Patterns of Individualism and Collectivism Across the United States

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Although the individualism–collectivism dimension is usually examined in a U.S. versus Asian context, there is variation within the United States. The authors created an eight-item index ranking states in terms of collectivist versus individualist tendencies. As predicted, collectivist tendencies were strongest in the Deep South, and individualist tendencies were strongest in the Mountain West and Great Plains. In Part 2, convergent validity for the index was obtained by showing that state collectivism scores predicted variation in individual attitudes, as measured by a national survey. In Part 3, the index was used to explore the relationship between individualism–collectivism and a variety of demographic, economic, cultural, and health-related variables. The index may be used to complement traditional measures of collectivism and individualism and may be of use to scholars seeking a construct to account for unique U.S. regional variation.

One of the most useful and actively researched constructs to emerge from cultural social psychology has been the dimension of individualism–collectivism (and the closely related constructs of independent vs. interdependent self-construals; Markus & Kitayama, 1991). The individualism–collectivism dimension has proven quite successful in describing cultural variations in behaviors, attitudes, cognitions, norms, values, goals, and family structures, organizing them into a general cultural theme or syndrome (Triandis, 1996). One ultimate goal of researchers conducting such work is to develop a clearer understanding of cultural differences and to relate the "fuzzy" construct of culture to the specific psychological functioning of the individual.

Briefly, collectivism can be defined as a social pattern of closely linked individuals who define themselves as interdependent members of a collective (e.g., family, coworkers), whereas individualism as a cultural pattern stresses individual autonomy and independence of the self (Markus & Kitayama, 1991; Triandis, 1995). These social patterns are characterized by differences in things such as family living arrangements (e.g., collectivists tend to have larger families and extended families living under the same roof), social behavior (e.g., collectivists tend to show greater conformity to group norms), beliefs (e.g., individualists tend to be more tolerant of practices such as divorce), political ideologies (e.g., individualists tend to be far more libertarian), and so on.

Not surprisingly, the large majority of research on the individualism–collectivism dimension has involved comparing Asian samples (collectivist) with samples from the United States or Western Europe (individualist). (For examples and review, see Kaglicibasi, 1997; Kim, Triandis, Kaglicibasi, Choi, & Yoon, 1994; Triandis, 1994, 1995.) Much insight about the individualism–collectivism construct has been gained from this valuable research. In the present article, we present a somewhat different approach to studying the individualism–collectivism construct. First, we examined the individualism–collectivism
dimension solely within the context of the United States. Second, we combined macro-level indicators with attitudinal data in developing and validating an index measuring regional differences. Third, we used this index to explore hypotheses about ecological, historical, and social factors associated with individualistic and collectivist syndromes. Our hope is that this research can further work in this area and can suggest another context for studying the individualism—collectivism construct, in addition to the American versus Asian context.

Of course, the culture of the United States, whose political, philosophical, and social underpinnings were founded on liberalism, is decidedly individualistic (Kim, 1994). Cross-cultural research has demonstrated that the United States is the prototypical individualist culture on the individualism—collectivism dimension (e.g., Hofstede, 1980; Triandis, 1994), and scholars in various fields have corroborated this account (e.g., Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Inkeles, 1983; Tocqueville, 1985a, 1985b). We do not refute that the United States is quite individualistic; however, we believe that regions of the United States show measurable variation on this dimension.

By studying this intranation variation, one may learn more about the individualism—collectivism dimension in general. The specific goal of this research was to create an index of collectivism based on several aggregate state-level measures that assigned a score to each U.S. state. We attempted to validate this index by examining whether the state-level index scores correlated with individual attitudes regarding individualist and collectivist issues, and we then used the index to test hypotheses derived from the individualism—collectivism literature regarding antecedents and consequences of these cultural patterns.

Predicted Regional Patterns

Prior to creating the index, we made several general predictions about regional patterns of collectivism. In some cases, we predicted general regional tendencies. In addition, we also believed several individual states would be characterized by unique subcultures that would distinguish them from their neighbors.

Collectivism in the South

We predicted that the South, particularly the Deep South, would be the most collectivist region of the country. The South, more than any other part of the United States, still retains a strong sense of regional identification (Grantham, 1994). Several ecological and historical factors and institutional practices probably have helped shape the South into a relatively collectivist region: defeat in the Civil War, the institution of slavery, relative poverty, and the prominence of religion.

In the years since the Civil War, the South has been viewed as somewhat of a tragic and defeated region. Reed (1972) described the historical image of the South as "a people defined in opposition to a powerful, external threat" (pp. 88–89). He painted a picture of the South similar to that of a minority group reacting to a more powerful, hostile majority by banding together. This has led to a mindset in the region of southern pride and tendencies toward localism and strong group identification. Over 100 years after the Civil War, these tendencies toward southern regional identification and distinctiveness were empirically supported in the 1970s by Reed (1972, 1983).

A second related factor that may contribute to collectivism in the Deep South is its history of a plantation system supported by slavery. In the early 19th century, the United States was largely agricultural, and as Huntington (1996, p. 69) has written, "in agricultural societies . . . social structure is shaped by geography." Farming practices in southern plantations tended to be collectivist in that work was not carried out by independent farmers but by large numbers of people coordinated within a complex, hierarchical web of relationships and status arrangements. These hierarchical structures and in-group–out-group distinctions (e.g., master and slave, gentleman and yeoman, White and Black) in turn helped to reinforce collectivist notions and suppress individualist ones (Kulikoff, 1993). As Elazar (1966) noted, the "traditionalistic" political culture of the Deep South "reflects an older, pre-commercial attitude that accepts a substantially hierarchical society as part of the ordered nature of things . . . social and family ties are paramount" (p. 93). By this reasoning, the slave states of the Deep South should be the most collectivist in the southern region.

A third factor that likely contributes to collectivism in the South is the relative poverty of the region. The South, particularly in rural areas, has historically been (Grantham, 1994, p. 157) and continues to be the poorest region of the country (Almapi, 1994). Poverty is associated with collectivism in that financial dependence leads to social dependence (and, conversely, wealth contributes to financial and social independence; Kohn, 1969; Triandis, 1995).

Finally, church life pervades southern culture. The strength and presence of the church and fundamentalist religion in everyday life.

