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# DIFFERENTIAL CHANGE IN FOLK DISEASE CONCEPTS[1]

Roland G. Tharp
*University of Hawaii*

Arnold Meadow
*University of California Medical School, Davis*
U.S.A.

ABSTRACT. The hypothesis is proposed that in the Mexican-American, Anglo-American contact situation, folk-medicine beliefs do not change as an aggregate but that individual components of these beliefs will undergo modification according to the degree to which they mesh with the etiological assumptions of the superordinate culture. To test this hypothesis an interview study was conducted using as subjects 250 randomly selected Mexican-American families in Tucson, Arizona. Results indicated that explanations of diseases which are expressed by naturalistic etiological concepts are less resistant to extinction than those expressed in terms of emotional origin. The latter in turn were more persistant than diseases explained by magical etiological conceptions.

RESUMEN. Se propone la hipótesis que en los contactos entre Mexicano-Americanos y Anglo-Americanos, las creencias folklóricas en medicina no cambian en su totalidad, sino que los componentes individuales de dichas creencias sufren modificaciones de acuerdo con el grado en que se fusionan con las suposiciones etiológicas de la superestructura cultural. A fin de comprobar esta hipótesis, se realizó una encuesta empleando como sujetos a 250 familias seleccionadas al azar entre el sector Mexicano-Americano de Tucson, Arizona. Los resultados indicaron que las explicaciones de enfermedades basadas en conceptos naturalistas-etiológicos son menos resistentes a la extinción que aquellas que se formulan en términos de un origen emocional. Estas últimas, a su vez, eran más persistentes que aquellas explicaciones de enfermedades formuladas en conceptos mágicos-etiológicos.

Concepts of disease have long been a source of mutual consternation between Spanish-speaking Americans and modern medical practicioners in the southwestern United States. The problem is but an example of the conflict between folk-belief and scientific medicine, characteristic of the urbanization of folk peoples the world over. The continuation of folk beliefs with respect to the definition, cause, and treatment of diseases are primary obstacles to the acceptance of private and public scientific health facilities. In a larger sense, this issue is but one manifestation of a central problem of our time: in what way, at what rate, according to what pattern do folk peoples modify their beliefs in the process of urbanization and acculturation?

This report is designed to chart the persistence of certain folk-medical beliefs as the folk-Mexican becomes acculturated into the urban United States. Of course, acculturation can no longer be considered a unitary phenomenon. Using the theoretical model proposed by Spicer *et al.* (1961), the type of acculturation dominant in the Mexican-American population which we have studied could best be considered an *assimilative integration*, a process taking place in a non-directed contact. The distinctive feature of assimilative integration "consists in the acceptance and replacement of cultural behaviors in terms of the dominant society's cultural system" (Spicer, 1961, p. 531). (Although the contact pattern is not directed, in matters of medical belief and practice the superordinate society does bring certain pressures to bear through public health programs, preventative measures enforced by the schools, etc.) It may well be that the pattern of belief persistence in the subordinate society which we have discovered is applicable only to this one type of acculturation process.

## BACKGROUND

Saunders (1954) and Clark (1959) have documented the difficulties which ensue as Mexican folk-medical beliefs persist into a superordinate Anglo-American urban society. In analyzing the social function of folk-medical beliefs among Mexican-Americans in a small Texas city, Rubel has offered the hypothesis "that the greater number of Mexican-Americans who adopt new behavior and values, the more value will the traditionally oriented invest in the aggregate of *caida de la mollera, empacho, mal ojo,* and *susto*" (Rubel, 1960, p. 814).

The implicit assumption – that folk disease beliefs form an aggregate – characterizes the work of other previous investigators. The present research tests an alternative formulation. It hypothesizes that folk disease concepts do not rise or fall, persist or disappear, as an aggregate; rather, during the process of acculturation, belief in the various diseases undergo a differential fate.

The proposed theory assumes that this differential can be predicted from the relationship between the type of etiological system implicit in the explanation for each separate disease in the folk culture, and the type of etiological system dominant in the new superordinate culture. Thus, for example, the theory would predict that among Mexican-American folk diseases, those disease syndromes which were originally explained in the Mexican culture in terms of naturalistic etiology would be less resistant to change in the Tucson Mexican-American community than diseases explained in terms of magical etiology.[2]

The determinant of persistence is this etiological consistency and not the *consistency of specific contents* of beliefs. Thus, each folk-disease is identified by a particular syndrome of symptoms. These syndromes may (and do) occur in the superordinate culture, although they are labelled and explained differently. Hence, if a different degree-of-persistance occurs among the disease-concepts, there must be an explanation other than the extent of correspondence between the manifest contents of the symptomatology of a particular disease in the Mexican and American cultures.

*The Mexican-American Culture of Tucson, Arizona*

Most of Tucson's 35,722 (U.S. Bureau of the Census, 1960) Mexican-Americans trace their origins to isolated ranches, villages, and towns in northwestern Mexico, principally Sonora. The census data indicates that 5,575 (15.6 percent) were born in Sonora; the larger part of the remaining population is second generation.

