

ACHIEVEMENT VALUES,
COGNITIVE STYLE AND SOCIAL CLASS
A CROSS-CULTURAL COMPARISON OF PERUVIAN
AND U.S. STUDENTS

LEOPOLD GRUENFELD
Cornell University, U.S.A.

PETER WEISSENBERG
State University of New York, U.S.A.

WALLACE LOH
University of Michigan, U.S.A.

L'œuvre de McClelland et les recherches interculturelles rapportées par Witkin permettent de supposer que les aspirations à la réussite personnelle, d'une part, et le style cognitif, d'autre part, sont liés au niveau d'industrialisation. Dans cette étude, on a comparé les valeurs de réalisation de soi et le style cognitif d'étudiants américains et péruviens de même niveau social et de même origine urbaine. Les résultats ne soutiennent pas l'hypothèse de différence entre les deux échantillons et attirent l'attention sur la nécessité de contrôler, dans ce type de recherches, des variables telles que le niveau social, le degré d'instruction ou l'origine urbaine des sujets.

It is generally accepted that achievement values and personality vary systematically with level of industrialization. Presumably there is a set of values that fosters industrialization and economic development. This set of values is characterized by a high need for achievement, a willingness to forego kinship ties, and optimism about being able to affect the future by use of one's ability.

This study investigated differences in these values between two societies that differ sharply in economic development — the U.S. and Peru. Differences in a related personality measure — cognitive style field articulation — were also studied.

The rationale for the variables compared in this study was provided by the work of McClelland (1961) and Witkin *et al.* (1962). McClelland has shown that societies that have achieved high levels of economic development, like the United States, no longer maintain traditional family ties. They value status based on personal ability, knowledge and accomplishment rather than on ascriptive attributes, like family lineage.

Witkin's work focuses on characteristic patterns of behavior which can be observed in several areas of psychological functioning, *i.e.* the intellectual, perceptual, emotional, social, and motivational realms. These patterns of behavior refer to how a person engages his environment. They vary along a continuum

from global or diffuse to articulated or differentiated. At the articulated end of the continuum, the characteristic intellectual behavior is analytical-systematic, the perceptual behavior is discriminating, the emotional behavior is self-controlled, the social behavior is independent and self-reliant and the motivational behavior is active and focused. At the global end of the continuum, the characteristic intellectual behavior is intuitive, the perceptual behavior is undifferentiated, the emotional behavior is impulsive, the social behavior is dependent and other directed, and the motivational behavior is passive and diffused.

These patterns of behavior are conceptualized and explained in terms of level of articulation or field articulatedness. Level of field articulation is most readily measured in the intellectual and perceptual area. For this purpose the *Embedded Figures Test* (EFT), a measure commonly used to assess this cognitive style in the intellectual area, was used in this study.

Various cross-cultural studies have shown that the social history, particularly child-rearing practices, influence the articulatedness of the cognitive style attained. Of particular interest are findings by Dawson (1967) among African groups that relatively less tradition-oriented cultures foster higher levels of field articulation. Berry (1966) found that sub-groups of Scottish, Eskimo, and Temne (African) subjects who came from transitional rather than traditional environments were relatively more field articulate. Similarly, Dershowitz (1966) has shown that among children from these subcultures in the U.S.A. (orthodox, traditional Jewish families, assimilated, transitional Jewish families; and Protestant, Anglo-Saxon families) the expected differences in cognitive style could also be observed.

Witkin also has shown that members of traditional societies differ from members of more modern societies in their cognitive style. The traditional society with child-rearing practices that emphasize conformity to adult authority rather than personal mastery, discipline rather than independence, restriction rather than responsibility and freedom, produces people who are relatively low in their level of field articulation. For example, they are more dependent upon others.

