors in this situation using the RBQ. Analyses of the RSQ data, from 20 of the 21 countries in the present study, were previously reported by Guillaume et al. (2016)[3]. All the analyses in the present study are new.

Measure

The RBQ was translated and independently back-translated in collaboration with our international collaborators, who are all psychologists with university faculty appointments. We worked with these collaborators to resolve any discrepancies between the original and back-translated English versions. After our collaborators translated the RBQ items into their respective languages, independent native speakers back-translated the items into English. We then reviewed

[3] Data from the United Arab Emirates were not available at the time the study by Guillaume et al. (2016) was completed.

any discrepancies and edited the items to match their original meaning. For a review of this translation procedure, see Brislin (1970). In the Q-sort method, participants can only place a certain number of items into each category. This yields a quasi-normal bell-curve, in which the most extreme categories have the fewest items and the neutral category has the most. Specifically, participants placed the 68 items into nine categories as follows: 3, 5, 7, 11, 16, 11, 7, 5, 3. Table 2 displays the mean placement for each RBQ item for each of the 21 countries as well as overall across the entire sample.

Table 2
Riverside Behavioral Q-sort item means across 21 countries

#	Item	AU	AT	CA	CN	CZ	DK	EE	DE	IT	JP	NL	PL	RU	SG	SK	ZA	KR	ES	UAE	UK	US	World Mean
1	Interviews others	5.13	5.41	5.07	5.56	5.64	5.09	5.06	5.27	4.90	4.66	5.12	5.20	5.64	5.22	4.92	4.96	5.17	5.02	5.00	4.88	5.02	5.16
2	Volunteers a large amount of information about self	4.93	4.89	5.04	5.55	5.29	5.19	5.16	5.10	5.30	4.74	5.06	5.20	4.81	5.10	5.17	4.90	5.13	4.94	4.73	4.85	5.05	5.07
3	Seems interested in what someone had to say	5.98	6.03	6.01	5.70	6.63	6.45	6.31	5.99	5.75	6.20	6.29	6.66	5.72	6.32	5.89	5.68	5.48	5.94	5.69	6.27	5.88	6.03
4	Tries to control the situation	4.90	5.38	5.06	5.10	6.04	5.29	5.70	5.33	5.51	5.06	5.38	5.55	6.12	5.05	5.42	4.97	5.03	5.52	5.54	4.80	5.09	5.35
5	Dominates the situation	4.79	5.14	5.06	4.99	5.64	5.25	5.62	5.13	5.58	4.97	4.76	5.11	5.80	4.96	5.04	4.76	5.08	5.81	5.12	4.81	5.03	5.20
6	Appears to be relaxed and comfortable	6.40	6.39	6.63	6.32	6.07	6.97	6.51	6.27	6.33	6.63	6.79	6.64	6.15	6.84	7.11	6.13	5.74	6.44	6.34	6.62	6.36	6.44
7	Exhibits social skills	6.10	5.90	5.80	5.37	5.87	5.92	5.38	5.63	5.50	5.79	5.97	5.90	5.64	5.92	6.11	5.55	5.47	5.67	5.36	5.83	5.90	5.70
8	Is reserved and unexpressive	4.75	4.17	5.01	4.81	4.43	4.19	5.03	4.26	4.41	5.32	4.26	4.32	4.41	4.90	4.57	4.60	4.64	4.40	5.17	4.55	4.88	4.67
9	Laughs frequently	6.06	5.67	5.95	5.43	5.65	5.74	5.54	5.30	5.65	6.32	6.00	6.15	5.65	5.96	5.91	5.89	6.06	5.81	5.53	6.24	5.97	5.80
10	Smiles frequently	6.41	6.46	6.39	6.49	6.40	6.72	6.36	6.13	6.33	6.36	6.40	6.90	6.37	6.46	6.81	6.13	6.30	6.70	6.10	6.43	6.32	6.37
11	Is physically animated; moves around	5.13	5.06	5.07	5.13	5.02	4.98	5.17	4.93	5.52	4.70	5.25	5.19	5.13	5.27	5.36	5.08	5.73	5.01	5.11	5.09	5.52	5.14

12	Seems to like other(s) present	6.11	6.06	5.65	5.54	5.16	6.53	6.11	5.90	5.74	5.85	6.32	6.75	5.54	6.06	5.35	5.95	5.88	5.98	5.36	6.29	5.89	5.89
13	Exhibits an awkward interpersonal style	4.55	4.23	4.48	4.64	4.21	4.15	4.33	4.03	4.27	4.66	4.21	4.30	4.25	4.50	4.16	4.28	4.82	4.01	4.40	4.19	4.64	4.40
14	Compares self to other(s)	5.16	5.54	5.52	5.12	5.24	5.50	5.42	5.66	5.02	5.20	5.57	5.19	5.48	5.42	5.19	5.04	5.17	5.22	5.46	5.46	5.25	5.31
15	Shows high enthusiasm and a high energy level	5.89	6.11	5.82	5.95	5.62	5.79	5.64	6.04	6.04	5.85	6.09	6.20	6.06	5.91	5.95	5.85	5.87	5.99	5.70	5.55	5.90	5.89
16	Shows a wide range of interests	5.51	5.60	5.74	5.78	5.49	5.81	5.25	5.69	5.65	6.21	6.02	5.73	5.68	5.65	5.85	5.79	5.17	5.78	5.67	5.79	5.76	5.69
17	Talks at rather than with other(s)	4.23	3.97	4.52	4.60	4.15	4.37	4.39	4.34	4.25	4.85	4.34	4.52	4.84	4.53	4.46	4.09	4.91	4.11	4.52	4.07	4.60	4.47
18	Expresses agreement frequently	5.22	5.51	5.56	5.62	5.26	5.80	5.11	5.53	5.23	6.22	5.35	5.31	5.52	5.64	5.45	5.40	6.09	5.58	5.17	5.53	5.42	5.49
19	Expresses criticism	4.76	4.90	4.96	4.69	5.14	4.91	5.02	5.09	5.13	4.79	4.96	5.02	4.98	4.97	5.33	4.85	4.86	4.94	5.07	5.14	4.94	5.01
20	Is talkative	6.07	5.67	5.60	5.53	5.84	5.96	5.65	5.47	5.60	5.74	6.16	6.22	5.76	5.54	6.38	5.48	5.61	5.63	5.41	5.97	5.88	5.72
21	Expresses insecurity	4.57	4.64	4.54	4.63	4.66	4.59	4.32	4.84	4.49	4.50	4.73	4.51	4.71	4.63	4.65	4.26	4.57	4.43	4.46	4.68	4.55	4.55
22	Show physical signs of tension or anxiety	4.55	4.74	4.90	4.53	4.47	4.27	4.83	5.03	4.84	4.78	4.50	4.49	4.76	4.67	4.68	4.79	4.46	4.35	5.18	4.55	4.72	4.69
23	Exhibits a high degree of intelligence	5.70	5.38	5.60	5.39	6.00	5.60	5.32	5.80	5.38	5.82	5.50	5.68	5.68	5.61	5.61	6.19	5.09	5.56	5.82	5.27	5.51	5.69
24	Expresses sympathy	5.43	6.47	5.66	5.39	6.49	5.99	6.21	6.41	5.55	6.03	6.47	5.51	5.08	5.54	6.00	5.78	4.83	6.55	5.11	5.87	5.42	5.75
25	Initiates humor	5.98	6.01	5.75	5.83	5.84	5.72	6.15	5.60	5.88	5.22	5.80	5.92	5.49	6.06	6.06	5.99	5.43	5.58	5.63	6.21	5.88	5.84
26	Seeks reassurance	5.31	5.55	5.12	5.19	5.65	5.37	4.93	5.33	5.20	6.04	5.51	5.20	6.05	5.57	5.30	4.80	5.44	4.96	5.07	5.14	5.12	5.27
27	Exhibits condescending behavior	4.35	4.16	4.06	5.03	4.35	3.88	4.26	4.11	4.26	3.92	3.90	4.22	4.23	4.20	3.78	4.03	4.62	4.36	4.61	4.13	4.28	4.27
28	Seems likable	6.26	6.43	6.14	5.97	5.10	5.61	6.22	6.23	5.74	6.42	6.82	6.44	5.81	6.19	6.93	6.18	6.38	6.64	5.69	6.23	6.26	6.14
29	Seeks advice	5.65	5.41	5.53	5.72	5.67	5.31	5.61	5.77	5.69	5.45	5.45	5.04	5.71	5.82	5.14	5.42	5.54	5.44	5.58	5.50	5.37	5.50
30	Appears to regard self as physically attractive	4.74	5.16	4.75	5.20	4.75	4.97	4.93	4.93	4.76	4.74	4.43	4.84	5.31	4.41	5.30	5.14	4.85	4.91	4.73	4.60	4.67	4.88
31	Acts irritated	4.62	4.44	4.61	3.73	4.47	4.58	4.18	4.24	4.01	4.19	4.59	4.51	4.04	4.55	3.94	4.30	4.60	3.52	4.66	4.35	4.43	4.33
32	Expresses warmth	6.21	6.39	6.16	5.97	5.96	6.36	6.12	6.23	5.27	6.85	6.68	6.43	6.29	6.46	6.16	5.90	6.22	6.13	5.48	6.71	6.02	6.08
33	Tries to undermine, sabotage or obstruct	3.71	3.20	3.63	3.37	2.69	3.12	3.21	2.97	3.44	3.58	3.27	3.40	3.48	3.56	3.63	3.01	3.50	2.99	4.01	3.38	3.57	3.41
34	Expresses hostility	3.84	3.68	3.66	3.52	3.17	3.29	3.67	3.24	3.94	3.50	3.33	3.24	3.51	3.68	3.45	3.67	3.94	3.37	4.20	3.54	3.85	3.61
35	Is unusual or unconventional in appearance	4.11	4.26	4.17	4.53	3.95	4.20	4.16	4.59	4.26	4.49	3.63	4.46	4.46	4.13	4.14	4.40	5.01	4.06	4.42	3.93	4.23	4.32

