

Leadership and culture: Work-related values and leadership styles among one company's U.S. and German telecommunication employees

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Authors: K Peter Kuchinke

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Abstract:

Differences in leadership styles and work-related values among managers, engineers, and production employees of one company's US and German telecommunication employees are examined based on survey results. Using Bass and Avolio's (1991) Full-Range Leadership theory and Hofstede's (1980) theory of culture, the results reveal lower levels of transformational leadership styles among German employees, but no differences in leadership styles among different job categories in either country. There were country-level differences in culture that explained a portion of the variance in leadership scores. Job category also had a main effect on cultural values. Patterns of work-related values different from those predicted in earlier research are shown, as is the need for further refinement of research in leadership theory and understanding of culture. Copyright Jossey-Bass, Incorporated Summer 1999

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This survey-based study examines differences in leadership styles and workrelated values among managers, engineers, and production employees of one company's U.S. and German telecommunication employees. Using Bass and Avolio's Full-Range Leadership theory and Hofstede's theory of culture, the results reveal lower levels of transformational leadership styles among German employees, but no differences in leadership styles among different job categories in either country. There were country-level differences in culture that explained a portion of the variance in leadership scores. Job category also had a main effect on cultural values. The study points to patterns of work-related values different from those predicted in earlier research, and to the need for further refinement of research in leadership theory and our understanding of culture.

Despite the rapidly increasing globalization of business and industry, there is a dearth of cross-national and cross-cultural comparative social science research to answer the questions faced by organizations operating in increasingly complex and fast-changing international and multicultural environments and to provide guidance for practice. In the field of international human resource development (IHRD), this lack is felt especially keenly (see Hansen and Brooks, 1994; McLean, 1991; Peterson, 1997), but it is also felt in the related fields of human resource management (see Brewster, Tregaskis, Hegewich, and

Mayne, 1996) and organizational behavior (see Lytle and others, 1995). Among the reasons for this paucity is the lack of global constructs and theories, the complexity of measuring country-level effects, and difficulties of research design.

This comparative, cross-national study seeks to expand the body of knowledge of IHRD by testing a series of hypotheses related to leadership and work-related values of U.S. and German telecommunication employees of a global organization. The choice of these two countries was dictated by their strong economic, historical, political, and cultural ties and by the researchers' familiarity with and interest in both nations. Moreover, there has been a great degree of cross-fertilization of ideas related to these countries' HRD-related practices in areas ranging from general and higher education to apprenticeship training, labor-management relations, and work-related policies and practices. At the same time, however, Germany has embarked on a course of administrative governance of business organizations that is markedly different from that prevalent in the United States. These differences make comparative work in the area of leadership valuable and interesting.

The study focused on three distinct research questions: the degree of variance in leadership styles and behavior within and between the two nations; the level of variation in cultural, work-related norms and values within and between the two countries; and the effects of cultural differences on leadership styles in both countries. The results provide a set of answers related to the differences in work-related values and leadership styles and to the effects of these differences at the country level and by job category within each country.

Previous Research, Theoretical Framework, and

Hypotheses

This section contains a summary of relevant previous research, the theoretical framework for this study, and the hypotheses tested in the study.

Leadership. Leadership is a key construct in the organizational sciences and has spawned a large number of empirical studies over the past fifty years. Leadership training ranks among the most frequently conducted types of training in organizations ("1997 Industry Report," 1997) and the "development of global leaders . . . [is seen as] one of the central tasks of management development programs" (Conference Board, 1996, p. 9). Leadership is important because it leads to a number of desired outcomes at the individual, group, and organizational levels (for a summary, see Yukl and Van Fleet, 1992).