The child-rearing practices described by Within which foster an articulated cognitive style overlap considerably with those described by McClelland which foster need for achievement. Both emphasize that the encouragement of self-reliance, independence, skill, and ingenuity begin at a very early age. Both include the use of objective standards for punishment and for rewards for accomplishment, and both encourage the child to set his own goals and to pursue them on his own terms in order to attain relatively high levels of need for achievement or field articulation. A study by Wertheimer and Mednick (1958) has shown that measures based on these two constructs correlated significantly ($.50, p < .01$).

The two countries used for comparison in this study differ sharply in economic development and traditionalism. Per capita GNP in the U.S.A. is equal to \$3,357; in Peru it is equal to \$307. Per capita energy consumption (in Kg of coal ton equivalents) in the U.S.A. is 9,828; in Peru it is 620. Peruvian society has been characterized as passive, as oriented toward the present, and as unwilling to break family ties for personal advancement (Gillin, 1965; Simmon, 1965). American society is described by Kluckhohn (1950) as active, as oriented toward

the future, and as independent of family ties in the pursuit of advancement and mastery of the environment.

Within each of these countries, too, there are sharp subcultural differences, especially in social class and rural-urban milieu. In comparison to the United States, Peruvian society is polarized, resulting in a thin middle-class stratum, and it has considerably less of its population within large urban centers. Thus, the danger exists that differences in values and personality observed between the two countries may be due to differences between the social strata or rural-urban locale being compared.

The major question of this study is, therefore, whether American and Peruvian achievement values and cognitive style will follow the patterns suggested by McClelland and Witkin when social class is held constant in exclusively urban populations.

The theoretical significance of the research reported in this study lies in the fact that the results obtained are contrary to expectations.

METHOD

Subjects

The Peruvian group consisted of 191 male high school seniors from seven different schools in Lima, selected to represent the widest possible socio-economic range of the secondary school population of the city. Within each school, a group was randomly selected from senior students enrolled in the academic curriculum. Aside from those in a Jewish school, the overwhelming number of students were Catholic. The schools surveyed were: an adult night school, two public day schools, a private middle class school, a public military academy, a private Jewish school, and a private upper-class school. They were ordered by social status from I (low) to VII (high) on the basis of five variables: self-report of parents' social class, father's birthplace, ethnic self-identification (white, Mestizo, mixed, Indian), family income and father's education. The seven Peruvian schools differed sharply on these socio-economic variables.

The American group of 186 male high school seniors were drawn from three schools in the Triple Cities area of New York State, representing a fairly broad range of the secondary school population of the area. Within each school, one of which provided primarily a technical and vocational curriculum, all senior students were asked to participate in this study. Catholics and Protestants were represented in the sample, but a preliminary breakdown by religion of the variables under study revealed no significant differences. So they were kept together in the analyses. The sample was further subdivided into six social class groups on the basis of mother's and father's education and father's occupation.

The Peruvian sample is representative of those who are voluntarily in school at this age — education is not compulsory — and who are in the academic rather than the technical-vocational tract. In contrast, the American sample is fairly representative of the general population in this age group in the area studied. Thus, it should be noted the social class breakdown is not entirely parallel.

Instruments and Factor Analysis

All of the subjects were given the *Embedded Figures Test* (EFT)¹ and a self-administering questionnaire. The entire testing took about 70 minutes and was conducted during regular classroom periods.

The EFT, the measure of cognitive style, consists of 16 items, each involving a simple figure embedded in a more complex one, all to be located within a ten-minute time period. One advan-

¹ Form V, copyright Educational Testing Service, Princeton, N.J., 1962, used by permission of ETS.

tage of using this test for cross-cultural comparisons is that it purposely seeks to identify cultural differences and, therefore, as Within says, in this sense, the tests are certainly not culture-free — quite the opposite. "However, to the extent that the task given may be made meaningful to a variety of cultural groups, and the influence of differences in verbal development and verbal facility may be avoided as a factor in test results, tests of the global-articulated dimensions may be made culturally appropriate." (Witkin, 1967, p. 256).