The forebears of most Mexican-Americans were rural peasants who had little or no formal education. They farmed and ranched their lands as co-operative extended family units. Those from urban centers were generally members of the poorer classes who made their living by unskilled and semi-skilled labor. Probably not more than one percent were large land-holders, merchants, professionals, or belonged to other segments of Mexico's small, relatively well-educated upper class.

Traditional medicine was the prevailing system. Modern medicine was little known in the rural areas of Mexico. Modern practitioners generally exercised their profession among the upper classes of the larger towns and cities. Most illnesses received the attention of traditional *curanderos* who knew little about the natural causes of disease — at least as defined by contemporary western scientific medicine. Nevertheless, the time-honored precepts and remedies of traditional medicine were familiar and had accepted meanings to all those whom they attended. Traditional cures utilized a large pharmacopoeia of herbal remedies for naturally caused illness, and a wide variety of magico-religious rituals and ceremonies.

Although many modern diseases such as smallpox, measles, whooping cough, malaria, etc., are well known to Mexican laymen, many other afflictions are perceived along traditional lines. Traditional diseases may be classified into three types: (1) diseases of naturalistic origin, (2) diseases of emotional origin, (3) diseases of magical origin. These concepts are well integrated into the traditional Mexican world view.

*Traditional Mexican Diseases* [3]

*Diseases of Naturalistic Origin:* (1) *Empacho* is an infirmity of both children and adults which occurs when food particles become lodged in the intestinal tract, causing sharp pains. *Empacho* is generally not a serious infirmity and is well enough understood so that prayer is not mandatory in the curing process.

(2) *Caida de la Mollera* is a disease of infants which occurs when the fontanella of the parietal bone falls, leaving a "soft spot" which sometimes vibrates during breathing.

*Diseases of Emotional Origin:* For Mexicans, the mind-body dualism common in modern medicine does not exist. Interactionism is a basic premise in their concept of human nature. Therefore, a great many physical diseases are traced to emotional origins.

(3) *Susto* is an illness explained in terms of emotional origin. It is very common in Mexico. Practically any disturbing or unstabilizing experience such as an unexpected fall, a barking dog, a car accident, etc., may be sufficient to induce part of the self to become separated from the body. In the early stages *susto* is usually manifested by stomach ache, diarrhea, high temperature, vomiting, and several other symptoms. As the disease progresses the patient is forced to withdraw from active participation in normal family and social activities. *Susto* is often fatal.

(4) *Bilis* is based on the belief that the body is composed of four humors which must maintain a favorable balance if the person is to continue in good health. When he becomes angry this balance is upset; one of the humors overflow into his blood, causing him to become ill. The disorder produces symptoms of acute nervous tension, chronic fatigue and malaise.

Bilis is ordinarily treated with herbal remedies imbibed in the form of teas. Less severe cases are allowed to pass untreated.

*Diseases of Magical Origin:* (5) *Mal ojo* or "evil eye" is assumed to be the magical origin of many illnesses, especially those of children. The belief associated with this disease is that some people are born with the ability to harm others with a glance. An infant with *mal ojo* sleeps restlessly, cries for no apparent reason, vomits, has fever and diarrhea.

(6) *Mal puesto* (*dano*) or witchcraft plays an important part in traditional Mexican disease concepts. Torturing effigy dolls made to look like the victim is one of the more common witchcraft practices. Another involves the manipulation of the images and statues of Catholic saints in private homes. The use of magical potions known as *sal* (salt) is also very common.

## PROBLEM

This research attempts to determine the strength of belief in and the degree of adherence to the three types of traditional disase concepts by Tucson's Mexican-American population. The following hypotheses will be tested:

(1) Beliefs in diseases which are explained in terms of naturalistic concepts in the folk culture will be more resistant to extinction, since the explanatory system of physical cause and effect most closely corresponds to the world-view of the superordinate culture.

(2) Diseases explained in terms of concepts of emotional origin will be less resistant than type 1, since this explanatory system is less prevalent in the superordinate culture.

(3) Diseases of magical origin will be less resistant than either type 1 or type 2, since magical causation is generally rejected by the superordinate culture.

## THE STUDY

Two hundred and fity Mexican-American families in Tucson, Arizona were used as subjects. This group was selected as a representative sample of the city's more than 6,700 (U.S. Bureau of the Census, 1960, p. 39) Spanish-surname families by using a combination of area and cluster sampling techniques. First, percentages of the total Spanish-surname inhabitants of the 40 Tucson census tracts were established (U.S. Bureau of the Census, 1960, pp. 13-18). Secondly, sampling quotas were set for each tract based on the percentages. For example, if a given tract contained ten percent of the entire Spanish-surname population, ten percent of the sample was chosen from it.

Households were selected as follows. Using a table of random numbers, the quota of city blocks was selected within each tract on the census map of the city. All Spanish-surname households were then listed for each block selected. Finally, a specific household was selected for interview employing the table of random numbers. If this procedure revealed no Spanish-surname households, an alternate block was selected. Interviews of either male or female heads of households were conducted in either Spanish or English according to the informant's preference.