Over the past fifteen years, much of the focus of leadership research has been on the class of outstanding leadership theories (House and Podsakoff, 1994) that take as their core idea the concept of charisma, defined early in this century by German sociologist Weber (1924/1947) as the leaders' authority based on "devotion . . . exemplary character [and] of the normative patterns or order revealed by him [sic]" (p. 328). Based on this notion, Bass (1985) developed a theory of transformational leadership, distinguishing between transformational and transactional leadership styles. Transformational leaders motivate their subordinates to perform at a higher level by inspiring their followers, offering intellectual challenges, paying attention to individual developmental needs, and thus leading followers to transcend their own self-interest for a higher collective purpose, mission, or vision. Transactional leaders, conversely, engage in a process of negotiation, offering subordinates rewards in exchange for the attainment of specific goals and completion of agreed-upon tasks (Bass, 1985). While transactional leadership—with its clear focus on specific goals and agreed-upon rewards—is necessary and effective, transformational leadership—the appeal to affective states, such as pride to be working with a specific supervisor—has been shown to exert an augmentation effect, that is to add to the levels of productivity, satisfaction, and effectiveness associated with transformational leadership alone (Avolio, Bass, and Jung, 1995).

In the North American context, the transformational leadership framework is well established and has been used in more than two hundred studies with a variety of public, private, and government

organizations of different sizes and in different industries (Avolio, Bass, and Jung, 1995). In the German-speaking countries (Germany, Austria, and part of Switzerland), however, the author is aware of only one study that applied Bass and Avolio's Full Range of Leadership framework, in an investigation of transformational leadership and financial performance measures in Austrian banks (Geyer and Steyrer, 1995). The Austrian researchers found moderate positive correlations (range = .45 < r < .65) between transformational leadership styles of supervisors, individual employees' level of effort, and objective branch performance.

A core question for this study, then, was, To what degree did German managers and supervisors use transformational leadership styles? Unlike in the United States, where transformational styles of leadership found wide acceptance during the 1980s and 1990s, in Germany people have a much more difficult relationship to notions of affective identification with one's manager or leader. As labor sociologist Wever (1995a, 1995b) pointed out in a comparative analysis of the employment relationships in both countries, transformational leadership was deliberately shunned in Germany until recently. This form of leadership was, in its negative and perverted sense, at the core of the rise of the Third Reich in the 1930s, and during the reconstruction in the late 1940s and 1950s German society implemented a very contractual form of governance and management, where the rights and duties of each member of society were clearly and formally defined. Such rule-bound behavior, anchored in firm policies and guidelines, is enforced in many formal and informal ways and forms the foundation for transactional styles of leadership in which desired behaviors are elicited through a process of exchange, and in which specific duties are rewarded with very clearly specified rewards and recognitions. Although business owners most recently have been expressing much interest in raising the level of emotional attachment, loyalty, pride, and identification with one's organization while decreasing the purely instrumental mode of working—even a casual perusal of the popular German business press reveals many articles on this issue—transactional ways of managing appear to dominate in German organizations.

The first set of research hypotheses is related to differences in leadership styles in the United States and Germany. Following the theoretical framework of Avolio and Bass (1991), six leadership dimensions were investigated. Transformational leadership consists of Charisma, Inspirational Motivation, Intellectual Stimulation, and Individual Consideration. Charisma involves gaining respect, trust, and confidence toward the leader, and transmission to followers by the leader of a strong sense of mission and a vision of the desired future. A sample survey item related to this dimension from Avolio, Bass, and Jung's (1995) Multifactor Leadership Questionnaire (MLQ5x) used in this study is, "I have trust in my superior's ability to overcome any obstacle." Inspirational Motivation is when the leader communicates a vision with confidence and increases optimism and enthusiasm in its attainability. A sample survey item reads: "My superior uses symbols and images to focus our efforts." Intellectual Stimulation is defined as a leader's way of actively encouraging followers to question the status quo and to challenge their own and others' assumptions and beliefs. A sample survey item is, "My superior enables me to think about old problems in new ways." Individual Consideration, finally, is expressed as personalized attention to the needs of all followers, making each person feel valued and treating him or her differently but equitably on a one-to-one basis. A sample survey item is, "My superior treats me as an individual and not as part of an anonymous group."

