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Journal of Cross-Cultural Psychology published online 17 January 2011

DOI: 10.1177/0022022110390926

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<http://jcc.sagepub.com/content/early/2011/01/10/0022022110390926>

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Journal of Cross-Cultural Psychology
XX(X) 1–23
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DOI: 10.1177/0022022110390926
jccp.sagepub.com



James H. Liu¹, Dario Paez², Katja Hanke¹, Alberto Rosa³, Denis J. Hilton⁴, Chris G. Sibley⁵, Rosa Cabecinhas⁶, Franklin Zaromb⁷, Ilya E. Garber⁸, Chan-Hoong Leong⁹, Gail Moloney¹⁰, Velichko Valchev¹¹, Cecilia Gastardo-Conaco¹², Li-Li Huang¹³, Ai-Hwa Quek¹⁴, Elza Techio¹⁵, Ragini Sen¹⁶, Yvette van Osch¹¹, Hamdi Muluk¹⁷, Wolfgang Wagner¹⁸, Feixue Wang¹⁹, Sammyh S. Khan¹, Laurent Licata²⁰, Olivier Klein²⁰, János László²¹, Márta Fülöp²¹, Jacky Chau-kiu Cheung²², Xiaodong Yue²², Samia Ben Youssef²³, Uichol Kim²⁴, Youngshin Park²⁴, Jen Puch-Bouwman²⁵, Katayoun Hassall²⁵, John Adair²⁶, Lauren Unik²⁶, Dario Spini²⁷, Karine Henchoz²⁷, Gisela Böhm²⁸, Marcus Selart²⁹, Hans-Peter Erb³⁰, Deborah Felicitas Thoben³⁰, Giovanna Leone³¹, Tiziana Mastrovito³¹, Tomohide Atsumi³², and Ko-ichi Suwa³²

Abstract

The universality versus culture specificity of quantitative evaluations (negative-positive) of 40 events in world history was addressed using World History Survey data collected from 5,800 university students in 30 countries/societies. Multidimensional scaling using generalized procrustean analysis indicated poor fit of data from the 30 countries to an overall mean configuration, indicating lack of universal agreement as to the associational meaning of events in world history. Hierarchical cluster analysis identified one Western and two non-Western country clusters for which adequate multidimensional fit was obtained after item deletions. A two-dimensional solution for the three country clusters was identified, where the primary dimension was historical calamities versus progress and a weak second dimension was modernity versus resistance to modernity. Factor analysis further reduced the item inventory to identify a single concept with structural equivalence across cultures, Historical Calamities, which included man-made and natural, intentional and unintentional, predominantly violent but also nonviolent calamities. Less robust factors were tentatively named as Historical Progress and Historical Resistance to Oppression. Historical Calamities and Historical Progress were at

the individual level both significant and independent predictors of willingness to fight for one's country in a hierarchical linear model that also identified significant country-level variation in these relationships. Consensus around calamity but disagreement as to what constitutes historical progress is discussed in relation to the political culture of nations and lay perceptions of history as catastrophe.

Keywords

cross-cultural dimensions of meaning, evaluation of historical events, perceptions of history, World History Survey, Historical Calamities, Historical Progress, Historical Resistance to Oppression, willingness to fight for one's country

A major contribution of cross-cultural psychology to the global science of psychology has been the identification of dimensions of cultural variation on which national cultures can be located. Two of the most sophisticated investigations of this type have converged on the finding that while cultures may differ on average as to the extent that members endorse certain values (Schwartz, 1992) or beliefs (Leung & Bond, 2004), there is substantial universality in the associational meaning

¹Victoria University of Wellington, Wellington, New Zealand

²University of the Basque Country, Spain

³Autonomous University of Madrid, Madrid, Spain

⁴University of Toulouse II, Le Mirail, France

⁵University of Auckland, Auckland, New Zealand

⁶University of Minho, Portugal

⁷Washington University, St. Louis, Missouri, USA

⁸Saratov State Socio-economic University, Russia

⁹National University of Singapore, Singapore

¹⁰Southern Cross University, Australia

¹¹Tilburg University, Tilburg, the Netherlands

¹²University of the Philippines-Diliman, Philippines

¹³National Tsing Hua University, Taiwan

¹⁴University of Malaya-Kuala Lumpur, Malaysia

¹⁵Tiradentes University, Brazil

¹⁶Logistics, India

¹⁷University of Indonesia, Indonesia

¹⁸Johannes Kepler University, Linz, Austria

¹⁹Sun-Yat-Sen University, Guangzhou, China

²⁰Université Libre de Bruxelles, Brussels, Belgium

²¹Hungarian Academy of Sciences, Budapest, Hungary

²²City University of Hong Kong, Hong Kong, China

²³Tunisia

²⁴Inha University, Incheon, Korea

²⁵University of the South Pacific, Fiji

²⁶University of Manitoba, Winnipeg, Manitoba, Canada

²⁷University of Lausanne, Switzerland

²⁸University of Bergen, Norway

²⁹NHH, Norway

³⁰Helmut Schmidt University, Hamburg, Germany

³¹University of Rome, Italy

³²Osaka University, Japan

Corresponding Author:

Dr. James H. Liu, Centre for Applied Cross Cultural Research, School of Psychology, P.O. Box 600, Victoria University of Wellington, Wellington, New Zealand.

Email: james.liu@vuw.ac.nz

of important concepts across cultures. In the domain of values, for example, Schwartz (1992) found good agreement across 11 of 12 national cultures as to which values were compatible (i.e., positively correlated) or incompatible (negatively correlated)¹ on a multidimensional space consisting of two dimensions. In the domain of social axioms or context-free general beliefs, Leung and Bond (2004) identified a pan-cultural five-factor structure, where specific beliefs consistently correlated together on the same general conceptual factors across cultures. These findings (a) enable systematic classification of cultures into “regions” of psychological similarity and dissimilarity and (b) facilitate the prediction of behavior across cultures, both at the individual and culture (or country) level. Given the benefits of such an approach, a primary goal of the current research is to ascertain whether there are similarly universal dimensions of meaning for the evaluation of events in world history (Liu et al., 2005; Liu, Paez et al., 2009; Pennebaker et al., 2006). In addition, we examine whether concepts constructed from historical evaluations are able to predict citizens’ willingness to fight for their country, an important aspect of national political cultures (e.g., Bar-Tal, 2001; Liu & Sibley, 2009).

Given that most contemporary instances of large-scale intergroup violence involve national, ethnic, or religious cultures, it is surprising that the intersection between culture and group conflict is sparsely theorized (Hilton & Liu, 2008, but see Brewer & Yuki, 2007). To fill this gap, Liu and colleagues (Liu & Hilton, 2005; Liu & László, 2007; Liu & Sibley, 2009) have argued that history furnishes raw materials that are communicated through interpersonal and institutional channels to produce symbolic representations consisting of narratives and iconic images that maintain continuity between a people’s past, present, and future (see also László, Ehmann, & Imre, 2002; Wertsch, 2002). They argue that social representations (Moscovici, 1988) of history provide important symbolic reserves that can be mobilized to help define and redefine national political cultures as they cope with new challenges (Wagner, Kronberger, & Seifert, 2002). Much research to date has focused on articulating the function of culturally unique symbols like the Treaty of Waitangi in New Zealand (Liu, Wilson, McClure, & Higgins, 1999) that underpins conceptions of a bicultural national identity (Sibley & Liu, 2007) or the February 28 incident in Taiwan (Huang, Liu, & Chang, 2004) that provides fuel for Taiwanese desires for sovereignty. These studies suggest that social representations of history furnish the symbolic basis for unique aspects of political culture within nations that are causally connected to present-day conflicts/prejudice and political decisions about them (Sibley, Liu, Duckitt, & Khan, 2008). The ethnocentrism inherent in the construction of national historical narratives (Liu & Hilton, 2005; Paez & Liu, in press) leaves room for doubt as to whether any universal perception of the meaning of world history is even possible. Rather, each nation might regard different events as central, and even if there is agreement about the centrality of an event, each nation might evaluate its meaning differently (see Liu et al., 2005, p. 188).