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2 State-level analyses have been popular among American political scientists and sociologists, who usually do not view American culture as monolithic. Some of the most famous and influential work was done by political scientist Daniel Elazar, who classified states' political cultures as individualistic, moralistic, traditionalistic, or some hybrid of these (Elazar, 1966, 1972; see also Gastil, 1975; Liaske, 1993; Lupback, 1971; Morgan & England, 1987; Sharkansky, 1969; Wright, 1987). Although Elazar’s labels were commonly used words, his definitions of the terms did not necessarily match those that other political scientists (or that social and cultural psychologists) might use. As Elazar (1966) cautioned, his descriptions must be read “after first abandoning many of the preconceptions associated with such idea-words as individualistic, moralistic, marketplace, etc.” (p. 87, see also pp. 90–91). For the present concerns, perhaps the closest parallel with Elazar’s work comes in his description of traditionalist political cultures, which emphasize hierarchy and rule by an elite. Such verticality in structures is often associated with collectivist cultures (Hofstede, 1980). Indeed, we show that Elazar’s traditionalistic states of the Deep South are the ones that are the most collectivist; and further, our collectivism measure correlates quite highly with measures of gender and racial inequality (see Part 3, Hypothesis 10). The correlation of our collectivism scale with Elazar’s traditionalism classification was $r = .47 (p < .001)$. Elazar’s characterization of moralistic political culture seems most in line with a political culture of participatory egalitarianism, and indeed we find that our collectivism measure correlates negatively with his moralism classification, $r = -.57 (p < .001)$. Elazar’s description of an individualistic political culture viewing “government as [s]tates for strictly utilitarian reasons, to handle those functions demanded by the people it is created to serve” (p. 86) bears only a modest resemblance to individualism as it is often defined (see his caution on p. 87), and indeed our collectivism measure has a very low correlation with his individualist classification ($r = .12, p > .40$).
southern culture surely promotes collectivist tendencies. The church as an institution promotes strong group ties through collective events such as camp meetings, church organizations, and the like. A strong religious influence still characterizes the South today, as the southern historian Granham (1994) noted: ‘The pervasiveness and intensity of religion below the Potomac continue to set the region apart within the nation’ (p. 315).

Individualism in the Mountain West and Great Plains

We predicted that western states would anchor our scale on the individualist end. The West was the last remaining frontier of the United States, and even today some parts of the Mountain West remain largely uncultivated and wild. Triandis et al. (1988) cited having a frontier as an important antecedent of individualism. Western geography should have a direct impact on the cultural psyche of the region. People of the Great Plains and Mountain West regions are characterized as “somehow still self-reliant and independent,” their values shaped by the environment itself, “with its vast distances, sparse population, and harsh, unpredictable weather” (Shortridge, 1993, p. 1011). We predicted that the Mountain West, with its wide open spaces, sparse population, and tradition of cattle ranching, would be the most individualistic region of the country. (We hypothesized that animal herding as practiced on the western frontier was a more individualistic form of farming than agriculture and plantation farming, a point we will elaborate on and empirically test later in the paper; see also Reaves & Nisbett, 1998. Great parts of the South were also herding, frontier areas, but the Mountain West, unlike the South, never developed a collectivist slave and plantation economy to supplant the earlier individualistic, frontier one.)

There are exceptions to this broad regional generalization. The Southwest (New Mexico, Arizona, Nevada, and California) was primarily settled by Mexican and Spanish populations before White settlers entered the area in the 1840s to 1860s. When the White settlers arrived, they often adopted Hispanic cultural practices of ranching, food, and lifestyle (Gastil, 1975; Paul, 1988, pp. 184–185). Hispanic influence is still very apparent today, both within the large Hispanic population and within the overall culture of the region. Hispanic and Latino cultures tend to be more collectivist than Anglo culture (Hofstede, 1980; Marin & Triandis, 1985; Triandis, 1983, 1994). Thus, we predicted that the Southwest would be more collectivist than the Mountain West and the Great Plains regions.

Utah should also be quite different on the individualism–collectivism dimension compared with the surrounding states because of the pervasive influence of Mormon culture. In 1847, when Mormons settled the region that is today Utah, they brought with them a strong sense of group identity and collective spirit (Paul, 1988, p. 169), not to mention the collectivist practice of polygamy. Mormons were expected to commit themselves completely to this body of beliefs, and they became united in this loyalty, as well as isolated from the surrounding states and American culture more generally. The Mormons were such a distinct society that social scientists have long classified them as a separate cultural group (Paul, 1988, p. 169). Today, Mormonism remains the dominant cultural force in Utah, with 70% of the population practicing the faith (Kosmin & Lachman, 1993). Thus, Utah should be much more collectivist than the surrounding Mountain West states.

The Northeast and the Midwest

We predicted that the Mountain West and Great Plains and South regions would anchor our individualism–collectivism index, but beyond that our predictions were less certain. Historically, the Northeast (especially Puritan New England) probably started out being relatively collectivist but became more individualist as the region moved from a farming-based economy to one largely driven by commercial and merchant interests. As cultures move to more formal trading relationships and market-pricing social behavior, individualism should increase (Fiske, 1992). Williams (1993) has argued that the Northeast started as an “ethnically homogeneous populace unified also by the absence of extremes of economic inequality” (p. 910) but then moved away from this with increased commercialism after the industrial revolution: “The ideal of the collective good began to yield inexorably to the pull of individual interest as social cohesion became strained from various quarters and the opportunity for profit in trade increased” (p. 912; see also Moore, 1966). Thus, we predicted that contemporary Northeastern culture would be somewhat individualistic, although we made no firm predictions of how individualistic it would be other than it would fall between our extremes of the South and the Mountain West and Great Plains.

3 In our works on violence, we have emphasized the way some violence norms developed and crystallized during the early frontier, herding period of the South (D. Cohen, 1998a. 1998b; D. Cohen & Vandeloo., 1998), whereas in the present article we emphasize the way norms concerning individualism and collectivism developed with the plantation and slave economy. Clearly a multitude of influences have shaped the South (D. Cohen, 1996), with different aspects of southern culture being formed at different times in the South’s development and in different core areas (Zelinsky, 1973). How important all these influences were is a matter of some debate. Some historians, such as McDonald and McWhiney, have emphasized the massive role of herding and livestock in shaping the South (McDonald & McWhiney, 1975; McWhiney, 1988), whereas others, such as Phillips (1918, 1929), have focused more on the slave system and plantations. Turner (1920) viewed southern herders as only one of a group of “successive waves across the continent . . . [in] the procession of civilization” (p. 12). Others have echoed this view that the “herder either was pushed out by the farmer and the planter, or more likely, joined their ranks” (Hillard, 1966, p. 122; 1972, p. 117), such that by 1840, the South had been “sufficiently settled by farmers... and the herdsmen had largely disappeared from the land” (Owlesley, 1965, p. 34). We think it is reasonable to agree that both the herding economy and the plantation economy (as well as many other forces) helped shape the South. In some ways, the question about any given force then becomes: Where did it have its influence? When did it have its influence? and On what aspect of southern life did it have its influence? (See D. Cohen, 1998a.) With respect to norms about violence, we have argued that herding was essential for the development of some forms of violence, whereas slavery, particularly in the Deep South, was essential for others (D. Cohen, 1996, Studies 3, 4, 5, and 6; Nisbett & Cohen, 1996; see the critique by Jackson, 1997). For the present article, we emphasize the way norms about individualism and collectivism generated by the slave system in the South may have supplanted norms about individualism and collectivism generated by the frontier herding economy, in a way that obviously could not have happened in the West, where there was no slave system. This supplanting did not occur in all parts of the South; the Peripheral South is not particularly collectivist. Rather, as we show later (Part 3), it was the parts of the South that had extensive slave systems and plantation economies that are highly collectivist today.
New York, and to a lesser degree New Jersey, present special cases because of their large numbers of ethnic immigrants. These states have quite heterogeneous populations, and some scholars have argued that heterogeneity should lead to multiple norms, loose social relations, and individualism. However, in many cases, the large numbers of foreign immigrants to these states created distinct, salient subgroups that maintained their own distinct cultures and separate neighborhoods (e.g., Chinatown, Little Italy, Crown Heights, Spanish Harlem). Rather than disintegrating group norms, we suspect that this has had the effect of intensifying in-group identification and cohesion. Thus, we expected these states might be somewhat more collectivist than the rest of the states in the Northeast region.

