

ANTHROPOLOGICAL RECORDS

14:6

CHANGING WASHO KINSHIP

BY

STANLEY A. FREED

UNIVERSITY OF CALIFORNIA PRESS

BERKELEY AND LOS ANGELES

1960

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Vol. 14, No. 6

UNIVERSITY OF CALIFORNIA
ANTHROPOLOGICAL RECORDS

Editors (Berkeley): J. H. Rowe, R. F. Heizer, R. F. Murphy, E. Norbeck
Volume 14, No. 6, pp. 349-418, 9 figures in text,
32 graphs

Submitted by editors June 18, 1958
Issued February 5, 1960
Price, \$1.50

University of California Press
Berkeley and Los Angeles
California

Cambridge University Press
London, England

Manufactured in the United States of America

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INTRODUCTION

This paper presents a study of Washo social organization and of the changes which have occurred within it since the end of the aboriginal period. It is particularly concerned with discovering the causes of a number of alternate kinship terms which together appear to constitute a new, emerging system of kinship terminology. The hypothesis here advanced to account for the alternate kinship terms is that changes occurring outside of social organization can affect the terminological system without first modifying elements of formal social structure, such as residence rules or rules of descent. This hypothesis is based on the assumptions that kinship terminology is closely correlated with patterned norms of behavior, or roles, and that these roles may vary considerably within the limits set by a given kind of social organization. Cultural changes can therefore cause terminological change by altering role behavior without affecting the formal social structure.

In order to test the assumption of a close correlation of role behavior and kinship terminology, I have devised a technique, called the role profile test, which yields an objective description of role behavior. The data from the role profile test show that Washo role behavior agrees closely with the emerging system of kinship terminology. The close correlation of role behavior and terminological system and the occurrence of changes in the Washo system of kinship terminology despite a relatively stable social structure support the hypothesis that roles may vary markedly within the limits set by a given type of social structure, the variation being due to causes which lie outside of social organization.

The study is based on six months of field work among the Washo living in Carson City and Dresslerville, Nevada, and Woodfords and Markleeville, California. Four trips were made: during the first two,

in the summers of 1952 and 1953, an attempt was made to add to the data on aboriginal Washo culture; during the last two, in the summer of 1956 and the winter of 1956-57, Washo social structure and kinship terminology were intensively investigated to determine if they had changed appreciably as a result of white contact. My wife assisted me on these last two trips.

I am indebted to a number of people for their help and encouragement. Professor Edward Norbeck, chairman of my thesis committee, introduced me to the study of kinship and has closely guided both my field research and the writing of this report. Professor David M. Schneider pointed out to me the usefulness of the role concept in the study of kinship and social structure. The hypothesis here proposed to account for the Washo kinship data was derived from the articles by Schneider and Homans (1955) and Schneider and Roberts (1956) and was elaborated and discussed in several long conversations with Dr. Schneider. Professor Mary R. Haas read the manuscript several times and offered a number of suggestions and criticisms. My thanks are also due Professor Josephine Miles and Martin A. Baumhoff, who read and criticized the manuscript. Professor Evelyn A. Fix suggested the statistical analysis used in this study, and the section on statistics was written under her supervision. Any errors of calculation or interpretation are, of course, the responsibility of the author. Unless otherwise noted, Washo words are written in a phonemic system developed for Washo by William H. Jacobsen, Jr., who did his work under the Survey of California Indian Languages, Department of Linguistics, University of California, Berkeley. Mr. Jacobsen advised me on all linguistic matters. The field research was supported by the Department of Anthropology, University of California, Berkeley.

I. THE WASHO INDIANS

This chapter is a brief summary of what is known of aboriginal Washo culture, except for social organization, together with the principal changes it has undergone since the coming of the whites. The most significant characteristic of Washo acculturation from the point of view of this study has been the progressive individualization of the society. This can be seen most clearly in their economic life, where the old, coöperative methods of earning a livelihood have given way to individual wage work. The trend toward individualism has also affected ceremonial. The major ceremony of the year, the pine-nut dance, has been given up; and curing is less a group affair than it once was, with the exception of the peyotists, who constitute approximately ten per cent of the tribal membership. Warfare, another activity requiring group coöperation, was abandoned shortly after the coming of the whites. The effects upon social organization of this trend toward individualism will be traced in the following chapters.

INFORMANTS

The sketch of Washo culture which follows is based primarily upon the sources listed below and upon data which I gathered directly in the field. My principal informants were the following: Nancy Emm, Clara Frank, Bertha Holbrook, and Hank Pete, all of Dresserville, Nevada; Roy James, Woodfords, California; Caesar John, Markleeville, California; and Henry Rupert, Carson City, Nevada.

SOURCES

Ethnographic accounts of the Washo are few. The principal ones are by Barrett (1917), Curtis (1926), and Lowie (1939). Stewart (1944) and Siskin (MS) have contributed two excellent studies of Washo peyotism, and Kroeber (1907) has published a brief sketch of the Washo language, which contains a list of kinship terms. Other major sources are Dangberg's (1927) collection of myths, Kroeber's (1925) brief summary of the then available data on Washo culture, Stewart's (1941) list of cultural elements, and Heizer and El-sasser's (1953) study of the archaeology of the central Sierra Nevada.

LOCATION

The Washo Indians are a small, isolated group who speak a language tentatively placed in the Hohan stock (Sapir, 1929, p. 139). In aboriginal times they occupied the extreme western edge of Nevada and eastern California. The eastern part of their territory lay in the Great Basin and the western part in the Sierra Nevada. Aboriginal Washo territory extended from Honey Lake in the north to Sonora Pass in the south. The eastern boundary ran from Sonora Pass northward along the crest of the Pine Nut Mountains; it then turned west

passing just west of Virginia City; then north to a point a few miles east of Reno, and from there northwest to Honey Lake. The western boundary followed the crest of the Sierra Nevada. Lake Tahoe and the eastern half of Sierra Valley were in Washo territory, as were the modern towns of Woodfords, Truckee, and Loyalton, California; and Reno, Carson City, Minden, and Gardnerville, Nevada (Barrett, 1917, pp. 5-7; Curtis, 1926, pp. 57, 89; Kroeber, 1925, pp. 569-570; Lowie, 1939, p. 301; Merriam, MS; Siskin, 1938, pp. 626-627; Stewart, 1944, p. 66).

POPULATION

Estimates of the aboriginal population vary considerably. Kroeber (1925, p. 570) gives the total in pre-white times at possibly 1,500. Mooney estimates 1,000 Washo in 1845, the date he considers to mark the end of the aboriginal period. Mooney believes that the Washo population had fallen to 300 by 1907 (1928, p. 20). This last figure differs markedly from Curtis' estimate of 800 Washo only three years later in 1910 (1926, p. 91). The Washo tribal secretary, Ronald James, estimates the present-day Washo at 850. Many of them have moved to the cities; probably no more than 600 remain within the boundaries of what was formerly Washo territory.

GEOGRAPHICAL DIVISIONS

There are three geographically distinct groups of Washo. Those living north of Carson City, Nevada, are called wélmelti?. Washo living in the Carson Valley are called pá'wa?lu?, and the California Washo are called háñalelti?, with the present California-Nevada border being the approximate dividing line between these last two groups (Simpson, 1876, pp. 93-94; Curtis, 1926, p. 90). I know of no cultural differences between these two groups, but the wélmelti? are said to differ from the other two by their slow manner of speech. In the spring and summer, when the Washo moved up to Lake Tahoe, the wélmelti? camped mainly around the northern half of the lake from McKinney around to Glenbrook. The pá'wa?lu? lived on the western side of the lake south of McKinney, and the southern and eastern lake shore was mixed háñalelti? and pá'wa?lu?. However, any family was free to camp anywhere around the lake.

SEASONAL MIGRATIONS

The Washo were migratory hunters, fishers, and gatherers. A family usually spent the winter in the Pine Nut Mountains. In the spring, the able-bodied men and women went to Lake Tahoe to fish. The rest of the family moved into the great valleys east of the Sierra Nevada where they searched for roots, grass seeds, birds, birds' eggs, and berries. From time to time, someone who had gone to the lake would carry

a load of fish back to the valley to help feed those who had been left behind. In the fall, groups of Washo would travel into California to gather acorns. These trips frequently took them as far west as Placerville. The Washo then returned to the Pine Nut Mountains for the pine-nut season. In the years when there was no crop of pine nuts, a family might choose to winter at Lake Tahoe or in one of the valleys east of the Sierra Nevada.

The Washo no longer lead a migratory life. The shores of Lake Tahoe are now privately owned, and the Washo may not fish there. They still obtain acorns from California, but they no longer have to travel in groups for protection. The trip takes only a day or two in an automobile and may be made by an individual or a single family. The only noteworthy survival of the old seasonal migrations is the fall trip to the Pine Nut Mountains to hunt deer and gather pine nuts. Many families, especially those headed by older people, still spend a month or longer in the Pine Nut Mountains.

ECONOMIC LIFE

The major game animals were deer, antelope, and rabbit. Deer could be hunted individually or communally. The leader of the communal deer hunt was a secular officer; that is, he did not derive his authority from dreams (Lowie, 1939, p. 326). He divided the hunting party into two groups. One group built fires and drove the deer toward the other hunters who were lying in ambush with bow and arrow. The captured deer were divided among all who participated in the hunt. Deer provided, in addition to food, hides for clothes and sinews for use in the manufacture of bows and arrows.

Deer could be hunted by small parties of four or five men. When pursued, deer follow a certain route; and as the Indians knew which way the animals would go, some of them chased the deer while others took a short cut and lay in wait. Disguises consisting of the horns and hide of a deer were sometimes used to approach a herd of deer and lure them close to a group of concealed hunters (Curtis, 1926, pp. 94-95).

Deer remain a fairly important item of food for the modern Washo. Today deer are hunted by individuals armed with rifles; the old, coöperative methods of deer hunting are no longer practised.

Antelope were hunted by a technique known as antelope charming. The leader of the antelope hunt received his power through dreams. He communicated with the animals in his dreams and told them not to be afraid of him. When antelope were sighted, the Washo built a corral of sagebrush. The antelope charmer approached the herd and talked to them, gradually leading them into the corral. This was accompanied by a slow drive by the rest of the Indians. Once the antelope were inside the corral, the Washo rushed upon them and killed them with clubs and bows and arrows. The animals were divided among all the hunters. This method of hunting must have disappeared very early, for no antelope chief was living in 1926 (Lowie, 1939, p. 324).

Rabbits were hunted by a communal drive under the leadership of a secular rabbit chief. This officer was distinct from both the leader of the deer hunt and the antelope charmer. According to Barrett (1917, p. 12), he was a hereditary officer; according to Lowie (1939,

p. 303), an elected official. As many as 200 Indians might take part in a rabbit drive. The rabbits were slowly driven into long nets. During the drive, they were shot with bows and arrows or killed with clubs. Those which evaded the drivers were usually trapped in the nets, where waiting Indians killed them by wringing their necks or squeezing their temples. Care had to be used not to break the net and cause bad luck for the hunters (Barrett, 1917, p. 12). Rabbits provided food, and their skins were used to make rabbitskin blankets. Rabbits have remained a rather important food for the Washo, and rabbitskin blankets are still used by a few older Washo.

Today, rabbits are hunted individually or in a kind of drive which consists of a line of men moving through the sagebrush, shooting the flushed rabbits with shot-guns. Nets are no longer used. Another modern hunting method which is popular among the younger men is to shoot rabbits from an automobile.

The principal seeds used as food were acorns and pine nuts. Acorns did not grow in Washo territory. They were gathered in California and carried back in large, twined burden baskets. The acorns were shelled, pounded to flour on permanent bedrock mortars, leached with hot water, and made into soup. Another popular way to prepare acorns was to pour a thick acorn mush into cold water, thus forming jellylike balls about the size of a fist. The preparation of acorn meal by the Washo closely resembles the practices of the adjacent Californian tribes.