On the other hand, Liu et al. (2005) and Liu, Paez et al. (2009) have used open-ended nominations to determine the most important figures and events in world history from 24 societies and found that across cultures world history (a) is a story about politics and war (especially World War II and Hitler), (b) focused on the recent past (e.g., the last hundred years), and (c) is characterized by Eurocentrism tempered with nationalism. However, using open-ended questions did not allow evaluation of the associative meaning of events in world history. Is there a deeper, universal structure to the evaluation of important events in world history, or are historical events uniquely perceived through cultural lenses? Would a temporal structure emerge with distance in time forming a crucial dimension, or could there be a content structure separating politics and war from other events? Unlike values (Schwartz, 1992), there is not a rich psychological literature on perceptions of history to guide theory construction. Professional historians have proposed numerous theories of history, but these accounts are more controversial than consensual (e.g., Great Man versus Marxist theories, unidirectional progress versus cyclical change; see Blanco &

Rosa, 1997). Furthermore, there are fundamental differences between professional and lay conceptions of world history (see Liu et al., 2005, p. 187; Liu & Hilton, 2005, p. 541). Ordinary people may be considered experts at receiving and transmitting their culture's values or general beliefs, but only particular social categories, like politicians and professional historians, might be expert at selectively utilizing histories to explain, justify, and construct agenda for present-day political situations (see Reicher & Hopkins, 2001)—hence, there might be less coherence or constraint in lay people's understandings of history. Our program to investigate whether there are universal dimensions in the evaluation of historical events is exploratory. We have only rudimentary ideas about what factors might shape the structure of these perceptions, like the centrality of World War II, the impact of recency, and the tension between nationalistic versus Eurocentric conceptions of history.

This is not to say that our approach is a-theoretical. Rather, our theoretical approach allows us to provide an alternative treatment for historical events that are *not* universal even as we search for universal dimensions of meaning. Regardless of the structure of lay perceptions of world history, we have a functional theory about the preeminent role of the collective remembering of warfare in national political cultures. A classic study by Archer and Gardner (1984) using cross-national archival data after World War II found that combatant nations, especially victorious ones with high casualty rates, were more likely to experience increases in homicide rates compared to control nations, even after accounting for economic deprivation, civil unrest, or returning male combatants. Building on this using their own country-level cross-cultural data, Paez, Liu, Techio, Slawuta, Zlobina, and Cabecinhas (2008) found that free recall of World War II (but not World War I) as important was positively correlated with both willingness to fight in future conflicts for one's country and high power distance. Hence, it appears that the collective remembering of recent wars (as just or necessary) tends to legitimize the use of violence in society, and that this may be connected to national political cultures where high power distance "promotes differences in power and hierarchical roles emphasizing obedience and respect for authorities and the legitimacy of using power to attain goals, including in-group or national goals" (Paez et al., 2008, p. 375). It is an open question whether these associations will be restricted to World War II, as Paez et al. (2008) found using a relatively limited data set, or be more broadly related to dimensions of historical perception. So unlike in other domains, a failure to find universal dimensions of historical perception does not undermine the theory of history and identity, but it would be important to know whether specific events or overall perceptions influence action tendencies.

To summarize, these are the two initial parallel goals of the current investigation:

Goal 1: to ascertain whether there are universal dimensions in the evaluation of historical events across cultures.

Goal 2: to determine whether these dimensions can be used to construct cross-culturally valid scales that predict willingness to fight for one's country beyond the specific evaluation of World War II.

More generally, we open a new avenue of inquiry into the process and consequences of excluding specific items that lack universal meaning from cross-cultural inventories. For example, Leung and Bond (2004, p. 133) began with 182 items and reduced this to a final inventory of 60 items in order to achieve a replicable five-factor structure of social axioms. Schwartz (1992) began from the established base of the 36-item Rokeach Values Survey and does not detail how he added items for his final inventory of 56 values. We believe that these differences in item selection and elimination are highly informative. Values are a constrained domain, where all human beings face similar questions about how to prioritize concerns about biological, social, and group-based needs (Schwartz, 1992). Item selection and elimination in the values domain

can therefore proceed in a more theory-driven manner, whereas the realm of social axioms is constrained only by linguistic expressions (A is related to B) and human imagination. Although Leung and Bond (2004) do not provide further analyses of items that were excluded from their final item inventories, we surmise that like historical events, there might be particular social axioms that do not fit into a universal factor structure but have important culture-specific impact.

As different cultures rub shoulders with one another on an increasingly frequent basis, fundamental miscommunication as to the basic meaning of important historical symbols is becoming more of a problem. For instance, the United States has been excoriated by other countries for invading Afghanistan and Iraq following the September 11 terrorist attacks (Pew Global Attitudes Project, 2006) and subsequently lost considerable international prestige (Liu, Hanke et al., 2009; Liu, Paez et al., 2009). But it may be that September 11 has fundamentally different associative meanings for Americans compared to citizens of other countries that rendered these political actions reasonable or even necessary to Americans in a way that is incomprehensible to citizens of other states. Similarly, the Nanjing Massacre may carry associative meanings for mainland Chinese that bring it into fundamental miscommunication and symbolic conflict with neighboring nationalities like the Japanese (Atsumi & Suwa, 2009; Liu & Atsumi, 2008).

Given that we allow for both culture-general and culture-specific effects for the perception of world history, specifying criteria for item generation is critical to identifying not only meaningful dimensions of cross-cultural variation but historical events with potentially global implications that cannot fit within a universal structure of associative meaning. Because of the lack of theoretical consensus, the primary criterion we used was prior empirical research. We included in the event inventory of the World History Survey all events nominated in the Top 10 by two or more cultures as reported in Liu et al. (2005) and Liu, Paez et al. (2009).² This produced a list of 31 events (see Table 1) that was augmented by events chosen for specific theoretical purposes: The Foundation of the United Nations, Decolonization, and the Rise of Islamic Civilization were only nominated in one country but were deemed important enough to be included. The 30 Years War was a conflict between Catholics and Protestants that decimated Germany in the 17th century that together with the Invention of the Printing Press were chosen to represent events of vast importance in previous eras that seem to not be salient in open-ended nominations. The Rise of the European Union, the Digital Age (Computers, Internet), and Global Warming were chosen as events of significant importance to the future that may have been underestimated. Finally, the Creation/Evolution of Humanity was chosen because the empirical survey disallowed events of greater than 1,000 years antiquity, and we wanted to better ascertain the place given to prehistory in overall ratings of world history. This event inventory is both comprehensive and content rich and allows us to articulate the remaining (less central) goals for investigation:

Subgoal 3: to articulate empirical criteria for item deletion from cross-cultural survey inventories and to generate an inventory of culturally significant events in world history that lack universal meaning.

Subgoal 4: to ascertain whether among these historical events deleted from a general cross-cultural inventory there might be events influencing willingness to fight in particular cultures (particularly the superpowers of the United States and China).

Method

Participants

Data were collected initially from 6,023 university students who were citizens of 30 societies (Australia, Austria, Belgium, Brazil, Bulgaria, Canada, China, Colombia, Fiji, Germany, Hong Kong, Hungary, India, Indonesia, Italy, Japan, Malaysia, Mexico, the Netherlands, New Zealand, Norway,

Philippines, Portugal, Russia, Singapore, South Korea, Switzerland, Taiwan, Tunisia, and the United States). Social science students were preferred, and specialists majoring in history were avoided. Each society, which for convenience sake we sometimes refer to as a “country”,³ was subjected to a missing data analysis, and cases with more than 33% missing values were excluded from the overall analyses (99 cases). We calculated for each participant the individual standard deviation across all relevant items (40 historical events and figures, evaluation, and importance ratings). Participants who had a standard deviation of 0 (indicating no variability in responses) were also excluded from the overall sample (124 cases).

Thus, participants were in total 5,800 university students (61.1% were female, 35.9% were male, and 3% did not indicate their gender). Participants' age ranged from 16 to 66 ($M = 21.39$, $SD = 4.47$), with country means ranging from 19.0 (Philippines) to 27.3 (Australia). Sample sizes ranged from 113 (Japan) to 330 (Philippines) with a mean sample size of 193.

Procedure and Materials

The questionnaire was administered to university students from a range of different academic disciplines. The survey consisted of two sets of 40 historical events and 40 historical figures. All questionnaires were translated from their original language into the language prevalent in the society of administration and back-translated to ensure correct translation. The participants were asked to evaluate first 40 historical events and then 40 historical figures on a 7-point Likert-type scale ranging from *extremely negative* (1) to *extremely positive* (7) followed by an importance rating from *not at all important* (1) to *extremely important* (7). We will focus only on the evaluation of the 40 events in this article.

Results

Multidimensional Scaling (MDS), Factor Analysis, and Scale Construction

Table 1 shows all events sorted by descending means across all samples. While it was clear that events associated with the progress of civilization (at the top of Table 1) were rated highly whereas events associated with war, terror, and environmental catastrophe were rated negatively across cultures, their relationship with one another is likely to be contextualized within culturally derived systems of meaning.

Determining underlying dimensions of meaning. According to Welkenhuysen-Gybels and van de Vijver (2001), when operating with 30 configurations of raw data from 30 societies, the likelihood is very high that many of the configurations will differ from one another and yield a very poor fit in terms of the underlying dimensions of meaning for the items across cultures.