Finally, we made no specific predictions for the Midwest and Great Lakes region. We suspected, however, that these states would be less collectivist than the Deep South but more collectivist than the Mountain West.

Hawaii as a Special Case

Hawaii has a culture different from that of the rest of the United States, both historically and currently. Hawaii lies midway between Asia and North America, and its culture reflects both of these influences. About 62% of the state is Asian (Almapi, 1994), and Asian cultures tend to be quite collectivist (Hofstede, 1980; Triandis, 1994). In fact, cross-cultural researchers have used Hawaiian samples as representatives of a moderately collectivist group (e.g., Triandis, McCusker, & Hui, 1990). Thus, Hawaii provided a good test of the validity of our U.S. collectivism measure; the state should fall at or near the top of the rankings.

Part 1: Creating the Index

Method

Our strategy in creating an index of collectivism was to find state-level data on the dimensions of interest that reflected a wide range of cultural practices, from family and living arrangements to political, occupational, and religious behaviors. Specifically, we had a number of criteria for selecting indicators. We began by collecting various indicators that we thought might be relevant. From this larger pool of indicators, we narrowed our choices down to those items that we both agreed were relevant, core reflections of individualism and collectivism. We chose indicators that would hold together well (i.e., that would be moderately correlated and show good reliability), and we also sought parsimony, choosing to eliminate items that seemed to overlap too much with other variables. Thus, (a) many items were dropped because they were redundant and were better captured by other measures (e.g., we chose to measure the percentage of people who live alone as opposed to size of household or percentage of households with seven or more members), and (b) a few items were dropped because they turned out to be empirically uncorrelated despite their theoretical relevance (for example, American Civil Liberties Union ratings for a state’s legislators were uncorrelated with the other eight items of our final index, \( r = -.04 \)).

Our final index comprised eight items. For items that reflected individualist tendencies, we reversed the state scores such that higher scores indicated greater collectivism. The first three items of our index related to family structure and living arrangements, with the rest relating to social, political, religious, and economic practices.

Percentage of people living alone (reverse scored; Almapi, 1994). One of the major facets of the individualism–collectivism dimension is the family structure. Individualists, who view themselves as autonomous, should be more likely to live alone than collectivists, who see themselves as part of a group and tend to have larger families.

Percentage of elderly people (aged 65+ years) living alone (reverse scored; Almapi, 1994). A related marker of the individualism–collectivism dimension is the choice of living arrangements for elderly people. Collectivist children should be more likely to take personal care of their parents by sharing living quarters with them, and individualist elderly people should be more likely to try to maintain independence by living alone rather than with their children or in a nursing home.

Per centage of households with grandchildren in them (Almapi, 1994). Collectivist households should be more likely to include extended family members rather than simply nuclear family members.

Divorce to marriage ratio (reverse scored; U.S. Bureau of the Census, 1996). Naroll (1983) argued that extreme individualism leads to several forms of social pathology, including divorce. The argument is based on the idea that strong ties to a normative reference group provide emotional support and warmth and punish deviant behavior. Indeed, individualist cultures around the world have higher rates of divorce than do collectivist cultures (Vandello & Cohen, 1998). Thus, states with higher marriage-to-divorce ratios should be more collectivist.

Percentage of people with no religious affiliation (reverse scored; Kosmin & Lachman, 1993). Religion as an institution promotes social integration through ritual and community and also regulates norms and moral conduct (Ellison, Burr, & McCall, 1997). Thus, religious affiliation should contribute to collectivism. Conversely, individualism has been correlated with less interest in religion (according to Daab, as cited in Triandis, 1995, p. 87).

Average percentage voting Libertarian over the last four presidential elections (1980–1992; reverse scored; Congressional Quarterly, 1994). More than other political parties, Libertarians provides the most direct parallel to the individualism–collectivism dimension. Libertarianism places heavy emphasis on individual freedoms and self-governance. These attributes are at the core of individualism, and thus states with higher Libertarian voting percentages should be more individualist.

Percentage of self-employed workers (reverse scored; Almapi, 1994). Schooler (as cited in Triandis, 1995, p. 83) emphasized modes of production as an explanation of the emergence of individualism. Self-employment is the prototypical act of individualism in the workplace. Not only does it entail being one’s own boss, but it also typically means less opportunity for social integration with coworkers and for the unity and collective spirit that accompany teamwork.

Results

The scores for each of these eight items were standardized across states; the Z scores of the eight items were then summed to create an overall collectivism score for each state. We further linearly transformed the scores by multiplying the means by 20 and adding this result to 50 (essentially creating an index with a mean of 50 and a standard deviation of 20 to create a more easily readable index while avoiding negative scores; see Baron &

4 We eliminated Nevada from our data regarding marriage rates because it was an extreme outlier. Because of the popularity of Las Vegas weddings, Nevada had an annual marriage rate of 96.3 per 1,000 people, nearly 7 standard deviations above the national mean. The next highest state, Arkansas, had a marriage rate of 15.6 per 1,000 people.
Straus, 1989). Table 1 shows the state rankings on the eight-item collectivism index (higher scores reflect greater collectivism and lower scores reflect greater individualism). Figure 1 displays the collectivism rankings in map form.

**Summary statistics for the index.** We chose items that were moderately positively correlated (i.e., not too low as to be unrelated but not too high as to be redundant). We also chose items such that the alpha coefficient of reliability would increase with the inclusion of the item in the index (see Baron & Straus, 1989). In addition, we sought indicators that would reflect a broad scope of social domains (family, job, politics, religion, etc.). Thus, although we wanted reasonably high reliability, we were willing to sacrifice some internal consistency to increase the breadth of the measure.5

As can be seen in Table 2, the overall standardized alpha for our eight-item index was .71. Also, the inclusion of each item increased the reliability of the measure (and the exclusion of any item resulted in a lower reliability). Table 3 shows the correlation matrix of the eight indicators. As desired, the indicators were, in general, moderately positively correlated, with all of the corrected item-total correlations being positive. Given the diversity of indicators, these correlations are actually quite respectable. The general pattern of low to moderate correlations suggests that although the individual items are not measuring the same thing, they are tapping into a similar construct. Overall, the eight-item index adequately met our statistical criteria of acceptability.

**Regional differences in collectivism.** From a cursory inspection of the map, one can see definite regional patterning that is generally consistent with our predictions. To further examine regional patterns, we aggregated states according to theoretical ideas laid out in the introduction, creating nine cultural regions. The regions are as follows:

1. Confederate (Deep) South (South Carolina, Mississippi, Florida, Alabama, Georgia, Louisiana, Texas, Tennessee, Arkansas, Virginia, and North Carolina).

