

How Competition Is Viewed Across Cultures

A Test of Four Theories

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Competition is a pervasive aspect of human life. Yet the values and attitudes that people have concerning competition vary widely, from the belief that it underpins the social order to the belief that it corrodes positive social ties. This research examines the structural and cultural roots of these attitudes across societies. Contrasting predictions from five social theories (Marxism, system justification, Protestant ethic, postmaterialism, and individualism) were derived and tested using data from the World Values Survey. Study 1 tests the various hypotheses examining differences between societies. Using a mixed-level model, Study 2 examines the individuals' attitudes toward competition in the context of both individual-level and societal-level factors. Results indicate that competitive values are consistently related to Protestantism, both at the level of individual affiliation and cultural religious history, especially when structural factors are controlled. However, only limited support was found for the idea that attitudes toward competition vary as function of one's position in the socioeconomic structure, economic regulation, postmaterialist values, and individualism.

Keywords: *economic attitudes; competition; Protestant ethic; system justification; postmaterialism; religion*

Rivalship and emulation render excellency.

Adam Smith

Homo homini lupus est.

Thomas Hobbes

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As the capitalist ethos has spread across the globe, it has become a point of both macroeconomic policy and apparent common sense that the path to economic development on the national level lies through the expansion of global free markets (Carrier, 1997). Guided by the idea that markets are most efficient through the free interplay between self-interested actors (e.g., Fama, 1970), competition is the underpinning of the market economy, and the success of any market economy is contingent on the acceptance of the principles of competition (Metcalf, 2002). Although generally embraced by market theorists, the idea of human competition is much more controversial among social theorists and the general public alike, as it is typically wrapped up in a particular view of human nature. Some, like the economist Adam Smith (1776/1964), viewed competition as a positive force in the world such that it allows people to express their natural tendency to strive toward improving of their own lot, with competition resulting in a better society as whole. Yet others fervently rejected the idea that competition brings out the best in people. For example, the philosopher Thomas Hobbes (1651/1994) held that competition and mutual exploitation are the natural basis of interaction among humans, from whom cooperation can be wrought only through societal control. Thus, for those who agree with Hobbes, competition is the result of a human moral deficit. Still, others (e.g., Kohn, 1986) do not doubt the human capacity for good, but they view competition as appealing to the worst in people, ultimately destroying the most valuable parts of the human experience.

For the purpose of this article, we assume that whether competition is seen as a force for good or for ill is shaped by a range of forces that includes a society's shared cultural and economic experience as well as one's individual background and beliefs. Specifically, our article examines the acceptance or rejection of competition from a cross-cultural perspective. Given the rich and controversial debate on competition, which we just alluded to, we examine the patterns of variation in competition values both across and within societies. Specifically, do the peoples of this world agree with Adam Smith that competition brings out the best people by enhancing their effort and creativity? Or is competition viewed, with Thomas Hobbes, as a corrosive force that reduces us to antisocial beasts? The answer to this question likely has implications not only for the acceptance of market system itself but also for the culturally specific adaptation of market principles.

Beyond merely documenting patterns of variation, a major goal of our work is to locate societal and individual perspectives on competition within the nexus of culture, ideology, and economic structure. Cultural traditions and values are linked with people's ideological views about the value of

competition, which are in turn linked with the power structure and limitations imposed by the economic institutions that exist within the culture. But the directions of causation within this web are not necessarily clear. Several distinct social theories bear on the nature of this set of relationships but entail different, and often contradictory, predictions. Structural approaches, like those taken by classical Marxism and system justification theory, hold that the economic power structure serves as the material basis for ideology. Cultural beliefs about competition and human nature are shaped by experience with whatever economic policies and structures exist and come to reflect them. The opposite view of causation is implied by cultural-historical approaches, including Weberian theory, individualism, and the postmaterialist hypothesis. These hold that there are certain aspects of culture, rooted in historical processes, that are either stable or develop according to predictable patterns and that shape people's ideological views of competition. These views, in turn, form the basis of economic policy and structure. In this article we review these diverging perspectives, derive contrasting hypotheses, and put them to a comprehensive test.

Classical Marxist Theory

Karl Marx is the name most closely associated with the idea that a society's culture and prevailing ideology are primarily a reflection of its material foundation. According to this view, the pattern of economic relationships as well as the distribution of power and resources of a given society help shape the dominant values held by that society (Marx, 1867/1967). These values and cultural beliefs tend to sustain and perpetuate the existing economic system in such a way as to benefit the most powerful economic class. Thus, in a society driven by free-market capitalism, competition between individuals and between products benefits the capitalist class and therefore comes to be embraced on an ideological level by the general public. The popular belief that competition is a natural and beneficial part of human interaction is simultaneously a reflection of the free-market economic structure as well as a system that benefits the capitalist class by discouraging people from agitating for any type of market restrictions or wealth redistribution. Other sets of economic relations, by contrast, should inculcate quite different sets of social values; people are expected to value obedience in a slave economy, hierarchy in a feudal economy, and so forth. However, Marx also anticipated that the prevailing values would eventually be repudiated by members of the working class to

the extent that they developed a class-consciousness, or realization of their own true economic interests.

System Justification

A recent theoretical development broadly in the Marxian tradition can be found in system justification theory (Jost & Banaji, 1994; Jost & Hunyady, 2005). According to proponents of this view, there are certain sets of beliefs that act to legitimize the existing systems of economic and political power in any given society, and these value systems are promoted by those in power. For instance, popular belief in the virtue of individual competition tends to lend support to the capitalist economic system. This provides macrolevel benefits, in terms of social stability, as well as individual benefits in terms of reducing existential anxiety by facilitating the belief that the world is just and fair. Of course, such belief systems are harmful to the extent that the power structure is actually unjust and unfair, as they reduce the likelihood that people will demand reform. In general, system justification theory predicts that ideology should differ between countries and that local beliefs should serve to justify the existing structure of power. Thus the extent to which people embrace competition should be directly related to the extent to which the political and economic power structure is based on competitive processes. A belief that competition is virtuous supports and helps to justify the excesses of free-market capitalist economies but threatens the stability of more closed systems; thus, competition should come to be broadly endorsed in places with free markets and distrusted in places with closed markets.

In terms of both Marxist theory and system justification theory, attitudes toward competition can be thought of as a reflection of a country's economic structure. Specifically, societies, in which free-market principles reign, should be more likely to embrace competition than those in with more restricted markets, even when other factors are controlled (Hypothesis 1).

Weber and the Ethic of Protestantism

Although Weber agreed with Marx that economic structure was important in understanding culture, their interpretations stand in marked contrast. Weber rejected the notion of a unidirectional influence of the economy on culture but argued that culture is not only shaped by many more diverse economic, cultural, and political factors but also shapes economics in turn.

Specifically, Weber (1904/1996) saw in Protestantism the catalyst for the emergence of modern-day capitalism. According to Weber, the “Protestant ethic” cast worldly success as reflection of religious virtue, infusing economic pursuit with religious meaning. The impetus toward economic success was paired with reliance on an increasingly rational mode of decision making, in which actors sought to convert minimum investments to maximum output. Weber (1925/1978) saw competition as a “formally peaceful attempt to attain control over opportunities and advantages that are also desired by others” (p. 38) and therefore as a natural way to coordinate the activities of individual actors. Thus the Weberian perspective highlights the religious underpinnings of modern market economies, and societies in which the cultural footprints of Protestant theologies are particularly pronounced can be expected to favor competition (Inglehart & Baker, 2000; but see also Giorgi & Marsh, 1990).