Pine nuts were the most important single food of the Washo. They were eaten throughout the winter and stored from year to year. The pine-nut season was preceded by a dance lasting four days. This was the largest social gathering among the Washo. During these four days, they danced, played games, and prayed for a good crop. While dancing, the Washo carried the tools used to gather and prepare pine nuts: the hooked pole, burden baskets, mano and metate, and the paddle for stirring mush. The most prominent feature of the pine-nut dance was the continual round of games and races, accompanied by heavy gambling. After the last night's dancing, the chief made a speech exhorting people to treat children and the aged with kindness and to be good to their wives. Then they bathed in a stream and scattered to their pine-nut plots (Curtis, 1926, p. 95). Pine nuts were ground to flour and made into soup.

The Washo still make considerable use of pine nuts and acorns. Most of the traditional implements used in their preparation have been retained: mortar, mano and metate, burden baskets, hooked pole, and the various winnowing baskets. Although acorns and pine nuts are widely eaten, they cannot now be considered staple items in the Washo diet, which consists largely of modern American food.

Fish were the most important summer food for the Washo. They obtained most of their fish from the streams draining into Lake Tahoe. The importance of fish in the Washo economy is indicated by the variety of fishing techniques: they could be harpooned, taken in conical traps of basketry, or captured by drives into nets or stone dams erected at suitable places in a stream. None of the aboriginal fishing techniques survive today. All fishing is with rod and line and is therefore individualistic as opposed to many of the aboriginal coöperative methods. In fishing, as in hunting, there has been a steady shift from coöperative to individual activity.

In spite of the moderate number of hold-overs from the old economic system, the economic base of modern Washo life has changed considerably since the 1850's. Today, the Washo live primarily through wage work on surrounding ranches and in the towns. The men are mainly unskilled laborers, although a few have trades and earn a good living. One man has grown wealthy in the lumber business. Women work as domestic servants, as dishwashers in restaurants, or in laundries. But women do not work unless they must, and they spend most of their time at home caring for their families. Most of the aboriginal survivals are in the female sphere of activity, for women can add considerably to the family income by preparing pine-nut and acorn flour and by weaving baskets for sale. The older people have pensions or receive social security payments and are economically independent of their children. Washo material culture is entirely American except for the items mentioned above and a few others. They now live in permanent settlements resembling small, American towns. The largest of these, Dresserville, Nevada, has a population of 195. This is far larger than the number of individuals who lived together in prewhite settlements.

CEREMONIES OF THE LIFE CYCLE

A number of practices were formerly associated with childbirth. The mother ate no meat or salt for a month after the birth; the father observed the same taboos until the baby's umbilical cord fell off; and until the loss of the cord, husband and wife were forbidden sexual intercourse. Ceremonies involving the distribution of gifts marked the return of the father and mother to normal life, the former when the infant lost its umbilical cord and the latter a month after the birth.

Most of the customs surrounding birth are no longer observed. Some women still observe the food taboos; but if they have their babies in the government hospital, they generally eat meat when it is served. Often the doctors and nurses insist upon it. The men have given up all their previous observances. The custom of distributing presents following the birth of a baby is still maintained. It usually takes place two weeks after the birth and seems to be a merging of two aboriginal ceremonies: the one at the time of the detachment of the umbilical cord, and the second, when the mother is freed of all restrictions a month after the birth. The modern ceremony is called the "baby feast."

The girl's puberty rite or "dance," as the Washo call it, was the most elaborate of all the ceremonies of the life cycle. It lasted four days, and the Washo say that during this period the girl was "shaping her life." The principal features of the ceremony were: (1) the girl fasted four days and abstained from meat and fish for one month; (2) she worked very hard so as not to be lazy in later life; (3) on the fourth night, the girl climbed a mountain where she lit four fires; (4) she then raced a nonrelative back to the foot of the mountain, care being taken that she always won the race; (5) the girl danced until dawn on the fourth night of the ceremony and was then bathed. The entire ceremony was repeated when the girl had her second menses.

The puberty ceremony for girls is still held. In my interviewing, I have found very few women who had not had a "dance." Each woman who had not had a

dance gave a reason for its omission, such as her attendance at a government boarding-school. In general, the ceremony is scrupulously observed. The modern ceremony is a modified version of the old one. The girl no longer climbs a mountain; she climbs a small hill. An automobile is waiting for her when she returns; she wears her slip when she is being bathed instead of being naked as was formerly the custom; she abstains from meat for only two weeks instead of a month; the second dance is usually omitted. Yet the essentials of the ceremony are maintained; and this is in the face of the teasing to which the Indian girl is exposed from her white schoolmates, for the public puberty ceremony makes her a conspicuous social object at the time of her first menses.

Marriages were celebrated with a minimum of ceremony. The most desirable Washo marriage was one arranged by the parents of the bride and groom. Such a marriage was preceded by an exchange of presents. To refuse a present was to reject the prospective bride or groom. Following the exchange of gifts, the new couple began to live together without further ceremony (Curtis, 1926, p. 97; Lowie, 1939, p. 308). The exchange of presents was optional, and occasionally a boy and girl would live together without the benefit of parental arrangements (Barrett, 1917, p. 9; Lowie, 1939, p. 308). Perhaps arranged marriages were never very frequent or else the custom began to die out very early, for in my interviews I found only two arranged marriages out of a total of forty-eight. Today, most people marry in the "tribal" manner, that is, they just begin to live together. Even those few who have purchased marriage licenses usually neglect to go to a justice of peace to complete the ceremony officially.

Curtis (1926, p. 97) says that the dead were formerly cremated. Lowie (1939, p. 310) and Barrett (1917, p. 9) confirm this but add that, by the time they studied the Washo, burial had replaced cremation. Following cremation, the Washo collected the bones of the dead person and placed them in a creek. The clothes and personal property of the deceased person were burned or hidden and the house he used was abandoned. The old men and women cut their hair and mourned for three months (Lowie, 1939, p. 310).

Modern funerals retain many Indian practices. Chief among them are the customs intended to make sure that the ghost of the dead person does not return to trouble the living. Before the body is lowered into the grave, an old man steps forward and makes a speech instructing the ghost to stay away. All of the dead person's property that can be buried is interred with him. Personal property must be destroyed, for this is the "road" by which the ghost of the dead can return and trouble the living.

RELIGION AND CURING

The shaman was the principal religious figure. He possessed supernatural power (*wegeleyu*) which he received in dreams and which he learned to control during an apprenticeship of several years under an experienced shaman. A shaman could use his power either to cure sickness or to kill. Supernatural power could come from the deer, rattlesnake, "water-baby" (a small, white, manlike creature which lived in streams, springs, and lakes), bear, and eagle. The Washo call both the sources of power and the power itself *wegeleyu*.

The word also denotes the implements used in curing.

A curing ceremony usually lasted four nights although it was sometimes reduced to two. The rites were the same each night. For the first three nights, the shaman would stop around midnight; on the final night he continued until dawn. The shaman's techniques consisted largely of smoking, singing the songs he had received from his wegeléyu, praying, and finally sucking out the cause of the disease. This might be an insect, a pine nut, a small piece of bone, or some other small object. The shaman's paraphernalia included a rattle, a straight stone pipe, and, for at least one shaman, a bone whistle.

Two shamans were active among the Washo as recently as a few years ago. Today, only one remains alive, and he is an old man. When he dies, shamanism will disappear. Modern Washo medicine is a mixture of shamanism, white medicine, and curing through peyote meetings. Any or all remedies may be tried by a particular patient. The older people are reluctant to go to the government doctor, for they have a fear of being placed in the hospital. They tend to patronize the shaman and the peyote cult in preference to the white doctor. The peyotists, though sincere believers, also recognize the powers of the shaman and the white doctor and readily patronize either of them. The younger people, however, prefer modern medicine; and it is steadily displacing the other two methods of curing.

POLITICAL ORGANIZATION AND LEADERS

Washo political organization was extremely simple. Settlements were minute; Lowie's informants said that they usually had only two to four huts (1939, p. 303). Each settlement was politically independent. Washo informants report the presence of tribal chiefs, but Lowie thinks that this was probably a recent development (1939, p. 303). The chief's sole function was to arrange dances and to make speeches exhorting the Washo to be good and to behave properly. Special headmen led the communal antelope, deer, and rabbit hunts. The antelope chief received his power in dreams; the other two hunting chiefs were secular officers.

The political organization of the modern Washo is more complex. They have adopted a written constitution and they elect a tribal council. Yet this new complexity is largely nominal, for the council exercises little real power and each family does pretty much as it pleases. The chief responsibilities of the council are to manage the small amount of tribal property and to maintain the water supply in Dresslerville, Nevada. Though these are relatively simple matters, the council handles them quite ineptly. Factional fights and personal antagonisms block any really effective council action. The older people, who run the council, seem incapable of dealing with the important problems which face the modern Washo; and the younger people appear to take little interest in council affairs. In short, the Washo have not yet developed an effective political organization.

WARFARE

Warfare seems to have been waged under the leadership of any renowned fighter. The leader collected his

band by sending a messenger around the country carrying a knotted cord (ba'óló'go). The knots represented the number of days remaining until the persons who wished to take part in the fight were to gather at the place of assembly, and the messenger untied one knot every day so as to keep track of the time that remained.

After the warriors had assembled, they engaged in a war dance which lasted four or eight nights. During this period, they manufactured bows and arrows. The arrows were smeared with rattlesnake poison obtained by letting a rattlesnake strike a piece of deer meat. The war dance was a kind of test and training for warfare. A man demonstrated by vigorous dancing that he was strong and fit to go to war; and the dance itself consisted of sudden, jerking movements as if one were dodging arrows. The war dance resembled the pine-nut dance in that features of both dances imitated the coming activities: in the war dance, men danced with bows and arrows and acted as if they were at war; in the pine-nut dance, people carried their implements for gathering and cooking pine nuts. Several taboos were observed during the period of the war dance: (1) men and women were forbidden sexual intercourse; (2) warriors could not eat meat and salt; (3) pregnant women could not throw their shadows on men engaged in dancing and they could not touch the bows and arrows.

Shamans who accompanied the war party served two functions: they called on their supernatural power to keep the enemy and his dogs asleep during the assault; and since they were specialists in herbal medicine, they treated the wounded. The shamans also selected the night for the attack. While the Washo were surrounding the enemy camp, the shamans became very intent on their praying so that none of the enemy should awake. The Washo then entered the camp of the enemy, set fire to their huts, and killed them with clubs and arrows as they emerged. Everyone was killed, even small babies.

When the Washo returned, they had a dance which lasted two or four nights. Lowie reports that men and women danced over the capture of the scalp of the enemy regarded as the best fighter. The scalp was tied to the top of an eight-foot, peeled, willow pole, which everyone except young girls seized and shook. The people finally burned the hair of the scalp and then went home (Lowie, 1939, pp. 329-330). My informants omitted mention of the scalp, but said that an important feature of the dance after the fighting was a ritual bath. This was necessary before the warriors could eat or have intercourse with their wives. The Washo apparently were militarily superior to the Miwok and the Maidu on the west, but they found the more numerous Paiute on their eastern border more formidable opponents. The fact that the Paiute obtained horses earlier than the Washo would also have given the Paiute some superiority in warfare.

SUMMARY

Aboriginal Washo culture may be thought of as a blend of Californian and Great Basin cultural traits. Heizer and Elsasser (1953, p. 4) note the following ties with California:

. . . the conical dwelling made by piling up bark slabs; semi-subterranean assembly house; "community" or bedrock mortar; emphasis on coiled

basketry decorated with named geometric patterns; language affiliation; soaproot meal brush; looped with the hot rock lifter; flat mush stirring paddle; hopper-mortar; feather-decorated coiled basketry.