Transactional leadership is defined in terms of two dimensions, Contingent Reward and Management-by-Exception. Contingent Reward involves positively reinforcing the achievement of mutually agreed-upon goals. A sample survey item is, "My superior makes sure that there is close agreement between what he or she expects me to do and what I can get from him or her for my efforts." Management-by-Exception is defined as negative reinforcement. Only when things turn out wrong will the leader intervene to make corrections, which consist of criticism, discipline, and punishment. A sample survey item is, "My superior takes action only when a mistake has occurred."

Because of the longer history of transformational leadership in the United States than in Germany and because of the differences in industrial relations between Germany and the United States, the first two hypotheses are related to differences in leadership styles in the two countries:

HYPOTHESIS 1. There is a greater level of each of the four dimensions of transformational leadership styles among U.S. employees than among German employees.

HYPOTHESIS 2. There is a greater level of each of the two dimensions of transactional leadership among German employees than among U.S. employees.

Leadership styles typically differ within organizations. Managerial and professional employees, for example, receive more and longer training than production-level employees, and leadership development is focused predominantly on the higher ranks in an organization ("1997 Industry Report," 1997). Because much of transformational leadership behavior is learned (Conference Board, 1996), there is reason to expect that executives, professional employees, and production-level workers differ in the ways they are being led.

HYPOTHESIS 3. There are greater levels of transformational leadership behaviors among management and professional than among production-level employees.

HYPOTHESIS 4. There are greater levels of transactional leadership behaviors among production-level employees than among management and professional employees.

Culture. The concept of culture is central to international work and has been used in IHRD to measure country- and group-level effects that can discriminate between countries and groups and thus help explain variance in the behavior of organizations and people. Culture has been conceptualized as a complex web of norms, values, assumptions, attitudes, and beliefs that are characteristic of a particular group and that are reinforced and perpetuated through socialization, training, rewards, and sanctions (Lytle and others, 1995). Culture constitutes the successful attempt to adapt to the external environment, it presents the group's strategy for survival (Triandis, 1993), and it has been described as the "software of the mind" (Hofstede, 1991, p. 3). Researchers have described a wide variety of categories of cultural dimensions (see Lytle and others, 1995), and it is generally accepted that individuals can belong to any number of social groups, each with its own set of norms and values (Kostova, 1997).

Among the most popular frameworks for studying international culture has been that of Geert Hofstede, who published a study of some 116,000 IBM employees in forty countries (Hofstede, 1980) and used factor-analytic techniques to arrive at four dimensions of culture related to work organizations: Power Distance, Individualism, Masculinity, and Uncertainty Avoidance. Later, he (Hofstede and Bond, 1984) added a fifth dimension, Long-Term Orientation, which is a part of Confucian Dynamism. Hofstede's work included scores on each of the five dimensions for the United States and Germany, and many cross-cultural training programs and IHRD textbooks use and report his findings. Power Distance is defined as the extent to which less powerful members of a group or society accept and expect that power is distributed unequally. Bureaucratic societies, such as some South American countries, are typically higher in Power Distance, while more egalitarian societies, such as many Scandinavian countries, rank lower. Individualism is the degree to which group members expect that individuals orient their action for their own benefit rather than for the benefit of the group or collective. The United States has frequently scored among the most highly individualistic societies, while Asian countries such as Singapore are more strongly collectivistic. Masculinity is the distribution of gender-role stereotypical behavior. Masculine cultures, such as Mexico, honor assertiveness, aggression, and toughness among its male members, while feminine cultures, such as Denmark, reinforce nurturing, caring, and modest behaviors among both male and female members. Uncertainty Avoidance is the degree to which members of a group are uncomfortable with and avoid change, ambiguity, and uncertainty. Long-Term Orientation, finally, is the degree to which a group orients its actions toward long-term results and the future, rather than toward short-term goals and immediate gratification.

The United States and Germany, although belonging to the same cluster of countries, were in Hofstede's (1980) report different along three dimensions. The United States was reported to be higher in Power Distance and Individualism, lower in Uncertainty Avoidance, and about equal in Masculinity and Long-Term Orientation.