The empirical evidence, however, has so far lent only limited support to this hypothesis. A study of economic development in European colonies (Grier, 1997) found that having a Protestant population is associated with greater wealth. But at the individual level, Guiso, Sapienza, and Zingales (2003) found only mixed support for the Protestant ethic itself, based on cross-national survey data. Although Christians in general held beliefs more supportive of the market economy than Muslims, Catholics were more pro-competition than Protestants by many measures. Using a similar approach, Inglehart and Norris (2004) found, in contradistinction to Weber’s theory, that citizens of countries with Protestant histories exhibited less of the “Protestant” work ethic than those in other nations and that they were also somewhat less prone to attitudes supportive of capitalism (see also Furnham et al., 1993).

The Weberian perspective lives on in the form of various cross-cultural approaches to understanding the link between ideology and the economy. The process of economic globalization has made obvious the fact that even within the relatively narrow world of corporate capitalism there are some clear differences between countries in terms of beliefs and practices. In a variety of formats, from Hofstede’s (1980) classic psychological study of cross-cultural personality differences among corporate managers, to popular business titles like *The Seven Cultures of Capitalism* (Turner & Trompenaars, 1993), researchers have demonstrated that traditional culture continues to influence economic activity in both theory and practice even as the structure of free-market capitalism is embraced (see Inglehart & Baker, 2000, for a similar argument). According to this neo-Weberian view, long-standing religious values and cultural traditions serve as the basis

for contemporary economic philosophies and thereby shape the particular economic structures that are created in different countries. Thus, as a counterpoint to the Protestant work ethic, research into the success of capitalism in East Asian countries has focused on the construct of the Confucian work ethic (Lim, 2002), and its antecedent Confucian work dynamism (Hofstede & Bond, 1988). By this interpretation, traditional Confucian values that emphasize education, diligent work, in-group cooperation, and obedience to authority provide the ideological basis for integrating the individual into a corporate capitalist system that has proven to be highly successful in the context of global capitalism. In this view, the endorsement of competition may be only one path among many to economic success, as advanced economic structures are shaped by traditional values and thus may be adapted differently across cultures.

From a Weberian perspective, attitudes toward competition are thought to be rooted in the traditional values that historically underlie a country's culture. Thus it is predicted that there should be differences in the level of mean competition endorsement between zones of traditional culture, even when economic development factors are controlled (Hypothesis 2a). In particular, Weber focused on traditional Protestant culture as a value system promoting the principles of free-market enterprise, and hence likely to promote a competitive mindset. The proportion of a country's population composed of Protestants should therefore be a positive predictor of national-level endorsement of competition, after controlling for economic factors (Hypothesis 2b).

Postmaterialism

Combining some elements of both Marxian and Weberian social theory, Inglehart's (1977, 1990, 1997) postmaterialism framework offers another perspective on the roots of societal beliefs about competition. According to this view, in economically developing societies, where resources are scarce, people's values reflect a concern with material security. Because failure in this social context can entail extreme poverty and even starvation, interpersonal competition is highly valued. But as economic and human development in a society progresses to a point where the basic needs of most people are met, values begin to change to reflect "postmaterial" aspirations, like environmental preservation, self-fulfillment, and social justice (e.g., Inglehart, 1997; Kimmelmeier, Król, & Kim, 2002). In a sense, this suggests a recapitulation of Maslow's (1954) psychological hierarchy of needs at a societal

level: Once a country has fulfilled its needs for security and material resources, it is able to shift its focus to needs of a higher order. If the values of a country's citizens do reflect this shift, then competition ought to be less valued in those places where human development is the highest. This approach, in effect, affirms the Marxist principle that economic development drives change in value systems but that, in keeping with the Weberian tradition, this development occurs differently in interaction with cultural values and histories. That is, modernization is not a uniform process, but one that unfolds in culturally specific ways in different societies within the constraints of only a few general parameters.

The postmaterialism hypothesis holds that a country's prevailing values develop over time following a predictable pattern, with concrete materialistic concerns gradually giving way to more abstract goals as basic survival and security needs are met. Because competition is a value that tends to promote material interests, but can detract from postmaterialist pursuits, a negative relationship ought to be observed between a country's level of human development and its mean endorsement of competition. In short, it is suggested that a general increase in postmaterialist values partially mediates this relationship, and thus there should be a corresponding relationship between postmaterialism and competition endorsement that subsumes some of the effects of the relationship between human development and competition (Hypothesis 3).

Individualism

The inverse of the postmaterialist hypothesis can be found in the suggestions put forward by Bellah, Madsen, Sullivan, Swidler, and Tipton (1985), among others, who maintain that modernization is accompanied not by greater concern for the public good but rather by the entrenchment of egoistic individualism. According to Bellah et al., economic development has brought with it technological and social changes that have contributed to the fragmentation of traditional communities, and hence the replacement of a collectivistic ethos with a radically individualistic one. Putnam (2000) tracked the systematic decline in engagement in American civic organizations as evidence of this trend (but see Cerulo, 2002; Kimmelmeier, Jambor, & Letner, 2006). Individualism provides justification for self-interested behavior because it emphasizes individual agency and thus promotes the ideal that people should be rewarded or punished on the basis of their individual efforts and achievement (cf. Oyserman, Coon, & Kimmelmeier, 2002). This contrasts with

the collectivistic pattern in which people work toward group goals and share the rewards of their efforts more or less equally within the group. Triandis (1995, 1996) drew a distinction between two dimensions of individualism: vertical and horizontal. The former construct entails the hierarchical aspect of individualism, in which status differences between individuals are defined in terms of individual merit. Horizontal individualism, on the other hand, refers to an emphasis on self-determination and the cultivation of individual uniqueness. Competition should thus be highly valued in societies that are high in vertical individualism, as people vie for status based on their individual achievements. But in societies more marked by the horizontal version of individualism, competition would not seem to necessarily have the same utility and thus ought to be less highly prized.

Individualistic societies emphasize the importance of individual agency and tend to treat personal merit as the appropriate criterion for success or failure. Individualism at the national level should therefore be a positive predictor of the endorsement of competitive values, after controlling for economic factors. Within this relationship, the vertical component of individualism, dealing with the merit hierarchy, should be stronger predictor than the horizontal component, which concerns the value placed on self-expression (Hypothesis 4).

The Present Studies

For a comprehensive test of our hypotheses, our general analytical approach was twofold. In Study 1 we took an ecological approach to testing these hypotheses, that is, we focused on country-level data to examine to what extent the characteristics of societies predict the endorsement or rejection of competition among its population. The advantage of this approach was that it allowed us to engage in broad cross-cultural comparisons. However, its disadvantage was that pertinent country-level data were not available for all countries; hence, not all countries could be included in tests of specific hypotheses, resulting in varying sample sizes across different analyses.

In Study 2, we focused on individual-level data. Cross-cultural research has repeatedly demonstrated that relationships found at the ecological level do not necessarily hold at the individual level and vice versa. For instance, Diener and Oishi (2000) reported only a modest correlation between income and subjective well-being, whereas there is a strong correlation between the wealth of a nation and the average well-being of a population (see Kimmelmeier et al., 2002, for similar findings in a different domain).