2. Peripheral South (Delaware, Maryland, West Virginia, Kentucky, Missouri, and Oklahoma).


7. Southwest (New Mexico, Arizona, Nevada, and California).

8. Utah.


Categorizations of states into regions follow theoretical considerations but are still, of necessity, somewhat arbitrary. For example, Texas was grouped with the Deep South because of its high concentration of slaves (30% of the population in 1860), but it could also be considered part of the Southwest. California was considered Southwest (as it was one of the states ceded to the United States by Mexico in 1848 along with Texas, Arizona, New Mexico, Utah, and Nevada), but it could conceivably have been its own separate cultural region (e.g., Vance, 1972). We chose the groupings to suggest patterns that corresponded to theoretical ideas about individualism and collectivism. It is important to remember that these cultural boundaries are somewhat fuzzy and overlapping, and some states share characteristics of more than one cultural region (Cohen, Vandeloo, Puente, & Rantilla, in press; Garreau, 1981; Nardulli, 1989; Vandeloo & Cohen, 1999).

Table 4 presents regional scores on the collectivism index. A one-way analysis of variance indicated significant regional differences in collectivism, F(8, 41) = 20.88, p < .0001. Post hoc analyses further revealed that Hawaii was more collectivist than all other regions, the Mountain West and Great Plains region was more individualist than all other regions, and the Deep South was significantly more collectivist than the Mountain West and Great Plains, the Great Lakes and Midwest, and the Northeast (all Tukey’s HSD ps < .05). These regional differences conform largely to our anticipated patterning, lending support to the validity of the collectivism index. There were a few surprises, however. For example, although we suspected that New York and New Jersey would be more collectivist than

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5 This issue is analogous to what Cronbach (1990) referred to as the “bandwidth versus fidelity dilemma,” the term being borrowed from information theory. Briefly, bandwidth increases with the diversity of items, whereas fidelity has to do with the accuracy or reliability of information. Bandwidth and fidelity are inversely related. Our strategy in creating the index was consistent with Cronbach’s suggestion that several less reliable scores should be preferred to a few highly reliable ones. In short, we emphasize the breadth of the measure over extreme reliability (e.g., including the religious affiliation variable because it is conceptually very relevant, even though it is not highly correlated with some of the other index variables).
the surrounding states of the Northeast, their high collectivism scores were not anticipated. It is a very plausible speculation that having a large ethnic immigrant base contributes substantially to collectivism.

Table 2
Reliability Statistics for the Eight Collectivism Indicators

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Corrected item-total correlations</th>
<th>Alpha if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage living alone (R)</td>
<td>.40</td>
<td>.35</td>
</tr>
<tr>
<td>Ratio of people carpooling to work to driving alone</td>
<td>.38</td>
<td>.35</td>
</tr>
<tr>
<td>Ratio of divorce rate to marriage rate (R)</td>
<td>.16</td>
<td>.42</td>
</tr>
<tr>
<td>Percentage of elderly people living alone (R)</td>
<td>.08</td>
<td>.44</td>
</tr>
<tr>
<td>Percentage of households with grandchildren in them</td>
<td>.74</td>
<td>.29</td>
</tr>
<tr>
<td>Percentage of people with no religious affiliation (R)</td>
<td>.05</td>
<td>.68</td>
</tr>
<tr>
<td>Average percentage of Libertarian votes over the last four presidential elections</td>
<td>.59</td>
<td>.38</td>
</tr>
<tr>
<td>Percentage of self-employed people (R)</td>
<td>.45</td>
<td>.26</td>
</tr>
</tbody>
</table>

Note. R indicates the item is reverse scored. Total standardized \( \alpha = .71 \).

Part 2: Validating the Index at the Individual Level

Thus far, analyses have been limited to state-level aggregates of objective behaviors and social structures. If the state-level and regional differences in collectivism do indeed exist, they should lead to differing psychological orientations at the individual level, with individuals from collectivist states being more allocentric and those from individualist states being more idiosyncratic (Triandis, Leung, Villareal, & Clark, 1985). To test this, we examined national survey data regarding issues related to individualism and collectivism. The strategy was to use state index scores to predict attitudinal responses to national survey items. One of the most popular, most relevant, and most accessible of such surveys is the National Election Study (NES).

Method

The NES, which explore a wide range of social issues, are administered biennially by the Center for Political Studies at the University of Michigan at Ann Arbor. Although more recent NES surveys are available, we chose the 1990 postelection study (Miller, Kinder, Rosenstone, & NES, 1992), because it most closely matched the time period from which most of the data composing our index were drawn.

The 1990 survey was administered to a nationally representative sample of 2,000 respondents drawn from 30 states. Two forms were administered to minimize the length of the survey; thus, not all respondents answered the
Table 3
Correlation Matrix for the Eight Collectivism Indicators

<table>
<thead>
<tr>
<th>Indicators</th>
<th>1</th>
<th>2</th>
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<th>8</th>
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<tbody>
<tr>
<td>1. Percentage living alone (R)</td>
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<tr>
<td>2. Ratio of people carpooling to work to driving alone</td>
<td>.54</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Ratio of divorce rate to marriage rate (R)</td>
<td>.25</td>
<td>.02</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>4. Percentage of elderly people living alone (R)</td>
<td>.63</td>
<td>.53</td>
<td>.15</td>
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<td></td>
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<tr>
<td>5. Percentage of households with grandchildren in them</td>
<td>.49</td>
<td>.69</td>
<td>.08</td>
<td>.43</td>
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<td></td>
<td></td>
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<tr>
<td>6. Percentage of people with no religious affiliation (R)</td>
<td>.01</td>
<td>.03</td>
<td>.12</td>
<td>.30</td>
<td>.42</td>
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<tr>
<td>7. Average percentage of Libertarian votes over the last four presidential</td>
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<tr>
<td>elections (R)</td>
<td>-.16</td>
<td>-.20</td>
<td>.15</td>
<td>-.21</td>
<td>-.11</td>
<td>.68</td>
<td></td>
<td></td>
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<tr>
<td>8. Percentage of self-employed people (R)</td>
<td>.27</td>
<td>.33</td>
<td>.05</td>
<td>.30</td>
<td>.55</td>
<td>.14</td>
<td>.20</td>
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</table>

*Note.* R indicates the item is reverse scored.

same questions. The sample sizes used in the present analysis ranged from 851 to 987, depending on the item.

Most of the questions on the survey asked about political attitudes, but there was also an eight-item section titled "individualism" that was very relevant to the present studies. Individual scores for items were aggregated at the state level for a total of 50 data points per question. Of the eight items in the section on individualism, three most directly paralleled the individualism-collectivism dimension as it is defined in cultural psychology. The three questions asked whether

1. It is better to fit in with people around you, or it is better to conduct yourself according to your own standards, even if that makes you stand out.

2. When raising children, it is more important: 1) to encourage them to be independent-minded and think for themselves, or 2) to teach them obedience and respect for authorities.

3. It is more important to be a cooperative person who works well with others, or it is more important to be a self-reliant person able to take care of oneself.