To confirm this, we initially employed metric MDS with proximity transformations into z -transformed Euclidean distances for each country separately, across all countries using individual level data with PROXimity SCALing (Proxscal). Therefore, we conducted 31 MDS procedures, based on raw data from 30 countries and on one z -standardized overall configuration allowing from one- up to six-dimensional solutions. A representation in one dimension accounted for .74 of the dispersion (normalized raw stress = .24, Tucker's coefficient of congruence = .87); for two dimensions .89, .11, and .95, respectively; for three dimensions .94, .06, and .97; for four .96, .04, and .98; for five .98, .02, and .99; and finally for six .98, .02, and .99. Subsequently, we performed generalized procrustes analysis (GPA; Borg & Groenen, 1997; Commandeur, 1991) to compare all configurations with one another simultaneously and to transform the configurations to maximal correspondence, arbitrarily treating the overall data set as equivalent and homogenous (see also Welkenhuysen-Gybels & van de Vijver, 2001). As expected, the centroid configuration

Table 1. Mean Evaluations of Events With Their Standard Deviations and Intraclass Correlation Coefficients Across All 30 Societies

Event	M	SD	ICC
Abolition of Slavery (19th century)	6.07	1.58	.20
Invention of Printing Press	5.92	1.31	.09
Digital Age (Computers, Internet)	5.72	1.39	.04
Creation/Evolution of Humanity	5.65	1.52	.11
Man on the Moon/Space Travel	5.50	1.41	.06
Women's Emancipation & Suffrage	5.42	1.93	.25
Industrial Revolution	5.37	1.43	.06
Rise of Ancient Civilizations	5.30	1.38	.08
Renaissance (15th century)	5.21	1.36	.13
Foundation of United Nations	5.19	1.45	.06
Fall of Berlin Wall/End of USSR	5.11	1.59	.18
Decolonization	5.08	1.57	.17
Discovery of Americas	4.93	1.52	.07
Rise of European Union	4.83	1.40	.13
French Revolution	4.72	1.41	.10
American (War of) Independence	4.68	1.41	.09
Foundation of the Major Religions	4.34	1.59	.10
Rise of Islamic Civilization	4.26	1.41	.12
Cultural Revolution (China)	4.15	1.55	.20
Age of Discovery/Colonization	4.15	1.68	.13
Russian Revolution (1917)	3.88	1.36	.05
Partition of India and Pakistan	3.82	1.21	.06
American Civil War	3.77	1.43	.05
30 Years War (17th century)	3.22	1.29	.05
Sino-Japanese War (1930s)	3.07	1.31	.03
Opium War (China, 19th century)	3.01	1.38	.03
Islam-Christian Wars/Crusades (11th to 14th century)	2.98	1.48	.11
Great Depression (1930s)	2.86	1.36	.06
Cold War	2.73	1.43	.06
Vietnam War	2.43	1.38	.10
Israeli-Palestinian Conflict	2.38	1.38	.09
World War I	2.21	1.51	.07
World War II	2.17	1.65	.10
Sept 11 Bombing	2.11	1.48	.10
Asian Tsunami (2004)	2.05	1.40	.09
Iraq War (2005)	2.02	1.32	.04
Holocaust	1.96	1.46	.20
Global Warming	1.93	1.42	.06
Atomic Bombings	1.89	1.46	.15
Terrorism (terror bombings)	1.68	1.26	.05

could only account for 55% of the squared distances for two dimensions and 52% for three dimensions. This low level of congruence indicates a lack of universal fit across cultures in the evaluation of historical events.

A plausible alternative to universality is to identify homogenous partitions of societies that show similarities within a cluster. Intraclass correlation coefficients (ICCs) were calculated for all items to provide an index of the expected correlation for evaluations of each historical event between two randomly selected people from the same country. A higher ICC indicates a higher

proportion of consistency in variability accounted for at the between-country level relative to variability between individuals. As seen in Table 1, significant amounts of variation were available to be accounted for at the country level, especially for items like Women's Emancipation, the Holocaust, and the Cultural Revolution (ICCs above .20), and less for others with ICCs as low as .03.

Therefore, we conducted a country-level hierarchical cluster analysis using Ward's method to combine data sets from different countries into coherent groups. The cluster analysis converged on three clusters: a mainly Western (Australia, New Zealand, Norway, Belgium, Italy, Switzerland, Austria, Germany, Netherlands, Hungary, Portugal, Brazil, United States, and Bulgaria) and two mainly non-Western country clusters (first cluster: China, Colombia, Japan, Mexico, Taiwan, and Tunisia; second cluster: Canada, Fiji, Hong Kong, India, Philippines, Russia, Singapore, South Korea, Indonesia, and Malaysia).

We then conducted an interval-level MDS with proximity transformations for each cluster separately using the individual-level data. Euclidean distances were calculated from z -transformed mean scores of 40 evaluations of historical events (MDS between variables) using Proxscal. Therefore, we employed three MDS procedures, based on three clusters (using z -scores) considering one- up to six-dimensional solutions. A representation in one dimension accounted for .74 of the dispersion (normalized raw stress = .26, Tucker's coefficient of congruence = .87); for two dimensions .90, .10, and .95, respectively; for three dimensions .94, .06, and .97; for four .97, .03, and .98; for five .98, .02, and .99; and finally for six .98, .02, and .99. We examined the scree plot for the normalized raw stress that suggested a two-dimensional solution and chose the two-dimensional solution as the most appropriate representation of the events.

Subsequently, we performed GPA (Borg & Groenen, 1997; Commandeur, 1991). GPA was used to compare all three configurations with one another simultaneously and to transform the configurations to maximal correspondence. GPA is for MDS what procrustean target rotation is for factor analysis. GPA rotates the coordinates of all configurations in such a way that they maximally correspond to one another. Furthermore, GPA provides congruence indices at configuration and item level computed as the proportion of the squared distances accounted for by each cluster and for each item. Hence, we are able to detect items that do not fit well using the congruence measure at the item level. We reduced possible cross-cultural differences due to response sets and so forth through standardizing the means for each country separately before using the overall data set (van de Vijver & Leung, 1997). The initial centroid configuration accounted for 76% of the squared distances for two dimensions, a big improvement on the solution derived from the individual countries.

To improve fit and to aim for a comparable structure across the three clusters, we detected items that had a poor fit using the ratio (0-1) between sum of squares fit per item divided by sum of squares total. We removed items that had a fit lower than .50 in three steps (details available from authors upon request). Some of these events are highly culture-specific and probably not well known outside of the involved countries: Opium War (China, 9th century), Sino-Japanese War (1930s), Partition of India and Pakistan, and (perhaps) the Russian Revolution (1917) as well. Other deleted events were likely to have contested meanings and referents across cultures: Islam-Christian Wars/Crusades (11th to 14th century), French Revolution, Women's Emancipation & Suffrage, foundation of the major religions, and Age of Discovery/Colonization. It should be noted that these are items that did not fit well within the dimensional space solutions, which is quite different from the items that have consistent variability accounted for at the country level by the ICC.

The total fit increased from .76 (40 events) to .90 (31 events) for the three cluster MDS solution (please see Figures 1 through 3 for MDS space for Western cluster, Non-Western Cluster 1, and Non-Western Cluster 2). We stopped here as we achieved a satisfactory total fit and had no items left below .50. While we gained a satisfactory proportion of fit through item deletions, we also lost culture-specific information by forcing an equivalent structure onto the data.