36	Behaves in a fearful or timid manner	3.62	3.54	3.87	3.82	3.54	3.58	3.27	3.57	3.94	3.82	3.44	3.52	3.86	3.54	3.63	3.50	4.02	4.02	4.04	3.24	3.89	3.69
37	Is expressive in face, voice or gestures	6.04	6.29	5.92	5.56	5.47	6.25	5.89	5.71	6.24	6.41	6.19	6.38	5.57	5.91	5.70	6.16	6.00	6.49	5.95	6.28	6.04	5.94
38	Expresses interest in fantasy or daydreams	5.08	5.82	5.31	4.92	5.54	5.75	5.80	5.66	5.59	5.12	5.50	5.33	6.07	5.22	6.01	5.47	4.97	5.52	5.67	5.44	5.01	5.45
39	Expresses guilt	4.06	4.11	3.99	3.87	3.76	4.04	3.94	3.84	3.87	4.08	3.97	3.92	3.79	3.89	4.03	4.05	3.99	3.36	4.60	4.03	3.91	3.95
40	Keeps other(s) at a distance	4.28	3.95	4.34	4.42	4.03	3.81	4.25	4.31	3.96	4.48	3.62	3.86	4.42	4.14	3.82	4.41	4.45	3.61	4.27	3.79	4.14	4.17
41	Shows interest in intellectual or cognitive matters	5.82	5.62	5.98	5.91	6.21	5.49	5.90	6.36	5.82	6.31	5.69	5.79	6.00	6.16	5.73	6.76	5.36	6.10	5.75	5.93	5.72	5.99
42	Seems to enjoy the situation	6.67	6.86	6.92	6.66	6.31	6.97	7.16	6.50	6.47	7.23	6.91	6.51	6.98	6.94	6.47	6.86	6.83	7.13	6.70	7.26	6.69	6.77
43	Says or does something interesting	5.87	5.86	5.96	6.03	6.17	5.86	6.03	6.04	6.17	5.37	5.88	6.39	6.36	6.03	6.09	6.08	6.30	6.19	5.88	5.69	5.86	6.04
44	Says negative things about self	4.26	4.49	4.20	4.42	4.22	4.23	3.92	5.13	4.28	4.16	4.22	4.08	4.33	4.01	4.14	4.11	4.50	3.62	4.71	4.51	4.00	4.24
45	Displays ambition	5.39	5.06	5.74	5.28	4.50	5.77	4.31	5.93	5.65	4.67	5.99	5.57	6.36	5.70	5.03	6.11	4.86	5.43	6.18	5.34	5.73	5.47
46	Blames others	3.44	3.76	3.54	3.80	3.22	3.74	3.26	3.49	3.77	3.88	3.60	3.29	3.16	3.65	3.70	3.39	3.94	2.94	4.06	3.84	3.55	3.59
47	Expresses self-pity or feelings of victimization	3.50	4.22	3.60	4.15	3.45	3.89	3.15	3.97	3.59	4.27	3.57	2.87	3.97	3.45	3.49	3.49	4.39	2.71	4.33	3.63	3.53	3.68
48	Expresses sexual interest	3.16	3.32	3.31	3.49	3.62	3.88	3.41	3.49	3.74	2.81	3.09	3.49	3.23	2.86	3.01	4.07	3.65	3.48	3.59	3.75	3.44	3.43
49	Behaves in a cheerful manner	6.70	6.89	6.63	6.48	6.38	6.71	6.92	6.77	6.73	5.55	7.02	6.60	6.58	6.76	6.85	6.66	6.42	7.18	5.98	6.74	6.56	6.54
50	Gives up when faced with obstacles	3.77	4.33	3.85	4.23	3.69	3.79	4.01	4.07	3.51	4.04	4.17	3.68	3.72	4.13	3.87	3.72	4.02	3.96	4.30	3.85	3.66	3.93
51	Behaves in a stereotypically masculine style or manner	3.50	3.92	3.75	4.55	3.96	3.86	3.73	3.57	4.13	4.21	3.26	3.41	3.60	3.89	3.54	4.20	3.62	3.30	3.71	3.79	3.90	4.17
52	Offers advice	5.68	5.41	5.32	6.20	5.88	5.26	5.77	5.80	5.82	4.44	5.57	5.33	5.41	5.51	5.15	5.77	5.48	5.90	5.76	5.72	5.55	5.57
53	Speaks fluently and expresses ideas well	5.95	5.54	5.83	6.06	5.93	5.84	5.75	5.83	5.85	5.14	6.04	6.30	6.37	5.98	6.32	6.15	5.90	6.31	5.93	5.91	5.94	5.93
54	Emphasizes accomplishments of self, family or acquaintances	4.76	4.14	5.10	4.37	4.29	4.64	4.50	4.83	4.69	3.12	4.64	4.68	4.77	5.08	3.87	4.77	4.90	5.02	5.08	4.44	4.93	4.6
55	Behaves in a competitive manner	4.55	3.82	4.31	4.71	4.08	4.29	3.92	3.91	4.24	3.82	3.79	3.74	3.77	3.99	3.97	4.30	3.86	4.09	5.05	3.79	4.44	4.22