Thus, a separate examination of individual-level predictors of attitudes toward competition is warranted. To accomplish this, we focused on data from the World Value Survey (WVS; European Values Study Group & World Values Survey Association, 2005) a widely used cross-national survey that includes 81 countries. By using a mixed-model approach, we were able to examine to what extent the nature of the relationship between individual-level predictors and attitudes toward competition varies across different societies.

Our approach is similar to that of Guiso et al. (2003), an investigation that also relied on data from the WVS. Whereas we focus on cross-sectional data from the fourth wave of the WVS (1999–2002), these authors merged data from the three first waves (1981–1997) of the WVS. This approach is problematic for a number of reasons. First, across the four waves the number of countries included in the WVS has been expanding from 22 (Wave 1), 42 (Wave 2), 54 (Wave 3), to 81 (Wave 4). This implies that simply combining the data from different waves renders the data from “old” countries more reliable than data from more recently included countries. Further, this type of analyses ignores changes over time that have occurred in these older countries and contrasts the combined data with the much more recent data from recently included countries, thus opening the door to potential artifacts.¹

Further, our analyses were aimed differently from those reported by Guiso et al. (2003). The theoretical scope of their analyses was limited to examining the Protestant ethic. In contrast, we are testing a range of theories beyond Weber’s classic thesis, namely, competing predictions derived from more recent social science literature.

Most important, we took advantage of a statistical technique that allowed us to separate variance that occurred between different countries and variance that occurred between individuals within the same country. Although ignored by many investigations relying on cross-national data (see Diener & Tov, 2007, for an exception), the structure of cross-national data is by its very nature “nested,” that is, composed of clusters or groups of observations (the different country samples). In this case, economic and religious attitudes do not vary randomly across the entire population of the world. Rather, any two randomly selected individuals from within the same country are likely to have more similar views than any two people randomly selected from different countries. Statistically, this means that observations are not independent, which violates a central assumption of statistical techniques such as ordinary least squares regression, which was

used by Guiso et al. (2003). In practical terms, ignoring the nested structure of data in single-level analyses can underestimate the standard error associated with a parameter estimate, rendering effects significant when they should not be (see Gonzalez & Griffin, 2001; Krull & MacKinnon, 2001; Kashy & Kenny, 2000; Raudenbush & Bryk, 2002; Sadler & Judd, 2001, for a review of multilevel models). Mixed-level linear modeling techniques (also referred to as hierarchical linear modeling) control for this group-based dependence in the data, providing accurate estimates of coefficients and standard errors across groups. This approach allows for the statistical separation of individual-level (within country) effects and group-level (between country) effects. It also enables to study cross-level interactions, that is, the extent to which the impact of an individual-level variable changes as a function of country-level characteristics.

Study 1

The purpose of the first study was to evaluate the usefulness of the theoretical frameworks provided by the system justification, cross-cultural, Protestant ethic, postmaterialism, and individualism perspectives. We tested the specific predictions from each of the foregoing traditions (Hypotheses 1–4) regarding the relationship between various aspects of a nation's economic structure and culture on one hand and attitudes toward competition on the other hand. Note that this "ecological" approach amounts to correlating the average attitudes toward competition in each country with other country-level characteristics.

Method

The sources of data for Study 1 included secondary cross-national survey data, previously published aggregate survey scores, population data, and indices of social and economic development. To maximize the breadth of nations covered, we pursued a cross-sectional analysis based on a dependent variable derived from the fourth wave of the WVS. Whenever possible, data for 2001 were used, because the bulk of the data for the dependent variable were collected in that year. Because many of the national measures were available for only a limited number of countries (see Table 1), we performed each analysis separately to include as many countries as possible in each.

Table 1
Countries by Historical Cultural Zone, With
Means for Key Variables (Study 1)

Country by Zone	1	2	3	4	5	6	7	8	9	10
Africa										
South Africa	6.67	10.35	3.00	.658	3	21	1.67	65	4.89	6.43
Tanzania	6.95	.62	2.35	.418	8	19	1.68	N/A	5.71	5.72
Uganda	7.51	1.46	2.85	.508	11	5	1.78	N/A	N/A	N/A
Zimbabwe	7.51	2.44	1.79	.505	11	16	1.65	N/A	5.53	1.43
Catholic Europe										
Austria	6.76	30.09	3.98	.936	2	4	2.21	55	4.24	6.19
Belgium	5.26	28.34	3.90	.945	3	1	2.03	75	N/A	N/A
Croatia	7.07	11.08	2.61	.841	5	1	2.09	N/A	N/A	N/A
Czech Republic	6.78	16.36	3.90	.874	3	2	1.85	N/A	N/A	N/A
Estonia	5.63	13.54	4.11	.853	3	18	1.62	N/A	5.15	6.40
France	5.27	27.68	3.51	.938	3	2	1.90	70	N/A	N/A
Hungary	6.31	14.58	3.63	.862	3	24	1.53	N/A	4.76	5.87
Italy	5.84	27.12	3.79	.934	3	1	2.14	76	4.70	6.66
Latvia	6.57	10.27	3.51	.836	3	12	1.70	N/A	N/A	N/A
Lithuania	6.11	11.70	3.48	.852	3	1	1.80	N/A	5.36	6.13
Luxembourg	5.51	62.30	4.21	.949	2	2	1.97	N/A	N/A	N/A
Malta	6.81	17.63	3.16	.867	2	0	1.72	N/A	N/A	N/A
Poland	5.99	11.38	3.36	.858	3	0	1.68	N/A	N/A	N/A
Portugal	5.61	18.13	3.68	.904	2	1	1.76	27	4.60	6.32
Slovakia	6.41	13.49	3.15	.849	3	9	1.58	N/A	N/A	N/A
Slovenia	6.76	19.15	2.99	.904	3	2	1.99	N/A	4.55	6.73
Spain	5.71	22.39	3.51	.928	3	0	1.92	51	3.99	6.09
Confucian										
China	7.28	5.00	2.45	.755	13	0	1.54	N/A	5.74	5.83
Japan	5.83	27.97	3.96	.943	3	0	1.92	46	4.98	5.86
Republic of Korea	5.90	17.97	3.65	.901	4	18	1.59	18	5.48	5.95
Singapore	6.64	24.48	4.34	.907	10	4	1.80	20	5.13	6.28
Taiwan Province of China	5.96	17.20	3.83	N/A	3	2	1.57	N/A	4.92	5.81
Viet Nam	6.21	2.49	1.76	.704	13	1	1.87	N/A	N/A	N/A
English Speaking										
Australia	6.81	29.63	4.09	.955	2	13	2.27	90	4.83	6.65
Canada	6.34	30.68	3.99	.949	2	15	2.20	80	N/A	N/A
Great Britain	5.92	27.15	4.22	.939	3	7	N/A	89	N/A	N/A
Ireland	6.20	37.74	4.40	.946	2	1	1.93	70	N/A	N/A
New Zealand	6.51	22.58	4.29	.933	2	20	2.13	79	N/A	N/A
Northern Ireland	6.09	17.01	N/A	.939	N/A	N/A	1.90	N/A	N/A	N/A
United States	6.56	37.56	4.22	.944	2	20	2.15	91	5.20	6.64
Islamic										
Albania	7.03	4.58	2.53	.780	9	1	1.58	N/A	N/A	N/A
Azerbaijan	6.49	3.62	2.08	.729	11	0	1.42	N/A	N/A	N/A
Bangladesh	7.13	1.77	1.95	.520	7	0	1.65	N/A	N/A	N/A
Bosnia and Herzegovina	6.95	5.97	1.96	.786	9	0	1.73	N/A	N/A	N/A

