

COGNITIVE STYLES IN CHILDREN:
TWO MEXICAN COMMUNITIES ¹

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ABSTRACT. Children of two Mexican communities (one more identified with the traditional Mexican system of values than the other) were tested with the Portable Rod and Frame Test. Their mothers were interviewed and a socialization questionnaire was administered to them. It was predicted that children from the community which was most identified with the traditional Mexican system of values would be the most field dependent in cognitive style and that their mothers would more frequently agree with items of a socialization questionnaire which reflected attitudes and behaviors of the field dependent "socialization" cluster. The results supported both hypotheses, although differences between mothers of the two communities on the socialization questionnaire were not significant. The socialization results also showed a need for modification of the field dependent "socialization" cluster for study of cognitive style development in the Mexican culture, particularly in those communities which are more identified with the traditional Mexican system of values.

RESUMEN. Se administró el "Portable Rod and Frame Test" a niños de dos comunidades mexicanas; una, identificada más que la otra, con los valores tradicionales mexicanos.

Las madres de estos niños fueron entrevistadas y se les administró un cuestionario de socialización. Se anticipaba que los niños de la comunidad más identificada con los valores tradicionales mexicanos, fueran más "field dependent" en el estilo cognoscitivo y que sus madres estuvieran de acuerdo con la mayoría de las preguntas del "field dependent socialization cluster".

Los resultados obtenidos comprabaron las dos hipótesis, aunque las diferencias encontradas entre las madres de las dos comunidades no fueron significativas. Los resultados relacionados con la socialización, también demostraron la necesidad de modificar el "field dependent socialization cluster" para que esté más de acuerdo con el desarrollo cognoscitivo en la cultura mexicana, particularmente en aquellas ciudades que están más identificadas con los valores tradicionales mexicanos.

Research on mothers of field dependent and field independent children (Dyk and Witkin, 1965) generated identification of a "socialization" cluster related to development of a field dependent cognitive style in children. This "socialization" cluster consisted of personality characteristics of these mothers, perceptions which they held of their children, and the manner in which they socialized their children. The following are among the indicators of the cluster as defined by Witkin:

1. Mother's physical care is not appropriate to child's age.
2. Mother limits child's activity.
3. Mother regards her child as delicate, in need of attention or protection, or as irresponsible.
4. Mother does not accept a masculine role for her child.
5. Mother limits the child's curiosity and stresses conformity.
6. Mother's control is not in the direction of the child's achieving mature goals and becoming responsible, or is consistently directed against the child asserting himself.
7. Mother does not have a feeling of self-realization in her own life (Witkin, 1967, pp. 237-238).

Results of cross-cultural studies have shown that the degree to which members of a group are field dependent in cognitive style is related to the degree to which their socialization practices resemble the field dependent "socialization" cluster. A study by Dawson (1963) in Africa, for example, assessed cognitive styles of members of the Temne and Mende tribes. Information concerning the socialization practices of the two groups were drawn from findings of anthropological studies and by administering questionnaires to members of the two tribal groups. The socialization data showed that many of the Temne socialization practices resembled those of the field dependent "socialization" cluster. Dawson predicted that members of the Temne tribe would be more field dependent than the Mende. The results of cognitive tests administered to children of the two tribes confirmed Dawson's prediction. Berry (1966) tested two samples (traditional and transitional) from three cultural groups (Temne, Eskimo and Scot). He found that in all three cultures the traditional or less westernized sample scored in a more field dependent direction.

The present study, conducted in two communities in Mexico, assessed cognitive styles in school children and attitudes of their mothers regarding socialization. The communities differed in the extent to which their members were identified with the sociocultural premises of Mexican culture (as identified by Diaz-Guerrero, 1970) which are similar to some of the field dependent "socialization" cluster indicators.

The community of Ahualulco de Mercado is located in the interior of the country in the state of Jalisco. In this community, child-rearing practices are characterized by strictness and emphasize respect for authority and social convention. Children are encouraged to be loyal to the family and to maintain very close ties to their mothers until they are of school age. In addition, separation of the sex roles is emphasized. Most residents are identified with a conservative Mexican Catholic ideology which stresses responsible behavior and respect for adults.

In contrast to Ahualulco, the community of Mier, Tamaulipas, located near the Mexican-United States border, shows less adherence to the socio-cultural premises of Mexican culture. Change in the traditional Mexican value system has occurred in this community because of its proximity to the United States. This proximity, and the fact that many men in the community work in the United States, has resulted in adoption of some of the values of U. S. culture. Moreover, absence of fathers from families has resulted in changes in family roles. Mothers are assuming responsibilities, formerly part of the father's role, which frequently take them outside their homes and community. Children are allowed to move more freely in the community and older male children assume responsibilities which previously were the father's alone. There is also a decreasing emphasis on separation of the sex roles in this community. The people of Mier tend to be less strongly identified with conservative Mexican Catholic ideology. (Historically, there has been more concern with separation of church and state in this region of Mexico than in Jalisco.)