Critics of Hofstede's work have charged that his findings might not generalize to the whole of the United States and Germany but instead might represent artifacts of his particular sample (Sondergaard, 1995). Further, because his data were collected in the late 1960s and early 1970s, there is reason to believe that the scores on five cultural values might have changed because of different social, economic, political, and technological conditions. The next hypothesis, therefore, relates to a verification and replication of Hofstede's work with a different sample and in the present time.

HYPOTHESIS 5. U.S. and German employees differ in the same manner as reported in Hofstede's original work. The United States ranks higher in Power Distance and Individualism and lower in Uncertainty Avoidance. There are no differences in Masculinity and Long-Term Orientation.

Hofstede (1980) also found differences among members of different occupational groups within a given country. In countries low on the Power Distance index, for example, occupational status and Power Distance were negatively correlated. This study, then, replicated this issue as well.

HYPOTHESIS 6. In the United States and Germany, employees at different levels of an organization do not differ on any of the five dimensions of culture.

The Effects of Culture on Leadership

Cultural values are important to leadership behavior because, as Hofstede (1984) pointed out, "leadership is a compliment to subordinateship" (p. 257). Unless leaders are able to fulfill subordinates' expectations of what leadership behavior ought to be within the particular cultural context, leaders will not be effective. The tendency of treating leadership (and other practices and theories) as a culture-independent characteristic has been labeled by Lawrence (1994) as ethnocentrism and managerial universalism, namely the erroneous assumption that theories developed in one culture—for instance, the United States—would have global validity.

Much of the writing on cross-cultural differences in leadership, however, is anecdotal or conceptual (Gerstner and Day, 1994), and relatively few empirical studies have investigated the relationship between culture and leadership. Gerstner and Day (1994) compared leadership prototypes across eight countries and found reliable differences of leadership behavior along cultural dimensions similar to Hofstede's Power Distance, Uncertainty Avoidance, and Individualism. Tayeb (1996) reviewed the record of success and failure of quality circles in several countries and concluded that the large degree of Power Distance in Hong Kong resulted in a greater centralization of decision making and a more autocratic management style. Because quality circles rely heavily on active involvement by all members, reluctance to disagree with a superior made quality circles and other participative styles of managing less effective in that country. A conceptual article by Jung, Bass, and Sosik (1995) addressed the relationship between Individualism and transformational leadership. They suggested that transformational leadership processes are likely to be enhanced in countries that are low on Individualism because most subordinates in these cultures have high respect and are obedient toward their leaders.

The final two hypotheses, then, relate to the effects of cultural values on leadership styles.

HYPOTHESIS 7. Where the two countries differ on transformational and transactional leadership styles, the variances can be attributed to differences in Power Distance, Individualism, Masculinity, Long-Term Orientation, and Uncertainty Avoidance.

HYPOTHESIS 8. Where employees from different levels of the organization differ on transformational and transactional leadership styles, the variances can be attributed to differences in Power Distance, Individualism, Masculinity, Long-Term Orientation, and Uncertainty Avoidance.

Research Setting, Design, and Methodology

The study was conducted using a causal-comparative, ex-post-facto, one-shot survey design. The population consisted of the 5,400 employees at three manufacturing sites of a Fortune 500 multinational telecommunication organization headquartered in the United States. The three sites were located in Ohio, New Jersey, and Nurnberg, Germany, and they reported to the same U.S.-based vice president of operations. All three sites were involved in manufacturing identical telecommunication transmission equipment, and all had similar technologies and work processes and common work policies and procedures. Employees at the three sites had undergone very similar programs of management and leadership development, and the transfer of executive and engineering personnel among the three sites was common practice. By conducting this survey in this particular organization, extraneous sources of variation, such as industry, work processes, and human resource policies, were controlled for experimentally. In consultation with representatives at the three sites, a survey was administered to a stratified, nonproportional, random sample of the population, using Hofstede's L994 version of the Values Survey Module, VSM 94 (Hofstede, n.d.); Avolio, Bass, and Jung's (1995) MLQ5x; and a series of standard demographic questions. Both the VSM 94 and the MLQ5x have been used extensively and have known psychometric properties (for information on VSM 94, see Sondergaard, 1994; for information on MLQ5x, see Avolio, Bass, and Jung, 1995). The instruments were obtained from the tests' authors in the English and German versions and given to the participants in their native language. The survey was administered to 3,540 employees (66 percent of the population) and yielded an overall response rate of 47 percent. Because the focus of the report is on country-level difference, the results from the two U.S. sites were pooled and compared to those from the German site. Table 1 shows the sample sizes and response rates for the sites in each country.