56	Speaks in a loud voice	4.63	4.41	4.49	5.00	4.79	4.28	4.39	4.27	5.10	4.04	4.43	3.86	4.39	4.04	4.06	4.48	5.32	4.56	4.69	4.64	4.92	4.53
57	Speaks sarcastically	4.71	4.23	4.08	3.45	4.32	4.35	4.12	3.90	4.53	3.80	4.18	3.61	3.79	3.58	3.91	4.11	3.31	3.96	4.72	4.41	4.57	4.14
58	Makes or approaches physical contact with other(s)	4.71	4.84	4.45	4.23	4.55	4.31	4.76	4.19	4.66	5.40	4.36	4.67	4.22	4.47	5.24	4.39	4.26	5.35	3.71	4.72	4.67	4.49
59	Engages in constant eye contact with someone	5.09	5.07	4.96	5.16	5.04	5.14	4.77	4.74	5.24	5.23	5.03	5.89	5.43	5.51	5.41	5.20	5.68	5.65	4.17	5.18	5.26	5.10
60	Seems detached from the situation	3.98	3.45	4.28	3.67	6.02	3.99	4.55	3.53	3.90	3.80	3.34	3.64	3.55	4.08	4.65	3.66	5.00	3.52	3.99	3.79	3.83	4.08
61	Speaks quickly	4.97	4.80	4.87	5.06	5.01	4.68	4.87	5.09	5.03	4.46	4.90	4.76	4.85	4.98	4.83	4.74	5.38	5.17	4.51	5.11	4.90	4.81
62	Acts playful	5.62	5.93	5.69	5.69	5.61	5.21	5.75	5.74	6.01	6.94	5.28	5.94	4.65	5.15	5.94	5.47	5.42	6.49	4.82	5.72	5.80	5.64
63	Other(s) seeks advice from P	5.15	5.23	4.98	5.49	5.27	4.60	5.10	5.19	5.35	4.33	4.90	5.24	5.16	4.93	4.84	5.20	4.50	4.90	5.19	5.01	4.85	5.02
64	Concentrates on or works hard at a task	5.77	5.28	5.86	6.02	6.48	5.52	6.44	6.09	6.29	7.13	5.44	5.49	5.84	5.73	5.83	6.17	6.17	5.96	6.29	5.43	5.83	6.05
65	Engages in physical activity	3.94	3.68	3.38	3.54	3.89	3.58	3.86	3.97	3.91	3.74	4.22	3.10	3.20	2.94	3.49	4.61	3.72	4.06	3.72	3.17	3.94	3.76
66	Acts in a self-indulgent manner	4.77	3.80	4.80	4.13	4.63	5.74	5.06	3.80	4.66	5.13	5.09	5.51	3.94	5.49	4.02	4.95	4.37	4.57	4.81	6.02	4.84	4.71
67	Exhibits physical discomfort or pain	2.95	3.44	2.81	3.12	3.03	2.50	3.67	3.33	3.14	3.74	2.88	2.75	3.13	2.61	3.08	3.36	3.26	3.59	3.70	2.66	2.85	3.15
68	Behaves in a stereotypically feminine style or manner	4.52	4.90	4.59	4.61	5.10	4.94	4.90	4.99	3.67	3.67	4.90	4.91	5.37	4.37	5.08	4.46	3.48	4.49	3.05	4.71	4.06	4.03

Note. Cultures are arranged as follows: Australia, Austria, Canada, China, Czech Republic, Denmark, Estonia, Germany, Italy, Japan, Netherlands, Poland, Russia, Singapore, Slovakia, South Korea, Spain, UAE, UK, US.

Results

Between-country Similarity and Within-country Homogeneity of Daily Behavior

Cross-cultural similarity. First, we examined the extent to which average behavior Q-sort profiles were similar across 21 countries. Due to sample size discrepancies between the genders across countries, we separated male and female RBQ ratings, averaged the participants' scores for each, and then averaged the resulting female RBQ profile with the male RBQ profile (see the Supplementary Materials at osf.io/72btx for separate inter-correlation tables for males and females). The resulting dataset consisted of an equally gender-weighted behavioral profile for each country. We then correlated each of these country-level behavioral profiles with each other. This yielded a 21 × 21 matrix of correlation coefficients representing the similarity of each country's average behavioral profile with those of each of the other countries (see Table 3). Results from these analyses show strikingly high similarities among all 21 countries, with an average r = .85 (SD = .05, range = .69 to .97). The most similar average behavior profiles came from Canada and the United States (r(66) = .97, 95% CI [.95, .99]), and the least similar came from Japan and the United Arab Emirates (r(66) = .69, [.54, .80]).

As can be seen in Table 2, the highest placed RBQ items worldwide were "Seems to enjoy the situation," "Behaves in a cheerful manner," and "Smiles frequently." The lowest placed items were "Exhibits physical discomfort or pain," "Tries to undermine, sabotage or obstruct," and "Expresses sexual interest." From these results, we can conclude that, on average, people around the world at 7:00 p.m. reported that they were behaving in a generally positive, relaxed, and cheerful way. These results correspond with those from a previous ISP investigations of situational experience in which the average situation experienced by individuals across 20 countries was enjoyable and relaxing in nature (Guillaume et al., 2016).

Within-country Homogeneity. The analyses described so far compared RBQ placements *on average* across all sampled countries. To assess within-country variation as well as cross-country comparison of behavioral profiles at the individual level, we calculated a series of inter-individual correlations, comparing every individual profile with all of the other profiles from within the same country as well as across all of the other 20 countries. As with the average country profile analysis, this was done for both males and females separately and then subsequently averaged together (see the Supplementary Material at osf.io/72btx for separate inter-individual correlation tables for males and females). Table 4 shows the resulting correlation matrix with the diagonal displaying within-country individual variation (i.e., each country's behavioral homogeneity) and the off-diagonal correlation coefficients (i.e., homogeneity across countries). Our findings suggest that the United Arab Emirates was the least behaviorally homogeneous country ($r(82) = .15$, 95% CI [-.07, .35]) and Spain was the most homogeneous ($r(107) = .33$, [.29, .38]).

The average between-country individual similarity of behavior (off-diagonal values) was $r(189) = .212$ [.208, .216], with the unit of analysis as the number of off-diagonal correlations; the average within-country behavioral homogeneity (diagonal values) was $r(19) = .235$, [.216, .254], with the unit of analysis as the number of diagonal correlations. The difference between these two average correlations was significant ($t = 2.45$, $p = .02$, $r = .16$, [.03, .28]), indicating that individuals behaved at 7:00 pm significantly more similarly to people within their same countries than with individuals in other countries – though the absolute size of this difference is very – and perhaps surprisingly – small.

Table 3

Intercorrelations of Averaged RBQ Profiles of Females and Males (combined) Across 21 Cultures