The Likert type summated rating questionnaire items which deal with different achievement values were graded on a six point scale from one "strongly agree" to six "strongly disagree". Responses to these items were factor analyzed in order to obtain homogenous scales. The items used in the questionnaire and their original sources are listed below :

1. Four items on optimism from the Cornell Values Study (Goldsen, Rosenberg, Williams, and Suchman, 1960; Rosenberg, 1957).
2. Four *ad hoc* items reflecting preference for personal ability over ascription for achieving success.
3. Two Independence of the Family items from Strodbeck's V-scale (Strodbeck, 1958).
4. Three Mastery or Activism items from Strodbeck's V-scale.

The first task was to determine items which clustered together to define scales for the Peruvian sample². Separate factor analyses were performed on each set of conceptually related items. In each case, principal component analyses were performed with rotations, using the Varimax method. The factors obtained were treated as separate value scales. The criterion for placing an item into the newly derived scales was a .50 minimum factor loading. Only those factors deemed meaningful and relevant were used. Each respondent's score for a particular value scale was obtained by summing his responses to the set of items derived from the principal component analysis. (A high score indicates disagreement with the item.) Table 1 describes the value scales and their associated factor loadings.

TABLE 1
VALUE SCALE ITEMS WITH FACTOR LOADINGS

I. Optimism	
1. Some are born to lead, and others to follow.	.72
2. It is useless to try to change your own fate.	.70
3. The important things that occur to a person are the result of circumstances beyond his control, and not due to his own efforts.	.69
II. Self reliance	
1. There is nothing preventing a young man from rising to the top these days, if he has the necessary personal ability and will.	.85
2. It is what you know more than who you know that counts these days.	.56
III. Independence from the family	
1. Nothing in life is worth the sacrifice of moving away from your parents.	.60
2. A good son would try to live near his parents, even if it means giving up a good job in another part of the country.	.68
IV. Achievement	
1. When a man is born, the success he is going to have is already in the cards, so he might just as well accept it and not fight against it.	.59
2. With things as they are now, the wise person lives for today and lets tomorrow take care of itself.	.68
3. Planning only makes a person unhappy, since your plans hardly ever work out anyway.	.77
4. Success in life depends more on chance than on personal ability.	.50

² A similar analysis was prepared on an American subsample and the results were essentially similar.

The next step of the analysis involved exploring differences in mean scores among the Peruvian and American groups. One-way ANOV's were used to test the difference among mean value scores. Tukey's method of multiple comparisons was utilized to examine differences between pairs of means (Winer, 1962).

RESULTS

For the American group (Table 2) the analysis revealed a significant, but small, relationship between EFT score and Social Class ($F_{5,178} = 2.9; p < .05$). For the Peruvian sample, EFT score was not significantly related to Social Class (Table 3), although the lower class school did score lower on the EFT than any of the others. The self-report Achievement Value measures were not related to Social Class for either the American or the Peruvian groups.

TABLE 2
MEAN SCORES FOR EFT, ACHIEVEMENT VALUES AND SOCIAL CLASS (U.S.A.)

VARIABLES	SOCIAL CLASS						$F_{5,178}$	$F_{12,355}^1$
	Low	LoMid.	Mid.	Bus.	Sub-Prof.	Prof.		
N	20	30	71	14	12	37		
EFT	5.6	6.3	7.6	7.1	11.0	8.2	2.9*	2.03* ²
Optimism	11.9	12.6	13.1	14.0	13.2	13.0	0.8	1.85*
Self-Reliance (low score-high self-reliance)	8.3	8.0	8.4	8.0	7.8	8.1	0.3	13.16**
Independence from the family	10.4	9.3	9.9	10.7	10.3	10.2	1.2	14.83**
Achievement	19.8	18.1	19.7	20.1	18.4	20.0	1.2	1.08

¹ For comparisons between Tables 2 and 3.