Certain traits link the Washo with the Great Basin area (Heizer and Elsasser, 1953, p. 4):

. . . long net for catching rabbits by driving technique; special "boss" for rabbit and deer hunt; rabbit-skin blanket; heavy dependence for food on nuts of piñon (*Pinus monophylla*) with the complex of implements and activities used to secure and prepare these (hooked pole, roasting of nuts, carrying baskets); mano and metate; twined basketry techniques and basket forms (e.g., winnowing trays); temporary brush house; antelope hunting method by "charming"; private ownership of clumps of piñon trees.

Modern Washo culture is largely western American with a moderate number of aboriginal hold-overs. The

old, prewhite culture survives most strongly in language, ceremony, and, as we shall see in the next chapter, social structure. The most important change with reference to this study has been the lessening of cooperative activity. This trend has progressed farthest in economics. Although the economic unit has always been the nuclear family, aboriginal economic activity emphasized group cooperation much more than it does today. The modern Indian works for wages; he is part of the larger society where economic activity is impersonal and one's coworkers may be relative strangers. If an Indian family so chooses, it can be economically independent of relatives and friends. This same trend is visible to a lesser extent in ceremonials. The prewhite curing ceremony was a group affair; but modern, white medicine is essentially a relationship between doctor and patient. There is no longer a large group of friends and relatives standing by to lend moral support. Some ceremonies, such as the pine-nut dance, have disappeared completely.

II. WASHO SOCIAL ORGANIZATION

A number of changes have taken place in Washo social organization since the end of the aboriginal period: the form of marriage has changed from non-sororal polygyny to monogamy; the system of kinship terminology is apparently changing, as indicated by the existence of a set of alternate kinship terms; the sororate and levirate have been abandoned; and a weak system of agamous moieties has been lost. Other elements of social organization appear to have been fairly stable, e.g., rule of residence, patterns of descent and inheritance, and form of the family.

The analysis of Washo social organization given in this chapter is based on the investigations of Barrett (1917), Curtis (1926), Kroeber (1907; 1917), Lowie (1939), and Siskin (MS), and upon the following kinds of data which I gathered in the field. First, the most reliable elderly informants were intensively interviewed about all aspects of social organization both past and present. Second, kinship schedules were obtained from seventy informants ranging in age from ten to over eighty. In addition, brief life histories and census data were collected in the course of the genealogical interviews. The life histories provided information on forms of marriage. Residence rules were determined both from the census material and from the life histories, since both kinds of data are necessary to establish residence rules adequately (Fortes, 1949; Goodenough, 1956; Murdock, 1955). Finally, sociometric data using family visiting patterns as the criterion were collected with the thought that, if any incipient unilineal kinship groups were present, they might be discoverable from the pattern of interfamily visiting.

The methods used to determine change in social organization were the same as those used by Bruner (1955), Eggan (1937), Gough (1952), Nett (1952), Schmitt and Schmitt (n.d.), and Spoehr (1947). The writings of earlier investigators and interviews with older informants supplied information on changes in residence rules, kinds of kinship groups, and forms of marriage. Changes in the system of kinship terminology were determined by comparing the variant usages contained in the large sample of modern kinship schedules with what was thought to be the aboriginal Washo kinship terminology. For the Washo, the aboriginal terminology may be established with relative confidence because the early kinship schedules collected by Kroeber (1907; 1917) and Lowie (1939) agree closely with each other and with the terminological system used by the majority of modern Washo.

Terminological change has a restricted meaning here. It refers only to changes which result in a new type of terminological system. Since the widely used classifications of kinship systems are based on the consanguine relatives of ego's generation and the first ascending and first descending generations (Spier, 1925; Lowie, 1928; Murdock, 1949), a change in the nomenclature of cousins or aunts and uncles is significant whereas change in terms for grandparents' siblings or affinal relatives is not significant. The genealogical interviews conducted in this research dealt primarily with relatives critical in defining the type of kinship terminology.

The classification of kinship systems used in this study is the one proposed by Robert H. Lowie (1928). On the basis of the terminological usages in the parental generation, he defined four types of kinship systems: generation, bifurcate merging, lineal, and bifurcate collateral. In generation terminology, one term is used for all male relatives and another term for all female relatives in the parental generation. In bifurcate merging terminology there is a single term for father and father's brother and a single term for mother and mother's sister, but father's sister and mother's brother have separate terms. The lineal type of terminology distinguishes father from father's brother and mother's brother (who are designated by a single term) and mother from mother's sister and father's sister (who are also referred to by a single term). Bifurcate collateral terminology has six distinct terms for parents and their siblings. Lowie's four types "can be applied to any trio of kinsmen in the same generation and of the same sex, provided the second is a collateral relative of the first in the same line of descent and the third is related to Ego in the same manner as the second except for a difference in the sex of the connecting relative" (Murdock, 1949, p. 142).

THE TERMINOLOGICAL SYSTEM

The standard or aboriginal Washo kinship terminology is given in table 1 (pp. 356-357). The standard terminology is still used by the majority of modern Washo. It is a generation type of terminology in ego's generation and a bifurcate collateral type in the first ascending and first descending generations.

The morphophonemic analysis of kinship terms in table 1 is by William H. Jacobsen. The first column lists a number for each term; these numbers are the same as the ones used in the diagram of the standard Washo consanguineal kinship system appearing on figure 1. The second column gives the English translation for each term. The third column presents the singular form with the prefix indicating first person possessive. The final column gives the morphophonemically basic form of the stem. If the stem is preceded by a hyphen, this indicates that it must always take a possessive prefix even if the possessor is indicated by a preceding noun or independent pronoun. The terms are given in approximately the order used by Lowie (1939).

All cousins are called older and younger brother or sister depending upon whether ego's parent is older or younger than the parent of ego's cousin. The relative ages of ego and his cousin do not affect the choice of terms; hence, a person may call a chronologically older cousin "younger brother," provided that his parent is older than his cousin's parent. Kroeber (1917) says that cousins are called older or younger siblings according to their own ages. This point was thoroughly checked with a number of informants and they all agree that terms applied to cousins depend on the relative ages of parents and parents' siblings rather than on the ages of ego and his cousins. Since Kroeber's

TABLE 1

Consanguineal and Affinal Relatives

Term No.	English	Singular with first person poss. prefix	Stem
Parent and child class			
1.	father	digóy?	-gó?y
2.	mother	dilá?	-lá?
3.	parent	di?málu	-?málu
4.	parent	dityé·Lu	-é·Lu
5.	son	diŋá·m	-ŋá·m
6.	daughter	diŋámu?	-ŋámu?
7.	children	diŋá?miŋ	-ŋá?miŋ
Sibling class			
8.	older brother, half-brother, cousin	di?á·tu	-?á·tu
9.	older sister, half-sister, cousin	di?í·sa	-?í·sa
10.	younger brother, half-brother, cousin	dibéyu	-béyu
11.	younger sister, half-sister, cousin	diwítsuk	-wítsuk
12.	distant male relative or friend, alternate term for cousin (m. sp.)	dikMílu or diMílu	-Mílu
13.	distant female relative or friend, alternate term for cousin (m. sp.)	di?ulišáwlam	-šáwlam
14.	distant male relative or friend, alternate term for cousin (w. sp.)	di?ulimeté·liwi?	. . .
15.	distant female relative or friend, alternate term for cousin (w. sp.)	disú·	-sú·
Grandparent and grandchild class			
16.	father's father	dibá·ba?	-bá·ba?
17.	son's child (m. sp.)	labá·pa?	-bá·ba?
18.	mother's father	di?élel	-?élel
19.	daughter's child (m. sp.)	le?éleli?	-?élel
20.	father's mother	di?áma?	-?áma?
21.	son's child (w. sp.)	la?á?ma?	-?áma?
22.	mother's mother	digú?u	-gú?u
23.	daughter's child (w. sp.)	legú?yi?	-gú?u
24.	father's mother's sister, mother's mother's sister	dibáki	-báki
25.	sister's child's child (w. sp.)	lebákiyi?	-báki
26.	father's father's sister, mother's father's sister	disáma?	-sáma?
27.	brother's child's child (w. sp.)	lasá?ma?	-sáma?
28.	father's father's brother	disáksak	-sáksag
29.	brother's son's child (m. sp.)	lasáksagi?	-sáksag
30.	mother's father's brother	di?é·bu	-?é·bu
31.	brother's daughter's child (m. sp.)	le?é·pu?	-?é·bu
32.	father's mother's brother, mother's mother's brother	ditó?o	-tó?o
33.	sister's child's child (m. sp.)	lató?yi?	-tó?o
Great-grandparent and great-grandchild class			
34.	relative of third ascending generation	dipísew	-písew
35.	relative of third descending generation	lepísewi	-písew
Uncle and nephew class			
36.	father's brother	di?éwši?	-?éwši?
37.	brother's child (m. sp.)	dimá?ša	-má?ša?
38.	mother's brother	didá?a	-dá?a
39.	sister's child	dimá·gu	-má·gu
40.	father's sister	diyá·?	-yá·?
41.	brother's child (w. sp.)	dišémuk	-šémug
42.	mother's sister	dišáša?	-šáša?

TABLE 1
(continued)

Term No.	English	Singular with first person poss. prefix	Stem
Parent-in-law and child-in-law class			
43.	parent-in-law	láyuk	-áyuk
44.	son-in-law	dibuʔáŋaliʔ	buʔáŋaliʔ
45.	daughter-in-law	léyeš	-íyeš
46.	child's spouse's parents	lámik	ámig
Sibling-in-law class			
47.	wife's brother	diwláʔdut	-wAláʔdut
48.	husband's brother	dimeʔéwšiʔ	-meʔéwšiʔ
49.	sister's husband	didámaw	-dámaw
50.	brother's wife (m. sp.)	dimašášaʔ	-mašášaʔ
51.	husband's sister, brother's wife (w. sp.)	diyáŋil	-yáŋil
Spouse class			
52.	husband	dibuméʔliʔ	buméʔliʔ
53.	husband	diʔméʔš	-ʔméʔš
54.	wife	dimláʔyaʔ	-mláʔyaʔ or -imláʔyaʔ