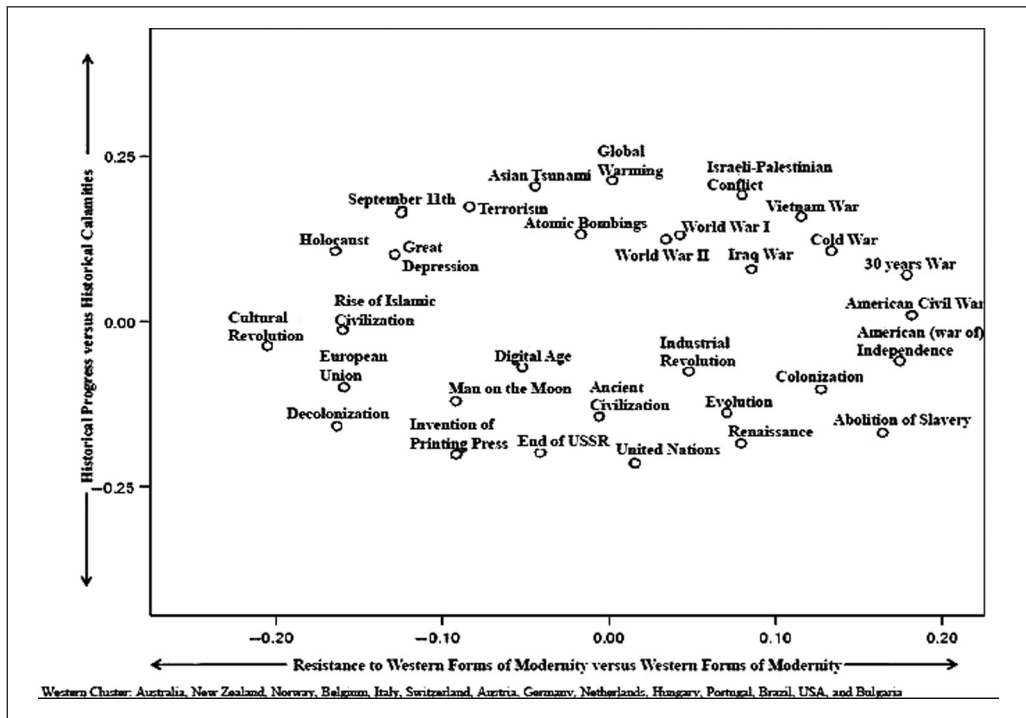


Figure 1. Rotated MDS Configuration for 24 Events by Western Cluster

As can be seen from Figures 1 through 3, the location of events along the vertical axis was not only highly consistent across all three-dimensional spaces but also easily interpretable. This primary dimension of cross-cultural meaning in the evaluation of historical events distinguishes between historical calamities (wars, weapons of mass destruction, environmental disasters, terrorism, ideological conflict, and economic depression) versus historical progress (technological, civilization, and social). Our sample did not distinguish sharply between human versus natural catastrophes, and hence warfare and genocide and economic and environmental calamities gathered together towards the upper halves of Figures 1 through 3. The second, horizontal dimension was less stable across clusters and harder to interpret. Tentatively, we speculate that it may have something to do with Western forms of modernity and resistance to this modernity. The events to the right side mainly concern the overthrow of hegemony and inequality on the pathway towards modernity in Western societies (the 30 Years War, the American Civil War, American Independence, but also the Discovery of the Americas, which fits this interpretation from a settler, not an indigenous, perspective). The other end of the horizontal dimension on the left side was anchored by China's Cultural Revolution, the Rise of Islamic Civilization, the Holocaust, the September 11 terrorist attacks, and the Great Depression, all events that could be seen as some form of resistance or obstacle to Western forms of modernity. There were many events that did not hold consistent horizontal positions across the different dimensional solutions, like the Abolition of Slavery, the Vietnam War, the End of the Soviet Union, Decolonization, and even the Invention of the Printing Press, suggesting that the meaning of these terms varied in different parts of the world. The second dimension is weak and might not be able to bear careful scrutiny.

Scale construction and structural equivalence. In the next step, we aimed for scales that had equivalent meaning across the 30 societies. We employed an exploratory factor analysis (EFA) with a principal components analysis followed by Varimax rotation on individual-level data to identify

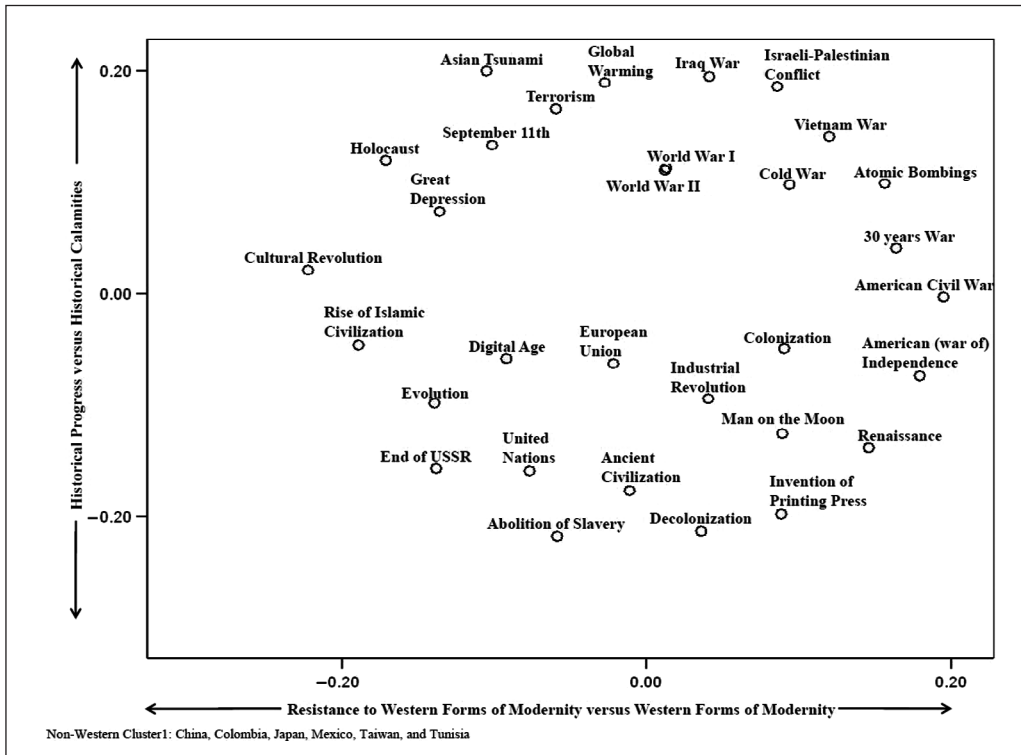


Figure 2. Rotated MDS Configuration for 24 Events by Non-Western Cluster I

factors that were structurally equivalent and to detect items that were not equivalent. Factorial procrustean target rotation (using the overall sample as the norm) was used subsequently (van de Vijver & Leung, 1997). The EFA revealed a three-factor structure across the three clusters. The scree test as well as parallel analysis suggested a three-factor structure, although the overall proportion of explained variance was relatively low (35%). We accept that due to events elimination, we were losing information that potentially could have explained more variance in some regions. Nevertheless, by using the EFA to inspect the factor structure across the three clusters, and then using procrustean target rotation to identify poorly fitting items after target rotation, we further reduced the set of events, as seven of them did not fit well, because they had either cross-loadings, loadings on a different factor, or a high square root of the mean squared difference per item after the target rotation: September 11 Bombing, Discovery of Americas, 30 Years War (17th century), Rise of Islamic Civilization, Invention of Printing Press, Rise of Ancient Civilizations, and Chinese Cultural Revolution (please see Table 2 for all excluded events).

Tucker's phi (proportionality coefficient) indicated a very high factorial agreement (between .96 and 1.00) for the remaining events organized as three subfactors across all three clusters. In general, factorial agreement coefficients higher than 0.95 indicate factorial similarity, whereas values lower than .90 are taken as a sign of incongruities (van de Vijver & Leung, 1997). Due to the high values of the factorial agreement indexes, it is valid to assume that all subscales had the same structure across the three clusters.

It should be noted that some of the deleted items anchored the previously described dimensional solutions, and so we can see the costs of item elimination to achieve equivalence in meaning. Like in the previous round of item elimination, the items either contained culture-specific content not well known globally (Chinese Cultural Revolution, Opium War, 30 Years War), diffuse

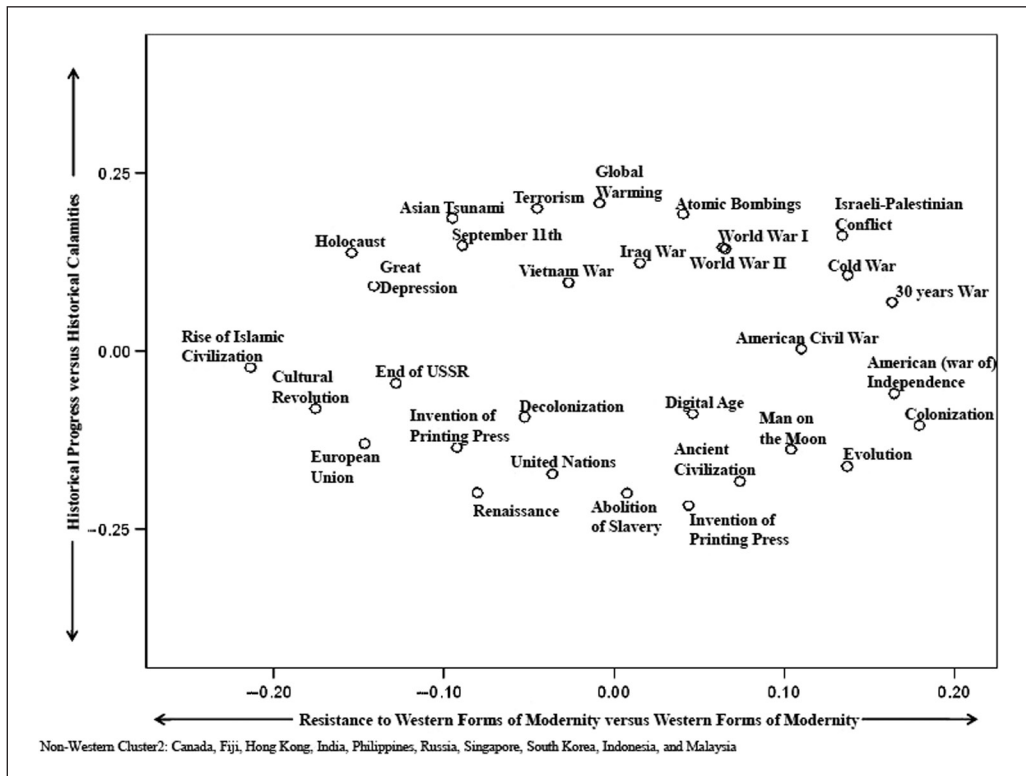


Figure 3. Rotated MDS Configuration for 24 Events by Non-Western Cluster 2

wordings (Rise of Ancient Civilizations, Foundation of Major Religions), or have contested meanings (French Revolution, September 11, Discovery of the Americas, Rise of Islamic Civilization, Islam-Christian Wars/Crusades, Women's Emancipation and Suffrage).