Table 1 (continued)

Country by Zone	1	2	3	4	5	6	7	8	9	10
Morocco	7.76	4.00	3.20	.631	9	0	1.67	N/A	N/A	N/A
Turkey	6.15	6.77	3.08	.750	9	0	1.97	37	5.91	6.67
Latin America										
Argentina	5.83	12.11	3.71	.863	3	7	2.07	46	4.39	6.91
Brazil	6.57	7.79	2.79	.792	6	17	1.81	38	4.56	6.27
Chile	5.26	10.27	3.98	.854	4	3	1.89	23	N/A	N/A
Dominican Republic	6.67	6.82	2.96	.749	4	7	1.97	N/A	N/A	N/A
El Salvador	6.25	4.78	3.84	.722	5	12	N/A	19	N/A	N/A
Mexico	6.21	9.17	2.95	.814	5	4	1.89	32	N/A	N/A
Peru	6.60	5.26	3.39	.762	7	7	1.94	16	5.25	7.08
Puerto Rico	7.03	11.20	N/A	N/A	N/A	15	2.10	N/A	4.48	6.94
Uruguay	5.38	8.28	3.70	.840	2	3	2.10	36	N/A	N/A
Venezuela	6.16	4.92	2.23	.772	8	4	1.89	12	N/A	N/A
Orthodox										
Armenia	5.93	3.67	2.98	.759	8	0	1.60	N/A	N/A	N/A
Belarus	6.33	6.05	1.90	.786	12	1	1.57	N/A	N/A	N/A
Bulgaria	6.57	7.73	2.73	.808	5	1	1.58	N/A	N/A	N/A
Georgia	6.82	2.59	2.33	.732	8	0	1.57	N/A	N/A	N/A
Greece	5.66	19.95	3.31	.912	4	0	1.98	35	5.59	6.65
Macedonia, Republic of	7.16	6.79	N/A	.797	7	1	1.69	N/A	N/A	N/A
Montenegro	6.62	1.28	N/A	N/A	8	N/A	1.58	N/A	N/A	N/A
Republic of Moldova	6.00	1.51	2.25	.671	6	3	1.56	N/A	N/A	N/A
Romania	7.26	7.28	2.41	.792	4	6	1.62	N/A	N/A	N/A
Russian Federation	5.85	9.23	2.21	.795	10	1	1.48	N/A	N/A	N/A
Serbia	6.61	1.30	N/A	N/A	8	N/A	1.57	N/A	N/A	N/A
Ukraine	5.86	5.49	2.13	.766	8	2	1.57	N/A	N/A	N/A
Protestant Europe										
Denmark	5.98	31.47	3.90	.941	2	84	2.08	74	4.15	6.21
Finland	5.74	27.62	3.96	.941	2	85	1.85	63	4.28	6.68
Germany	6.27	27.76	3.96	.930	3	35	1.84	67	4.11	6.32
Iceland	7.30	31.24	3.84	.956	2	89	1.89	N/A	N/A	N/A
Netherlands	5.32	29.37	4.16	.943	2	21	2.11	80	N/A	N/A
Norway	6.46	37.67	3.56	.963	2	90	1.98	69	4.23	6.54
Sweden	6.53	26.75	3.98	.949	2	88	2.16	71	N/A	N/A
Switzerland	6.73	30.55	4.11	.947	2	35	2.00	68	N/A	N/A
South Asia										
India	6.79	2.89	2.09	.602	5	2	1.56	48	5.71	6.65
Philippines	5.94	4.32	2.84	.758	5	6	1.67	32	N/A	N/A

Note: 1 = Competition; 2 = Gross Domestic Product per capita (in thousands of US dollars); 3 = Economic Freedom, 4 = Human Development Index; 5 = Freedom House Combined; 6 = Protestants as percentage of total population; 7 = Mean postmaterialism score; 8 = Individualism (Hofstede); 9 = Vertical Individualism; 10 = Horizontal Individualism.

Attitudes toward competition. Attitudes toward competition were obtained from the WVS 1999–2002 wave, which contained 81 countries in total. Data collection for this wave of the WVS took place over the course of 1 year in each participating country, beginning at various times in different countries between 1999 and 2001. The survey item used as an indicator of attitudes toward competition (V144) was included in 72 of the national surveys. This item asked respondents to locate their personal views on a 10-point scale ranging from 1 (*Competition is good. It stimulates people to work hard and develop new ideas*) to 10 (*Competition is bad. It brings out the worst in people*). For our purposes, responses were reverse coded with 10 reflecting most favorable evaluations of competition. Individual responses were aggregated for each country by computing the mean of all valid responses. These aggregate values were used as the dependent variable in Study 1.

Political rights and civil liberties. Ratings of political rights and civil liberties for 79 countries were obtained from the Freedom House's (2006) Freedom in the World study 2002. This organization rates political rights and civil liberties in each country on a 7-point scale from *most free* to *least free*. Criteria for the political rights ratings include the free election of representatives and the right to organize in political parties. Criteria for the civil liberties ratings include the presence of independent media and protection of private discussion. Because these two ratings were highly correlated ($r = .91$, $p < .001$), the sum of these indices was computed as a measure of overall political freedom. This measure was used as a control variable representing the development of social freedom at the national level.

Economic freedom. To test the predictions of system justification theory, we used a measure of the economic freedom mandated by national governments and hence the level of social structural support of competitive values. National ratings of economic freedom for 75 countries were obtained from the Heritage Foundation's (2006) Index of Economic Freedom 2001. This index provides ratings on a scale from 1 to 5 based on evaluations on 10 subscales including areas such as monetary policy and property rights. Low scores indicate greater economic freedom. To make interpretation of the results of our study more straightforward, the index was reverse coded so that higher scores represent more economic freedom.

Economic prosperity. Gross Domestic Product (GDP) per capita data for 2001 for most countries were obtained from the 2002 United Nations Human Development Program. Separate GDP figures for Montenegro,

Northern Ireland, Serbia, and Taiwan were not available from this source. Estimates of 2001 GDP for Montenegro and Serbia were obtained from the United States Agency of International Development 2001 NGO Sustainability Index. Data for Northern Ireland were obtained from 2006 data from Statistical Office of the European Communities. Data for Taiwan were obtained from the 2002 CIA World Factbook. This construct was used as a measure of economic structure in testing the Marxian hypothesis.

Human development. National scores on the United Nations Human Development Index (HDI) were obtained from the United Nations Human Development Program. This composite index gauges development in terms of longevity, education, and standard of living at the national level. Components include items such as average life expectancy, adult literacy rate, and per capita GDP. HDI was used as a measure of development in testing the postmaterialism hypothesis.

Cultural zones. National cultural background for the countries analyzed was coded using the system devised by Huntington's (1993) well-known discussion of the "clash of civilizations" and used by Inglehart and Baker (2000) in their analysis of WVS data. This system divides countries into groups based on aspects of culture such as religious history and language. We followed Inglehart and Baker's classifications historical cultural zone classifications whenever possible. For several countries that were included in our analysis, but not used by Inglehart and Baker, we imputed cultural zone membership based on national history.