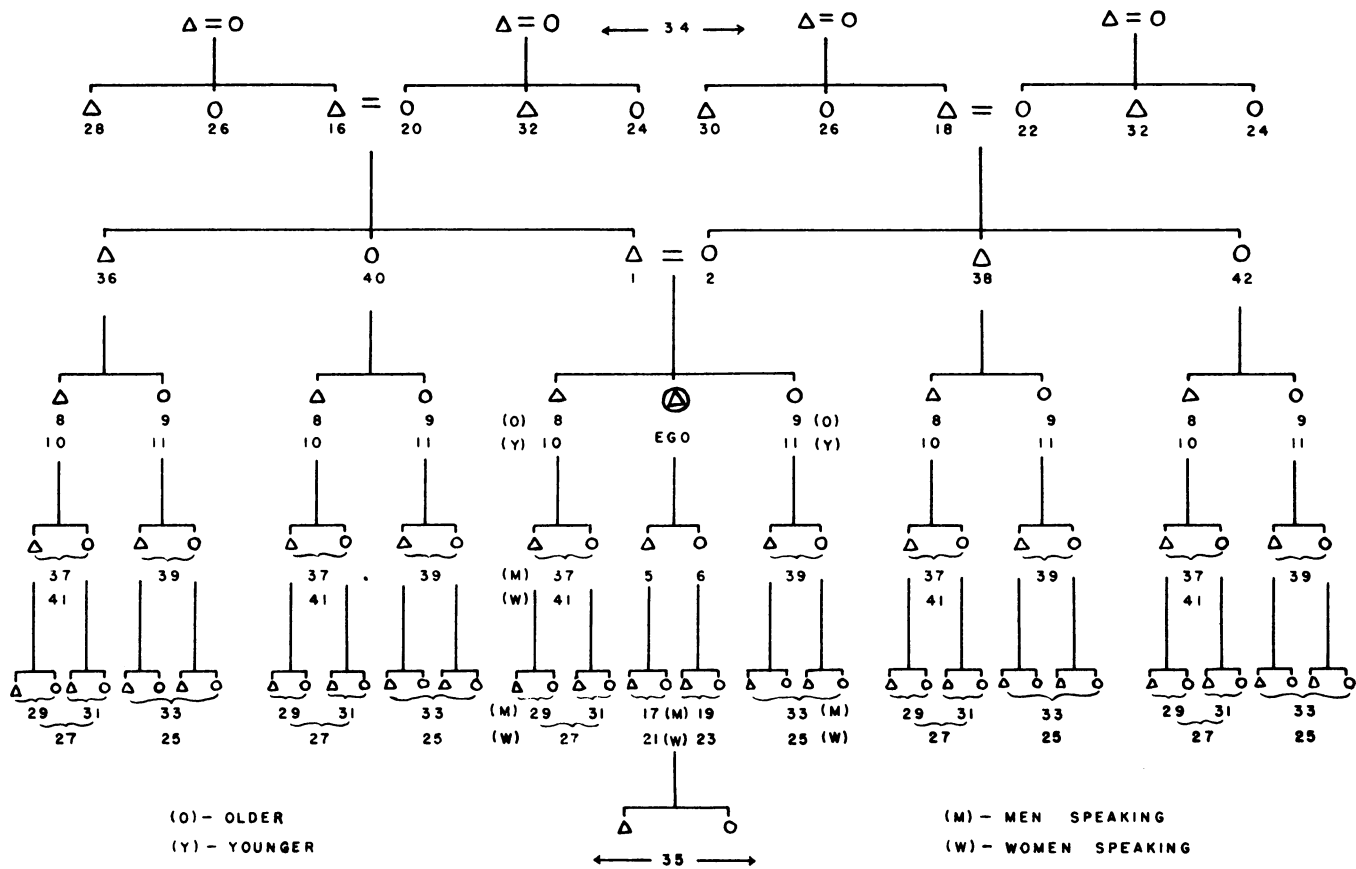


Figure 1. The standard Washo consanguineal kinship system.
Triangles denote males; circles denote females.

information came from a single informant, he may have been misinformed on this point. There is, however, a tendency among younger people to call cousins older or younger siblings on the basis of their own ages rather than the ages of parents and their siblings. This trend is clearly visible in the analysis of terminological usages given in table 3. It is a logical development since the introduction of schools, calendars, and written records of births. Before then, relative ages of individuals of different nuclear families would not ordinarily be known if the persons were of approximately the same age.

Six distinct terms exist for father, father's brother, father's sister, mother, mother's brother, and mother's sister. Brother's child is distinguished from sister's child; both are distinguished from own children. Husbands and wives of aunts and uncles are not considered relatives. All my informants were quite definite on this point. Lowie (1939) and Siskin (MS) say that mother's sister's husband is called by the same term as father's brother, and father's brother's wife by the same term as mother's sister. This was true when two brothers married two sisters, as occasionally happened. In such cases, mother's sister's husband is the same person as father's brother; and father's brother's wife is the same person as mother's sister. Lowie's information may have been obtained from the descendant of such a marriage.

Terminological usages between ego and all relatives of the second and third ascending and descending generations are reciprocal. For example, ego calls his mother's father *di'élel* (my mother's father), and this relative calls him *le'éleli?* (my daughter's child). Morphophonemically, the stem of these two words is the same (-'élel). The term, *le'éleli?*, may be translated approximately as "the one whose mother's father I am."

There are apparently no differences in terms of reference and address. Kroeber (1907; 1917) and Lowie (1939) have not reported any; and I have found none in the course of my interviewing. William Jacobsen, who is currently making a study of the Washo language, also corroborates this.

The extent of the Washo kinship system is elastic, but usually the range of recognized relatives is not extensive. Second cousins are brothers and sisters, but relationships are rarely traced that far. The children of grandparents' siblings are properly aunts and uncles (e.g., father's father's brother's daughter may be called father's sister, for father and his father's brother's daughter call each other brother and sister), but these relatives are usually not called aunts and uncles. Often my informants did not know the identity of the children of their grandparents' siblings; when they did know these persons, they sometimes called them by general terms meaning "my friend or distant relative." Occasionally, however, a person would call a child of a grandparent's sibling by the appropriate uncle or aunt term. Since the Washo are forbidden to marry relatives, a minute tracing of relationships would make it difficult to find a mate. This may account for the infrequency with which distant relatives are recognized.

POLITE AFFINAL TERMS

The Washo use a set of polite, teknonymous terms for most affinal relatives. These are given in table 2. One informant gave two polite terms for sister's husband. He was called *di'í'sa bumé-li?* (my older sister's husband) as well as *dimá'gu dagóy?* (my sister's child's father). My notes contain only one polite term for brother's wife (my brother's child's mother); I have not recorded the logically possible term "my older [or younger] brother's wife." This suggests that the use of descriptive terms with "mother" in them may be more strongly prescribed than those containing "father." On the other hand, my informants may simply have failed to mention the descriptive term "my older [or younger] brother's wife." Since I did not explicitly investigate all the possible descriptive terms which may logically be used for affinal relatives, table 2 may not give a complete list of terms. Nevertheless, the essentials of the system are presented.

TABLE 2

Polite Affinal Terms

English	Washo	Literal translation
son-in-law	<i>le'éleli? dagóy?</i> (m. sp.); <i>legú?yi? dagóy?</i> (w. sp.)	daughter's child's father; daughter's child's father
daughter-in-law	<i>labá'pa? dalá?</i> (m. sp.); <i>legú?yi? dalá?</i> (w. sp.)	son's child's mother; son's child's mother
father-in-law	<i>dibumé-li? dagóy?</i> (w. sp.)	husband's father
wife's brother	<i>diñá?miñ dadá'a</i>	children's mother's brother
husband's brother	<i>diñá'm de'éwš'i?</i>	son's father's brother
sister's husband	<i>dimá'gu dagóy?</i> <i>di'í'sa bumé-li?</i>	sister's child's father older sister's husband
brother's wife	<i>dimáš dalá?</i> (m. sp.)	brother's child's mother
brother's wife	<i>dišémuk dalá?</i> (w. sp.)	brother's child's mother

ALTERNATE TERMS

Terminological change was determined by comparing modern usages with the standard kinship system. In the course of seventy genealogical interviews, at least a few variant kinship usages could probably have been collected during aboriginal times. However, the conditions of modern Washo life make variant usages in genealogical interviews almost inevitable. Some informants speak Washo poorly and may guess at terms; others do not understand English well and may misunderstand the investigator's questions. The problem is to separate the alternate usages due to mistakes and misunderstandings from the ones which may indicate that the terminological system is changing.

Two criteria are available for this purpose. First, usages arising from change in the terminological system should occur more frequently than other "alternate" usages which appear to represent erroneous information. Second, the alternate terms of the new, emerging kinship system should form an internally consistent system.

Analysis of the Washo genealogical data showed the following alternate usages.

1. Thirteen informants called some or all of their cousins by terms distinct from the sibling terms. The terms used are numbered 12, 13, 14, and 15 in table 1.
2. Five informants called their brother's children and sister's children by a single term.

TABLE 3

Incidence of Washo Kinship Usages in Ego's and Adjacent Generations

Kinship usage*	Age group of informants							
	10-19 (15) [†]	20-29 (13)	30-39 (7)	40-49 (12)	50-59 (8)	60-69 (8)	70-79 (5)	80-89 (2)
Siblings								
Standard	12	12	7	12	8	8	5	2
Term unknown	2							
Miscellaneous	2	1						
Cousins								
Standard	2	3	4	8	7	7	4	
By own age	4	4	1	1	1			
Alternate	2	3	1	2	2	2		1
Term unknown	9	6	2		1			
Miscellaneous	1			2				
Uncles								
Standard	6	11	6	10	7	6	5	2
Alternate	3							
Term unknown	7	1				1		
Miscellaneous				1				
Aunts								
Standard	8	8	4	10	7	7	4	2
Term unknown	6	1	1					
Miscellaneous		2						
Nephews and nieces								
Standard	3	8	4	11	8	8	5	2
Alternate	1	2	2					
Term unknown	3	3						
Miscellaneous	1	1			1			
Father and mother								
Standard	12	13	7	12	8	8	5	2
Term unknown	3							
Son and daughter								
Standard	1	9	5	9	7	5	4	2

*The meanings of "standard" and "by own age" are clear from the text. "Term unknown" means the informant did not know the term. "Alternate" refers to the terms of the new terminological system. "Miscellaneous" includes all alternate usages regarded as nonsignificant; these are listed in the text. If a single informant gave different kinds of usages (e.g., standard and alternate) for a single kind of relative (e.g., cousins), he was counted twice. If he gave more than one different kind of "miscellaneous" response for any one kind of relative (as for example to call one aunt "grandmother's sister" and the other aunt "great-grandparent"), he was counted only once.

[†]The number in parentheses is the number of informants in the age group.

3. Three informants called their mother's brother and father's brother by a single term.

Two alternate usages were given by two informants: mother's brother's child was called brother's child, and older brother was called younger brother. A considerable number of alternate usages were given by only one informant: father's sister was called grandmother's sister, father's sister was called great-grandparent, mother's sister was called grandmother's sister, father's brother was called older brother, brother's son was called younger brother, mother's sister's son was called sister's child, and older sister was called younger sister. One woman used the male speaking term for brother's child instead of the female term. One informant used brother's child (male speaking) for sister's son and brother's son, and sister's child for sister's daughter and brother's daughter. This is what Schmitt and Schmitt (n.d., p. 42) call a "loan translation," that is, the Washo terms have been equated with the English nephew and niece terms.

The three alternate usages which occur most frequently appear to represent change in the terminological system. They form a consistent system: the new terminology is of the lineal type in all generations. The alternate cousin terms and the terminological merging of brother's child and sister's child show a significantly higher frequency than all other alternate usages. The merging of father's brother and mother's brother occurs only slightly more than other, nonsignificant alternate usages; but it is included with the other two primarily because it conforms to the trend toward a lineal terminological system in the three generations under study.

The alternate terms appear to represent a new system of kinship terminology rather than survivals from an older system. From the breakdown of Washo kinship usages given in table 3, it can be seen that the alternate uncle and nephew-niece terms are used by individuals in the younger age groups; and this leads to the inference that they are recent. The alternate cousin terms are spread rather evenly throughout the generations, but they too appear to be part of a new terminological system. This is indicated from the terms used for children of cousins. Older people generally use the terms meaning brother's child and sister's child in spite of the fact that they no longer call their cousins siblings. Younger people tend to use the cousin terms for the children of cousins. The terms for cousins apparently are first changed in ego's generation, and the change is then extended to the first descending generation. Thus the use of the alternate cousin terms is becoming more firmly embedded in the terminology. Another reason for believing that the cousin terms are part of a new kinship system is that the older people who use them state that sibling terms are also correct whereas the younger people are unaware that sibling terms may be used. The greater frequency of the alternate cousin terms compared to the alternate nephew-niece and uncle terms and their greater age as indicated by their occurrence among older persons is in accord with Dole's observation that when terminological patterns change, the cousin terms change first (Dole, MS, p. 428). The Washo data indicate that terms of the first descending generation may be the next to change, followed by changes in the parental generation.

Most people who use the standard cousin terms declare that the alternate cousin terms are incorrect.

However, the older people who use the alternate cousin terms handle the language expertly and can speak as authoritatively on the culture as those who use the standard terminology. When asked the reason for using alternate cousin terms, these older people usually say that they just prefer them. One man said that he used the alternate cousin term because he disliked his cousin but was fond of his brother who was dead. He did not want to apply the term for a relative whom he liked to one he disliked. On the other hand, another informant said he used alternate cousin terms for male cousins because he was friendly with them (the cousin terms also mean "friend"). Another informant said she used the alternate cousin terms because these relatives were not her "real" siblings. Apparently, no rules govern the use of standard or alternate cousin terms; it appears to be a matter of personal preference.