	AU	AT	CA	CN	CZ	DK	EE	DE	IT	JP	NL	PL	RU	SG	SK	ZA	KR	ES	UAE	UK	US
AU		.86	.94	.89	.84	.87	.88	.85	.91	.81	.91	.90	.85	.91	.87	.91	.83	.90	.82	.89	.96
AT			.87	.85	.81	.84	.85	.88	.85	.82	.86	.86	.83	.84	.86	.84	.78	.87	.72	.84	.87
CA				.90	.85	.91	.90	.89	.91	.83	.93	.93	.89	.95	.89	.91	.85	.90	.83	.89	.97
CN					.83	.82	.84	.86	.88	.77	.84	.86	.89	.88	85	.85	.85	.86	.76	.82	.90
CZ						.82	.90	.82	.85	.74	.81	.83	.81	.82	.84	.81	.77	.84	.70	.81	.83
DK							.87	.85	.87	.80	.89	.92	.85	.91	.84	.88	.77	.86	.76	.90	.90
EE								.87	.88	.81	.87	.88	.82	.89	.86	.88	.80	.90	.77	.89	.89
DE									.85	.78	.85	.84	.86	.87	.83	.88	.79	.86	.78	.83	.87
IT										.78	.89	.90	.86	.87	.87	.90	.83	.92	.83	.87	.94
JP											.78	.83	.76	.82	.79	.78	.77	.81	.69	.82	.83
NL												.90	.84	.89	.87	.91	.80	.90	.80	.88	.94
PL													.88	.92	.88	.89	.83	.89	.74	.91	.93
RU														.88	.84	.86	.81	.84	.77	.81	.88
SG															.86	.88	.85	.86	.79	.90	.93
SK																.84	.81	.86	.72	.81	.89
ZA																	.79	.90	.78	.86	.92
KR																		.80	.74	.78	.88
ES																			.76	.87	.92
UAE																				.75	.83
UK																					.90
US																					
AVE	.89	.84	.90	.85	.82	.86	.87	.85	.88	.79	.87	.88	.84	.88	.85	.87	.81	.87	.77	.86	.90
95% CI	.87-.91	.82-.86	.88-.92	.83-.87	.80-.84	.84-.88	.85-.89	.84-.86	.85-.89	.77-.81	.85-.89	.86-.90	.82-.86	.85-.89	.84-.86	.85-.89	.80-.82	.85-.89	.75-.79	.84-.88	.88-.92

Note. Cultures are arranged as follows: Australia, Austria, Canada, China, Czech Republic, Denmark, Estonia, Germany, Italy, Japan, Netherlands, Poland, Russia, Singapore, Slovakia, South Korea, Spain, UAE, UK, US. Averages in correlations computed using the *r*-to-*z* transformation. The most similar countries (with each other and overall) are highlighted in green; the least similar are highlighted in red

Table 4

Average Inter-individual RBQ Correlations Within and Across 21 Cultures

	AU	AT	CA	CN	CZ	DK	EE	DE	IT	JP	NL	PL	RU	SG	SK	ZA	KR	ES	UAE	UK	US
AU	**.20**	.20	.20	.20	.20	.21	.20	.21	.20	.20	.23	.24	.20	.23	.22	.20	.17	.25	.16	.22	.21
AT		**.20**	.20	.20	.20	.21	.20	.22	.19	.21	.22	.24	.21	.22	.23	.20	.17	.25	.14	.22	.19
CA			**.20**	.20	.20	.21	.20	.21	.19	.21	.23	.24	.21	.23	.22	.20	.17	.24	.16	.22	.20
CN				**.22**	.20	.20	.19	.21	.19	.20	.21	.23	.22	.22	.22	.19	.18	.24	.15	.20	.19
CZ					**.24**	.21	.22	.21	.19	.20	.21	.23	.21	.22	.22	.20	.17	.24	.14	.21	.19
DK						**.24**	.22	.23	.21	.22	.24	.27	.23	.25	.23	.22	.18	.26	.16	.24	.21
EE							**.23**	.22	.20	.21	.22	.24	.21	.23	.22	.21	.17	.25	.15	.22	.20
DE								**.24**	.20	.22	.23	.25	.23	.24	.23	.22	.18	.26	.17	.22	.20
IT									**.20**	.19	.22	.23	.20	.21	.22	.20	.17	.25	.16	.21	.20
JP										**.28**	.22	.25	.21	.23	.23	.20	.18	.26	.15	.23	.20
NL											**.27**	.27	.23	.25	.25	.23	.19	.28	.17	.24	.23
PL												**.30**	.26	.28	.27	.24	.21	.30	.17	.27	.24
RU													**.24**	.24	.23	.21	.18	.25	.16	.22	.21
SG														**.27**	.24	.22	.20	.27	.17	.25	.23
SK															**.25**	.22	.19	.27	.16	.23	.22
ZA																**.22**	.17	.25	.15	.22	.20
KR																	**.18**	.21	.13	.18	.18
ES																		**.33**	.18	.27	.25
UAE																			**.15**	.16	.15
UK																				**.26**	.21
US																					**.21**

Note. Cultures are arranged as follows: Australia, Austria, Canada, China, Czech Republic, Denmark, Estonia, Germany, Italy, Japan, Netherlands, Poland, Russia, Singapore, Slovakia, South Korea, Spain, UAE, UK, US. Diagonal figures in boldface represent within-country homogeneity; highest is highlighted in green and lowest in red.

Country-level Variables and Daily Behavior

In the final step of exploratory analyses, we examined relations between a number of common country-level, cultural attributes (e.g., average personality trait, economic output, population and other individual difference variables[4]) and RBQ behaviors. Previous research has accumulated evidence for country-level cultural value scores along six dimensions: Power distance, individualism, uncertainty avoidance, masculinity, long-term orientation, and indulgence (Hofstede, 2001). Also available are mean-level scores of each of the Big Five traits for 16 of our 21 countries (Schmitt, Allik, McCrae, & Benet-Martínez, 2007) as well as, Gross Domestic Product (GDP; United Nations, 2015) and population size (Central Intelligence Agency, 2014) for all 21 countries (see the Supplementary Material at osf.io/72btx for a complete list). Finally, we gathered country-level individual difference variables with meaningful behavioral implications: self-esteem (Bleidorn et al., 2015), satisfaction with life, work ethic, feelings of happiness, subjective state of health, meaning and purpose of life, importance of God, and tolerant attitudes (World Values Survey, 2016)[5]. See the Supplementary Material at osf.io/72btx for country-level scores of these individual difference variables.

To examine the number of significant correlations between each of the RBQ's 68 behaviors and the country-level variables, we employed Sherman and Funder's (2009) randomization test (see also Sherman & Serfass, 2015), in which the chance distribution of significant correlates can be estimated across 10,000 trials. The accumulation of the resulting

[4] With such a large number of previously collected country-level variables available, we chose this set of country-level attributes based on two criteria: (1) previous researchers must have collected the data from countries that overlapped with at least 16 countries in our sample and (2) each attribute must have clear and meaningful behavioral implications.

[5] Tolerant Attitudes is a composite of five individual difference variables assessed by the World Value Survey: Justifiable: Homosexuality; Justifiable: Prostitution; Justifiable: Abortion; Justifiable: Divorce; Justifiable: Suicide. The composite had high internal consistency reliability ($\alpha = .91$).

significant correlations across each of 10,000 trials provides a reliable way to determine whether the number of significant correlations in the obtained data is greater than could be attributed to chance. It also provides an estimation of the *p*-level of the resulting list of correlates, taken as a whole. This approach alleviates the issue of spurious correlations common when correlating a cultural attribute with a large number of non-independent (inter-correlated) variables (in this case each of the 68 RBQ items).

Overall, of the country-level variables examined, the Big Five traits extraversion, neuroticism, openness to experience, and conscientiousness as well as self-esteem, tolerant attitudes, and feelings of happiness were the only dimensions to generate more behavioral correlates than would be expected by chance. Country-level extraversion yielded 13 RBQ item correlates (p = .020); neuroticism yielded 11 (p = .016); openness to experience yielded 14 (p = .001); conscientiousness yielded 9 (p = .032); self-esteem yielded 15 (p = .001); tolerant attitudes yielded 8 (p = .07); and feelings of happiness yielded 9 (p = .04).