There were also several questions that asked about collectivism in the more political sense of libertarianism and big government versus individual autonomy. They asked whether

4. We need a strong government to handle today's complex economic problems, or the free market will handle these problems without government being involved.

5. Most poor people are poor because they don't work hard enough, or because of circumstances beyond their control.

6. The less government the better, or there are more things the government should do.

7. The main reason government has become bigger over the years is because it has gotten involved in things that people should do for themselves, or because the problems we face have become bigger.  

We combined these seven items from the individualism section into an index of collectivist attitudes (reverse scoring the appropriate items for consistency; \( \alpha = .41 \)).

Table 4
Means and Standard Deviations by Cultural Region for the U.S. Collectivism Index

<table>
<thead>
<tr>
<th>Region</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii_</td>
<td>91.2</td>
<td></td>
</tr>
<tr>
<td>Utah_e</td>
<td>61.4</td>
<td></td>
</tr>
<tr>
<td>Confederate (Deep) South_e</td>
<td>60.1</td>
<td>6.0</td>
</tr>
<tr>
<td>New York and New Jersey_e</td>
<td>56.4</td>
<td>4.3</td>
</tr>
<tr>
<td>Southwest_e</td>
<td>53.0</td>
<td>4.6</td>
</tr>
<tr>
<td>Peripheral South_e</td>
<td>51.1</td>
<td>7.5</td>
</tr>
<tr>
<td>Great Lakes and Midwest_e</td>
<td>46.7</td>
<td>6.1</td>
</tr>
<tr>
<td>Northeast_e</td>
<td>46.6</td>
<td>3.8</td>
</tr>
<tr>
<td>Mountain West and Great Plains_e</td>
<td>37.0</td>
<td>4.7</td>
</tr>
</tbody>
</table>

*Note.* Regions and divisions not sharing subscripted letters are significantly different at \( p < .05 \). An ANOVA on cultural region yielded \( F(8, 41) = 20.88, p < .0001 \).  

We were unable to code the eighth question from the section, because it was not clear which direction was more individualist or collectivist. The item read, "People should take care of themselves and their families and let others do the same, or people should care less about their own success and more about the needs of society." This item was excluded from the analysis.

The reliability of this index was a bit low. This should not be too surprising given the diversity of the items, with questions ranging from values in raising children to attitudes toward free markets and government involvement. This somewhat low reliability actually works against us in looking for a significant correlation to validate the index introduced in Part 1 (J. Cohen & Cohen, 1983, noted, "Unreliability in variables is a sufficient reason for low correlations; it cannot cause correlations to be spuriously high," p. 70. See also Zuckerman, Hodges, Zuckerman, & Rosenthal, 1993). We recognize the need for replication with better measures of collectivist attitudes from national probability surveys; however, given the dearth of such surveys, the present survey probably provides a reasonable first approximation.
Results

This index correlated with our collectivism index significantly and in the expected direction \((r = .61, p < .001)\).\(^8\) (Correlations of individual items with our collectivism index were as follows: Question 1, \(r = .19\); Question 2, \(r = .42\); Question 3, \(r = .20\); Question 4, \(r = .27\); Question 5, \(r = .25\); Question 6, \(r = .45\); Question 7, \(r = .24\).

We also explored the relative strength of collectivism index scores as a predictor of survey responses. We performed a multiple regression that included other plausible predictors of responses including age, education level, and income in addition to collectivism scores. This regression revealed that collectivism remained a significant predictor of survey responses on the seven-item index when the other variables were controlled (for collectivism, \(\beta = .55, p < .01\); for age, \(\beta = -.33, p = .02\); for education, \(\beta = -.22, p = .47\); for income, \(\beta = -.04, p = .58\)).

In sum, our collectivism index was consistently associated with the survey items, and it appeared to be a reasonably strong predictor of responses, providing further support for the validity of the index at the level of individual attitudes.

Part 3: Testing Hypotheses With the Index—Causes and Consequences of Individualism and Collectivism

Having established validity for our collectivism measure from the regional patterning and convergence with national survey responses, we next used the index to test hypotheses about individualism and collectivism in the United States. We proposed 10 a priori hypotheses based on theoretical suggestions and educated guesses from the literature on the individualism–collectivism dimension.

Some of these hypotheses have to do with antecedents of individualism and collectivism, some have to do with consequences, and others can be considered both causes and consequences. For example, below we tentatively consider residential stability as a consequence of collectivism, although it is probably true that stable communities are also more likely to build strong collectivist norms. Although the cross-sectional nature of the data makes separating causes and consequences difficult, theoretically one of the causal directions is often more plausible than the other for the hypotheses below.

Note that because the correlations are based on the entire sample of states, inferential statistical tests of significance are not strictly necessary. Nonetheless, following convention we report significance levels. This creates comparability with other studies, and it allows us to judge the strength of the findings against purely random effects (see Baron & Straus, 1989, p. 35). Given the relatively small sample size \((N = 50)\), only medium \((r = .30)\) effect sizes or larger will be significant (J. Cohen, 1977, p. 80).

Antecedents of Individualism and Collectivism

Hypothesis 1: Affluence will be associated with individualism. Triandis (1994, p. 165) argued that financial independence leads to social independence. Conversely, when people are relatively poor, interdependence becomes functional. In support of this notion, Hofstede (1980, p. 231) reported a correlation of about .8 between a country’s individualism and gross national product per capita.

We examined the hypothesis that financial dependence leads to collectivism by looking at poverty rates per state (O’Leary Morgan, Morgan, & Quinio, 1994b). Poverty correlated \((r = .31, p < .05)\) with collectivism, supporting our hypothesis.

Hypothesis 2: Population density will be associated with collectivism. Population density presses toward tightness and a need for coordination, hence collectivism. Conversely, sparsely populated locations and frontiers press toward looseness and self-reliance, hence individualism (Triandis, 1995, p. 100). We found a modest \(.22 (p = .12)\) correlation between collectivism and persons per square mile (O’Leary Morgan et al., 1994b).

A second measure of population density is the concentration of people in urban areas (Almapi, 1994). This measure is slightly different than persons per square mile in that some states have very little urbanism but are not necessarily sparsely populated (e.g., Vermont); for other states, persons per square mile will generally underestimate the density of the population because people are concentrated in a few areas of the state (e.g., Nevada, Utah). When looking at metro area population as a percentage of total population, we found a correlation of \(r = .38 (p < .01)\) with our collectivism index.

Some scholars have theorized that urbanism should lead to individualism. This does not necessarily contradict our present results. When urbanism is taken to mean modernization and industrialization at the national level, then it would likely correlate with individualism. However, when urbanism is a marker of density of population, it should (and, in this case, does) correlate with collectivism.