In general, the younger people (10-19 years of age) who use alternate cousin terms do not know that sibling terms are also correct. This does not seem to cause conversational confusion. One boy told me that his cousins called him brother whereas he always called them cousin. He found the situation amusing, but apparently saw no conflict in the usages. Another boy recalled that he had heard older people call their cousins siblings, but said that he never did.

There is no noticeable tendency for a person who uses one of the alternate terms to use any of the others. Only one informant used the alternate lineal terms for both cousins and uncles. He had no nephews and nieces and so his usage for these relatives could not be determined.

RESIDENCE RULES

Washo residence rules have undergone no discernible changes since the end of the aboriginal period. The minor differences between the findings of Lowie (1939), Curtis (1926), and myself are probably not due to change. Instead they appear to arise from two circumstances: (1) Washo residence patterns are difficult to characterize since there is no residence rule which must be strictly followed; and (2) Lowie and Curtis used only a few informants whereas my data were gathered from a fairly large number of people. The residence patterns reported by a large number of persons might reasonably be expected to show greater variation than the normative statements of a few informants, especially in the absence of a compelling rule.

Lowie reports residence as matrilocal until the death of the wife's parents, when the couple burned the house and moved. Another of his informants describes residence as matrilocal or patrilocal with a slight preference for the former (Lowie, 1939, p. 308). Curtis reports initial matrilocality. After a few weeks, the couple returned to the husband's family, but many of the couples lived in both places alternately (Curtis, 1926, p. 97).

These foregoing statements agree reasonably well with most of the data on residence which I collected. However, the situation is more complicated than Lowie and Curtis report. The 70 genealogies and associated brief life histories contain information on 37 first marriages of persons of all ages. Fourteen were initially matrilocal. After a few years, usually following the birth of the first child, the couple shifted residence. Of the 14 initially matrilocal marriages, 7 were

subsequently patrilocal, 8 neolocal, and 1 matrilocal. I have counted a single marriage more than once if the couple shifted residence more than once. For example, if a couple lived for two years with the wife's parents, then for some time with the husband's family, and finally by themselves, they were counted as initially matrilocal and subsequently patrilocal and neolocal. Of the first marriages not initially matrilocal, 11 were patrilocal, 10 matrilocal (permanently and not just initially), and 9 neolocal.

The various kinds of residence arrangements are scattered randomly with respect to the age of informants. This is a critical point, for the neolocal marriages were not specifically reported by the earlier investigators. Although Lowie says that a couple moved after the death of the wife's parents, he does not specify the new location of the couple. Yet the fact that neolocal marriages occur as frequently among older people as among younger indicates that they are not a recent innovation.

Data on 11 second and subsequent marriages are contained in the genealogies and life histories. Three of these were initially matrilocal; and of these, 1 was subsequently patrilocal and 2 neolocal. Of the second marriages not initially matrilocal, 3 were patrilocal, 4 matrilocal, and 5 neolocal. As was true of first marriages, the various kinds of residence arrangements of second and subsequent marriages were distributed randomly with respect to the age of informants.

To trace the history of a number of Washo marriages, as has been done above, describing them as patrilocal or matrilocal or neolocal without regard for the length of time spent under the various rules, gives a somewhat distorted picture of Washo residence, for it emphasizes unduly the "neolocal" residences. Actually, almost all couples live near their parents or other close relatives the greater part of their lives. Occasionally, a family may live for a few years with no close relatives near by. For this reason some marriages have been classed as neolocal. In the matter of residence rules, the normative statements of Lowie's, Curtis', and my informants give a better picture of the essential nature of Washo residence than a statistical count. Residence may best be described as bilocal. There is no evidence that the rule of residence was different in prewhite times.

DESCENT AND INHERITANCE

Descent was basically bilateral. Personal property was not inherited, for it had to be destroyed at death. Pine-nut picking rights descended bilaterally. A person also had picking rights on his spouse's land, but these rights were terminated at the death of the spouse. Certain offices may have descended from father to son. Barrett (1917, p. 9) says that each village had a hereditary chief. In former times, the office passed from father to the eldest son; more recently, he says, the office was filled by the selection of the most appropriate individual regardless of relationship. Barrett also states that the rabbit chief was a hereditary official, but this is disputed by Lowie. Neither shamans nor antelope charmers inherited their positions.

The aboriginal Washo system of inheritance fits well with the American bilateral system and has changed only slightly since the coming of the whites. One change is that people can now dispose of their property by a will. This is particularly important with regard to in-

surance policies. Some bitterness has been caused by beneficiaries who refuse to share insurance money with their siblings, since the latter would have inherited equally under the old system. Another change is that wives and husbands can now inherit from each other, and a third change is that parents can inherit money from their children if the latter die first. In aboriginal times, only consanguine relatives inherited, and these in descending order.

KINSHIP GROUPS

The Washo lacked sibs, lineages, and clans. The family was usually nuclear, often with a few, more distant relatives attached. The Washo formerly practiced polygyny and therefore possibly had some polygynous families. Whether these reached a frequency of 20 per cent, a level which Murdock uses to distinguish between societies with polygynous families (1949, p. 28) and those with monogamous families, cannot now be determined. My informants regard the old Washo family as nuclear, and it will be so classified here. The modern Washo family is nuclear but usually includes a few, more distant relatives.

The Washo formerly had a weak system of agamous moieties whose only apparent function was to oppose each other in games at the pine-nut dance. One moiety was called *péwlelel íáyadi?*, which means roughly "those who camp on the east side" (of the camp circle) or *dípek gumtánu*, meaning "people of the white paint." Lowie gives a third name, *álaási* (Lowie's transcription). The other principal moiety was called *tánjelelel íáyadi?*, which can be translated approximately as "those who camp on the west side" (of the camp circle). Members of this moiety painted themselves red and were also called *sawásaḡ gumtánu*, "people of the red paint." Members of a third "moiety" were called *dayásilgá-š íáyadi?* (also *dewtsilgá-š íáyadi?*), meaning "those who camp in the corner" (of the camp circle) or "those who camp in between" (the other two moieties). They lived between the east and west moieties in the camp circle and were divided between them for purposes of playing games. This third moiety seems to have had the sole function of supplying additional members to the teams representing the other two moieties. Despite this third group, the system was fundamentally dual (Lowie, 1939, p. 304). The moiety system does not exist today.

A person belonged to the moiety of his father, which often was his mother's moiety also. Nancy Emm reports that when persons of different moieties married, they could join whichever moiety they wished. Hank Pete claims that a woman joined her husband's moiety. Lowie says that in the hand game, a man could leave his own moiety and join his opponents if they were luckier (Lowie, 1939, p. 304).

Two kinds of kin groups that frequently occur in bilateral societies are demes and kindreds. The deme, says Murdock (1949, pp. 62-63),

. . . is most clearly observable in the endogamous local community which is not segmented by unilinear consanguineal groupings of kinsmen. By virtue of the rule or strong preference for local endogamy, the inhabitants are necessarily related to one another through intermarriage, although they cannot always trace their exact kinship connections. They are consequently bound to one another not only by common

residence but also by consanguinity, as is, in fact, usually specifically recognized. Within such a group the only social structuring is commonly into families, which may be of either nuclear, polygamous, or extended type. Except for family ties, the strongest sense of identification is usually with the community as a whole, which is viewed as a consanguineal unit in relation to other communities in a manner quite comparable to the attitude toward one's own sib in a unilinear society.

Murdock believes that the Washo may have had demes (1949, p. 63). This would be important to know, since demes are thought to exert an influence on kinship terminology. They are associated with kinship terminology of the generation type in ego's generation only (Murdock, 1949, pp. 158-161). I endeavored to discover whether the Washo had had demes and could find no evidence of their former existence. Murdock may have based his opinion on a sentence in Barrett: "The village community is the largest division and each village is entirely distinct from all others" (1917, p. 8). From the context, I interpret this to mean only that each village was politically independent. The principal feature of the deme, the fact that it is an endogamous community viewed by its members "as a consanguineal unit in relation to other communities," was apparently lacking among the Washo. Lowie's description of a Washo village would deny the existence of demes. His informant said that the neighbors who lived about thirty feet away were not kin (1939, p. 303). Demes clearly do not exist among the Washo today.

The kindred is the commonest type of bilateral kinship group. In our society, it includes that group of near relatives who are expected to attend weddings, funerals, graduations, holiday dinners, and family reunions. Members of kindreds visit freely and support one another when they are in difficulty. Kindreds in other societies have comparable characteristics and functions (Murdock, 1949, pp. 56-57).

The Washo do not appear to have groups of relatives which satisfy these criteria. Curing ceremonies, the girl's puberty dance, and funerals are attended by all interested Washo; and relatives outside the nuclear family seem to have no special functions. A Washo expects help from members of his nuclear family, but

more distant relatives have no particular obligations. In talking with the Washo about relatives, I get no particular feeling of a group of kinfolk larger than the nuclear family. Informants will mention this relative or that one as being particularly close, but make no mention of a group of kin standing up for them against another kin group or being obligated to aid them. The modern Washo are best regarded as lacking kindreds. The earliest evidence regarding Washo social organization is Barrett's statement that "the social organization of the Washo is primarily based upon the family unit" (1917, p. 8). This is certainly true today and there is no evidence that the situation has changed since the end of the aboriginal period.

MARRIAGE

Curtis (1926, p. 97) says that polygyny was common and by no means exceptional. Barrett (1917, p. 9) says:

In former times polygamy was practiced, there being no restrictions placed upon a man as to whom his second or other succeeding wife should be. On the other hand, monogamy was quite as prevalent as polygamy.

Lowie reports that both sororal and nonsororal polygyny existed. Lowie's data show a preference for the sororal form. He reports an incident in which a rancher asked a Washo why he did not have two wives. The Indian replied, "My wife has not got a sister" (Lowie, 1939, p. 309). The same preference for sororal polygyny is reported by my informants. The reason given is that strange women fight. Murdock classifies polygynous societies which are not exclusively sororal as nonsororal (1949, p. 140). I have followed his system and therefore classify aboriginal Washo marriage as nonsororal polygyny. The modern Washo have abandoned polygyny because it is forbidden by law.

Both the sororate and the levirate were formerly practiced to some degree. Lowie says that the levirate and sororate were correct but not compulsory (1939, p. 310). Curtis declares that a widow was bound to marry her husband's brother if he desired her (1926, p. 97). My informants generally agree with Lowie. The sororate and levirate are no longer followed.

III. ALTERNATE TERMS AND ROLE BEHAVIOR

This chapter is devoted to determining the causes of the emerging system of kinship terminology. Before we proceed to the explanation which seems to account for the Washo data most satisfactorily, three other explanations will be considered. The first is that the alternate terms are due to a process which Schmitt and Schmitt (n. d.) call loan translation, that is, the old Washo terms are adapted to the English kinship system. This explanation deserves attention because the alternate Washo terminological usages form a lineal type of kinship terminology resembling the English kinship system.

The case for loan translation is strongest in the parental generation because the two separate terms for father's brother and mother's brother have been reduced to a single term which may be equated with the English term "uncle." But the terms for aunts have not undergone a similar merging, and it is fair to ask why loan translation should be restricted to uncles.

The use of loan translation as an adequate explanation encounters further difficulties with regard to the alternate cousin and nephew-niece terms. The process of loan translation should result in a single Washo term being used for cousins; instead, the Washo use four distinct terms. Furthermore, one of the informants who uses alternate cousin terms speaks no English and another speaks only a few words. These informants could not be directly affected by the English terminological system. In the first descending generation, the process of loan translation should alter the Washo terminology so that a single term is applied to nephews and another to nieces. But this has not happened; in the emerging terminology, all siblings' children are lumped under a single term, thereby ignoring the sex distinction between nephews and nieces. It seems clear that loan translations do not in themselves adequately account for alternate Washo terminological usages.