Briefly, among other correlates, behavior in countries high in extraversion and openness and low on neuroticism were more likely to include someone offering advice (r = .82; 95% CI [.55, .94]; r = .72, [.35, .90]; r = -.78, [-.92, -.46], respectively). Also, behavior in countries low in extraversion and high in neuroticism were more likely to involve someone frequently expressing agreement (r = -.78, [-.92, -.46] and r = .82, [.55, .94], respectively; for all correlations N = 16). Individuals in countries higher in self-esteem were more likely to report expressions of self-pity or feelings of victimization (r = .72, [.35-.90]) and unusual or unconventional appearance (r = .71, [.33, .89]). Finally, individuals in countries with generally tolerant attitudes tend to be likable (r = .66, [.25, .87]), social (r = .56, [.09, .83]), and express sympathy (r = .63, [.20, .86]). Lastly, individuals in countries that have strong feelings of

happiness tend to laugh (r = .53, [.05, .81]) and behave in a social, self-indulgent, and irritated way (r = .67, [.26, .88]; r = .60, [.15, .84]; r = .58, [.12, .84], respectively). Tables 5-11 provide a complete list of these correlates.

It should be noted that the relationship between self-esteem and RBQ behaviors shown in Table 9 are likely driven by the countries that have the highest and lowest levels of self-esteem according to Bleidorn et al.'s (2015) estimates (UAE and Spain, respectively). Figure 1 demonstrates this point by displaying a scatter plot of the relationships between country level self-esteem scores and country level ratings of the RBQ item "Expresses self-pity or feelings of victimization." More detailed explanations for the above relations are found in the discussion section.

Table 5
Behavioral Correlates of Extraversion Across 16 Countries

Item #	RBQ Item	*r* (95% CI)	*p*-level
63	Other(s) seeks advice from P.	.82 (.55, .94)	**
38	Expresses interest in fantasy or daydreams.	.75 (41, .91)	**
57	Speaks sarcastically.	.62 (.18, .85)	*
25	Initiates humor.	.60 (.15, .84)	*
68	Behaves in a stereotypically feminine style or manner.	.54 (.06, .82)	*
24	Expresses sympathy	.51 (.02, .80)	*
52	Offers advice.	.51 (.02, .80)	*
18	Expresses agreement frequently.	-.78 (-.92, -.46)	**
17	Talks at rather than with other(s).	-.77 (-.92, -.44)	**
13	Exhibits an awkward interpersonal style.	-.73 (-.90, -.37)	**
35	Is unusual or unconventional in appearance.	-.68 (-.88, -.23)	**
09	Laughs frequently.	-.61 (-.85, -.16)	*
36	Behaves in a fearful or timid manner.	-.51 (-.80, -.02)	*

Notes. ** = $p < .001$, * = $p < .01$. The chance of finding 13 significant correlations at the .05 level (3.37 expected by chance) is $p = .020$.
Countries included in this analysis: Australia, Austria, Canada, China, Czech Republic, Denmark, Estonia, Germany, Italy, Japan, Netherlands, Poland, Russia, Singapore, Slovakia, South Africa, South Korea, Spain, UK, US.

Table 6
Behavioral Correlates of Neuroticism Across 16 Countries

Item #	RBQ Item	*r* (95% CI)	*p*-value
18	Expresses agreement frequently.	.82 (.55, .94)	**
62	Acts playful.	.69 (.30, .88)	**
26	Seeks reassurance.	.63 (.20, .86)	**
09	Laughs frequently.	.61 (.16, .85)	*
59	Engages in constant eye contact with someone.	.57 (.10, .83)	*
58	Makes or approaches physical contact with other(s).	.56 (.09, .83)	*
36	Behaves in a fearful or timid manner.	.53 (.05, .81)	*
63	Other(s) seeks advice from P.	-.78 (-.92, -.46)	**
52	Offers advice.	-.62 (-.85, -.18)	**
25	Initiates humor.	-.61 (-.85, -.16)	*
49	Behaves in a cheerful manner	-.50 (-.80, -.01)	*

Note. ** = $p < .001$, * = $p < .01$. The chance of finding 11 significant correlations at the .05 level (3.37 expected by chance) is $p = .016$.

Countries included in this analysis: Australia, Austria, Canada, Czech Republic, Estonia, Germany, Italy, Japan, Netherlands, Poland, Slovakia, South Africa, South Korea, Spain, UK, US.

Table 7
Behavioral Correlates of Openness Across 16 Countries

Item #	RBQ Item	*r (95% CI)*	*p*-value
63	Other(s) seeks advice from P.	.72 (.35, .90)	**
25	Initiates humor.	.67 (.26, .88)	**
04	Tries to control the situation.	.63 (.20, .86)	**
38	Expresses interest in fantasy or daydreams.	.60 (.15, .84)	*
49	Behaves in a cheerful manner	.59 (.13, .84)	*
43	Says or does something interesting.	.58 (.12, .84)	*
19	Expresses criticism.	.55 (.08, .82)	*
52	Offers advice.	.54 (.06, .82)	*
57	Speaks sarcastically.	.50 (.01, .80)	*
18	Expresses agreement frequently.	-.87 (-.95, -.66)	**
09	Laughs frequently.	-.67 (-.88, -.26)	**
26	Seeks reassurance.	-.63 (-.86, -.20)	**
32	Expresses warmth.	-.62 (-.85, -.18)	**
35	Is unusual or unconventional in appearance.	-.52 (-.81, -.03)	*

Note. ** = $p < .001$, * = $p < .01$. The chance of finding 14 significant correlations at the .05 level (3.37 expected by chance) is $p = .001$.
Countries included in this analysis: Australia, Austria, Canada, Czech Republic, Estonia, Germany, Italy, Japan, Netherlands, Poland, Slovakia, South Africa, South Korea, Spain, UK, US.

Table 8
Behavioral Correlates of Conscientiousness Across 16 Countries

Item #	RBQ Item	*r (95% CI)*	*p*-value
63	Other(s) seeks advice from P.	.74 (.39, .90)	**
54	Emphasizes accomplishments of self, family or acquaintances.	.67 (.26, .88)	**
45	Displays ambition.	.66 (.25, .87)	**
52	Offers advice.	.55 (.08, .82)	*
48	Expresses sexual interest.	.51 (.02, .80)	*
26	Seeks reassurance.	-.72 (-.90, -.35)	**
18	Expresses agreement frequently.	-.63 (-.86, -.20)	**
17	Talks at rather than with other(s).	-.62 (-.85, -.18)	*
32	Expresses warmth.	-.61 (-.85, -.16)	*

Note. ** = $p < .001$, * = $p < .01$. The chance of finding 9 significant correlations at the .05 level (3.37 expected by chance) is $p = .032$.
Countries included in this analysis: Australia, Austria, Canada, Czech Republic, Estonia, Germany, Italy, Japan, Netherlands, Poland, Slovakia, South Africa, South Korea, Spain, UK, US.

Table 9
Behavioral Correlates of Self-Esteem Across 16 Countries

Item #	RBQ Item	*r* (95% CI)	*p*-value
47	Expresses self-pity or feelings of victimization	.72 (.35, .90)	**
35	Is unusual or unconventional in appearance	.71 (.33, .89)	**
17	Talks at rather than with other	.62 (.18, .85)	*
46	Blames others	.59 (.13, .84)	*
40	Keeps other(s) at a distance	.59 (.13, .84)	*
39	Expresses guilt	.59 (.13, .84)	*
13	Exhibits an awkward interpersonal style	.58 (.12, .84)	*
36	Behaves in a fearful or timid manner	.56 (.09, .83)	*
55	Behaves in a competitive manner	.52 (.03, .81)	*
24	Expresses sympathy	-.66 (-.87, -.25)	**
49	Behaves in a cheerful manner	-.58 (-.84, -.12)	*
07	Exhibits social skills	-.58 (-.84, -.12)	*
12	Seems to like other(s) present	-.53 (-.81, -.05)	*
28	Seems likable	-.53 (-.81, -.05)	*
03	Seems interested in what someone had to say	-.51 (-.80, -.02)	*

Note. ** = $p < .001$, * = $p < .01$. The chance of finding 15 significant correlations at the .05 level (3.37 expected by chance) is $p = .001$.
Countries included in this analysis: Australia, Austria, Canada, China, Denmark, Germany, Italy, Japan, Netherlands, Singapore, South Africa, South Korea, Spain, UAE, UK, US.