Hypothesis 3: Variations in historical farming practices created the conditions for collectivism and individualism. In the introduction of this article, we briefly mentioned that the types of farming economies differed historically by region, and we suggested that these differences might have important relationships with individualism and collectivism. Our general hypothesis is that farming practices that require many hands and coordinated efforts will contribute to collectivism. For example, on large plantations in the South, many workers were needed to harvest the major cash crops such as cotton, tobacco, and rice. Conversely, farming practices that require relatively few hands would contribute to individualism. This would be true of ranching and herding farms, which are typically large but require few workers, and it would be true for the smaller, family-run farms typical of the Midwest prairies following the Homestead Law of 1862, in which the government gave

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\(^8\) There is a second plausible way to analyze the survey data. Instead of aggregating individuals’ scores at the state level (for an \(N = 30\)), our collectivism index can be correlated with survey scores at the individual, unaggregated level by giving each respondent a collectivism score based on the score of their reported home state. This method takes advantage of a much larger sample size but results in more individual-level variation (and, thus, smaller correlations). We reanalyzed the data this way, and results remained similar. The seven-item aggregate from the survey \((\alpha = .52, N = 981)\) correlated with our collectivism index in the expected direction \((r = .10, p < .01)\). Similarly, the multiple regression in which we controlled for age, income, and education revealed that collectivism remained a significant predictor over and above the other factors. \(\hat{\beta}_{\text{collectivism}} = -.05, p < .05; \text{for age}, \hat{\beta}_{\text{collectivism}} = -.15, p < .0001; \text{for education}, \hat{\beta}_{\text{collectivism}} = -.23, p < .0001.\)
small (less than 160-acre) parcels of land to encourage western expansion. In its simplest form, the hypothesis is that large, plantation-style agricultural farming is conducive to collectivism, whereas ranching, herding, and independent crop farming on the Western frontier were more conducive to individualism (see Huntington, 1996; Reaves & Nisbett, 1998; Triandis, 1990, 1994; Wilson, 1993).  

To test these hypotheses, we turned to historical records from the agricultural census. A census of agriculture has been taken every decade since 1830. Our hypotheses require looking at historical records to see how the past shaped the present, but the question is, how far back should one look? There is no definitive answer to this question. We chose to look at the 1900 census (U.S. Bureau of the Census, 1902), partly because older records are less detailed and do not include all of the states, and partly because the turn of the century marked a plateau just before the beginning of a precipitous drop in the percentage of Americans engaged in farming (Hoffman, 1989, p. 125). After 1900, economic and social changes turned the country from an agrarian to a more urban industrial society, and thus agricultural influences are less relevant past this point. We occasionally supplement these data with older records where appropriate.

There are several ways to test our farming hypotheses. Perhaps the most directly related category is the number of farms operated by owners (as opposed to tenant farms, which are operated by people other than the owner). Self-run farms should foster individualism. We divided the number of self-run farms by the total number of farms per state and correlated this with our collectivism index (Dodd, 1993). The 1900 census figure correlated \( r = -0.59, p < .001 \) with our index.

The 1900 census also divided the total number of individuals engaged in agricultural pursuits into several subcategories, three of which were (a) crop farmers, planters, and overseers; (b) agricultural laborers; and (c) herders, stock raisers, and drovers. We hypothesized that herding as practiced in the United States would contribute to individualism, whereas crop farming (particularly large-scale plantation farming) would lead to collectivism. We divided the number of individuals in each category by the total number of people engaged in agricultural pursuits in that state. The percentage of individuals engaged in herding correlated negatively with our collectivism index, as predicted \( r = -0.28, p = 0.052 \). Conversely, the percentage of individuals engaged as either farmers, planters, overseers, or agricultural laborers correlated positively with collectivism \( r = .31, p < .05 \).

In addition, regarding agricultural farming, we looked at the ratio of laborers to farmers, planters, and overseers in each state. Larger plantations or corporate farms should have high ratios of laborers to farmers, and thus this ratio should correlate with collectivism. As predicted, we found a \( .67 \) correlation \( p < .001 \).

Last, we wanted to examine the hypothesis that plantations in particular fostered collectivism. We were unable to find a direct measure of plantations per state. As an approximation of this measure, however, we looked at the most popular plantation crops: cotton, tobacco, and rice. For each crop in each state, we looked at the total production (in pounds or bales) and then divided it by the total acres of farmland. For each crop we looked at census records from 1860, 1880, and 1900 because of the large changes that took place in plantation farming after the Civil War. As predicted, the production of each of these crops correlated with collectivism (for the years 1860, 1880, and 1900, respectively, for cotton, \( r = .55 \), \( r = .58 \), and \( r = .59, ps < .001 \); for rice, \( r = .39 \), \( r = .48 \), and \( r = .59, ps < .05 \); for tobacco, \( r = .24 \), \( r = .20 \), and \( r = .16, ps > .10 \)), suggesting a possible link between large-scale plantation farming and collectivism. Of course, given that each of these crops was raised primarily in the South, other factors might be confounding the relationships. However, even when the correlations were examined only within the Deep and Peripheral South, the correlations of collectivism with cotton and rice production remained strong (all \( r > .50, all ps < .06 \)).

In sum, there is evidence that collectivism and individualism relate to types of farming (self-run farms and herding in the United States tend to promote individualism; agricultural crop farming, particularly plantation-style farming, tends to promote collectivism). Although each variable is only an approximation of the theoretical constructs of interest, the convergence of evidence increases our confidence in their validity.

Hypothesis 4: Percentage of minorities will correlate with collectivism. Differential settlement patterns should affect regional individualism and collectivism. Whites of European ancestry tend to be the most individualist of the ethnic groups in the United States, whereas Blacks, Hispanics, and Asian Americans tend to be relatively more collectivist, though each group is quite heterogeneous (Marin & Triandis, 1985; Triandis, 1994; Triandis et al., 1986). Thus, states with large numbers of ethnic minorities should be generally more collectivist. We looked at the minority population percentage in a state (a composite of percentage of Asian, Black, Hispanic, and American Indian citizens; Almapi, 1994) and found a strong correlation between this variable and a state’s collectivism score \( r = .75, p < .001 \). Looking at the separate associations of the major minority groups with collectivism, we found the following correlations: Asians = .54, Blacks = .60, Hispanics = .13, and American Indians = -.26. Note that percentage of American Indians is the only variable that correlates negatively with collectivism, although it is unclear how to best interpret this finding.

Hypothesis 5: The slave system will be associated with collectivism. We predicted that the institution of slavery would contribute to collectivism for reasons outlined in the introduction to this article. Briefly, with the development of large plantations in

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9 Importantly for the present purposes, herding on the U.S. frontier took place without the extended kinship networks that characterize places like the Mediterranean (Courtwright, 1996; Peristiany, 1965; Schneider, 1971; Smith, 1759/1765).

10 As a further test of the hypothesis that herding should correlate with individualism, we also examined the average value of livestock per farm (Dodd, 1993, p. 472). There was a correlation of \( -0.31 (p < .05) \) between this livestock variable and our collectivism index, consistent with expectations. We suspect that a distinction needs to be made between farms where the animals require regular tending (e.g., dairy farms) and farms where the animals do not require such regular maintenance and are let loose in fields and open areas (see McDonald & McWhiney, 1975; Reaves, 1992). The former type should require more coordination and cooperation and be somewhat more associated with collectivism. Thus, we acknowledge that this livestock value per farm measure is only a first approximation. However, it is reassuring that the results using the herder occupation variable \( r = -.28 \) and the livestock variable \( r = -.31 \) converged so closely.
the Deep (and parts of the Peripheral South), there arose the need for large groups of field workers. Further, the resulting social system of hierarchy, stratification, and group differentiation should have created verticality and collectivist tendencies. When correlating the percentage of slaves per state (from the 1860 U.S. Census) with our collectivism index, we found a .52 (p < .001) correlation (D. Cohen, 1996; Rice, 1985; U.S. Bureau of the Census, 1864, 1872).