This is not to say that the Washos' knowledge of the American kinship system has no effect on Washo kinship terminology. It may be one of several causes of the alternate terms. But the new Washo terminology is not due solely to loan translation, for the new terms do not agree closely enough with the English system. I found only one clear case of loan translation: one informant called his nephews by one term and his nieces by another. This usage agrees exactly with the English system of terminology, a circumstance one might reasonably demand before using loan translation as an explanation of terminological change.

A second possible explanation is that the alternate terms arise from unusual circumstances whereby a relative assumes a role ordinarily played by another relative and is therefore called by the kinship term appropriate for the assumed role instead of by the term ascribed by his genealogical position. I found only one case of this kind among the Washo: a woman called a cousin by the term "older sister" instead of the genealogically correct term "younger sister" because they were raised in the same house and her cousin was actually ten years older than she. The age

discrepancy of ten years, together with being raised in the same nuclear family, made the term "younger sister" seem inappropriate. The woman knew that younger sister was the correct term, but preferred to use older sister. This kind of modification of terminological usages appears to be quite rare among the Washo. When children were reared by an aunt or grandmother, they always called these relatives by the correct terms instead of mother; and stepfathers were never called father. The Washo seem quite orthodox in the use of their kinship terminology.

A third possible explanation of the new Washo kinship system is Murdock's theory of the evolution of social organization. Murdock says that social organization is a semi-independent system which changes according to internal dynamics of its own. Of the major elements of social organization, which include the system of kinship terminology, kinds of kinship groups, rules of residence and descent, and forms of marriage, the one least susceptible to influences from outside the social organization is the terminological system. Rules of descent and kinds of kin groups are also relatively immune to the influence of external factors. Types of marriage can change directly owing to external influences, but "the impact of a change in marriage upon other parts of the social structure is usually relatively slight" (Murdock, 1949, p. 201). The aspect of social organization particularly sensitive to outside influences is the rule of residence. Rules of descent and kinds of kinship groups usually change after the residence rule. In brief, change in social organization begins with modification of the residence rule and ends with the adaptive changes in the system of kinship terminology.

The features of aboriginal Washo social structure which are reflected in the standard terminology are bilocal residence, nonsororal polygyny, and bilateral descent, with the nuclear family constituting the largest kinship group. Their presumed effects upon kinship terminology as given by Murdock (1949) are as follows. Bilocal residence tends to be associated with kinship terminology of the generation type. Washo standard terminology is of the generation type in ego's generation only. Nonsororal polygyny tends to be associated with kinship terminology of the bifurcate collateral type. Washo standard terminology is bifurcate collateral in the first ascending and first descending generations. When the nuclear family stands "in majestic isolation, as it does in our own society" (Murdock, 1949, p. 156), it tends to be associated with kinship terminology of the lineal type. The Washo family is nuclear, but it does not stand in majestic isolation. Murdock does not deal explicitly with this kind of a situation. However, he notes that extended families depend on the prevailing rule of residence and exert an influence on kinship terminology in accord with it (1949, p. 153). The Washo family and residence rules result in an alignment of kinsmen rather similar to that which occurs in groups with bilocal extended families; therefore, the family and residence rules taken together may be said to exert an influence in the direction of a generation type of kinship terminology. In

summary, the standard Washo kinship terminology may be thought of as a compromise between a generation type and bifurcate collateral type, as might be expected from the divergent influences arising from the social structure.

The new Washo terminological system is lineal in ego's generation and the first descending generation. In the parental generation, the uncle terms are lineal but the terms for aunts remain bifurcate collateral. Can the changes in social structure, namely, the demise of the moiety system, the loss of the sororate and levirate, and the shift from nonsororal polygyny to monogamy adequately account for the terminological changes?

The first two changes in social structure appear to have no connection with the terminological changes. Exogamous moieties tend to be correlated with the bifurcate merging type of terminology; but nonexogamous moieties do not have this effect, for they produce no regular alignments of kinsmen. Murdock classes societies with nonexogamous, unilineal kinship groups as bilateral (1949, pp. 161-162). The Washo moiety system was agamous and therefore exerted no noticeable influence on the terminological system. Thus its loss is probably not significant with regard to the changes that have taken place in the kinship terminology. If the sororate and levirate have an influence on kinship terminology, it is presumably toward the bifurcate merging type (Sapir, 1916). Since Washo standard terminology is not bifurcate merging, the sororate and levirate were never reflected in the terminology, and their lapsing has no apparent connection with the changes in the system of kinship terminology.

The loss of nonsororal polygyny has been the only significant change with regard to the changes in the kinship terminology. Nonsororal polygyny is associated with kinship terminology of the bifurcate collateral type. Its loss therefore should result in some modification in the first ascending and first descending generations. In part, this has happened; bifurcate collateral terminology is disappearing for the uncle terms and in the first descending generation. However, the aunt terms have not yet merged. The emerging terminological system in ego's generation cannot be explained by the change in marriage arrangements, for the standard terms in ego's generation are not bifurcate collateral and therefore never reflected nonsororal polygyny. At best, the disappearance of nonsororal polygyny appears to be a factor in roughly one-half of the changes in the Washo terminological system. It helps explain the new terms for uncles and for nephews and nieces. It does not explain why the terms in ego's generation are changing or why the terms for mother's sister and father's sister remain distinct.

Although changes in marriage patterns probably help to undermine the bifurcate collateral terms, they do not explain why the lineal type of terminology is being adopted instead of the generation type. The only elements of social structure which Murdock gives as tending to be associated with the lineal type of kinship terminology are neolocal residence and the isolated nuclear family (Murdock, 1949, pp. 152, 157). The Washo lack these. Modern Washo social structure is more in accord with a generation type of terminology, for Washo residence is bilocal. Therefore, while changes in Washo social structure may set the stage for some of the terminological changes, they do not account for the specific form taken by the terminological modifications. In short, Murdock's theory does not provide a fully ade-

quate explanation of the changes in the Washo kinship system although it is considerably more helpful than the other two theories discussed above.

SUGGESTED EXPLANATION FOR TERMINOLOGICAL CHANGES

The hypothesis here proposed to explain the alternate Washo kinship terms is that changes occurring outside of social organization can affect the terminological system without first modifying the residence rule or other elements of social structure. This hypothesis is based on the assumption that kinship terminology is closely correlated with patterned norms of behavior, or "roles." This assumption is most reasonable, for, as Murdock notes, it accords "with the overwhelming testimony of the data surveyed for the present study, and with the experience and the declared or admitted views of nearly all competent anthropological authorities" (1949, p. 112). If this assumption is provisionally accepted, the proposed hypothesis may be restated: role behavior and its associated system of kinship terminology may be directly affected by cultural changes without any changes necessarily taking place in the formal social structure. Or we may use the terminology proposed by Raymond Firth and say that within any given type of "social structure" many different forms of "social organization" may exist (Firth, 1951, pp. 39-40; 1954).

The principal difference between this hypothesis and Murdock's theory is in the elaboration of the role concept. Murdock does not explicitly deal with roles although he implies the concept when he speaks of similarities and differences between kin-types. Murdock distinguishes five kinds of similarities and differences (1949, pp. 136-137):

Coincidence: a similarity between two kin-types owing to the probability that the members of both are the same persons, as can happen as a result of certain social equalizers. Sororal polygyny, for example, tends to equate WiSi with Wi.

Proximity: a similarity or dissimilarity in spatial relations. For example, matrilineal residence, by bringing Mo and MoSi together as close neighbors or even actual housemates, operates as a social equalizer to make more likely their designation by a single classificatory term, and by separating FaSi spatially from both of them operates as a social differential to favor the application of a special kinship term to her.

Participation: a similarity or dissimilarity in group membership. Thus patrilineal descent places BrDa and Da in the same lineage, sib, or moiety and SiDa in a separate group, thereby promoting extension of the term for Da to BrDa and differentiation of the term for SiDa.

Analogy: a similarity relative to a parallel relationship. Extension of the term "mother" to MoSi, for example, acts as a social equalizer in the case of MoSiDa, increasing her likelihood of being called "sister" even under patrilineal descent when Si and MoSiDa are usually neither sibmates nor neighbors.

Immateriality: a negative similarity resulting from the functional unimportance of the relatives of two kin-types, whereby a sufficient basis for

differentiating them is lacking. Immateriality appears chiefly with respect to distant relatives. In the English kinship system, for example, it operates as an equalizer to favor the extension of the term "cousin" to various distant relatives of little importance, without reference to distinctions of sex, generation, or collaterality.

Murdock's similarities and differences are aspects of role behavior, but they are aspects which are strongly determined by elements of formal social structure. This being so, he can trace the effects of social structure upon systems of kinship terminology without dealing with role behavior, for it is so closely tied to the formal social structure as to lack the characteristics of an independent variable. This thesis suggests that roles are characterized by many more qualities than those listed by Murdock and that some of them vary considerably within the limits set by a given type of social structure. Cultural changes can therefore cause terminological change by altering role behavior without affecting the formal social structure.

The role concept has been used in various ways by other authors. Radcliffe-Brown (1935) once argued that apparent discrepancies between social structures and terminological systems in some Californian tribes were due to the fact that systems of terminology correlate with "social usage" rather than gross social structure. Radcliffe-Brown's social usage seems roughly equivalent to role behavior. Role behavior has been used explicitly in two recent kinship studies: Schneider and Roberts (1956) propose the concept of role to account for alternate usages in the Zuni kinship systems; and Schneider and Homans (1955) suggest that alternate terms in the American kinship system, such as "father," "dad," and "pop," reflect differences in role behavior. The central hypothesis of this monograph derives directly from these two papers.

From the hypothesis that roles and terms are closely correlated and are capable of being influenced by cultural factors we may draw the following inferences regarding Washo role behavior and the emerging Washo kinship system. Since cousins are being terminologically distinguished from siblings, the roles for cousins and siblings should be significantly different. The role of mother's brother should not be significantly different from the role of father's brother, and the role of brother's child should not differ significantly from the role of sister's child, for in both cases, kin-types which are distinguished in the standard terminology are merged in the alternate terminological system. The roles associated with the rest of the standard kinship terms should all differ significantly from one another because they have remained terminologically distinct.

It is apparent that an explanation based on detailed comparisons of roles cannot use subjective assessments of similarities and differences between roles. A technique for describing roles is required which yields data that can be treated statistically. Such a technique, called the role profile test, was developed for this research. It is thought to give a more exact and sensitive picture of Washo role behavior than that which may be obtained solely through observations and interviews, and the statistical analysis of the test protocols gives an objective measure of similarities and differences in role behavior.

The inferences presented above will be tested with data derived from use of the role profile test. It will

be seen that the data strongly support the foregoing inferences, thereby supporting the validity of the assumption of a close fit between role and term. The close correlation of role and term together with the fact that the Washo kinship system is changing in spite of a relatively stable social structure supports the hypothesis that roles may vary considerably within the limits set by a given configuration of social structure, the variation being due to causes which lie outside of the social organization.

THE ROLE PROFILE TEST

The role profile test makes use of sixteen categories for describing interpersonal behavior developed by Freedman, Leary, Ossorio, and Coffey (1951). I have slightly modified the categories and converted them into a questionnaire, which appears below. As conceived by Freedman and his associates, the sixteen categories were arranged in a circle. This emphasizes an important feature of the conceptual scheme. It has four nodal points: dominance, affiliation, submission, and hostility. These nodal points occur in the questionnaire at Question 1 (dominance), Question 5 (affiliation), Question 9 (submission), and Question 13 (hostility). The questions between the nodes combine the nodal qualities in varying degrees. For example, "to teach" (Question 2) is a combination of dominance and affiliation; "to punish" (Question 14) is a combination of hostility and dominance.