² Df = 11,328 since Peruvian Gp III (Table 3) data for EFT was not usable.

* $p < .05$

** $p < .01$

A significant difference ($F_{12,355} = 1.85; p < .05$) in the Optimism scale was obtained between American students whose fathers were business executives or entrepreneurs and Peruvian students from School I whose fathers were semi-skilled workers. Thus, an apparent "cultural" difference is found to be due to a comparison of extreme Social Class differences across the two cultures.

A small significant difference ($F_{11,328} = 2.03; p < .05$) in EFT scores across the national cultures (see Tables 2 and 3) is also due to Social Class differences. However, the profiles of means within each culture parallels the profile of the contrasted culture. Both the lower class American and Peruvian groups differed

TABLE 3
MEAN SCORES FOR EFT, ACHIEVEMENT VALUES AND SOCIAL CLASS - SCHOOL (PERU)

VARIABLES	SOCIAL CLASS-SCHOOL							F_{obs}	Df ^a
	(Low) I	II	III	IV	V	VI	(High) VII		
N	16	31	28	25	28	28	28		
EFT	5.1	7.7	— ^b	7.7	8.9	8.3	8.2	1.8	5,155
Optimism	10.0	11.3	12.7	11.1	11.4	11.8	11.9	0.8	6,179
Self-Reliance (low score-high self-reliance)	3.4	4.8	5.1	5.2	5.3	4.8	5.5	1.3	6,178
Independence from the family	6.8	6.3	5.9	7.4	6.1	6.3	7.9	1.8	6,178
Achievement	19.0	18.0	20.0	20.0	19.0	19.6	20.6	1.1	6,177

^a Due to missing responses to some of the items, the sample sizes of the school varied in each analysis.

^b EFT scores of School III were discarded because of a timing error during the administration of the test.

significantly from the American subprofessional groups. Lower Social Class American students had scores similar to those of lower Social Class Peruvian students. Similarly, higher Social Class American students did not differ in their EFT scores from higher Social Class Peruvian students. The differences observed can again be accounted for by comparisons between extreme Social Class groups across the two national cultures.

In sum, the significant differences in EFT scores and Optimism observed between the American and Peruvian student groups are the result of comparisons between extreme Social Class groups and not of presumed differences in economic development or level of industrialization.

The two national cultures regardless of Social Class differed sharply on the Independence-from-the-Family measure. As expected, the lowest American group scored significantly higher on this dimension than the highest Peruvian group ($F_{12,355} = 14.83$; $p. < .01$); there was no overlap.

Most surprising, and contrary to expectation, was the observed difference between the two cultures on the Self-Reliance scale ($F_{12,355} = 13.16$; $p. < .01$); there was no overlap. As a means for getting ahead, Peruvian students valued personal ability and knowledge over ascriptive attributes more than American students.

DISCUSSION AND CONCLUSION

These comparisons between literate urban students, of similar social classes, from two national cultures which differ in level of economic development,

do not, with one exception, show expected cultural differences in Cognitive Style and Achievement Values. To the contrary, American students were shown to be much more skeptical (cynical?) than were the Peruvian students about their ability to get ahead on the basis of merit rather than ascribed status.

American students, perhaps because of their exposure to democratic-egalitarian values, may have higher expectations than Peruvian students about the relationship of personal achievement to ability. Since the relationship between ability and merit is in reality less than perfect in American society, perception of this imperfection against the background of high expectations apparently results in diminished credibility of the universalistic standards. Consequently, American students do not believe strongly that hard work and ability are always impartially rewarded. In fact, they may be even more sensitive to the existence of discrimination on the basis of race, ethnicity, religion, or other non-merit criteria as an impediment to successful achievement based on self-reliance.

In Peru, admission into an organization is often based on kinship ties; advancement, however, is awarded to those who through their performance can enhance the family fortune. In the United States, on the other hand, admission to organizations is awarded on the basis of ability and merit after competitive selection procedures; but advancement criteria include social adaptability, race, ethnicity and other so-called social desirability factors.