Overall response rates for each of the three job categories ranged from 45 percent for production employees to 51 percent for engineers. At the German site, the survey yielded a high rate of participation (71 percent) among production employees, while the rate was lowest among their U.S. counterparts. The error limit (Wunsch, 1986) associated with these response rates was less than plus/minus 3 percent overall and ranged from plus/minus 2 percent to plus/minus 6 percent for specific subpopulations. This indicates that the samples obtained are large enough to warrant generalizations of the findings to the plant populations at large. To address the possible issue of response bias, chisquare tests were conducted comparing the demographic information of respondents with information obtained from the sites' personnel information systems for all employees at each of the three plants. These analyses showed that survey respondents in each job category were no different than the plant population in terms of age and education levels. Among the respondents at the U.S. sites, however, women were overrepresented. Because the demographic variables of age, gender, and education were statistically controlled for in the following analyses, however, the possible effects of the overrepresentation of women were removed from the analysis. Table 2 shows demographic characteristics of the samples.

The majority of employees were male, as is common in technical firms, and especially among engineers. The two U.S. sites had a much older population, with a modal age of between fifty and fifty-nine years. Engineers and managers at all sites had a modal level of education comparable to a master's degree, while production employees at the German site had a higher modal level of education than their U.S. counterparts.

Results

The scores for leadership styles and work-related values were calculated based on the formulae provided by the test authors; test statistics for the leadership scales, on a Likert Scale from 0 (low) to 4 (high), revealed ranges of the mean scores and standard deviations similar to those attained in previous studies. Measures of internal consistency (Cronbach's alpha) ranged from $\alpha = .68$ to $\alpha = .83$, meeting the generally expected level of $\alpha = .7$ (Nunnally 1967). The U.S. sites ranked highest in Inspirational Motivation, followed by Charisma and Contingent Reward. The employees at the German site rated Intellectual Stimulation as the most prevalent leadership style. Negative reinforcement, Management-by-Exception, was the lowest dimension among employees in both countries. The four dimensions of transformational leadership were strongly and positively interrelated, but so was Contingent Reward. Management-by-Exception was low to moderately correlated with the other factors.

[IMAGE TABLE] Captioned as: Table 1.

According to Hofstede's (n.d.) recommendations, the scales for the five cultures were calculated by weighing specific item means and adding constants to arrive at scales ranging from 1 (low) to 100 (high). This allows for comparisons with previously published country scores (Hofstede, 1980). The internal reliability was (α) = .83 for the entire instrument, but below the .70 mark for Power Distance and Uncertainty Avoidance. These low reliabilities pose serious questions about the factor structure of these two dimensions, and they were subsequently omitted from further analyses. Intercorrelations of the culture dimensions were in the low range, with the exception of a moderate correlation of $r = .51$ for Individualism and Long-Term Orientation. The correlations between leadership styles and cultural dimensions were also low, especially given the large sample size. This suggests that the leadership and culture dimensions are largely independent from one another (see Table 3).