This large correlation between the percentage of slaves and collectivism could be merely the product of slavery being confounded with the variable South. To examine the hypothesis that the slavery variable might be merely standing in for the variable South, we examined the relation between the percentage of slaves and collectivism in states of the Deep and Peripheral South only. However, even when examining only southern states, the correlation between the percentage of slaves and collectivism remained strong and, in fact, became larger (r = .74, p < .01), suggesting that slavery mattered over and above its confounding with South.\textsuperscript{11}

**Consequences of Individualism and Collectivism**

**Hypothesis 6: Residential stability will correlate with collectivism.** We hypothesized that collectivist places would be more residentially stable because people in such places would find it harder to leave their families and communities. (As noted previously, however, the causal direction may also be reversed in that stable communities probably also breed cohesion.) Our prediction was not supported. Correlations between collectivism scores and (a) the percentage of people who were born in the same state they currently resided in and (b) the percentage of people who lived in the same house they did 5 years ago (Andrews & Fonseca, 1995) were not significant (rs < .10, ps > .50), although they were in the predicted direction.

Our next two hypotheses dealt with the individualism—collectivism dimension's link to health and well-being.

**Hypothesis 7: Suicide will correlate with individualism.** One hundred years ago, sociologist Emile Durkheim (1897/1964) showed that suicide rates were highest in areas lacking sufficient levels of social integration and social regulation (see also Ellison et al., 1997). Naroll (1983) has similarly argued that extreme individualism may be linked to suicide. The more general hypothesis is that social integration and strong social support decrease stress, whereas an emphasis on individual achievement increases it. In support of this hypothesis, we found a -.31 (p < .05) correlation between collectivism and suicide rates (O'Leary Morgan et al., 1994b).

**Hypothesis 8: (a) Binge drinking will correlate with individualism; (b) Rates of heart disease will correlate with individualism.** We predicted there would be a link between collectivism and health. Again, the general hypothesis is that strong social integration buffers against stress, whereas an emphasis on individual achievement increases stress and susceptibility to stress-related illnesses. Thus, stress-related health problems should be associated with individualism.

We examined data on excessive drinking (compiled from a U.S. Department of Health and Human Services survey, as cited in O'Leary Morgan, Morgan, & Quinto, 1994a, p. 451). Consistent with predictions, the percentage of adults classified as binge drinkers (defined as people who have consumed five or more alcoholic drinks on one or more occasions during the previous month) correlated negatively with our collectivism measure (r = -.28, p = .052).

We also examined data on heart attack rates. Triandis et al. (1988), using data from Marmot and Syne (1976), found that Japanese people living in Japan had lower heart attack rates than Japanese Americans, even after controlling for factors such as diet and exercise. In addition, they found that the more acculturated a Japanese American was, the higher the heart attack rate. In the present sample, however, death rate by heart disease (O'Leary Morgan et al., 1994b) did not significantly correlate with the collectivism index (r = -.06, p = .67).

On the basis of these measures, we can only conclude that there is some suggestive evidence of a link between a culture of individualism and stress-related health problems (particularly alcohol-related problems) in the present data.

**Hypothesis 9: Individualism will promote artistic creativity.** We tested the idea that individualist regions are more likely to produce artistic and creative people. There is some indirect but relevant evidence to support this link. Yamaguchi (1994), for instance, found that collectivism correlated negatively with the need for uniqueness (r = -1.43) in a sample of Japanese students. To test the hypothesis in the present data, we looked at occupations that required creativity, uniqueness, and free thought. Specifically, we looked at two occupational categories from the 1990 census of population: (a) authors and (b) painters, sculptors, craft artists, and artist printmakers (U.S. Bureau of the Census, 1990). Summing the totals from these categories and dividing by state population gives a figure of artists and authors per capita. We found only a slight negative correlation between artists and authors per capita and collectivism (r = -.11, p = .44).

**Hypothesis 10: (a) Individualism will be associated with greater gender equality and women's rights; (b) Individualism will be associated with greater racial equality.** We expected this association for two reasons: First, individual rights—including the rights of women and minorities—should be more sacred in individualist cultures. Second, equality tends to be an issue of much greater concern among individualists than among collectivists (Hofstede, 1980, p. 316, found a correlation of -.67 between individualism and power distance [hierarchy] in his studies). To test this idea in the present study with regard to women's rights, we looked at five different measures, each reflecting different aspects of equality and different time periods. The measures were (a) state votes on the 19th Amendment (giving women the right to vote; Catt & Shuler, 1969), (b) state votes on the Equal Rights Amend-\textsuperscript{11} Another possible confound of the percentage of slaves in 1860 is the present-day percentage of Blacks. That is, it might be the case that the correlation between slavery and collectivism is in fact driven solely by the presence of Blacks today in former slave states. To test this, we looked at the correlation of percentage of Blacks with collectivism both inside and outside the Deep and Peripheral South. In the non-South, the correlation between percentage of Blacks and collectivism was .32. However, in the South—where the percentage of Blacks reflects both the influence of the present-day Black population and the extent of the slave system in 1860—the correlation was .84. The two correlations were significantly different (for the test of differences in correlations, z = 2.75, p < .01). This suggests that the legacy of the slave system exerts an influence over and above its effect on the present-day percentage of Blacks.
ment (ERA) during the 1970s (D. Cohen, 1996; Congressional Quarterly, 1982; Fischer, 1989). (c) Baron and Straus’s (1989) index of gender equality (comprising three subscales—economic, political, and legal equality—and having 29 total indicators from the late 1970s and early 1980s), (d) the percentage of women in state legislatures (Andrews & Fonseca, 1995), and (e) income disparity between men and women (Andrews & Fonseca, 1995). For both women’s suffrage and the ERA, we coded each state as voting either in favor of the amendment (1) or not (0). These items were combined into an index of gender equality with a standardized alpha of .81. This index correlated -.45 (p < .01) with our collectivism index. (Correlations for individual items were for suffrage, r = -.61; for the ERA, r = -.38; for Baron and Straus’s gender equality index, r = -.27; for women legislators, r = -.43; and for income ratio, r = -.15.)

We also created an index of racial equality. Four items composed this index: (a) Black to White income ratio (Almapi, 1994), (b) White to Black poverty ratio (Almapi, 1994), (c) ratio of percentage of Blacks 25 years or older with a bachelor’s degree to percentage of Whites 25 years or older with a bachelor’s degree (Almapi, 1994), and (d) White to Black infant mortality ratio (Horton & Smith, 1990, pp. 677–678). This four-item index (standardized \( \alpha = .75 \)) correlated -.43 (p < .01) with our collectivism index. (Correlations for individual items were for income ratio, r = -.51; for poverty ratio, r = -.13; for bachelor’s degree ratio, r = -.45; and for infant mortality ratio, r = -.25.) Overall, there was converging evidence from diverse sources of an association between individualism and both gender and racial equality.