Protestant religious adherents. Country-level estimates of total Protestant population were obtained from the World Christian Database (WCD). The WCD was more desirable in this instance than other sources because it offered comparable cross-national population estimates of a broad range of large and small religious groups based on a combination of institutional, government, and survey data.² Data for 2001 were not available from this source, so 2005 estimates (the earliest complete data available) were used instead. An estimate of the proportion of the population composed of Protestants for each country was computed by dividing this figure by WCD's estimate of the total national population for 2005.

Postmaterialism. The four-item postmaterialism scale included in the WVS was aggregated at the country level by computing the mean of valid individual scale scores. This scale measures the extent to which respondents

give priority to the values of self-expression and autonomy over those of physical and economic security. It is based on the relative rankings given by respondents to a list of materialist (maintaining order, fighting rising prices) and postmaterialist (giving people more say in government, protecting free speech) national values (see Inglehart, 1997, for a detailed description):

Individualism. Previously published country-level measures of individualism were obtained from two sources. Hofstede's (1980) widely used national scores based on aggregate personality measures of corporate managers are used to gauge overall national individualism. From a study by Oishi (2000) we obtained data on horizontal-vertical individualism (Singelis, Triandis, Bhawuk, & Gelfand, 1995) from student samples in 39 different societies. Although not representative of the population, student samples have the advantage that they hold age and social status constant across samples. Therefore, if the choice of students does introduce bias, this distortion can be assumed to be roughly equal across societies. As a result, these data can be employed as cross-cultural indicator of societal values.

Results

Preliminary analyses. Because most of the independent variables just described that were used to test the hypotheses were available for limited subsets of countries, we were not able to conduct a single country-level regression controlling for all factors. Table 1 provides a list of all countries available for analysis, grouped by historical cultural zone, and includes within-country means of the key variables. Overall descriptive statistics and bivariate correlations for the key variables can be found in Table 2. Because preliminary analyses showed that the distribution of per capita GDP was positively skewed, all main analyses were conducted using the natural log of per capita GDP. The dependent variable in all analyses was mean endorsement of competition at the national level.

Economic structure (Hypothesis 1). Based on Marxian theory and system justification theory, we expected economic structure to provide the basis of societal attitudes toward competition. As shown in Table 2, societies with higher levels of economic freedom were less likely to favor competition than those with lower levels of economic freedom, $r(67) = -.39$. Likewise, there was a negative correlation between GDP and embracing competition, $r(72) = -.34$. These findings directly contradict Hypothesis 1.³ This pattern leads us to reject wealth and economic structure as a basis for cultural beliefs regarding competition.

Table 2
Correlations and Descriptive Statistics (Study 1)

	1	2	3	4	5	6	7	8	9	10
1 Competition		-.34**	-.39**	-.48**	.39	.05	-.18	.10	.27	-.38*
2 GDP per capita			.76**	.78**	-.67**	.41*	.61**	.75**	-.59**	.28
3 Economic Freedom				.74**	-.74**	.32**	.60**	.49**	-.50**	.49**
4 Human Development					-.67**	.31*	.56**	.54**	-.60**	.49**
5 Freedom House						-.36*	-.54**	-.68**	.64**	-.45**
6 % Protestant							.27*	.34*	-.45*	.04
7 Postmaterialism								.58**	-.43*	.38*
8 Hofstede Individualism									-.40	.11
9 Vertical Individualism										-.24
10 Horizontal Individualism										
<i>n</i>	72	72	67	68	70	69	70	35	29	29
<i>M</i>	6.37	15,241.32	3.26	0.83	5.06	0.13	1.82	53.37	4.91	6.20
<i>SD</i>	0.59	12,212.57	0.77	0.12	3.12	0.23	0.22	24.08	0.56	0.99

* $p \leq .05$. ** $p \leq .01$.

Table 3
Endorsement of Competition by Historical Cultural Zone (Study 1)

Zone	<i>n</i>	<i>M</i>	<i>SD</i>
African	4	7.16 _a	0.42
Baltic	4	6.28	0.51
Catholic Europe	13	6.10 _a	0.62
Confucian	6	6.30	0.56
English Speaking	6	6.39	0.31
Islamic	6	6.92	0.56
Latin America	9	6.10	0.52
Orthodox	9	6.25	0.53
Protestant Europe	8	6.29	0.61
South Asian	2	6.36	0.61

Note: Means with the same subscripts differ at $p < .05$ based on Tukey's honestly significant difference.

Weberian cultural theory (Hypothesis 2a). To examine the notion that cultural heritage was responsible for a society's approach to competition, we first compared endorsement of competition between historical-cultural zones. Overall, a significant difference in endorsement of competition was detected between historical cultural zones, $F(9, 62) = 2.08$, $p < .05$, $\eta_p^2 = 0.23$, with post hoc comparisons showing only Catholic Europe and Africa

to differ (see Table 3). However, when controlling for GDP per capita, the effect of historical cultural zone was no longer significant, $F(9, 62) = 1.24$, $p = .29$, $\eta_p^2 = .16$. This analysis did not provide substantive support for the idea that differences in the endorsement of competition are based on traditional cultural patterns.

Protestant ethic (Hypothesis 2b). The hypothesis derived from Weber's analysis of the Protestant ethic was tested by applying a series of linear regression models including as predictors, in various progressive combinations, the proportion of the population composed of Protestants, along with HDI, and the Freedom House combined measure of political and social freedom. Table 4 summarizes all relevant regression models. Model 3 shows that the proportion of the protestant population was not a significant predictor of mean endorsement of competition, $F(1, 67) = .15$, $p = .70$. However, when HDI and economic freedom were included in the equation, the overall model was significant, $F(3, 63) = 8.31$, $p < .001$, $R^2_{\text{adj}} = .25$, and the proportion of Protestants in the population emerged as a significant predictor ($\beta = .24$, $p = .04$). This pattern reflects a suppressor effect, showing that the true contribution of this predictor variable in Model 3 was masked by unaccounted variance that subsequently is captured by other predictors.

The positive association between Protestant population and HDI and economic freedom, coupled with the negative relationship between those two variables and competition, thus concealed a positive relationship between Protestant population and endorsement of competition at the national level. These results support the Weberian concept of the Protestant ethic and its relation to endorsement of competition.

Postmaterialism (Hypothesis 3). As may be recalled, the postmaterialism hypothesis with respect to competition holds that the increase in postmaterialist values in general mediates the relationship between rising human development and falling levels of endorsement of competition. This hypothesis was tested by means of a series of regression models. Significant relationships in the hypothesized directions were found both between HDI and mean postmaterialism scores, $F(1, 64) = 29.07$, $p < .001$ ($R^2_{\text{adj}} = .31$, $\beta = .56$), and between HDI and mean endorsement of competition, $F(1, 66) = 19.94$, $p < .001$ ($R^2_{\text{adj}} = .22$, $\beta = -.48$). However, no significant relationship was detected between postmaterialism and competition, $F(1, 69) = 2.34$, $p = .13$. Thus, Inglehart's concept of postmaterialism is unable to account for cultural variations in the endorsement of competition.