It was predicted that children in Ahualulco would be more field dependent than children in Mier, and that mothers in Ahualulco would more frequently agree with items of a socialization questionnaire which reflected attitudes and behaviors of the field dependent "socialization" cluster.

METHOD

Subjects

The Ss were 136 Mexican school children and their mothers.³ Children were selected from families who were Catholic and who had lived in their respective communities for at least three generations. Families chosen for the study represented all socioeconomic levels in their communities.

There were four groups of children separated according to sex and age in each community as follows: 1) 17 males, ages 9-11; 2) 17 females, ages 9-11; 3) 17 males, ages 13-15; and 4) 17 females, ages 13-15.

Procedure

The children were tested with the Portable Rod and Frame Test (PRFT) developed by Oltman (1968). Each S was given eight trials in the following order: (1) F (frame) 28 deg., L (left), R (rod) 28 deg. L; (2) FL 28 deg., RR (right) 28 deg.; (3) FR 28 deg., RR 28 deg.; (4) FR 28 deg., RL 28 deg.; (5) FL 28 deg., RL 28 deg.; (6) FL 28 deg., RR 28 deg.; (7) FR 28 deg., RR 28 deg.; and (8) FR 28 deg., RL 28 deg. The S's score was the mean number of degrees deviation of the rod from the true upright for the eight trials given. A lower score, then, was indicative of greater field independence.

Mothers of children tested were visited twice by an interviewer of Mexican descent who spoke Spanish fluently. On the first visit mothers were given a semi-structured interview. Questions asked pertained to family history, to the S's views on child rearing in general and more specifically, to her views on child rearing issues related to the field dependent "socialization" cluster. On the second visit, a socialization questionnaire was administered. The instrument consisted of 52 items representing all indicators of the field dependent "socialization" cluster. The items were read by the interviewer and the S was asked to respond with "Yes," "No," or "Don't Know." On neither the first nor the second interview were the interviewers aware of the scores which children had obtained on the PRFT.

Responses to the questions on the interview were recorded as "agree" or "disagree." Responses to the questionnaire were assigned a score of one (1) whenever the S indicated agreement with an item, and zero when she expressed disagreement. Some items were reversed to counteract possible response set. A higher score indicated greater agreement with the field dependent "socialization" cluster.

RESULTS

Confirming the first prediction, PRFT scores showed that children in Aqualulco scored in a significantly more field dependent direction than children in Mier ($F = 36.04$; $p < .001$). Moreover, females scored in a significantly more field dependent direction than males ($F = 23.54$; $p < .001$), and scores of younger children were more field dependent than those of older children ($F = 35.50$; $p < .001$). Mean scores on the PRFT for all four sub-groups in each community are listed in Table 1.

TABLE 1

Mean Scores for the Four Sub-groups in Each
Community on the Portable Rod and Frame Test

Groups	N	Aqualulco		Mier	
		\bar{X}	S.D.	\bar{X}	S.D.
9-11 males	17	12.44	6.77	7.14	4.58
9-11 females	17	16.71	7.71	10.41	6.54
13-15 males	17	6.31	3.91	2.71	1.26
13-15 females	17	11.32	6.03	6.40	4.97

Results from the socialization questionnaire indicated that mothers in Ahualulco indicated more agreement with the items than mothers in Mier, but the difference was not significant ($F = 1.19$; $p < .5$).

A factor analysis was done on the socialization questionnaire results (Irving, 1970). This indicated that the Mier data yielded factors which paralleled the indicators of the field dependent "socialization" cluster more closely than did factors from the Ahualulco data. In particular, the factors from the Mier data were concerned with self-confidence in performing the mother role and a view of the child as helpless and irresponsible. The factors yielded by the data collected in Ahualulco, on the other hand, focused on respect for authority, i.e., items concerned with forbidding children to disagree with parents and encouraging children to choose friends of their own social standing.

These results are supported by an item analysis of responses to questions asked in the interviews. Items which best discriminated between the mothers of the ten most field dependent and ten most field independent children in Mier were different from those which had discriminated in Ahualulco (see Table 3).