Differences in Leadership Styles and Culture

Multivariate analysis of variance (MANOVA) is a commonly used statistical technique for examining data for mean differences among several dependent criterion variables that are strongly interrelated. MANOVA provides a distinctive advantage over separate analysis of variance (ANOVA) tests, because MANOVA considers the correlations among the dependent variables (Bray and Maxwell, 1985). The data assumptions for MANOVA, as for ANOVA, are (1) random sampling of observations from a population, (2) independence of observations, (3) univariate and multivariate normal distributions of the dependent variables, and (4) univariate and multivariate homogeneity of variance for all criterion variables (Bray and Maxwell, 1985). Assumptions 1 and 2 were fulfilled by the research design. Univariate homogeneity of variance (Bartlett-Box F and Cochran's C) was found for most dependent variables, and a data transformation was performed to stabilize the variances (Howell, 1992). Multivariate homogeneity of dispersion (Box's M) was established for the five culture dimensions, but not for the leadership dimensions. Normality assumptions were tested by applying the Levene test, and it was established that three of the six leadership dimensions and two culture dimensions were not normally distributed (which might explain the failure to establish homogeneity of dispersion for leadership, because Box's M test is sensitive to departure from normality assumptions [Norusis, 1994]). Seldom, however, are all assumptions for MANOVA precisely met, especially with large samples, and MANOVA is robust with respect to violations of assumptions (Bray and Maxwell, 1985). "Departures from normality generally have only very slight effects on the Type I error rates" (Bray and Maxwell, 1985, p. 33). To minimize the effects of unequal variances, the sample sizes were equalized by country, a method recommended by Bray and Maxwell. To this effect, a random sample of 625 employees was drawn from among the German sample of 1,049 valid responses, yielding an equal number of responses for the U.S. and German sites. "When sample sizes are equal, all of the test statistics tend to be robust, unless sample sizes are small" (Bray and Maxwell, 1985, p. 34). In addition, missing values in the dependent variables were replaced by means. Mean substitution is recommended when only a small amount of data are missing due to listwise deletion to ensure orthogonality of the effects (Cohen and Cohen, 1983).

[IMAGE TABLE] Captioned as: Table 2.

Because the demographic variables of age, gender, and education had a main effect on leadership and culture, they were statistically controlled for in the one-way multivariate analysis of covariance (MANCOVA) models used to test the hypotheses. An omnibus MANCOVA for leadership styles by country and job category yielded significant results for country but not for job. There were no interaction effects for job and country. The omnibus MANCOVA for cultural values yielded significant results for country and job, but again, not for their interaction. Table 4 shows the results of these tests.

Follow-up univariate F-tests (ANCOVAs) yielded more specific results regarding the differences of leadership styles and cultural values by country and job category (see Table 5).

[IMAGE TABLE] Captioned as: Table 3.

The U.S. and German sites differed on two transformational leadership dimensions, Charisma and Inspirational Motivation, and the U.S. sites ranked higher on both ($p < .01$). This finding confirms the first hypothesis, related to higher levels of transformational leadership styles among U.S. employees, but only for two of its four dimensions. The high power ratings of the tests indicate a strong level of confidence in these findings. The omega-squared (ω^2) statistics, however, indicate that the country membership accounts for only a small portion of the variance in Charisma and Inspirational Motivation. The sample in both countries did not differ with respect to leadership through Intellectual Stimulation or Individual Consideration.

The second hypothesis, related to higher levels of transactional leadership styles, was not supported. Employees in both countries appear to have similar levels of Contingent Reward and Management-by-Exception. The third and fourth hypotheses, which theorize differences in leadership styles by job category, were also rejected.

The fifth hypothesis addressed possible differences in cultural, work-related values. As Table 5 shows, the U.S. employees in this study ranked higher in Individualism and Masculinity but lower in Long-Term Orientation ($p < .001$). Judging by the high power rating of the tests, there is a strong confidence that the null hypotheses related to Hypothesis 5 were rejected appropriately. With respect to the higher level of Individualism, this study confirms Hofstede's (1980) assertion that the United States ranks among the countries that are very high in this dimension. The effect size (12 percent of variance explained) also lends support to Triandis's (1995) contention that Individualism constitutes perhaps the most significant dimension along which nations differ.

There were also differences in Masculinity, and here the results differ from those found in Hofstede's original work. With this sample there was a markedly higher level of this dimension in the United States than in Germany. Five percent of the variance is explained by country.

Whereas Hofstede (1991) had predicted equal levels of Long-Term Orientation, this study found a greater level of this dimension among the German sample.