Table 4
Suppression of the Effect of Protestantism by
Human Development Index (HDI) and Freedom (Study 1)

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	B	β	B	β	B	β	B	β	B	β	B	β
HDI	-2.92***	-.48	-1.97***	-.41	-2.60***	-.54	-2.10***	-.44				
Freedom	0.07***	.39	0.02	.10	0.03	.17						
House												
% Protestant	0.13	.05	0.54†	.21	0.62*	.24						
R ²	.23	.15	.01	.24	.27	.28						
S. E. E.	0.53	0.55	0.60	0.53	0.52	0.52						

† $p \leq .10$. * $p \leq .05$. *** $p \leq .00$.

Individualism (Hypothesis 4). The hypothesized relationship between vertical individualism and endorsement of competition was tested using a series of regression models. Because our analyses on the impact of economic structures established a correlation between endorsement of competition and economic freedom (see above), we controlled for the latter variable in all equations. Because only 20 of the countries overlapped between the data from Hofstede (1980) and Oishi (2000), the measures from these two sources were entered into separate models to avoid loss of data through listwise deletion. We always tested two models, one without controlling for economic freedom and one in which this variable's impact on attitudes toward competition was controlled.

Hofstede's individualism score was unrelated to endorsement of competition both by itself, $F(1, 33) = 0.34, p = .57$, and when economic freedom was controlled, $F(2, 32) = 0.69, p < .51$. Using Oishi's student data, the model was significant both using the individualism measures alone, $F(2, 25) = 4.01, p = .031, R^2_{\text{adj}} = .18$, and controlling for economic freedom, $F(3, 24) = 4.91, p = .008, R^2_{\text{adj}} = .30$. However, higher levels of horizontal individualism predicted *less favorable* attitudes toward competition in the initial model ($\beta = -.38, p = .043$), but this effect disappeared in the second model, where economic freedom was the only significant predictor ($\beta = -.48, p = .03$). This is not compatible with the individualism hypothesis, which predicted that the vertical dimension would be the most important subset of individualism predicting endorsement of competition and that the relationship between the two constructs would be positive. Instead, these results indicate that, to the extent there is any relationship between individualism and competition, higher levels of horizontal individualism are related to *lower* levels of approval of competition. Therefore, higher levels of cultural individualism do not explain why some societies embrace competition more than others.

Discussion

Our country-level analyses of endorsement of competition produced clear results in some but not all of the theoretical perspectives that we tested. The structural prediction, derived from the Marxian and system justification frameworks, that higher national endorsement of competition should reflect the hegemony of free-market capitalism was clearly not supported. In fact, market freedom is associated with *lower* levels of endorsement of competition. The individualism hypothesis, that the breakdown of communitarian sentiment and the rise of individualist values resulted in a corresponding rise in attitudes toward competition, was likewise incompatible with our results.

Culture-level individualism is actually associated with *less* national endorsement of competition. Thus, predictions derived from two of these theories were flatly contradicted by the empirical evidence. Similarly, the postmaterialism hypothesis, with its predicted shift away from the values of personal survival toward a more cooperative ethos, was not entirely supported, because no direct link between greater postmaterialist values and lower endorsement of competition was established, even though rising societal development is linked to both.

Among all the theoretical perspectives examined here, the Weberian position received the strongest support. Whereas overall differences between most of the zones of historical culture were small, we uncovered a robust and relatively strong association between the Protestant proportion of the national population and the aggregate endorsement of competition. It is important to note that this result was obtained only after the countervailing effects of human development and political rights and civic liberties were filtered out, suggesting that attitudes toward competition are embedded in a complex web of economic, social, and cultural relations.

Study 2

Our second study was designed to follow up on the results of the first by examining predictors of individual-level, rather than country-level, endorsement of competition. One of the central insights of cross-cultural research is that individual-level outcomes and processes cannot be anticipated based on aggregated findings (the “ecological fallacy”; see, e.g., von Eye & Bogat, 2006). Therefore it was necessary to conduct a separate study in which within-country differences and their relationship to competition attitudes were examined. Similar to Study 1, our research allows a competitive test of the theoretical perspectives outlined in the introduction. Because the WVS does not contain an individual-level measure of individualism, we are unable to directly test the individualist hypothesis with respect to endorsement of competition.

Marxian Hypothesis

Based on the Marxian view of economic structure (e.g., Marx, 1867/1967), one’s values and beliefs are conditioned by the material position of one’s class. Therefore, we expect that those who disproportionately benefit in a competitive economic system are more likely to hold favorable views of competition, such that higher income should be linked to more favorable views of competition.

System Justification

In contrast to the Marxian perspective, system justification theory (e.g., Jost & Banaji, 1994) suggests that people's ideologies are co-opted by the economic system regardless of their position in it. Because this view sees values as a function of the economic structure, without any interaction with the individual's position within that structure, endorsement of competition should not vary within countries as a function of income.

Protestant Ethic

According to Weber's (1904/1996) account of the economic role of the Protestant ethic, Protestantism entails a unique set of values that tend to promote a view of competition as necessary and good. Thus we predicted that Protestants should endorse competition more strongly than non-Protestants.

Postmaterialism

The postmaterialist hypothesis (Inglehart, 1997) predicts that as people's material needs are met, their values tend to shift away from those that promote survival and toward those that promote self-expression. Because competition is a strategy that promotes individual survival-oriented outcomes more than the prosocial and affiliative outcomes of self-expression, we predict that individuals endorsing postmaterialist values should be likely hold less favorable views of competition.

Beyond examining main effects, we were also interested in exploring interactions between individual-level characteristics. There is a documented affinity between postmaterialist values and Protestantism (Inglehart, 1990). Specifically, the Protestant focus on moral choice and personal development parallels the postmaterialist focus on rational decision making and self-expression. Weber (1904/1996) for example, argued that the Protestants differed adherents of other religions in their focus on individual agency and reason in the pursuit of religious goals. Based on these observations, we surmised that postmaterialist values are more relevant to Protestants, resulting in a greater predictive power for this group compared to members of other traditions. In other words, we expected an interaction such that the impact of postmaterialist values in shaping competition attitudes would be particularly strong for Protestants as compared to non-Protestants.

The present multilevel approach also afforded us the opportunity to examine whether the impact of individual-level characteristics varies as a function of the characteristics of the country in which an individual resides.

Although we explored a number of different such cross-level interactions, we were particularly interested in the circumstances under which being Protestant would matter for how one views competition. First, it is plausible that one's Protestant heritage is a particularly potent predictor of one's social attitudes if one lives in a society with few other Protestants, and hence where one's heritage is likely to distinguish the individual from others. Second, and more important, starting with Weber (1904/1996), various researchers have documented the relationship between Protestantism and national wealth (e.g., Grier, 1997). At the same time, Study 1 has demonstrated that wealthier societies tend to have a more skeptical view of competition. We argue that this implies that for Protestants living in wealthy societies, their heritage should carry greater weight in predicting competition attitudes. In a society that holds less favorable views of competition, one's Protestant background, with the more favorable view of competition it entails, should matter more. This possibility is tested in Study 2.

Method

Data. Individual-level data for Study 2 were obtained from the WVS. Demographic items included sex and age of respondents. Education was coded on an 8-point scale from those who did not complete elementary education to those with a postsecondary degree. Income was coded on a 10-point scale from low to high based on a comparison of individual household income with the distribution of incomes within each country for the year of data collection. Values on axes of traditional versus rational and survival versus self-expression were computed by the compilers of the WVS based on factor loadings of a number of individual survey items described by Inglehart (1997). Because the distribution of the dependent variable endorsement of competition, described previously, was found to be skewed at the individual level, the natural log of the WVS score was used for the cross-level analysis. As previously mentioned, for ease of interpretation this variable was reverse coded such that higher values reflect more favorable views of competition.