Questionnaire of the Role Profile Test

1. Which relative most often tries to tell you what to do? Which most often gives you orders (or bosses you)?
2. Which relative most often teaches you how to do something? Which one gives you advice or tells you his opinions?
3. Which relative is most likely to help you if you need it?
4. Which relative is most likely to feel bad and sympathize with you when something goes wrong?
5. Which relative is specially fond of you?
6. Which relative most often coöperates (works together) with you?
7. Which relative depends on you most and most often asks your help?
8. Which relative respects you the most? Which one asks your opinions?
9. Which relative obeys (minds) you if you tell him or her to do something?
10. Which relative is most eager for your approval?
11. Which relative would be the most likely to say or think you did something wrong (or bad)?
12. Which relative nags you most?
13. Which relative disapproves of you and criticizes you most often?
14. Which relative punishes you or gets angry (or mad) if you don't mind or if you do something wrong (or bad)?
15. Which relative is most likely to refuse you help even if you need it pretty badly?
16. Which relative would be most likely not to want to have anything at all to do with you?

The role profile test is administered as follows.

The informant is provided with slips of paper containing Washo kinship terms written quasiphonetically for all the relatives he possesses in first ascending, ego's, and first descending generations. These, of course, differ from person to person. The informant is then asked to arrange the slips of paper in a column in response to each of the sixteen questions. The relative ranking highest in the behavior questioned is to be placed at the top of the column; the remainder are to be ranked in descending order, with the one ranking lowest in the behavior in question to be placed at the bottom. The first few questions are for practice and designed to acquaint the informant with the kind of response desired. The investigator asks "which of your relatives weighs most . . . is tallest . . . is oldest" or some other similar question, and instructs the informant to arrange the slips of paper, helping him if necessary. Once the "set" of the experiment is established, the questionnaire is administered. The questions are explained to the informant, using examples if necessary; they are not read mechanically. The informant's responses are noted for each question, and the paper slips are shuffled before the next question is given. The result is a test protocol ranking a person's relatives in each of the sixteen categories of interpersonal behavior.

Several precautions must be observed if the test results are to attain their maximum reliability. First, the investigator must determine the opportunity the informant has had for knowing and interacting with the relatives to be included in the test. If there has been a reasonable opportunity for interacting with a relative, he is to be included in the test even if the informant has had little interaction with him. If there has been no opportunity for interaction, the relative should be excluded. For example, if a relative has lived close to the informant for many years, he is to be included even though the informant rarely sees him. In this case, the opportunity for interaction exists, and the fact that none has taken place may be an important feature of the role behavior. However, if a relative died when the informant was a baby, or lives at a great distance, or is feeble-minded, he is to be excluded, for the informant has had no opportunity to interact with him.

Second, the same interpreter should be used for all informants. This should not be taken too literally, for feuds and hard feelings can make the presence of particular interpreters unpleasant to informants. In addition, if the interpreter is related to the informant, this might tend to influence the informant's responses. It is probably best to use an interpreter who is not related to the informant. This precaution could not be observed for two Washo informants owing to the prevailing rules of courtesy. These two informants were slightly deaf and it was necessary to shout at them. Among the Washo, it is considered impolite for a person to shout at a nonrelative. Therefore, relatives had to be used as interpreters.

Third, the testing situation should be standardized. This means that as few relatives as possible should be looking over the informant's shoulder while he is taking the test. An easy way to shed distracting relatives is to conduct the interview in an automobile.

Fourth, the questions should be asked randomly. I suspect that there is some contagion from one question to the next. This is enhanced if, for example, all the questions probing dominance are asked one after the other. By randomizing the questions, the investigator

can break up a developing pattern in an informant's responses. This precaution was not followed in the present study because its importance was not realized until the field work was almost completed.

Finally, the sample tested should be random. This is probably the most difficult of all the precautions to observe, for many persons will refuse to work with the investigator. Approximately twenty Washo refused with varying degrees of firmness to work with me. Of these, probably half would have eventually weakened because I could have brought pressure to bear through some of their relatives. This still would leave a sizable number of adamant refusals. In small, homogeneous groups like the Washo, the lack of a random sample is probably less serious than in larger, more heterogeneous societies.

In the present study, the above-mentioned precautions were carried out less fully than they might have been because the importance of some of them became clear only as the work progressed. The first four may be observed with no particular difficulty. I regard numbers one and four as particularly important. The problem of obtaining a random sample presents the most difficulty, but the effort must be made so that statistically valid inferences may be drawn about the larger population.

The role profile test deals only with the qualitative characteristics of roles. It indicates that a role ranks high in teaching or helping or fondness and low in submission or hostility. But roles also differ in their content. For example, both mother and father help a person, but the nature of the help differs. The mother cooks for an individual and mends his clothes; the father helps him to fix his car or to build a house. The role profile test tells us only that something is taught, but it does not tell us what is taught. The content of the teaching or helping or punishing distinguishes roles as much as the qualities of the roles. Among the Washo, the differences in the content of roles generally follow sexual lines. For the most part, this study does not deal with these differences in content; but it will be seen that content must be taken into account in distinguishing between the roles of the members of the nuclear family who are of opposite sex and in the same generation.

THE SAMPLE TESTED

The role profile test was administered to 47 of approximately 280 Washo living in the vicinity of Gardnerville, Nevada, and Woodfords, California. An effort was made to select a sample with an equal number of men and women, and one in which the young, middle-aged, and old were represented fairly equally. However, the persons within these categories were not selected randomly. The sample contains 20 men: five are thirty-five years of age or younger; 9 are from thirty-six to fifty-four years of age; and 6 are fifty-five years of age or older. The sample contains 27 women: 10 are thirty-five years of age or younger; 11 are thirty-six to fifty-four years of age; and 6 are fifty-five years of age or older. No one was tested who was under fourteen or who had less than seven different kinds of relatives. This reduced the number of young people who could be tested. The reluctance of the older Washo to mention dead relatives meant that many of the older people would not give all their relatives in the genealogical interviews, or would re-

fuse to be interviewed at all. This reduced somewhat the number of old people in the sample. Two people could not finish the test: one old woman, after completing four questions, burst into tears at the mention of a dead relative; and a young woman could not finish the last six questions, for she rejected the idea that any of her relatives could be hostile. The questions these women finished are perfectly usable and have been included in the analysis.

The sample includes 4 blind people, 4 others with whom I had to use interpreters, and 8 people who were illiterate. None of these 16 persons could manipulate the slips of paper by themselves. They could take the test, for they retained a mental list of the relatives involved and verbally directed the investigator as to the arrangement of the slips. The order of relatives was read back to them and they continued to make adjustments until they were satisfied. They handled the test fairly well, but not so well as people who could arrange the slips of paper themselves. This fact probably increases the variability of the protocols.

STATISTICAL ANALYSIS

The purpose of this analysis is to reduce the data to a form in which the patterns of role behavior become apparent, and their similarities and differences can easily be compared. Since the sample was not chosen at random from the population, inferences drawn from it about the larger population are, statistically speaking, dangerous.

Two factors make the handling of the data troublesome: (1) the number of relatives contained in the particular protocols is different, ranging from seven to fourteen; and (2) protocols with the same number of relatives often contain different kinds of relatives. The ordinary, nonparametric methods of treating ranked data assume that each individual ranks the same set of objects. Another possible method of analysis involves the construction of preference matrices for all relatives in all sixteen behavioral categories. This idea was discarded because the size of the matrices, together with the variability and the smallness of the numbers in the cells, did not seem to promise sufficient returns for the work involved.

Consequently, the question of quantifying the data was studied. Because of the unequal number of relatives in the various protocols and because the relatives were often different in kind, some sort of metric seemed unavoidable. Consider a specific category of behavior and assume that the characteristic which determines a person's rank can be measured numerically and is distributed normally in the population. Let X equal the numerical value of the characteristic. Then X is a normally distributed random variable which, for convenience and with no loss of generality, we can assume has mean zero and variance one, that is, approximately 68 per cent of the population have values of X between -1 and +1. Thus, there are a few individuals who have the characteristic to a marked positive degree leading to an almost certain rank of one in any comparison, and a few individuals who have the characteristic to a marked negative degree leading to an almost certain lowest rank.

Now suppose that you have a judge and you take a random sample of \bar{n} individuals from the population and ask him to rank them. Further, suppose that you repeat this indefinitely with samples of \bar{n} . Now consider

the average value of X for all individuals who receive the rank \bar{r} . For any given value of X, say x, the probability that you will get a sample of \bar{n} in which exactly (r - 1) will have values of X > x and (n - r) will have values of X < x while one will have a value in the interval (x, x + dx) is

$$\frac{n!}{(r-1)! (n-r)!} q_1^{n-r} q_2^{r-1} q_3$$

where q_1 , q_2 , and q_3 are the probabilities respectively for falling short of x, exceeding x, and falling in the interval (x, x + dx).

More precisely, to within terms of order dx,

$$q_1 = \int_{-\infty}^x \frac{1}{\sqrt{2\pi}} e^{-\frac{t^2}{2}} dt,$$

$$q_2 = \int_x^{\infty} \frac{1}{\sqrt{2\pi}} e^{-\frac{t^2}{2}} dt,$$

$$q_3 = \frac{1}{\sqrt{2\pi}} e^{-\frac{x^2}{2}} dx.$$

The formula for the expected or mean value, μ_r , of the \bar{r} th rank can then be written as follows

$$\mu_r = \int_{-\infty}^{\infty} \frac{n!}{(r-1)! (n-r)!} x \cdot q_1^{n-r} q_2^{r-1} \cdot \frac{1}{\sqrt{2\pi}} e^{-\frac{x^2}{2}} dx.$$

A table for the values of μ_r is given in Fisher and Yates (1953, pp. 76-77).

Admittedly in our data, the samples of \bar{n} were not selected at random since they consist of all the relatives of the ranker in three selected generations. However, the Washo are a small, homogeneous, interrelated group; therefore, the relatives of one person are probably quite similar to the relatives of any other person. Taking this into consideration, it was thought that the relatives ranked by a given individual would have sufficient spread over the range of a characteristic to make the use of the metric μ_r meaningful. At the very least, the use of normal scores is a device which enables one to put rankings of, say, fourteen items and rankings of, say, seven items on numerical scales which are comparable.

If the kinship terms have no effect on the ranking within the categories, then the assignment of the kinship terms to the particular individuals being ranked would be at random. Thus, the rank of "father" would depend on the specific characteristics of the individual being ranked and not on the fact that he is called father. Consequently, it would seem that since individuals vary, the rankings of "father" would also vary from protocol to protocol. If, however, it were found that the rank of "father" is relatively constant, then it would seem that the kinship term "father" has a weight in determining rankings.

After normal scores had been assigned to the test rankings, the mean, standard error of the mean, and 95 per cent confidence limits were calculated for each

relative in all sixteen categories. The mean was calculated as follows:

$$\bar{X} = \frac{\sum_{i=1}^N X_i}{N}$$

The standard error of the mean was calculated by the formula

$$S_{\bar{X}}^2 = \frac{\sum_{i=1}^N (X_i - \bar{X})^2}{N - 1}$$

The 95 per cent confidence limits were estimated by the formula

$$\bar{X} \pm 2S_{\bar{X}}$$

(When x is distributed normally, the confidence coefficient corresponding to the interval $\bar{X} \pm 2S_{\bar{X}}$ is .954).

An inspection of the lengths of the confidence intervals revealed no striking differences among them. Comparisons of the end points of the confidence intervals showed the differences among the means of many relatives in each category of behavior to be significant because of the lack of overlap between the confidence intervals.

The male and female protocols were analyzed separately because it was assumed that roles are enacted somewhat differently toward men and women. That this assumption is correct is shown by the table on p. 395 (bottom). If the male and female protocols had been lumped, some of the differences in role behavior could have been obscured whenever the sex differences happened to cancel each other. The fact that the male and female test protocols give slightly different results does not mean that we are dealing with two separate societies or that Washo society is stratified or segmented in any way. Since the Washo are one society and have essentially one kinship system, a significant distinction between two roles occurring among either men or women is regarded as a distinction obtaining for the whole society. Therefore, the following definition of role difference is used in this study: if the confidence intervals about the means of two roles fail to overlap in any category of behavior for either men or women, the roles are considered to differ significantly.