We labeled the first, strongest factor as "Historical Calamities," the second factor as "Historical Progress," and the third factor as "Historical Resistance to Oppression" (please see Table 3 for details). The first factor was exactly the same as represented in the upper half of the dimensional space shown in Figures 1 through 3, with the exception of September 11, which was deleted to achieve higher reliability. The Historical Calamities scale, which does not differentiate between human-made or natural, intentional, or unintentional calamities, has robust reliabilities across country clusters and high interitem correlations that suggest that this concept is meaningful across the 30 societies surveyed.

The second and third factors are less robust, as evidenced by scale reliabilities and by the inconsistent location of some items from these scales across the three-dimensional spaces. The Historical Progress scale (see Table 3) includes technological and political events indicative of civilization advance in recent times, like the Digital Age, Man on the Moon, the Foundation of the European Union and United Nations, but also the Creation/Evolution of Humanity. The weakest factor, Historical Resistance to Oppression, includes the two great American internal wars, the Abolition of Slavery and Decolonization and the Fall of the Berlin Wall/End of USSR but also the Renaissance. The spread of items in all three scales across the horizontal dimension of historical representations seen in Figures 1 through 3 indicates how weak this second dimension was compared to the first dimension. The inclusion of ancient items with recent items in the latter two scales seems to suggest that temporal constraint is not critical to these concepts.

Table 2. List of Excluded Historical Events (Without Universal Meaning)

Excluded Events
1. Islam-Christian Wars/Crusades (11th to 14th century)
2. French Revolution
3. Opium War (China, 9th century)
4. Sino-Japanese War (1930s)
5. Women's Emancipation & Suffrage
6. Russian Revolution (1917)
7. Foundation of the Major Religions
8. Age of Discovery/Colonization
9. Partition of India and Pakistan
10. September 11 Bombing
11. Discovery of Americas
12. 30 Years War (17th century)
13. Rise of Islamic Civilization
14. Invention of Printing Press
15. Rise of Ancient Civilizations
16. Cultural Revolution (China)

Multilevel Analyses

Having created our historical concepts, we then turned to their use in predicting willingness to fight for one's country. We used hierarchical linear modeling (HLM) to test a model in which evaluations of World War II and September 11 predicted the willingness to fight in a future war (y_{ij}) of each participant (subscripted i) within each country or society (subscripted j). HLM is a powerful statistical technique that calculates both individual-level(i) and society/country-level(j) contributions to variance in the dependent variable and hence is ideally suited to modeling cross-cultural data.

We then extended this model to examine the unique effects of World War II and September 11 evaluations and our new scales of Historical Calamities, Historical Progress, and Historical Resistance to Oppression. Following recommendations outlined by Enders and Tofghi (2007), evaluations of World War II (and all other predictors subsequently discussed) were group-mean centered in this analysis, because we were interested primarily in the associations between variables at the individual level (i.e., Level 1 associations). At Level 1, the equation was expressed as follows:

$$y_{ij} = \beta_{0j} + \beta_{1j}(\text{World War II evaluation}) + \beta_{2j}(\text{September 11} + \beta_{3j}(\text{Historical Calamities}) + \beta_{4j}(\text{Historical Progress}) + \beta_{5j}(\text{Historical Resistance})) + r_{ij} \quad (1.1)$$

The Level 2 model then specified that each β coefficient was expressed as a function of a fixed and random component, as follows:

Intercept	$\beta_{0j} = \gamma_{00} + u_{0j}$	
World War II evaluations	$\beta_{1j} = \gamma_{10} + u_{1j}$	
September 11	$\beta_{2j} = \gamma_{20} + u_{2j}$	(2.1)
Historical Calamities	$\beta_{3j} = \gamma_{30} + u_{3j}$	
Historical Progress	$\beta_{4j} = \gamma_{40} + u_{4j}$	
Historical Resistance	$\beta_{5j} = \gamma_{50} + u_{5j}$	

Table 3. Overall Factor Loadings, Cronbach's Alpha, Mean Interitem Correlation, and Tucker's Phi for "Historical Calamities," "Historical Progress," and "Historical Resistance to Oppression"

Event	Factor 1	Factor 2	Factor 3
"Historical Calamities" ($\alpha_{\text{overall}} = .85$; $\alpha_{\text{Western}} = .82$, $\alpha_{\text{non-Western1}} = .82$; $\alpha_{\text{non-Western2}} = .84$ overall mean interitem correlation = .32; Tucker's Phi = 1.00, 1.00, .99)			
World War I	0.74	0.01	0.06
World War II	0.73	0.04	0.04
Atomic Bombings	0.62	0.01	-0.05
Vietnam War	0.58	0.00	-0.04
Terrorism (terror bombings)	0.57	-0.21	-0.04
Cold War	0.56	-0.02	0.13
Israeli-Palestinian Conflict	0.56	-0.03	-0.14
Iraq War (2005)	0.55	0.05	-0.09
Asian Tsunami (2004)	0.55	-0.19	-0.07
Global Warming	0.53	-0.03	-0.16
Holocaust	0.51	0.02	-0.21
Great Depression (1930s)	0.46	-0.14	0.10
"Historical Progress" ($\alpha_{\text{overall}} = .65$; $\alpha_{\text{Western}} = .65$, $\alpha_{\text{non-Western1}} = .65$; $\alpha_{\text{non-Western2}} = .65$; overall mean interitem correlation = .24; Tucker's Phi = .99, .98, .96)			
Digital Age (Computers, Internet)	0.03	0.71	-0.07
Man on the Moon/Space Travel	-0.06	0.64	0.05
Creation/Evolution of Humanity	-0.07	0.54	0.19
Industrial Revolution	0.03	0.53	0.31
Rise of European Union	-0.03	0.53	0.18
Foundation of United Nations	-0.13	0.44	0.21
"Historical Resistance to Oppression" ($\alpha_{\text{overall}} = .59$; $\alpha_{\text{Western}} = .50$, $\alpha_{\text{non-Western1}} = .56$; $\alpha_{\text{non-Western2}} = .57$; overall mean interitem correlation = .19; Tucker's Phi = .99, .97, .96)			
American Civil War	0.28	-0.07	0.55
American (War of) Independence	0.06	0.22	0.54
Abolition of Slavery (19th century)	-0.20	0.05	0.51
Renaissance (15th century)	-0.10	0.19	0.51
Fall of Berlin Wall/End of USSR	-0.05	0.21	0.50
Decolonization	-0.15	0.12	0.50

Note. Bold factor loadings represent items included in the final scales

The average of the slopes for the relation between World War II evaluations and willingness to fight across countries is represented by γ_{10} , and γ_{20} represents the average of the slopes for the relation between September 11 evaluations and willingness to fight, controlling for the effects of Historical Calamities,⁴ Historical Progress, and Historical Resistance to oppression, and u_{1j} and u_{2j} represent respective variation in the slopes of the effects of World War II and September 11 evaluations on willingness to fight across countries. Likewise, γ_{30} represents the average of the slopes for the relation between Historical Calamities and willingness to fight across countries, controlling for all other predictors, and u_{3j} represents variation in the slopes of the effect of Historical Calamities on willingness to fight across countries. As with a normal (fixed-effects) regression, this analysis therefore allowed us to evaluate the unique effects of World War II evaluations, September 11, Historical Calamities, Historical Progress, and Historical Resistance to oppression on willingness to fight averaged across countries, while (unlike in a fixed effects regression) also recognizing that these slopes might vary across different countries or societies (as represented by the u terms assessing Level 2 error).