Results

As previously mentioned, the structure of data from cross-national surveys is by its very nature nested. This means that respondents from within the same country sample are more similar to each other than respondents between country samples. This violates the assumption of independence that is inherent in conventional statistical approaches (Krull & MacKinnon,

Table 5
Linear Model for Attitudes Toward Competition (Study 2)

	Estimate	SE
Intercept	1.267***	.036
Individual-level parameters		
Protestant ^a	.008	.018
Male	.107***	.006
Age	.001***	.0002
Education	.016***	.002
Income	.012***	.001
Rationalist values	-.043***	.004
Self-expression values	.039***	.004
Protestant ^a × Rationalist Values	-.038**	.012
Protestant ^a × Self-Expression Values	-.044***	.011
Country-level parameters		
GDP(log)	-.154***	.028
% Protestant population	.090	.117
Cross-level parameters		
Protestant ^a × GDP(log)	.079**	.021
Protestant ^a × % Protestant Population	.062	.068

Note: $N = 57,247$. GDP = Gross Domestic Product.

a. Non-Protestants were used as reference category.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

2001; Kashy & Kenny, 2000). Indeed, the intraclass correlation coefficient showed that 7.7% of the variance in the competition attitudes measure was accounted for by country membership (Wald's $Z = 5.44$, $p < .001$). Therefore, we used a linear mixed modeling (Raudenbush & Bryk, 2002; Sadler & Judd, 2001) approach, which treats country as a random effect and which produces unbiased estimates of coefficients at the individual level.

A summary of the effects derived from our mixed model analysis can be found in Table 5. At the individual level, estimated endorsement of competition was increased by being male rather than female ($B = .11$, $p < .001$), being older ($B = .001$, $p < .001$), and having a higher level of education ($B = .02$, $p < .001$). In line with the social-structural prediction individuals with higher incomes were more likely to endorse competition ($B = .01$, $p = .002$).

Examining interactive effects at the individual level, our analyses revealed that whether a respondent was a Protestant interacted with the endorsement of rationalist values ($B = .04$, $p < .001$). The traditional-rational axis of values was more strongly predictive of competition endorsement for Protestants ($B = -.08$, $p < .001$) than for other respondents ($B = -.04$, $p < .001$), though it

was still reliable. Conversely, a corresponding interaction effect for the survival-self expression axis of values revealed a very different pattern ($B = -.04$, $p < .01$). The endorsement of self-expression values carried no weight for how Protestants regarded competition, simple effect ($B = -.005$, $p = .649$), whereas there was a positive relationship for non-Protestants ($B = .04$, $p < .001$). Overall, it appears as if traditional-rational values were important for Protestants' rejection of competition, whereas they played a lesser role for Protestants. However, the influence of survival/self-expression values on non-Protestants' support seemed to be suspended for Protestants. These findings are hard to reconcile with the idea that competition is linked with a basic part of the Protestant cultural worldview.

At the national level, GDP had a significant effect on attitudes toward competition, with higher GDP predicting less favorable attitudes ($B = -.15$, $p < .001$). This finding replicates the negative correlation between GDP and country-level attitudes toward competition found in Study 1, Table 2.

As to influence of religion on attitudes toward competition, we found no main effect for the size of the Protestant population on general endorsement of competition ($B = .09$, $p = .45$). At the same time, whether someone was Protestant seemed to have no implications for their evaluation of competition ($B = -.008$, $p = .67$).

However, in addition to the interactive effects with postmaterialist values previously described, the impact of whether a respondent was Protestant was also moderated by country-level GDP, cross-level interaction ($B = .08$, $p < .01$). This interaction indicated that, within the present set of countries, in countries with average levels of GDP (e.g., Poland), an individual's status as Protestant had no effect, as described earlier. However, among countries with comparatively high levels of GDP (1 standard deviation *above* the average of countries, e.g., Finland), the coefficient was positive and significant ($B = .062$, $p < .02$). At the same time, among countries with comparatively low levels of GDP (1 standard deviation *below* the GDP average, e.g., Venezuela), the coefficient was negative and significant ($B = -.077$, $p < .01$). This confirms our prediction of an interactive relationship between Protestantism and wealth. In richer countries, the Weberian prediction of greater support for competition among Protestants was supported, yet Protestants in poorer countries had less favorable attitudes toward competition than their non-Protestant counterparts.

At the same time, we did not find any evidence to support the notion that being Protestant has less impact on one's attitudes toward competition in predominantly Protestant countries as compared to countries where other religions are more prevalent. In other words, even though GDP tends to be

correlated with the proportion of a society that is Protestant, the fact that Protestants favor competition in wealthier societies is not merely a function of these wealthier societies having a larger share of Protestants in their midst.

Discussion

The Marxian hypothesis, namely, that one's socioeconomic status predicts one's evaluation on outcome on competition, found some support in our data. Respondents with higher income were more likely to endorse of competition as a positive force than those with lower income. This pattern is consistent with the notion that wealthier people justify their position in the capitalist social structure by internalizing its values. Note that the causal arrow may run in the reverse direction in that people who embrace competition are more likely to be economically successful. Although the interpretation of this relationship has to remain somewhat unclear, note that system justification theory's prediction of there being no relationship between income and system-justifying beliefs (such as esteem for competition) was clearly not supported.

Again, there was some support for the Weberian hypothesis in our data. Although there was no overall association between Protestantism and endorsement of competition, there was a cross-level interaction with national GDP, such that in wealthier countries, Protestants favored competition more than their non-Protestant compatriots. Although there was the opposite relationship in less wealth countries, this interaction nevertheless supports Weber's argument that the Protestant ethic is conducive to supporting competition. However, it qualifies this argument and pinpoint that this is primarily true for countries in which the market economy has delivered the economic benefits it generally promises. Conversely, where the economy is lagging behind, Protestants seem to be opposed to competition.

Results with respect to the postmaterialism thesis (Inglehart, 1990) were mixed. Although the rationalism dimension of the value complex was associated with reduced endorsement of competition, as anticipated, the self-expression dimension was not. Because the second dimension was our only proxy for individualist values, the influence of individualism at the personal level must also be thrown into doubt.

General Discussion

Our examination of the worldwide variation in attitudes toward competition yielded several intriguing findings. Throughout the world, people lean markedly in the direction of Adam Smith's view of competition as a

constructive social force and away from Hobbesian skepticism. Nevertheless, there are some systematic differences in just how sanguine people are with respect to the role of competition in society. Generally, our analyses offer support for a cultural explanation for these differences and cast doubt on alternative accounts framed in terms of economic structure and individualism.

Strikingly, we found some significant support for Weber's (1904/1996) classic Protestant ethic hypothesis. According to the Weber, the rise of capitalism in the West hinged on the positive interpretation of economic competition inculcated by certain aspects of Protestant theology. Given that this claim is essentially historical in nature, it might be expected that any genuine difference between Protestants and others that may have prevailed in the 17th and 18th centuries, when both Protestantism and capitalism were in their formative stages, would have dissipated over time. Along these lines, Guiso et al. (2003) suggested that reforms in Catholic theology and practice accounted for their finding that Catholics and Protestants both held beliefs more conducive to free markets than members of other religious groups. Inglehart and Norris (2004) attributed their failure to find much support for any enduring effects of Protestantism to the acceleration of secularization in Protestant countries.