Table 10

Behavioral Correlates of Tolerant Attitudes Across 16 Countries

Item #	RBQ Item	*r* (95% CI)	*p*-level
28	Seems likable	.66 (.25, .87)	**
57	Speaks sarcastically	.65 (.23, .87)	**
24	Expresses sympathy	.63 (.20, .86)	**
07	Exhibits social skills	.56 (.09, .83)	*
35	Is unusual in appearance	-.65 (-.87, -.23)	**
40	Keeps others at a distance	-.57 (-.83, -.10)	*
02	Volunteers info	-.56 (-.83, -.09)	*
13	Exhibits awkward interpersonal style	-.53 (-.81, -.05)	*

Note. ** = $p < .001$, * = $p < .01$. The chance of finding 8 significant correlations at the .05 level (3.32 expected by chance) is $p = .07$.

Countries included in this analyses: Australia, Canada, China, Estonia
Germany, Italy, Japan, Netherlands, Poland, Russia, Singapore, South Africa, South Korea, Spain, UK, US

Table 11

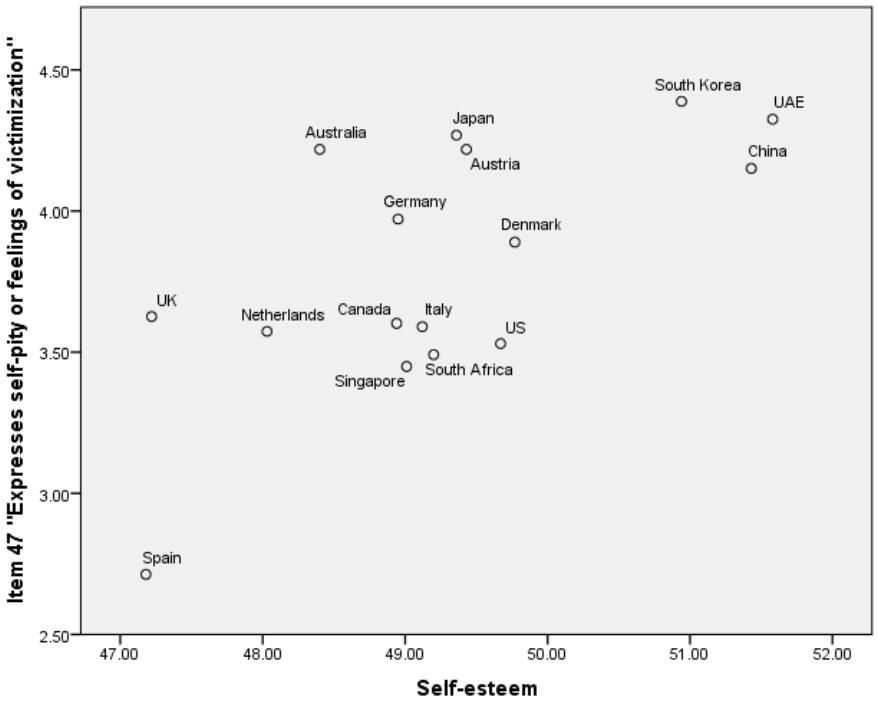
Behavioral Correlates of Happiness Across 16 Countries

Item #	RBQ Item	*r* (95% CI)	*p*-level
07	Exhibits social skills	.67 (.26, .88)	**
66	Acts in a self-indulgent manner	.60 (.15, .84)	*
31	Acts irritated	.58 (.12, .84)	*
09	Laughs frequently	.53 (.05, .81)	*
33	Tries to undermine, sabotage or obstruct	.50 (.01, .80)	*
67	Exhibits physical discomfort or pain	-.69 (-.88, -.30)	**
30	Appears to regard self as physically attractive	-.64 (-.86, -.21)	**
05	Dominates the situation	-.623 (-.85, -.19)	**
04	Tries to control the situation	-.620 (-.85, -.18)	*

Note. ** = $p < .001$, * = $p < .01$. The chance of finding 9 significant correlations at the .05 level (3.40 expected by chance) is $p = .042$.

Countries included in this analyses: Australia, Canada, China, Estonia
Germany, Italy, Japan, Netherlands, Poland, Russia, Singapore, South Africa, South Korea, Spain, UK, US

Figure 1
Country level ratings of RBQ item 47 ("Expresses self-pity or feelings of victimization") and Self-esteem



Discussion

Our results lead to three notable conclusions. First, the cross-country comparison of behavioral profiles revealed that, at 7:00 p.m., individuals across all 21 countries behaved fairly – and perhaps surprisingly – similarly to one another and that the behaviors most widely enacted could be characterized as generally positive and relaxed. Furthermore, the United States and Canada had the most similar average behavioral profiles while the UAE and Japan were the least similar. While the geographical proximity and cultural similarity of the US and Canada make the basis for their similarity almost self-evident, the reasons behind the significant dissimilarity between the UAE and Japan are less obvious and while it would be tempting to present explanations post hoc, this finding, along with many others reported here, are the outcome of

frankly exploratory research. Future investigations can now build on these findings to develop focused hypotheses and further assess theoretically-relevant characteristics of cultures to help explain the observed similarities and dissimilarities in daily behavior seen here.

Second, individuals' behavioral profiles varied across countries (slightly) more than individuals within a single culture. These results may be surprising in that they imply that behavioral variation across countries is not much larger than behavioral variation within countries. However, Guillaume et al. (2016) reported, similarly, that situational experiences were only slightly more similar across individuals within countries compared to those of individuals across 20 countries (see also Allik et al., 2009; Hanel, Maio & Manstead, 2016; Tsai & Chentsova-Dutton, 2003).

Third, the exploratory analyses of behavioral correlates of cultural value dimensions, average personality traits, economic output, population, and various individual difference ratings provided an opportunity to investigate behavior from cross-cultural and anthropological perspectives. For example, people in countries ranking higher, on average, on the Big Five trait extraversion were more likely to display behaviors such as seeking advice (Item 63), expressing interest in fantasy or daydreams (Item 38), and speaking sarcastically (Item 57). The relationship between extraversion and seeking advice may reflect a general, universal relationship between extraversion and trust (Evans & Revelle, 2008). The strong correlation between extraversion and speaking sarcastically may be driven by Austria, the highest ranked country on extraversion. Indeed, contemporary Austrian literature is characterized by its dry, sarcastic tone (Meyer-Sickendiek, 2014).

Japan is ranked among the lowest in extraversion and highest in neuroticism. A look at the most positive and negative correlates for these traits provides especially interesting insights

into Japanese culture and daily life. In particular, the item "Expresses agreement frequently" had the strongest negative correlation with extraversion and the strongest positive correlation with neuroticism. Indeed, Japan is commonly characterized by its inhabitants' frequent expression of agreement. This could possibly be driven by the common occurrence of *amae* interactions – the practice of unconditional acceptance, even for potentially socially unacceptable behavior (Niiya, Ellsworth, & Yamaguchi, 2006).

An examination of the relationship between countries high on conscientiousness and country-level RBQ behavioral profiles provides an opportunity to understand more about life in a highly conscientious country. The United States ranks among the highest on conscientiousness worldwide. Accordingly, US students at 7:00 p.m. reported offering advice, displaying ambition, and emphasizing the accomplishments of themselves, their family, or their acquaintances more so than students from other countries. Likewise, as any highly conscientious US-American can attest, in a competitive social and professional environment, conscientiousness may be driven by the need to succeed. Indeed, there is a strong relationship between conscientiousness and academic and professional success (Wagerman & Funder, 2007). We therefore see a trend in the United States in which individuals have and display ambition, feel as if they have advice to offer (i.e., lessons learned from their success), and have the motivation and credentials to emphasize their own accomplishments.