Employees at different levels of the three sites also differed with respect to the three cultural dimensions, indicating variation within, as well as between countries, indicating that Hypothesis 6 should be rejected. The tests yielded strong power indices for all three dimensions but low effect sizes. Figure 1 summarizes the differences among managers, engineers, and production employees (scores transformed to a common 0-4 scale.). There was a linear trend for Individualism level in the organization: managers were more highly individualistic than engineers; production employees were the least individualistic, that is, most highly collectivistic. Both managers and engineers had higher levels of Long-Term Orientation than production employees. Engineers, finally, ranked higher on the Masculinity dimension than did production employees or managers.

Effects of Culture on Leadership

The final two hypotheses addressed the effects of cultural values on leadership styles at the country and job levels. To test Hypothesis 7, two stepwise multiple regressions were performed with Charisma and Inspirational Motivation as dependent and the three culture dimensions as independent variables. As Table 6 shows, all three cultural values predicted the two leadership styles, with Masculinity as the strongest predictor. Together, the three culture dimensions account for 7 percent of the variance in each leadership style. Masculinity emerged as the strongest predictor of Charisma, followed by Long-Term Orientation and Individualism. The final hypothesis, Hypothesis 8, related to the effects of culture on leadership at the job level, was rejected because there were no differences in leadership by job category.

Conclusions

This survey-based study investigated differences in leadership styles and cultural values between two highly industrialized Western countries with strong historical, political, and economic ties. Although many researchers have focused their attention on differences between countries with greater cultural distance, this study was conducted in the United States and Germany, two close international allies and business partners. The results of this study suggest that there are many similarities but also very specific differences in leadership and culture between the plant populations of one company in these two countries. With many extraneous variables controlled for in the experimental design, and controlling statistically for the effects of age, gender, and education, the plant populations in the United States and Germany differed in the transformational leadership dimensions of Charisma and Inspirational Motivation. In these samples, U.S. employees reported a greater frequency of leadership focused on vision, a desired future, and optimism and enthusiasm in its attainability. This relative lack of Charisma and Inspiration among the German sample can be understood given the tragic experience of negative Charisma during the Nazi era and the deliberate postwar decision to build a rule-bound society. Contrary to predictions, however, there were no differences in transactional leadership styles between the two countries. This finding suggests that the primary difference between the two countries lies in the relatively stronger use of Charisma and Inspirational Leadership among the U.S. plant populations.

[IMAGE TABLE] Captioned as: Table 4.

[IMAGE TABLE] Captioned as: Table 5.

[IMAGE GRAPH] Captioned as: Figure 1.

[IMAGE TABLE] Captioned as: Table 6.

Production workers, engineers, and managers at each site reported very similar levels of each leadership style. Although lower levels of transformational leadership behavior had been expected among production-level employees, the findings of this study suggest that leadership is homogeneous within each plant. This finding might be explained by the fact that the organization that was studied ranks among the industry leaders in the telecommunications industry and invests heavily in supervisory, management, and leadership development. Further, the organization employs sophisticated production processes that require a high level of expertise from frontline workers. Much of the organization's training over the past fifteen years has been focused on quality management principles, such as worker participation, teamwork, and joint decision making and accountability. Leadership principles such as vision and mission statements are common among the production employees of this high-tech organization. Replications and extensions of this study in different industries and with organizations of smaller size are required to assess whether the level of homogeneity of leadership is a common phenomenon or specific to this organization.

When using Hofstede's framework to investigate work-related values of the plant populations, the study confirmed previous findings of the U.S. employees as higher in Individualism than their counterparts abroad. Contrary to earlier findings, however, employees at the German site scored lower in Masculinity, defined as role-stereotypical behavior. U.S. employees in this study emerged as more highly divided in behavior expectations along gender lines. U.S. employees also emerged as more focused on short-term results than their German counterparts. There were also differences within each country by job category. Managers emerged as more highly individualistic and more focused on the long-term. Engineers ranked highest in Masculinity. These differences held across each country, and there were no interaction effects of country and job category.