TABLE 2

Mean Scores for the Four Sub-groups in Each
Community on the Socialization Questionnaire

Groups	N	Ahualulco		Mier	
		\bar{X}	S.D.	\bar{X}	S.D.
9-11 males	17	26.65	4.44	24.82	4.65
9-11 females	17	22.71	4.17	22.94	4.34
13-15 males	17	22.35	5.72	20.06	4.01
13-15 females	17	21.18	5.60	21.41	5.10

Table 3

Interview Questions Which Differentiated Best Between
Mothers of Field Dependent and Field Independent Children

Ahualulco	FD		FI		Chi-square	P
	Yes	No	Yes	No		
1. Trusts child enough to allow him/her to do important errands	10	0	6	4	1.2250	N.S.
2. Prohibits child from forming friendships with certain children	9	1	2	8	5.0505	.05*
3. Would like child to live nearby after child is married	2	8	7	3	3.6363	N.S.
4. Tends to rely on others for advice in child rearing	6	4	3	7	.4040	N.S.
5. Does not have enough time to enjoy herself	9	1	4	6	3.9560	.05*
Mier						
1. Feels responsible if child fails in school	8	2	3	7	3.6363	N.S.
2. Unsure as to effectiveness of her approach to child rearing	7	3	2	8	3.6363	N.S.
3. Tends to use harsh punishments	6	4	1	9	3.9560	.05*
4. Child is irresponsible	8	2	4	6	2.0000	N.S.
5. Trusts child enough to allow him/her to do important errands	3	7	8	2	3.6363	N.S.

* $\chi^2 = 3.84146$, $df = 1$

DISCUSSION

The findings obtained here support the hypothesis that children reared in more traditional communities are more field dependent in cognitive style.

When compared with scores of American children, the results also confirmed the findings of previous research showing that Mexican children tend to score in a more field dependent direction than American children (Diaz-Guerrero, 1966).

Younger children scored in a more field dependent direction than older children, confirming earlier findings with several cultural groups (Witkin, 1967).

In both communities, male children were more field independent than females on the PRFT. Similar results were obtained by Mebane and Johnson (1970) in another Mexican community. As would be expected, because of greater separation of sex roles in Ahualulco, differences between males and females in that community were greater than in Mier. Sex differences were also observed in the results of the socialization questionnaire: in all four sub-groups in Ahualulco and in three of the four sub-groups in Mier, mothers of male children indicated more agreement with items reflecting field dependent socialization practices than mothers of female children. This may have been due to the fact that the field dependent "socialization" cluster was derived from data obtained from research with mothers of male children only (Dyk and Witkin, 1965). Since there is considerable separation of sex roles in Mexican culture, a socialization questionnaire used in Mexico should contain items which reflect specific concerns for socializing males and females.

Some of the indicators of the field dependent "socialization" cluster were not reflected in the socialization data of the more traditional community. In fact, the findings show a reversal of what was expected on some of the indicators of Ahualulco. Namely, mothers showed little agreement with items concerned with sense of realization in life, viewing children as irresponsible and allowing the child to separate from them. Mothers in Ahualulco did indicate more concern for socializing children to be loyal to the family and to be well-behaved, and they tended to rely on others for advice on child rearing in general (a practice which is considered appropriate in traditional Mexican culture where grandparents frequently assist parents in child rearing). Factors derived from a factor analysis of the Mier data paralleled the indicators of the field dependent "socialization" cluster more closely than factors from the Ahualulco data. A possible explanation for this is that Mier has been influenced more by U.S. values than has Ahualulco, and consequently reflects socialization patterns more like

those observed by Dyk and Witkin in U.S. mothers.

The results obtained in Ahualulco, then, indicate that the field dependent "socialization" cluster may not apply completely to traditional Mexican communities. In fact, to make the "socialization" cluster more appropriate to Mexican communities in general these findings imply an additional indicator should be considered: mothers of field dependent children in both Mier and Ahualulco showed great concern for socializing children to feel a responsibility for contributing to the family's welfare throughout their lives.

Thus, the socialization findings obtained in this study show need for modification of the field dependent "socialization" cluster for study of cognitive style development in Mexican culture, particularly in those communities which are more identified with the traditional Mexican system of values.

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FOOTNOTES

1. This study was supported by funds from the Center for Social Change and Economic Development, Rice University, Houston, financed originally under ARPA order No. 738. Subsequent analysis of results was supported in part by Research Grant No. HD 04612, NICHD, Mental Retardation Research Center, University of California at Los Angeles; by the California Department of Mental Hygiene and by the University of California.
2. The authors would like to thank the Secretary of Education of the Department of

Public Instruction, Mexico City, Professor Martin Lopez Gudino and Dr. Ruben Arismendi Rojas of the Autonomous University of Guadalajara and the officials of the Colegio Resurgimiento of Ahualulco and also the principals of the primary and secondary schools of Mier, Tamaulipas for making Ss available.

3. The Ss of this study were chosen from the Mexican sample in the study by Witkin, Price-Williams, Bertini, Christiansen, Oltman, Ramirez and van Meel entitled "Social Conformity and Psychological Differentiation." All Ss on which complete socialization data was available were included.