A look at particular individual differences (on a country level) enables us to parse apart country-level differences in daily behavior. For example, the Netherlands is the most tolerant country in our sample, and our Dutch participants reported behaviors including being likable and social, having a sarcastic sense of humor, and, not surprisingly, expressing sympathy. Conversely, China ranks among the lowest in holding tolerant attitudes, and our Chinese

participants reported behaviors including the tendency to keep others at a distance and exhibiting an awkward interpersonal style.

Also, while some reported behaviors from individuals in countries that have generally strong feelings of happiness on average (i.e., the UK and Canada) are paradoxical (e.g., acting irritated, undermining and obstructing), most are common expressions of happiness. For instance, individuals in these happy countries generally reported being social, laughing frequently, and acting in a self-indulgent and comfortable manner.

Finally, individuals in countries with higher self-esteem were relatively likely to report behaviors such as feeling victimized, appearing unconventional, and expressing blame; they were also less likely to report expressing sympathy, behaving cheerfully, or exhibiting social skills. We do not have a ready explanation for this pattern of findings, but it appears to be empirically rather strong. These patterns could be driven to a large extent by the fact that two countries, Spain and the UAE, were at the extremes of self-esteem (with Spain being lowest and UAE the highest), while also being near the extremes of some of the behaviors listed above (see, for example, Figure 1).

Limitations

Although the current project was ambitious and the first effort of its kind, it is not without limitations. First, while we did make efforts to translate and back-translate the RBQ, it is a measure that originated in the US and therefore could still be considered an "imposed etic" (Berry, 1980). Future developments of behavioral assessments within each country would be desirable to more widely capture between-country variation in daily behavior.

Second, our sample is comprised primarily of members of college communities. It seems reasonable to expect that with a more representative sample of people occupying various roles in

society, daily behavior will be similarly more diverse. However, this speculation awaits an empirical test. Relatedly, while we were able to collect data from 21 countries across five continents, individuals from South America, Central America, South Asia, and the Middle East are not represented in the current study. Moreover, regional, cultural, and ethnic variation in behavioral expression within countries was not assessed. Future research from our lab will seek not only to gather data from many more countries across underrepresented areas of the world, but to also include assessments from different regions within a single country.

Third, as is common in psychological research, there was a disproportionate number of female participants in many of our samples. Although we did attempt to statistically adjust for this discrepancy in representation by each gender, future research should seek to recruit a percentage of male participants that is more representative of each country' population.

For the current study, we unfortunately did not collect individual-level personality trait scores. We therefore related previously acquired, country-level personality trait scores with country-level behavior profiles. This approach limits our power and constrains our interpretations to be about countries and not individuals. A necessary next step will be to measure personality trait levels and behavior for each individual, thus enabling us to compare relations between theoretically derived personality-behavior pairs in more powerful multi-level models.

Finally, while the findings we report do illuminate the ways in which countries around the world are similar and different in how they live their lives, it is important to note that such a large and rich dataset can be analyzed in many ways (for an example of a potential alternative approach, see Webster and Duffy, 2016 for a recent discussion on spatial analysis). We thus encourage interested readers to explore our open dataset at https://osf.io/ytn9u/.

Implications and Conclusion

The current project provides the beginnings of a foundation for future theoretical construction and methodological sophistication (Haig, 2005) in the sense that it is "…important to explore something real, important, and general across cultures…" (Rozin, 2004, p. 439).

Real life is lived moment to moment, so when one is interested in how people around the world are similar and different in the way they live their lives, a natural starting place is assessing a wide array of behaviors at a single point in their day. With the use of 68 nuanced behaviors, our method aimed to provide relatively objective assessments while also constructing holistic descriptions of behavioral patterns, towards the ultimate goal of gaining a fuller psychological understanding of daily life and behavior across the globe.

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Supplementary Materials

Intercorrelation and inter-individual correlation matrices separated by gender are reported in the Supplementary Materials, along with the complete data set used for this study and R script used to run all analyses (https://osf.io/68yh3/).

References

Allik, J., & McCrae, R.R. (2004). Toward a geography of personality traits patterns of profiles across 36 cultures. *Journal of Cross-Cultural Psychology*, *35*, 13-28.

Allik, J., Mottus, R., Realo, A., Pullmann, H., Trifonova, A.,McCrae, R. R., & 56 Members of the Russian Character and Personality Survey. (2009). Personality traits of Russians from the observer's perspective. *European Journal of Personality*, *23*, 567-588.

Benet-Martínez, V., & Karakitapoglu-Aygün, Z. (2003). The interplay of cultural syndromes and personality in predicting life satisfaction comparing Asian Americans and European Americans. *Journal of Cross-Cultural Psychology*, *34*, 38-60.

Berry, J. W. (1980). Introduction to methodology. In H. C. Triandis & J. W. Berry (Eds.), *Handbook of Cross-Cultural Psychology: Methodology* (Vol. 2, pp. 1-28). Boston, MA: Allyn & Bacon.

Bleidorn, W., Arslan, R.C., Denissen, J.J.A., Rentfrow, P.J., Gebauer, J.E., Potter, J., & Gosling, S.D. (2015). Age and gender differences in self-esteem—A cross-cultural window. *Journal of Personality and Social Psychology*. Advance online publication.

Bond, M.H., & Smith, P. B. (1996). Cross-cultural social and organizational psychology. *Annual Review of Psychology*, *47*, 205-235.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, *1*, 185-216.

Catalá-Miñana, A., Walker, K., Bowen, E., & Lila, M. (2014). Cultural differences in personality and aggressive behavior in intimate partner violence offenders: A comparison of English and Spanish offenders. *Journal of Interpersonal Violence*, *29*, 2652-2669.

Central Intelligence Agency (2014). *World Factbook*. Retrieved March 13, 2015 from

https://www.cia.gov/library/publications/the-world-factbook/rankorder/2119rank.html.

Cross, S. E. (1995). Self-construals, coping, and stress in cross-cultural adaptation. *Journal of Cross-Cultural Psychology, 26*, 673-697.

Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, *55*, 34-43.

Duda, J. L., & Allison, M. T. (1989). The attributional theory of achievement motivation: Cross-cultural considerations. *International Journal of Intercultural Relations*, *13*, 37-55.

Earley, P.C. (1994). Self or group? Cultural effects of training on self-efficacy and performance. *Administrative Science Quarterly*, *39*, 89-117.

Evans, A.M., & Revelle, W. (2008). Survey and behavioral measurements of interpersonal trust. *Journal of Research in Personality*, *42*, 1585-1593.

Frake, C.O. (1980). *Language and cultural description: Essays by Charles O. Frake.* Stanford, CA: Stanford University Press.

Funder, D.C., Furr, R.M., & Colvin, C.R. (2000). The Riverside Behavioral Q-sort: A tool for the description of social behavior. *Journal of Personality*, 68, 451-489.

Funder, D.C., Guillaume, E., Kumagai, S., Kawamoto, S., & Sato, T. (2012). The person-situation debate and the assessment of situations. *Japanese Journal of Personality, 21,* 1-11.