Table 4. Coefficients for the Fixed and Random Components of Nested Multilevel Models Assessing the Effects of Historical Evaluations on Willingness to Fight for One's Country Across Cultures

	Fixed Part			Random Part	
	γ	SE	t	u	χ^2
Step 1					
Intercept	4.10	.16	25.13*	.78	1093.67*
World War II	.08	.03	2.83*	.01	89.37*
September 11	-.03	.02	-1.43	.01	40.33
Step 2					
Intercept	4.14	.16	25.68*	.76	728.05*
World War II	-.01	.03	-.22	.01	48.52*
September 11	-.04	.03	-1.49		50.53*
Historical Calamities	.27	.11	2.56*	.21	131.39*
Historical Resistance	.01	.04	.36	.01	44.30
Historical Progress	.21	.04	4.96*	.04	62.88*

Note. The residual Level 1 variance component at Step 1 (r in equation 1.0) was 2.91. The residual Level 1 variance component at Step 2 (r in equation 1.1) was 1.70. All effects remained nearly identical when additional analyses were conducted with a version of the Historical Calamities scale that did not include World War II evaluations as part of that scale. Evaluations of World War II specifically remained nonsignificant in this alternative model ($\gamma = .01$, $t = .60$, $p = .55$), and evaluations of Historical Calamities remained significant and comparable in magnitude ($\gamma = .25$, $t = 2.57$, $p = .02$).

The γ -coefficients (intercept and slopes) for the fixed-effects parts of these models and associated u -terms representing variation in slopes and intercepts across countries (random part of model) are presented in Table 4. As shown, evaluations of World War II significantly predicted an increased willingness to go to war when entered at Step 1 ($\gamma = .08$, $t = 2.83$, $p < .01$). The γ -coefficient for this effect can be interpreted as an unstandardized regression coefficient and indicates that a one-unit increase in evaluations of World War II predicted a .08 unit increase in willingness to fight for one's country (keeping in mind that both variables were measured on scales ranging from 1 to 7). Analyses of the random part of the model indicated that there was significant variation across countries in the slope for this effect ($u = .01$, $\chi^2(29) = 89.37$, $p < .01$). Thus, while the slopes were heterogeneous across countries, of critical interest for our purposes, the average slope across all countries was significant. Evaluations of September 11, in contrast, did not predict unique variance in willingness to fight ($\gamma = -.03$, $t = -1.54$, $p = .14$), and the slope for this effect did not differ significantly across countries ($u = .01$, $\chi^2(29) = 40.33$, $p = .08$).

As detailed in Equations 1.1 and 2.1, we entered Historical Calamities, Historical Progress, and Historical Resistance as additional predictors at Step 2. This allowed us to examine unique effects of World War II evaluations, September 11 evaluations, and these other three more broad-bandwidth evaluative aspects of historical perceptions simultaneously. As shown in the lower half of Table 4, evaluations of World War II ($\gamma = -.01$, $t = -.22$, $p = .82$) no longer predicted willingness to fight after controlling for the historical scales. Rather, this model indicated that more positive evaluations of Historical Calamities ($\gamma = .27$, $t = 2.56$, $p = .02$) and Historical Progress ($\gamma = .21$, $t = 4.96$, $p < .01$) both uniquely predicted an increased willingness to fight for one's country. These coefficients for the fixed-effects part of the model indicate that a one-unit increase in positivity of evaluations of Historical Calamities and Progress in human history, respectively, predicted .27 and .21 unit increases in willingness to fight for one's country. Finally, examination of the random part of the model (as shown in Table 4) showed that slopes for both of these relations varied significantly. Thus, the magnitude of these effects was not homogenous across countries.⁵

We conducted additional analyses testing whether contrast coded differences in the three regional clusters moderated the relationship between Historical Calamities, Historical Resistance, and Historical Progress on willingness to fight. We examined this possibility by including two dummy coded Level 2 variables representing Western nations versus non-Western Cluster 1 (0,1) and Western nations versus non-Western Cluster 2 (0,1) as predictors of each of the Level 1 slopes defined in equation 2.1. This analysis therefore compared the average slope for each non-Western cluster of nations with the average slope for Western nations. Importantly, all slopes reported in Table 4 remained significant when these additional variables were included. Analysis of main effects indicated that nations included in the two non-Western national clusters expressed greater overall willingness to fight than Western nations ($\gamma = .75$, $t = 2.09$, $p < .05$, and $\gamma = 1.13$, $t = 3.72$, $p < .01$). Interestingly, results from this additional analysis also indicated that Historical Calamities predicted increased Willingness to Fight in Western Nations (slopes = .58 and .58) but not in either of the non-Western clusters (slopes = $-.05$ and $-.05$, respectively). It seems that the main effect of Historical Calamities on willingness to fight is driven by Western nations and may increase willingness to fight to a similar mean level to that in non-Western national clusters.

Finally, we conducted analyses testing whether specific events that might be of relevance to a particular country exerted more predictive utility there. This did not appear to be the case for any of the events tested, including the Russian Revolution for Russia and the Partition of India and Pakistan for India. For instance, consistent with the multilevel (cross-cultural) analyses, evaluations of September 11 did not significantly predict willingness to fight in the United States when data for this nation were examined separately ($\beta = -.11$, $t = -1.42$, $p = .16$). Similarly, evaluations of the Sino-Japanese war did not predict unique variance in willingness to fight in China ($\beta = -.02$, $t = -.15$, $p = .88$). Controlling for World War II evaluations made no difference in either case.

Graphical Representations at the Country Level

Our final analyses involved country- or societal-level graphical representations of the historical concepts (and willingness to fight). As seen on the vertical axis of Figure 4, non-Western societies almost without exception evaluated Historical Calamities much less negatively than Western societies (the sole “exception” being Russia, but there has been considerable debate about whether Russia is a Western society). The pattern of scores on the horizontal axis of Historical Progress is not as easy to interpret: the highest scoring countries (Portugal, China, Tunisia, and Bulgaria) are those that *aspire to* Historical Progress rather than having necessarily internalized the events contained within this concept. The lowest scoring societies (Malaysia, Singapore, Hong Kong, South Korea, and Indonesia) are, except for Switzerland, modernizing Asian societies that have had difficult experiences emulating the largely Western ideals of historical progress represented in this concept. If we consider the diagonal between the two axes, China and Tunisia are two countries that rate Historical Progress highly and do not see Historical Calamities as all that terrible, whereas at the other end of the diagonal, Switzerland, Norway, Australia, and New Zealand, all highly progressive and prosperous countries, do not rate Historical Progress that highly and consider Historical Calamities to be horrific. Brazil is at the middle of the diagonal, whereas furthest away from the diagonal Portugal rates progress highly and calamities as horrible and Malaysia does not rate calamities as horrific and does not consider progress to be that great. These data suggest that the structure and naming of our second factor as “Historical Progress” could use fine-tuning, as peoples could vary considerably in their subjective experiences with events that could be considered as “progress” (see Gibson & Noret, 2010). We are much more confident of the meaning of Historical Calamities across cultures, as this appears to fit in nicely with Inglehart and Baker’s (2000) cross-cultural dimension of survival versus self-expression, with non-Western societies seeing Historical Calamities as part of the process of survival and

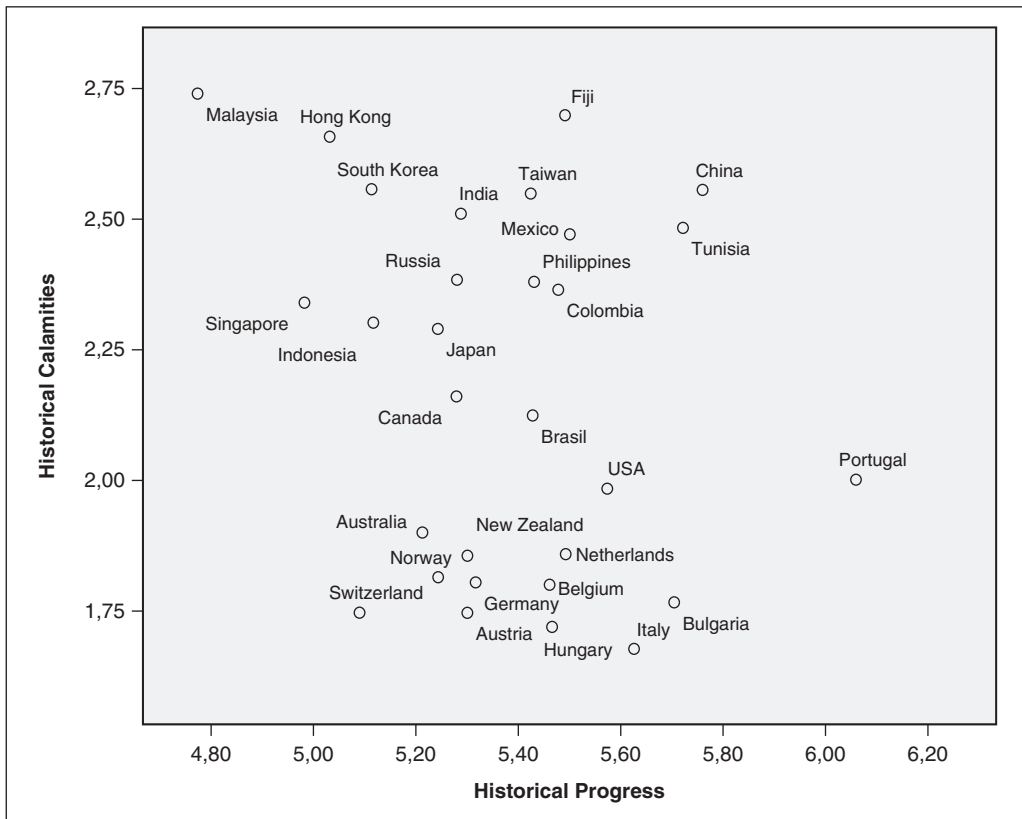


Figure 4. Visual Representation of All Thirty Societies by “Historical Calamities” and “Historical Progress”