Adherence to traditional disease concepts was graded into five mutually exclusive categories: (1) never heard of the disease, (2) do not believe in it, (3) doubtful as to its validity, (4) do believe in it, (5) do believe in it plus statement that informant, spouse, or their children had suffered the disease. This scheme was assumed to describe an ascending order of acceptance of the disease concept. Scores were assigned to each household, according to the maximum degree of acceptance by either husband or wife. Thus, the "household adherence score" reflects the belief in folk disease of the least acculturated household member. Data in the cells of Table I show the number of households which subscribed to each category for each disease.

Since the row totals are all equal, if each disease is equal in strength of belief, then the expected frequencies of the cells in each column should be equal. A chi-square analysis of these expected frequencies compared to the observed frequencies show that the null-hypothesis of no difference may be rejected at the .001 level. Further, the distribution is in the predicted order. That is, folk diseases of natural origin persist longer than do those of emotional origin, and both remain more salient than do those of magical origin. The hypotheses are further supported by the analysis of differences among means (see Table II). Twelve of the fifteen differences are significant at the five percent level. All differences are in the predicted direction.

When the diseases are grouped according to explanatory principle, the mean endorsement scores are as follows:

1. Naturalistic origin (empacho, caida de la mollera): 3.71
2. Emotional origin (susto, bilis): 3.45
3. Magical origin (mal ojo, mal puesto): 2.62

The differences among each of these three means are significant at the .001 level.

## CONCLUSIONS

In the process of acculturation and urbanization, folk concepts are abandoned in an orderly and predictable manner. They do not disappear any more than they arise capriciously, but undergo modification according to the degree with which they mesh with the etiological assumptions of the superordinate culture. It is significant that the vast majority of respondents suscribed, in one form or another, to these Mexican folk diseases, demonstrating this population's strong degree of identity with the Mexican culture. Yet, even a belief system with an apparent unity of disease-concepts does not rise and fall as a unit, as Rubel's impressions indicated (Rubel, 1960); Mexican-Americans do not endorse or experience diseases according to whether the disease is Mexican or American, but according

TABLE I

DISTRIBUTION OF ENDORSEMENTS OF FOLK-DISEASES, WITH CHI-SQUARE MEANS, AND STANDARD DEVIATIONS

| Diseases | Degree of Endorsements 1 | 2 | 3 | 4 | 5 | N | M | SD |
|---|---|---|---|---|---|---|---|---|
| Naturalistic Etiological Explanation | | | | | | | | |
| Empacho | 8 | 52 | 26 | 56 | 108 | 250 | 3.82 | 1.28 |
| Caida de la mollera | 9 | 59 | 39 | 60 | 83 | 250 | 3.60 | 1.26 |
| Emotional Etiological Explanation | | | | | | | | |
| Susto | 11 | 43 | 57 | 95 | 44 | 250 | 3.47 | 1.10 |
| Bilis | 15 | 49 | 44 | 97 | 45 | 250 | 3.43 | 1.17 |
| Magical Etiological Explanation | | | | | | | | |
| Mal ojo | 14 | 126 | 39 | 62 | 9 | 250 | 2.70 | 1.02 |
| Mal puesto | 18 | 139 | 38 | 49 | 6 | 250 | 2.54 | .96 |

Chi Square = 33.45

P < .001

TABLE II

PROBABILITY LEVELS FOR T TESTS OF THE DIFFERENCES AMONG THE MEANS OF BELIEF-STRENGTH IN FOLK DISEASES

| | Empacho | Caida de la mollera | Susto | Bilis | Mal ojo | Mal puesto |
|---|---|---|---|---|---|---|
| Empacho | x | .03 | .01 | .01 | .01 | .01 |
| Caida de la mollera | x | x | .40 | .10 | .01 | .01 |
| Susto | x | x | x | .30 | .01 | .01 |
| Bilis | x | x | x | x | .01 | .01 |
| Mal ojo | x | x | x | x | | .05 |
| Mal puesto | x | x | x | x | x | x |

to the degree of congruence of the etiological system used to explain the disease in Mexico with that used in the United States.

This finding suggests that similar predictions may be made concerning many belief changes during acculturation. It does not appear to be the particular content of a belief which is crucial for rate of change, but rather the degree of congruence of the systems of explanation attached to the belief with those prevalent in the new superordinate culture.

## FOOTNOTES

[1] This study was supported by U. S. Public Health Service Grant 5-R11-MH-5442, Arnold Meadow, Project Director.

[2] Let us again emphasize that this formulation applies to the abandonment or persistence of a subordinate group's belief, not to the selection of a replacement from the superordinate society's belief-system. Although we assume that replacement, or fusion, or whatever, would follow this same principle, our current data do not speak to that point.

[3] A more complete description of these folk-medicine beliefs associated with "diseases" studies is presented by one of our collaborators (Holland, 1962).

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