Furnham, A., & Fong, G. (2000). Self-estimated and psychometrically measured intelligence: A cross-cultural and sex differences study of British and Singaporean students. *North American Journal of Psychology*, *2*, 191-200,

Guillaume, E., Baranski, E., Todd, E., Bastian, B., Bronin, I., Ivanova, C., Cheng, J.T., De Kock, F.S., Denissen, J.J., Gallardo-Pujol, D., Halama, P., Han, G.Q., Bae, J., Moon, J., Hong,

R.Y., Hřebíčková, M., Graf, S., Izdebski, P., Lundmann, L., Penke, L., Perugini, M., Costantini, G., Rauthmann, J., Ziegler, M., Realo, A., Elme L., Sato, T., Kawamoto, S., Szarota, P., Tracy, J.L., van Aken, M.A., Yang, Y., & Funder, D.C. (2016). The world at 7: Comparing the experience of situations across 20 countries. *Journal of Personality*, *84*, 493-509. doi: 10.1111/jopy.12176.

Haig, B.D. (2005). An abductive theory of scientific method. *Psychological Methods, 10,* 317-388.

Hanel, P., Maio, G., & Manstead, T. (2016, August). *Similarities between groups of people are usually much larger than differences.* Paper presented at the 23rd International Congress of the International Association for Cross-cultural Psychology, Nagoya, Japan.

Heine, S. J. (2001). Self as cultural product: An examination of East Asian and North American selves. *Journal of Personality*, *69*, 881-905.

Heine, S.J., Buchtel, E.E., & Norenzayan, A. (2008). What do cross-national comparisons of personality traits tell us? The case of conscientiousness. *Psychological Science, 19,* 309-313.

Heine, S.J., & Buchtel, E.E. (2009). Personality: The universal and the culturally specific. *Annual Review of Psychology, 60,* 369-394.

Heine, S. J., Lehman, D. R., Peng, K., & Greenholtz, J. (2002). What's wrong with cross-cultural comparisons of subjective Likert scales?: The reference-group effect. *Journal of Personality and Social Psychology*, *82*, 903-918.

Hofstede, G. (1980). Motivation, leadership, and organization: do American theories apply abroad? *Organizational Dynamics*, *9*, 42-63.

Hofstede, G., Hofstede, G.J., & Minkov, M. (1991). *Cultures and organizations: Software of the mind* (Vol. 2). London: McGraw-Hill.

Hofstede, G.H. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. Thousand Oaks, CA: Sage Publications.

Hofstede, G., & McCrae, R.R. (2004). Personality and culture revisited: Linking traits and dimensions of culture. *Cross-Cultural Research, 38*, 52-88.

International Monetary Fund (2014). *World Economic Outlook Data Base.* Retrieved March, 13, 2015 from http://www.imf.org/external/pubs/ft/weo/2014/02/weodata/index.aspx

Lievens, F., Harris, M.M., Van Keer, E., & Bisqueret, C. (2003). Predicting cross-cultural training performance: The validity of personality, cognitive ability, and dimensions measured by an assessment center and a behavior description interview. *Journal of Applied Psychology, 88,* 476-489.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224-253.

Meyer-Sickendiek, B. (2014). Trauma and sarcasm in modern Austrian literature. *Trauma and Traumatization in Individual and Collective Dimensions: Insights from Biblical Studies and Beyond, 2*, 111-126.

McCrae, R.R., & Costa, P.T. (1997). Personality trait structure as a human universal. *American Psychologist, 52*, 509-516.

McCrae, R.R. (2001). Trait psychology and culture: Exploring intercultural comparisons. *Journal of Personality, 69,* 819-846.

McCrae, R.R. et al. (2004). Consensual validation of personality traits across cultures. *Journal of Research in Personality, 38,* 179-201.

McInerney, D. M., & Ali, J. (2006). Multidimensional and hierarchical assessment of school motivation: Cross-cultural validation. *Educational Psychology*, 26, 717-734.

Morling, B., & Lamoreaux, M. (2008). Measuring culture outside the head: A meta-analysis of individualism–collectivism in cultural products. *Personality and Social Psychology Review*, *12*, 199-221.

Myers, D.G., & Diener, E. (1995). Who is happy? *Psychological Science*, *6*, 10-19.

Niiya, Y., Ellsworth, P.C., & Yamaguchi, S. (2006). Amae in Japan and the United States: An exploration of a "culturally unique" emotion. *Emotion*, 6, 279-295.

Oyserman, D. (1993). The lens of personhood: Viewing the self and others in a multicultural society. *Journal of Personality and Social Psychology*, *65*, 993-1009.

Oyserman, D., & Lee, S.W. (2008). Does culture influence what and how we think? Effects of priming individualism and collectivism. *Psychological Bulletin, 134*, 311-342.

Ozer, D. J. (1993). The Q-sort method and the study of personality development. In D. C. Funder, R. D. Parke, C. Tomlinson-Keasey, & K. Widaman (Eds.), *Studying lives through time: Personality and development* (pp. 147–168). Washington, DC: American Psychological Association. doi:10.1037/10127-023

Park, N., & Huebner, E.S. (2005). A cross-cultural study of the levels and correlates of life satisfaction among adolescents. *Journal of Cross-Cultural Psychology*, *36*, 444-456.

Ross, C.E., & Mirowsky, J. (1984). Socially-desirable response and acquiescence in a cross-cultural survey of mental health. *Journal of Health and Social Behavior*, *25*, 189-197.

Rozin, P. (2009). What kind of empirical research should we publish, fund, and reward?: A different perspective. *Perspectives on Psychological Science, 4*, 435-439.

Schmitt, D.P. Allik, J., McCrae, R.R., & Benet-Martínez , V. (2007). The geographic distribution of Big Five personality traits: Patterns and profiles of human self-description across 56 nations. *Journal of Cross-Cultural Psychology, 38,* 173-212.

Schwartz, S.H. (1990). Individualism-collectivism critique and proposed refinements. *Journal of Cross-Cultural Psychology*, *21*, 139-157.

Sherman, R.A., & Funder, D.C. (2009). Evaluating correlations in studies of personality and behavior: Beyond the number of significant findings to be expected by chance. *Journal of Research in Personality, 99,* 330-343.

Sherman, R.A., & Serfass, D.G. (2015). The comprehensive approach to analyzing multivariate constructs. *Journal of Research in Personality,* 54, 40-50.

Singelis, T. M., & Sharkey, W. F. (1995). Culture, self-construal, and embarrassability. *Journal of Cross-Cultural Psychology*, *26*, 622-644.

Shweder, R.A. (1991). *Thinking through countries: Expeditions in cultural psychology.* Cambridge, MA: Harvard University Press.

Tsai, J., & Chentsova-Dutton, Y. (2003). Variation among European-Americans in emotional facial expression. *Journal of Cross-Cultural Psychology, 34,* 650-657.

Tsujioka, B., & Cattell, R.B. (1965). A cross-cultural comparison of second-stratum questionnaire personality factor structures - anxiety and extraversion - in America and Japan. *Journal of Social Psychology, 65,* 205-219.

United Nations Statistics Division (2015). *GDP and its breakdown at current prices in US Dollars.* New York: United Nations. http://unstats.un.org/unsd/snaama/dnllist.asp.

Webster, G. D., & Duffy, R. D. (2016). Losing faith in the intelligence–religiosity link: New evidence for a decline effect, spatial dependence, and mediation by education and life

quality. *Intelligence*, *55*, 15–27. doi:10.1016/j.intell.2016.01.001

World Values Survey (2016). *The World Values Database Wave V and Wave VI.* Retrieved June 18, 2016. http://www.worldvaluessurvey.org/WVSContents.jsp.

Wagerman, S.A., & Funder, D.C. (2007). Acquaintance reports of personality and academic achievement: A case for conscientiousness. *Journal of Research in Personality*, *41*, 221-229.

Yamaguchi, S., Kuhlman, D.M., & Sugimori, S. (1995). Personality correlates of allocentric tendencies in individualist and collectivist cultures. *Journal of Cross-Cultural Psychology*, *26*, 658-672.