progress and Western societies seeing them as something horrible located in an unthinkable past unrelated to current self-expression motives.

Country-level means for Historical Calamities (vertical axis) plotted against those for willingness to fight for one’s country (horizontal axis, see Figure 5) reinforce the interpretation above. The non-Western samples not only score higher on their evaluations of Historical Calamities, but the visible country-level correlation of this with willingness to fight along the diagonal shows that the non-Western samples tend also to be more willing to fight. Russia’s location on this space is in line with non-Western rather than Western societies, whereas Japan’s location is singularly low in willingness to fight (see Atsumi & Suwa, 2009; Liu & Atsumi, 2008) compared to its relative acceptance of calamities.

Discussion

MDS analyses indicated that no single universal dimensional space provided adequate fit for evaluations of events in world history across 30 societies. Hierarchical cluster analysis ascertained that an adequate two-dimensional solution could be found by putting societies with relatively homogeneous patterns of associations between events into three clusters, one Western and two non-Western. Through item deletions, a single strong, virtually universal dimension of evaluation was identified, distinguishing between historical calamities at one end and historical progress at

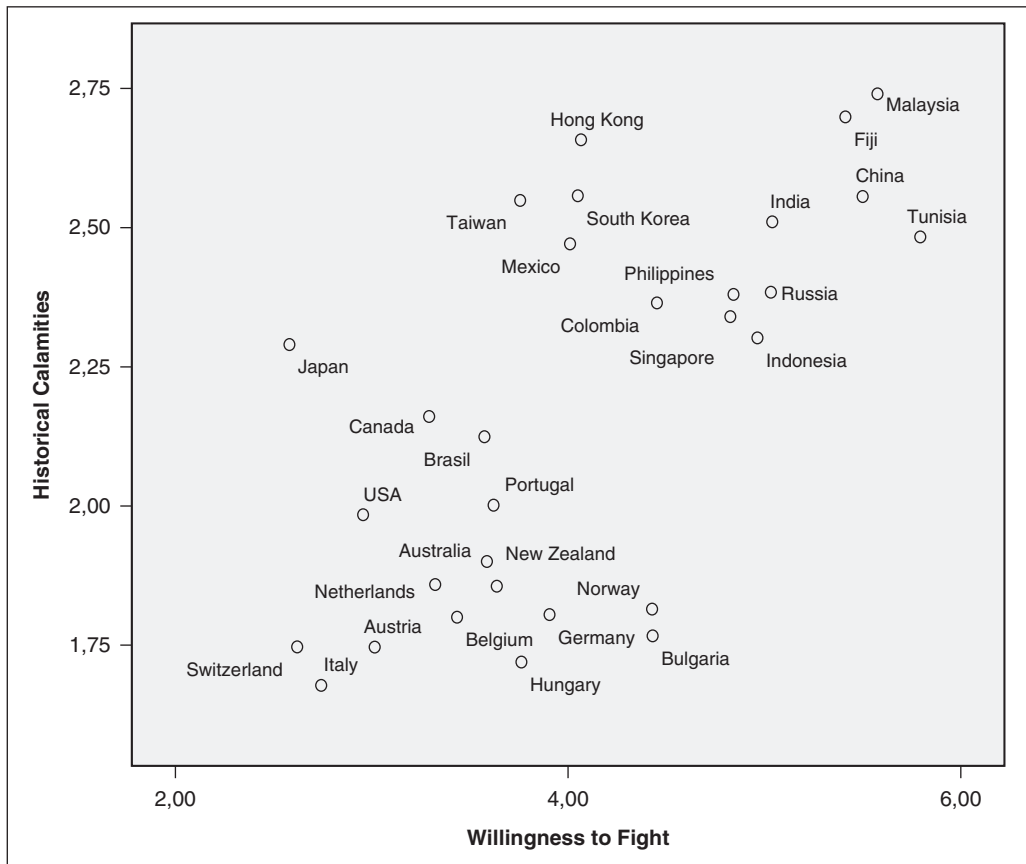


Figure 5. Visual Representation of All Thirty Societies by “Historical Calamities” and “Willingness to Fight for One’s Country”

the other. The second dimension, tentatively identified as modernity versus resistance to modernity, was both empirically and theoretically less robust. Lack of consensus on this dimension thwarted identification of universal dimensions across the 30 societies analyzed individually.

Nevertheless, factor analysis and item deletions indicated that three concepts could be identified with reasonably good structural equivalence across cultures. The first, most powerful factor in the evaluation of events in world history across cultures was Historical Calamities, an inventory of disasters both man-made and natural, both intentional and unintentional, encompassing catastrophes of warfare, economic collapse, genocide, and terrorism. The second two factors represent the other end of the continuum from calamity to progress, but our names for them are tentative, Historical Progress and Historical Resistance to Oppression, because scale reliabilities and theoretical interpretation was less than robust. They signal that while there is massive agreement across cultures as to what constitutes historical calamity, there is far less consensus as to what constitutes progress. The items on the Historical Progress scale are mostly Western in origin, and it is understandable that different non-Western societies might have different opinions as to their merit and the merit of following in their footsteps. Similarly, Historical Resistance to Oppression would appear to be a relatively coherent concept to Western societies, but for non-Western or Communist/Post-Communist societies, the symbolic meaning of the American Civil

War and War of Independence and the Fall of the Berlin Wall/End of the USSR could be highly contested. As a whole, these patterns suggest that lay knowledge, imagination, and beliefs about history are far more coherent concerning calamity than progress.

Despite these reservations, we found using HLM that Historical Calamities was a powerful predictor of willingness to fight and Historical Progress a decent predictor after controlling for one another and the specific events of World War II and September 11. There was significant variation in slopes at the country level, indicating that the relationship between our predictor variables and the dependent variable varied across cultures. Replicating Paez et al. (2008), evaluations of World War II were significantly correlated to willingness to fight, but new findings were that it had no independent predictive value after controlling for the scales. September 11 was not correlated with willingness to fight for one's country, even in the United States. Indeed, we were unable to find a single historical event able to predict willingness to fight beyond the scales. Finding culture-specific effects for an event would probably require more in-depth probing of the meaning of these events as imbedded within culture-specific contexts (Gibson & Noret, 2010; Liu et al., 2010).

Participants from non-Western countries rated Historical Calamities as less negative or less horrific than Western countries, and they also reported more willingness to fight for their countries, but they did not glorify past conflicts or see them as positive. The results for Historical Calamities were consistent with previous research by Basabe and Valencia (2007) showing that societies with more materialistic, collectivist, and hierarchical values had less negative views towards sociopolitically sanctioned violence and warfare. The shift to a postmaterialistic society (Inglehart & Baker, 2000) is typically associated with a shift toward a representation of warfare that focuses on victims, suffering, and the meaningless of war (Rosoux, 2001) and hence a reduction in willingness to fight. In addition to this, we found that a mixed bag of societies endorsed our concept of "Historical Progress," with correlations suggesting that members of these societies appeared to be *willing to fight in order to achieve progress*.