Cultural values predicted leadership styles but accounted for only a small portion of the variance. This suggests that cultural values have an effect on leadership, but that other variables exert possibly stronger effects. The low effect sizes speak to the fact that leadership is a complex construct that is influenced by a number of variables other than the three dimensions of culture assessed in this study. Culture, at least as measured using Hofstede's framework, might not be the most powerful predictor of leadership. Although there is a lot of emphasis on cultural differences in the literature, this study

suggests that cultural values exert a relatively small influence on leadership. This finding is parallel to McLean and Johansen's (1997) observation that research on organizational culture is presently unable to establish clear links to firm performance.

Further, results of this study suggest that Hofstede's framework, though popular in cross-cultural training and IHRD textbooks alike, is not valid in all circumstances. Two important dimensions of this framework, Power Distance and Uncertainty Avoidance, failed tests of scale reliability and had to be excluded from the analysis. Two other dimensions, Masculinity and Long-Term Orientation, yielded results contrary to the original research. The assumption that Hofstede's results, or those of any other cross-cultural study (including this one) can apply to an untested population appears, therefore, as an unwarranted overgeneralization. In working with different groups, whether nationally or internationally, where work-related values are important, HRD professionals are well advised to conduct culture assessments of their own rather than relying on previous research that might not generalize beyond the population of study.

The specific dimensions of a construct as complex as culture is open to further research. In addition, according to this study, there is substantial variance of cultural values within a country's population. This finding suggests that nations might not be the most appropriate level of analysis for the study of culture. Whether conducting research or training employees for overseas assignments, the possible variation of values within a given country must be considered if one is interested in a valid assessment of the population of interest.

Additional research is also needed to understand better the effects of different styles of leadership in different cultures. Although the positive effects of transformational leadership are relatively well researched in the North American context (most studies, though, have focused on higher-ranked employees), very little is known about its effect abroad. The findings of this study are descriptive, not normative. Whether the lack of transformational styles among the German sample implies the need to conduct leadership development will depend on further evidence of the effectiveness of Charisma and Inspirational Motivation in the German context. It is unlikely that a wholesale transfer of U.S.-style leadership training would be accepted and effective abroad. Charisma and Inspirational Motivation have different meanings in different contexts and U.S.-style organizational visions and mission might not have the same performance-enhancing effects in different cultural contexts. This lesson would also apply to leadership development and cross-cultural training of managers and executives. Without a clear understanding of the meaning of organizational symbols, such as vision or mission statements, their effectiveness in different cultures should not be taken for granted. Employees' expectations of their leaders will need to be investigated to determine the most appropriate mix of transactional and transformational styles in specific cultures, organizations, and situations.

As with all empirical research studies, this one has important limitations that need to be kept in mind. First, the organization and the three sites that participated in the study were samples of convenience and not selected at random. The findings, therefore, do not generalize beyond the walls of the two U.S. sites and the one German site. Further, participation within the three sites was voluntary, and while efforts were made to reduce response bias, this cannot be ruled out entirely. Second, the advantages of using existing instrumentation, such as the MLQ5x and the VSM94, used in this study, come at the cost of imposing a theoretical framework onto the research sites that might not capture all salient dimensions of the constructs of interest. Although representatives at all three sites had reviewed and approved the instruments ahead of time as relevant to their sites, and although measures of reliability confirmed the internal consistency of the scales, other dimensions of culture and leadership might have accounted for a greater portion of variance. Both constructs are multifaceted and complex, and further construct validation and instrument development is required. At present, the limitations of quantitative methods in studying strongly situational concepts such as leadership and culture are not known. Finally, this study relied on self-report and used a single method to collect information, introducing the possibility of single-method bias. Future research should use multiple methods, including qualitative research, to balance perception data with observational methods and other ways of triangulation.

~~Culture and leadership are critical issues as the globalization of business~~and industry progresses. They are also important for domestic workforces~~that are becoming increasingly multicultural, heterogeneous, and diverse.~~Further and expanded studies are required to gain a more complete understanding~~of these important issues for the profession of human resource development.

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K. Peter Kuchinke is assistant professor of human resource education at the University of Illinois at Urbana-Champaign.

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