Although our findings are consistent with this view of an ongoing historical dilution of the Protestant ethic, further analyses revealed enduring differences relative to countries and individuals with similar levels of economic development and wealth. Specifically, Study 1 showed that the effects of Protestantism tended to be obscured by the countervailing effects of economic development and postmaterialism. Once these factors were controlled, however, it appeared that, when examined at the cultural level, more heavily Protestant nations continue to have more positive views of competition. Similarly, when other factors were controlled, Protestant individuals' attitudes toward competition tended to be less affected by the cultural changes of postmaterialist values than were those of non-Protestants. This suggests a unique and lingering impact of Protestant culture on beliefs about competition.

Inglehart's (1990, 1997) postmaterialism hypothesis also received some support from our analyses. According to this perspective, competition is an important part of the complex of traditional cultural values that prevails in conditions of material insecurity. As social and material development make mere survival a less salient goal, competition becomes less important and hence tends to be supplanted by values related to rationalism and self-expression. At the national level, this prediction was quite clearly supported by the data. There was a marked positive association between national

human development, increasing aggregate postmaterialist values, and decreasing aggregate support for competition. At the individual level, the picture was more complicated. The rationalism component of the postmaterialist values complex was related to lower levels of endorsement of competition, but the self-expression component was not. Moreover, education, which as a measure of human development was negatively linked with endorsing competition at the group level, exhibited the opposite relationship at the individual level; within each nation, more educated people tended to be more favorably inclined toward competition. Thus although there seems to be solid evidence of a shift in the direction of postmaterialist values accompanying development, it appears to be mainly a group level phenomenon rather than differentiating individuals within the same country.

With regard to the Marxian and system justification perspectives, our findings were somewhat more complex. Because these models hold that ideology and values are to a large extent the products of economic structure and conditions, they predict that support for competition should be highest where it is most central to that structure, and among those who benefit most from it. At the national level, the data directly contradicted this hypothesis; in fact, where the economic freedom to compete was the highest, aggregate endorsement of competition was the lowest. To the extent that any system justification effects occur at the national level, it would seem that the countervailing effects of postmaterialism are more than enough to cancel them out. At the individual level, however, the Marxian view did find some support. Within countries, individual income and education, key indicators of socioeconomic status, are associated with greater endorsement of competition, which would appear to indicate that people's values are aligned to a certain degree with their relative positions in the national economic and social structure. Thus although the material underpinnings of social structure are not entirely irrelevant in determining one's values with respect to competition, they appear to be largely overshadowed in this regard by aspects of culture including history, ideology, and postmaterialist values.

Findings with respect to the individualism hypothesis were less clear. Contrary to the expectation that the rise of individualism is associated with the breakdown of social bonds (e.g., Putnam, 2000), and hence with increased endorsement of competition, the vertical dimension of individualism was unrelated in the aggregate with the average view of competition, whereas the horizontal dimension was negatively related with it. Given that interpersonal competition is to a certain extent encapsulated within the definition of vertical individualism, this finding is somewhat puzzling. At the individual level, the only available proxy for individualism, self-expressive values, was unrelated to endorsement of competition. However, we lacked the

data to adequately control for the possibility that the known positive relationship between individualism and prosocial orientation (e.g., Kimmelmeier et al., 2006; Waterman, 1984) masks some of the effects of individualism on competition endorsement. It is possible that, much as human development suppresses the effect of Protestantism, the rising prosocial orientation associated with individualism has a negative effect on endorsement of competition that suppresses an independent positive effect of individualism directly on competition. Additional analyses with more data would be required to deal with this alternative hypothesis.

Taken together, these results suggest that, although the broad forces of development and postmaterialism have the most immediate impact on people's views of competition, distinct cultural differences persist. Some significant questions remain in the wake of these analyses. In particular, the context of competition differs quite dramatically even between nations with relatively similar levels of economic freedom, which may well influence people's evaluations of competition in ways that cannot be fully anticipated. Tradition and public discourse may influence whether people frame particular issues in terms of competition or some other set of values, and this may affect the meaning of endorsing competition across cultures. In much of Europe, for example, the provision of health care is typically framed as an issue of human rights, whereas in America it tends to be seen more as an area of economic activity, in which competition is a legitimate means of distributing scarce resources. So although economic freedom and human development are quite high in both places, aspects of cultural practice such as these may mean that people in different contexts are effectively evaluating somewhat different concepts when rating their endorsement of "competition."

More broadly, there may be differences in the interpretation of competition that arise from cultural traits like individualism and collectivism (cf. Oyserman et al., 2002). To the extent that members of individualist and collectivist cultures differ in the extent to which they attend to the individual and group aspects of action, respectively (e.g., Menon, Morris, Chiu, & Hong, 1999), they might also be expected to conceive of competition in different terms. Individualists may think of competition mainly as something that occurs between individuals and thus see it as a positive source of interindividual differentiation and self-expression. Collectivists, on the other hand, may attend more to the intergroup aspects of competition, seeing it as a source of group cohesion and collective identity. Although the mixed modeling approach allowed our analysis to take this notion of shared cultural meaning into account to a certain extent, more work is needed to clarify some of these issues.

In short, people's beliefs and attitudes regarding the place of competition in society do not appear to be the product of any single process. Rather, these attitudes are shaped by a web of interconnected factors including cultural history, emerging cultural values, and individual social position. In particular, rising national human development, the emergence of a cultural background of postmaterialist values, and lower individual socioeconomic status are all associated with movement away from the view that competition is mainly a force for social good. Yet these effects are tempered by the surprisingly robust influence of Protestantism, at the level of both national religious history and individual religious affiliation. Thus, our work corroborates the observation by Inglehart (e.g., Inglehart & Baker, 2000) that even despite sometimes dramatic economic, political, and social change, the impact of a society's cultural heritage persists to shape values and beliefs.

Notes

1. Guiso et al. (2003) reported having used "survey year dummies" in their analyses to control for the fact that different data were collected at different points in time (e.g., Table 2, p. 243). We consider this approach somewhat unfortunate in that, first, it does not do justice to the longitudinal nature of the data. Second, there is a problem with what these "survey year dummies" reflect given that different survey years included different subsets of country. Potentially, the difference between two countries (and not any temporal change) is modeled by such a dummy variable simply because one country was included in, say, Wave 3 but not in previous waves (e.g., Albania), whereas another country was included only in Wave 2 (e.g., Austria). In this case, the meaning of a "survey year dummy" is ambiguous.

2. One common source of religious population data, the CIA World Factbook, could not be used because it does not provide separate population estimates for Protestants for many countries. For the 29 countries in our data set for which WCD data overlapped with those available from the CIA World Factbook, the correlation between the two sources for estimated Protestant population was .952. We chose not to use data aggregated from the World Values Survey because differences in sampling methodologies between countries made it of uncertain validity for estimating population parameters. The correlation between the WCD estimates and the aggregate country-level number of Protestants sampled in the WVS was .883.

3. Note that because of the high correlation between economic freedom and GDP, it was not possible to control for GDP in the prediction of competition from economic freedom, and vice versa.

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