Methodologically, during the process of analysis, we deleted 16 events or 40% of the original item inventory from our final scales. We used two separate criteria for item deletion, first fit indices derived from generalized procrustean analysis of MDS solutions and second measures of fit derived from both exploratory and generalized procrustean rotation factor analysis. The list of deleted events in Table 2 included culture-specific events like Opium War and September 11 critical for particular societies but less relevant across cultures. There is another set of events that are likely to have disputed or inconsistent meanings across cultures, like Women's Emancipation and Suffrage or the Age of Discovery/Colonization.⁶ Finally, there was a set of items where the referent of the event itself is not clear from the wording, like the Foundation of the Major Religions and/or the Invention of the Printing Press (where it is unknown whether participants were thinking about the Chinese invention or the European popularization that followed); these wordings were chosen to save space (e.g., rather than refer to Christianity and Islam with separate items), but in retrospect this was methodologically flawed. We consider this inventory of excluded events to be useful because (a) events of the first type could be explored more deeply in culture-specific studies and (b) events of the second type could be explored more deeply in cross-cultural qualitative studies.

Representations of world history are not theoretically constrained in the same way as values or social axioms; rather, new events are always entering into and updating current representations because of a recency bias in collective remembering (Liu et al., 2005; Liu, Paez et al., 2009). Because of the mixture of ethnocentrism and Eurocentrism that permeates perceptions, it may be difficult to identify universal perspectives on world history besides agreement on the nature of catastrophe. But acknowledgement of such limitations is itself a useful scientific advance. In the theory of history and identity articulated by Liu and Hilton (2005), history provides raw materials

or a “symbolic reserve” that through a process of communication driven by the agenda of political elites is transformed into legitimizing ideologies and discourses that are both a powerful influence on political decisions and become enduring elements of political culture (see also Liu & Sibley, 2009). The present study identifies for the first time a potential “symbolic reserve” of Historical Calamities that can be mobilized by political entrepreneurs (Klein, Spears, & Reicher, 2007; Reicher & Hopkins, 2001) in the *international* arena to justify and explain their future political agendas *across cultures*, whereas previous research focused only on country-specific events and discourses (e.g., Liu et al., 1999; Sibley et al., 2008). This concept is malleable, with content reflecting current events like terrorism and global warming, but also enduring, anchored in symbols like World War I and World War II. Historical Calamities, unlike the less coherent concepts of Historical Progress and Historical Resistance to Oppression, are likely to be understood in the same way across cultures and thereby provide a useful platform of commonality from which to construct global political agenda against future shared threats. Political entrepreneurs of *global society* in the 21st century may find that they can mobilize their agendas for the future by appealing to rather broader notions of shared calamities rather than resorting to more ethnocentric notions of specific historical events of cultural significance.

The present research is a first step in quantifying world history representations across cultures. Future research should examine how they relate to more presumably stable elements of cultures, like values, social axioms, or cultural syndromes like individualism-collectivism (Triandis & Gelfand, 1998). While one sure path forward is to correlate country-level indices of historical representations with other important cross-cultural variables, we highlight another approach that may illuminate the concept of *political culture* in a more fundamental way. We have repeatedly asserted and empirically demonstrated that historical representations are *dynamic* features with both universal and culture-specific aspects. Because they are dynamic, we can theorize about whether particular historical representations may be *caused* by other, more enduring cultural patterns. Paez et al. (2008) and Basabe and Valencia (2007) have argued (using correlational data only) that the collective remembering of warfare as “necessary and just” is a *product* of a major recent victorious war *together* with hierarchical and authoritarian values. If they are correct, a violent and aggressive political culture would be a function of *both* enduring values *and* recent success in war. Theoretically, this means that there must be at least two distinct paths for the cultural transmission of cultures of violence or peace: one through bottom-up institutions like the family (values) and the other through the top-down machinery of the state (social or collective memory; see Olick & Robbins, 1998).

History enters into this process by providing raw material (e.g., September 11, the Nanjing Massacre) that is shaped by political elites to create political agendas for their nations. These political agendas do more than reflect a “social memory” of the past, they *create* a social reality for the future (Hopkins & Reicher, 1997). If national political cultures are considered as dynamic configurations of social identity, social representations of history, and cultural syndromes, then just as a tradition of valuing high power distance and social hierarchy may predispose a people to adopt violent solutions to a political issue, a calamitous event may be mobilized by political elites to turn a low power distance and egalitarian culture towards violent solutions to political problems in a way that may have long-term consequences for that culture’s values. Parallel to the current investigations, we would benefit from having qualitative work across cultures into the systems of shared and unshared meaning that embed the pattern of correlations reported here into the political life of nations and our interconnected world.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interests with respect to their authorship or the publication of this article.

Financial Disclosure/Funding

The authors declared that they received no financial support for their research and/or authorship of this article.

Notes

1. The exception being China, where there were substantial mismatches between theory and empirical findings (see Schwartz, 1992, p. 28 and 31).
2. The sole exception was the 1990s Gulf War, because it was deemed repetitive to other Middle Eastern conflicts and appeared only in the 1990s data set and not in the 2000s data set. Some items, like the Rise of Ancient Civilizations and Foundation of Major Religions, were amalgamated from more specific nominations.
3. We use the terms *country* and *nation* interchangeably in this article, as most of the societies in our survey are both countries and nations. Hong Kong is a society that has demonstrably distinct characteristics as a Special Administrative Region of China, and Taiwan is a sovereign society that is not recognized formally as such by most countries.
4. Historical Calamities was computed both with and without World War II, and the results were not affected by its inclusion or exclusion.
5. All analyses remained comparable to those reported in Table 4 after controlling for gender and age. Specifically, the effects of Historical Calamities ($\gamma = .23, t = 2.40, p = .02$) and Historical Progress ($\gamma = .21, t = 4.81, p < .01$) remained significant, and all other effects remained nonsignificant. Men expressed greater willingness to fight than women independent of historical variables ($\gamma = .26, t = 2.92, p = .01$).
6. This was a problem even during the item wording phase, as for Portuguese the Age of Discovery is gloriously separate from the negative impacts of Colonization.

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Bios

James H. Liu in is a professor of psychology at Victoria University of Wellington and Deputy Director of its Centre for Applied Cross Cultural Research. He was born in Taiwan and grew up in a small town in the Midwestern United States. He obtained a bachelor's degree in computer science from the University of Illinois and worked as an aerospace engineer in the 1980s. He completed a PhD in social psychology in 1992 at UCLA and a postdoctoral fellowship at Florida Atlantic University. He has been teaching at Victoria University of Wellington since 1994. His research is at the intersection of cross-cultural psychology and intergroup relations. He specializes in the study of social identity and representations of history. He has more than 120 academic publications, and his edited volumes include *New Zealand Identities: Departures and Destinations*, *Restorative Justice and Practices in New Zealand*, *Ages Ahead: Promoting Intergenerational Relationships*, and *Progress in Asian Social Psychology, Volumes 2 and 6*. He was Secretary General of the Asian Association of Social Psychology from 2003 to 2007, Treasurer from 1999 to 2003, and is now editor of the *Asian Journal of Social Psychology*. A naturalized citizen of two countries, he describes himself as a "Chinese-American-New Zealander."

Dario Paez was born in Chile and received his PhD from the University of Louvain in 1983. He is currently a professor of social psychology at the University of the Basque Country in Spain and has been an invited professor at University of Louvain, Laussane, Porto, Lisbon, Perpignan, Rome, Catholic University of Lima, and Valparaiso. He works on culture, emotion, memory, identity, and well-being at individual and collective levels. He coedited with J. Pennebaker and B. Rime *Collective Memory of Political Events* (1997), coedited with J. De Rivera a monograph on "Emotional Climate and Culture of Peace" in the *Journal of Social Issues* (2007), and edited two monographs on "Overcoming Collective Violence" (*Spanish*

Review of Social Psychology and *Revista de Psicología, Peru*; 2010). He is currently working on the effect of collective violence on culture and the emotional climate, the collective process of coping with traumatic political events, and the role of social representations of past in political culture, particularly attitudes toward war.

Katja Hanke, received her PhD from Victoria University of Wellington in New Zealand. She is currently a postdoctoral research fellow at National Tsing Hua University in Taiwan. Her main research interests concern the intersection of cross-cultural, social, and peace psychology, with a focus on intergroup forgiveness, collective remembering, and cross-cultural research methods.

Alberto Rosa is a professor of psychology at the Universidad Autónoma de Madrid, where he lectures on history of psychology and cultural psychology. He is co-author of *Methodology of History of Psychology* and co-editor of *The Cambridge Handbook of Socio-Cultural Psychology*. He has carried out research on developmental psychology of the physically challenged, co-authoring *Psychology of Blindness* and *The Child With Cerebral Palsy*. Currently, he is carrying out research on the influence of cultural and historical knowledge in the shaping of identity. He co-edited *Collective Memory and National Identity* and *Teaching of History and Collective Memory*.

Denis J. Hilton is a professor of social psychology at the University of Toulouse. His research interests include the social psychology of history, social cognition, reasoning, judgment, and decision-making and experimental economics.

Chris G. Sibley, is a senior lecturer of social psychology at the University of Auckland. His research interests primarily center on prejudice and intergroup relations.