**Examining Outliers**

Hawaii’s score was much more collectivist than the rest of the states (2.06 standard deviations above the mean). Because of this, there is a risk that the correlations we obtained might be inflated. To examine this possibility, we reran all of our analyses excluding Hawaii. In almost all of the cases, the difference was negligible, but, if anything, the correlations were usually a bit stronger with Hawaii excluded.

**Examining the Effects of Ethnicity**

Given the importance of race and ethnic ancestry as a source of collectivism, it might be argued that our collectivism index should include an ethnicity variable. Indeed, individualism in the United States is largely a product of Western European ideas and institutions (Huntington, 1996). Other cultural groups settling in the United States are much less individualistic (Triandis, 1994). We chose not to include an ethnicity variable such as minority percentage in our collectivism index, however, because we wanted to restrict the index to behavioral measures and structural arrangements that reflected the individualism–collectivism construct.

If the percentage of minorities variable is added to the index (9-item \( \alpha = .77 \)), the results change very little. Correlations changed no more than .04 in magnitude for any of the analyses reported in Part 3. Further, if the analyses of Part 3 are rerun controlling for minority percentage, conclusions remain reasonably similar. All significant results in Part 3 remained significant, and all nonsignificant results remained nonsignificant with the following exceptions: the correlation between poverty and collectivism dropped from .31 to .09; the correlation between metro area population and collectivism dropped from .38 to .16; the correlation between the percentage of people born in the state they currently resided in and collectivism increased from \( r = .08 \) to a significant \( r = .37, p < .01 \); the correlation between the percentage of people who lived in the same house they did 5 years ago and collectivism also increased from \( r = .09 \) to a significant \( r = .38, p < .01 \); and the correlation between artists and authors per capita and collectivism increased from \( r = -.11 \) to a significant \( r = -.35, p < .01 \).

Our preference is to use an index of individualism–collectivism without including minority percentage as a variable. However, adding this variable in as an indicator changes things almost imperceptibly, and controlling for this variable produces results that are mostly similar with a few exceptions (noted above).

**General Discussion**

We developed an eight-item index, the U.S. collectivism index, designed to measure the degree of collectivism across the states of the United States. We provided evidence for the validity of this index at two levels. First, the index ordered the states in a way that was generally consistent with our theoretical analysis of individualism and collectivism in America. Second, the index predicted attitudinal responses to questions from the NES regarding individualist and collectivist beliefs of survey respondents.

The index showed a general pattern of relative collectivism in the South, particularly in the former slave states of the Deep South, with maximum individualism in the sparsely populated Great Plains and Mountain West. Montana was the most individualist state, and Hawaii was the most collectivist. Because Hawaii sits at the crossroads between East and West, the relatively high collectivism of this state was expected.

We then demonstrated how the index might be used to explore hypotheses regarding the individualism–collectivism dimension. We tested 10 hypotheses about the antecedents and consequences of collectivist versus individualist cultural syndromes, finding a reasonable amount of support for predictions.

Of our major hypotheses, nine showed statistically significant support (poverty, population density, farming practices, minority percentage, slavery, suicide, binge drinking, gender equality, racial equality). Three hypothesized correlations were in the predicted direction, but the effect sizes were small enough that they did not reach conventional levels of significance (residential stability, heart disease, artists and authors per capita). Overall, the results appeared quite promising for future use of this index and exploration of hypotheses.

**Advantages of the Index**

We recognize that the current approach is a somewhat novel one, sharing as much with sociological methods as with psychological ones. However, our hope is that this index can be used by other scholars to study theory regarding the individualism–collectivism dimension. We would like to briefly suggest ways the index might be used as a valuable research tool and note some strengths of this approach.

Unlike many cultural studies, the current approach focuses on only one nation. Limiting the analysis to one country minimizes...
many of the problems of extraneous variation that make isolating cross-cultural differences challenging. For example, cultures often differ in language, religion, political structure, standard of living, and so on. When finding a cultural psychological difference, it is sometimes difficult to determine whether this difference is the result of the hypothesized cultural dimension or whether some extraneous factor was responsible. By focusing on the United States only, we may minimize some of this extraneous variation. Of course, we are not advocating an end to cross-national cultural studies; rather, we think the present approach may provide a promising complement to existing popular methods.

Using the index as a research tool also allows one to explore ideas that may be difficult to test in the laboratory. Examining naturally occurring historical variation (in geography, in cultural or economic practices) provides “natural experiments,” the results of which tend to support one hypothesis over another. The current method is versatile in that virtually any historical, geographical, or economic variable that is quantifiable at the state level can be used to test hypotheses regarding individualism and collectivism.

Of course, using the index as a research tool will be most useful in conjunction with and as a complement to other methods such as experiments, surveys, or archival analyses. The index enables one to get correlational data, but its use alone makes causal hypotheses difficult to verify. In addition, care must be taken when drawing conclusions about individual behavior from aggregate-level variables, so as to avoid the “ecological fallacy” (Robinson, 1950). That is, data on the characteristics of states do not necessarily tell us anything about individuals within the state. For some of our hypotheses this was not an issue, as we were interested in how cultural-level phenomena (e.g., slave systems) contribute to collectivism or individualism. However, in cases where one might like to generalize to individual-level processes, it is important to supplement the present analyses with data gathered at the individual level. For example, we argued that individualism should lead to a high risk of stress-related health problems. Our data do suggest that people in individualist areas are more likely to have stress-related concerns; and the causal account for this at the individual level would be supported by a large body of work showing a causal link between a person’s level of social support and increased health and well-being. As with any research, a multimethod approach will provide convergent validity and strengthen the overall confidence in one’s conclusions.

The Ecology-to-Culture Framework

Beyond the presentation of a new methodological tool, there is a more general point to be emphasized. That is, in the present analysis we attempted to use an “ecological framework” (Berry, 1994; Triandis, 1972; Whiting, 1964, 1968) in analyzing culture, linking historical and ecological factors to individual psychological characteristics on the individualism–collectivism dimension.

John Berry has developed a framework connecting ecological factors to cultural adaptations to cultural transmission to observable behaviors (e.g., Berry, 1976, 1994). In the current study, we tried to follow this lead by, for example, linking patterns of subsistence (farming practices) to sociopsychological characteristics of individualism and collectivism in the United States. This is a causal path that is likely generalizable to other cultures as well.

With this type of framework, we can try to extract predictable patterns to explain phenomena across various cultures.

Our general hope is that researchers of cross-cultural psychology will be able to flesh out general models linking ecology, culture, and psychology that describe both the origins and consequences of various cultural syndromes. More broadly, we hope that such work can also highlight the importance of culture in basic psychological functioning and the necessity of including culture in every type of theoretical psychological equation.

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