Mobility for American students is by and large accomplished through membership in large, stratified organizations which seem to practice a double standard of evaluation. According to Zalesnik and Moment (1964), lower level workers are evaluated in terms of their productivity, while as one moves up in the organizational hierarchy, ascriptive criteria are more frequently used to evaluate "performance". Given such circumstances, and the existence of the norm of egalitarianism, this may account for the observed difference between American and Peruvian students regarding self-reliance.

For the Peruvian students, ascription is the norm, but there probably exists some relatively small relationship between ability and merit. Within this context universalistic standards seem to be imbued with greater credibility. In contrast to Americans, Peruvians are more likely to be employed in small entrepreneurial organizations, usually owned by family or friends (the normal ascriptive pattern). Within this setting, ability and performance can be more visibly related to results. Therefore, Peruvian students may, in fact, derive more benefit from self-reliance. Given the contrasting organizational environments of the two cultures, it is to be expected that different contextual meaning will exist for the apparently similar universalistic standards.

As expected, Peruvian students were much more attached to their parents and less willing to leave them to achieve economic success than were the American students. This was the only predicted difference in Achievement Values observed in this study which was unaffected by Social Class across cultures. Attachment to, and care of, parents is a deeply felt obligation among Peruvians. In a discussion of the results of this study, a group of Peruvian entrepreneurs expressed deep emotions and moral concern in support of these values. Americans were accused of being cruel and immoral in subscribing to a more independent attitude toward parents. This points to a profound difference between Americans and Peruvians in the criteria they use to evaluate the quality of social life in the society within

which they live. That this difference is a reflection of differences in the strength of Achievement Motivation or Cognitive Style has not been supported by this study. It must, therefore, be inferred that these differences are due to situational rather than personality factors.

Previous studies have suggested that Cognitive Style and Achievement Values differ substantially between different national cultures (McClelland, 1961). The results of this study show that apparent national differences observed in Optimism and Cognitive Style are small and due to differing social classes. With the exception of the two cases discussed above (*i.e.*, Self-Reliance and Independence from the Family), literate, urban Peruvian and American students did not differ when Social Class was taken into account.

In this study, EFT, which in previous comparative studies has been quite sensitive to cross-cultural differences, failed to reveal differences between Peruvian and American high school students when Social Class was controlled. As a matter of fact, very similar profiles appeared for both cultures showing that the lowest Social-Class groups in both cultures scored lowest on the EFT. Similarly, differences in Optimism were accounted for by social class differences. There were no differences observed in Achievement across cultures nor by Social Class.

The results discussed above show the utility of controlling for Social Class and rural-urban milieu in cross-cultural national studies. One of the objectives of this study was to point this out. Lack of control for Social Class is likely to obscure or accentuate differences between national cultures. Consequently, failure to control for Social Class may impair the understanding of cross-cultural differences and may lead to a misinterpretation of study results. Cross-cultural studies must be able to demonstrate their utility in explaining unique results that could not have been accounted for by the Social Class variable.

A difficulty, however, which was also encountered in this study, may involve the precise comparability and definition of social classes in differing national cultures.

To conclude, the results of this study are interesting for several reasons. First, because the direction of one of the differences found between the two national cultures was the opposite of our expectations. Peruvian high school students were more likely to endorse the importance of Self-Reliance rather than ascriptive criteria for getting ahead. American students endorsed the importance of ascriptive criteria over Self-Reliance. Second, while Attachment-to-Family was a significant value for Peruvian students, Independence-from-the-Family was a significant value for the American students. However, whether this difference can be interpreted in terms of Achievement Motivation that presumably favors the American student is doubtful within the context of the results of this study. And, finally, as far as a comparison of high school students is concerned, most differences that were revealed by this study were small, related to Social Class, or inconsistent with the predictions derived from the theoretical framework of McClelland (1961).

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