The results of the statistical analysis are given in Appendices I and II. Appendix III contains the graphs of the means of all the roles investigated. These graphs of means are called role profiles. Appendix IV presents the graphs of the sixteen categories with the kinship roles on the x axis.

ROLE BEHAVIOR

One general observation may be made before examining Washo kinship role by role. This concerns the distinctiveness of almost all the roles. The Washo are among the bilateral tribes of the Great Basin, Plateau, and California which are generally thought to contain little significant kinship patterning apart from family relationships. Murdock has investigated this

problem among the Tenino of central Oregon. He found a good deal of kinship patterning and concludes that there is considerable patterning of kinship behavior even in the simpler, sibless tribes (Murdock, 1949, pp. 111-112). The present study presents additional evidence in support of Murdock. The table on p. 395 (top) is a compilation of role comparisons indicating where the differences in the means are significant. This table shows Washo kinship behavior to be far from amorphous.

The role data are summarized below. The letters in parentheses after the kin terms are the abbreviations used in the appendices. The order in which the roles are given here is the same order observed in all the appendices.

Father (F). This relative ranks high in dominance (Categories 1-4), fairly high in affiliation (Categories 5-6), rather neutral in submission (Categories 7-10), and generally low in hostility. There is some ambivalence in the role of father regarding hostility because he is a disciplinarian for both men and women as shown by his high score in Category 14. In addition, women see him as a mildly suspicious and disapproving figure (Category 11). The only category where the role of father differs for men and women is Category 2 (to teach).

Father's brother (FB). This role differs considerably for men and women. He is a much more important relative for men than for women as indicated by his higher rating in all categories except the last two, which show rejection. The role differs significantly for men and women in Categories 2 (to teach) and 9 (to obey), and the difference comes very close to being significant in Category 1 (to order). The general role profile of father's brother for women is that of an unimportant relative with whom there is little interaction. The general role profile for men is roughly the same as that of father, the significant differences occurring in the first two categories.

Father's sister (FS). The role profile for father's sister is similar for both men and women. She is a rather cold and hostile figure; she ranks high only in hostility (Categories 11-13) and rejection (Categories 15 and 16). Although she is a disapproving relative, she possesses no disciplinary power over ego as shown by her negative score in Category 14. The role profile of father's sister is similar to that of mother's sister but ranks lower in most qualities except hostility and rejection. This is true for both men and women.

Mother (M). The role profile for mother is similar to that for father. She ranks high in dominance and affiliation, lower in submission, and low in hostility. Like father, she is a disciplinarian, as indicated by her fairly high score in Category 14. Category 11 (to suspect wrongdoing) shows a significant distinction between the male and female profiles, the women seeing their mothers as more suspicious. A similar distinction occurs for the father role, although the difference in role behavior is not significant. The mother is the most important and distinctive relative for a Washo. The table on p. 395 (top) gives 190 significant distinctions between mother and all other roles. This number is far more than the next closest relative, father, with 133.

Mother's brother (MB). This relative is neutral in dominance and affiliation, and low in submission, for both men and women. Mother's brother is a

more suspicious and hostile figure for women than for men (Categories 11, 12, 13, and 14). For the most part, mother's brother is a rather neutral figure showing few large positive or negative scores.

Mother's sister (MS). This relative is a much more dominating figure for women than for men. The difference is significant in Category 2 (to teach). Mother's sister is neutral in affection for both males and females, ranks higher in submission for males, and fairly high in hostility towards both. Her rather high score in Category 13 for both men and women shows her to be a disapproving and critical relative.

Older brother (OB). The most distinctive feature of this role is its neutrality. Its scores in all categories are close to zero. This probably is due to older brother's ambiguous age position. He is older than ego but not a member of ego's parents' generation. Consequently, his role has attributes both of equality and of superiority. The result is a role lacking distinctive features.

Younger brother (YB). This is another role lacking distinctive features. The probable explanation is similar to that used for older brother: younger brother is ambivalent regarding age position, for he is younger than ego and yet a member of the same generation. The significant differences between older and younger brother occur in the first two categories. Older brother is a much more dominating figure than younger brother.

Older sister (OS). This role is quite different for men and women. For women, she is a mildly dominant and highly cooperative relative. For men, she is neutral in dominance, affiliation, and submission, but ranks high as a disapproving, critical, and suspicious relative. Significant differences in the roles occur in Categories 2 (to teach) and 6 (to cooperate).

Younger sister (YS). The role of younger sister is quite similar to that of younger brother. It lacks distinctive features, seeming to fall between the roles of daughter and older sister. This is probably due to younger sister's position as a member of ego's generation who is younger than ego.

Male cousin (MaC) and Female cousin (FeC). These role profiles are based on a small number of protocols, since not many people use the cousin terms. Consequently, the profiles should be viewed with much less confidence than those of other relatives. The profiles indicate that cousins are unimportant relatives with whom there is little interaction. An apparent exception is the behavior of female cousins towards females in Category 13 (to disapprove).

Son (So). This relative ranks low in dominance and hostility and high in affection and submission. The profiles for men and women are similar.

Daughter (D). The role profiles for daughter closely resemble those of son; but there is more difference in the male and female profiles than there is for son. The difference is significant in Category 2 (to teach). Large differences also occur in Categories 6 (to cooperate), 7 (to depend), and 8 (to respect) with the profile for women scoring considerably higher.

Brother's child (BCh). This is a relative with whom there is little interaction. He ranks very low in dominance, low in affiliation, low to neutral in submission, and low in hostility. The profiles

for men and women are quite similar.

Sister's child (SCh). The role profiles of this relative are almost identical with those of brother's child. Sister's child ranks very low in dominance, low in affiliation, and low to neutral in submission and hostility. The role profiles for men and women are very similar.

A different perspective on Washo role behavior can be obtained from the graphs of the categories. They facilitate comparison of the sixteen roles within the behavioral categories.

Category 1 (to order). The most important relatives in this category are those who are older than ego. Father and mother attain the highest score for both males and females. Father's brother and father's sister for females and mother's brother for males are exceptions to the general rule that older relatives rank high in dominance.

Category 2 (to teach). As might be expected, relatives who are older than ego are ranked high. Older relatives who do not rank high are father's brother and father's sister for females and older sister for males.

Category 3 (to help). Mother and father attain high scores for both men and women. Father's brother and older brother are fairly high for men; older brother, mother's sister, and older sister attain positive scores for women.

Category 4 (to sympathize). Mother and father are the most sympathetic relatives. In addition, a man expects sympathy from his mother's sister and older brother, and a woman from her older brother, older sister, and younger brother.

Category 5 (to like). For women, the important relatives are mother and father. Older brother, older sister, son, and daughter also attain positive scores. All are members of the nuclear family. For males, affection is more widely diffused outside the nuclear family. However, men do not feel themselves as intensely liked as women: note the higher scores of father and mother for females.

Category 6 (to cooperate). There is considerable difference between men and women. The relatives who cooperate with men are men and those who cooperate with women are women. Note also the higher scores of the relatives who cooperate with women as opposed to those who cooperate with men.

Category 7 (to depend). This category of behavior is surprisingly undifferentiated for men. Mother is the only really dependent person. Even son and daughter rank low in dependence. Women see their children as highly dependent upon them.

Category 8 (to respect). One's children are the most respectful relatives. Mother also ranks high in this category. Women feel somewhat more respected than men, as indicated by the scores for daughter and mother.

Category 9 (to obey). The most obedient relatives are son, daughter, and the younger siblings, all of whom are younger than ego. A person has little authority over younger people if they are not members of his nuclear family, as indicated by the scores for brother's child and sister's child.

Category 10 (to want approval). For women, the only positive scores are achieved by members of the nuclear family. Men show a slight positive score for father's brother and mother's sister. As

in Category 5 (to like), women confine their significant interactions to the family while men have more diffuse and less strongly structured relationships. This is made quite clear by the table of significant distinctions on p. 391 (right). Only two significant distinctions occur among the male role profiles; among the female role profiles, 31 significant distinctions occur.

Category 11 (to suspect wrongdoing). For men, the suspicious relatives are father's brother, father's sister, mother's sister, and older sister. Women have a greater number of suspicious relatives: father, father's sister, mother, mother's brother, and older siblings.

Category 12 (to nag). This is a relatively undifferentiated category. For men, older sister scores higher than all other relatives. Women seem to have no outstanding relatives in this category.

Category 13 (to disapprove). The nodal category for hostility shows a remarkable similarity between male and female role profiles. The only hostile relatives, and they are only mildly hostile, are father's sister, mother's sister, and older sister. Female cousin may be ignored because the cousin profiles are based on but a few protocols. Category 13 for men is similar to Category 11 for men. I can offer no explanation for the concentration of hostility in older female relatives.

Category 14 (to punish). Older relatives are most prominent in this category. Father's sister is an exception for both men and women and father's brother for women. This category, together with Categories 1 and 2, shows that father's siblings lack dominance over women.

Category 15 (to refuse help). This category emphasizes the nuclear family relationships of father, mother, son, and daughter. They are the relatives with the lowest scores.

Category 16 (to reject). This category illustrates even more clearly than Category 15 the closeness of a person to his father, mother, son, and daughter.

Some interesting inferences can be drawn from this review of categories. First, the importance of the nuclear family is clearly emphasized, especially the father, mother, son, and daughter relationships. Second, neither patrilineal relatives nor matrilineal relatives receive greater emphasis; the two groups of relatives have equal importance. Third, there is an interesting difference between men and women. If Appendix II is examined, it will be seen that men have many more significant distinctions among roles in the categories probing dominance (1-4 and 13-16) than in the categories testing submission. Women have a closer to equal number of significant distinctions among roles in the categories probing dominance as in the categories testing for submission. In other words, men tend to see their relationships regarding who dominates them as clearly structured, but are much less clear as to whom they dominate; women see their relationship with subordinate relatives to be structured almost as clearly as their relationships with dominant ones. This may be an indication that Washo males tend to lack self-confidence and that Washo women may have made a more satisfactory adjustment to modern conditions than have the men.

This inference receives support from my observations. Men seemed less inclined to put themselves in

a situation where their egos could be threatened. For example, they were more reluctant to be interviewed and to take the role profile test.

The apparent differences in the adjustment of Washo men and women resemble the different adjustments to modern conditions made by men and women among the Saulteaux and Ojibwa. Hallowell made a study of acculturation and personality changes among the Saulteaux and concluded that women are better adjusted than men because the male aspects of culture have changed more through acculturation (1942, p. 48). Caudill studied the psychological characteristics of acculturated Ojibwa and also concluded that women seem to make a more satisfactory adjustment to the conditions of modern life than do men (1949, p. 425). The Washo role data can be interpreted as supporting the psychological studies of Hallowell and Caudill.

ROLE BEHAVIOR AND THE NEW TERMINOLOGICAL SYSTEM

The data from the role profile test support the inferences presented at the beginning of this chapter. The table of significant distinctions in Appendix II (p. 395, top) presents the relevant data. As predicted: (1) there are no significant distinctions between either the roles of mother's brother and father's brother or the roles of brother's child and sister's child; and (2) the roles of cousins are well distinguished from the roles of siblings. Older brother and younger brother are both distinguished from male cousin seven times. Older sister is distinguished from female cousin nine times; younger sister is distinguished from female cousin three times. That cousins are well distinguished from siblings while mother's brother resembles father's brother and brother's child is similar to sister's child can be clearly seen from figures 2 to 9 on pp. 372-375.

The inference that the roles associated with the stable parts of the kinship terminology all differ significantly from each other is supported reasonably well by the test data. However, there are five apparent exceptions: no significant distinctions exist between the roles of father and mother, son and daughter, younger brother and younger sister, mother's brother and older brother, and mother's brother and father's sister. The first three exceptions can be easily explained. These relatives are nuclear family members of opposite sex and the same generation. They do not differ in the qualities of their roles, but the sex distinction makes for significant differences in the content of the roles. However, the similarity in the qualities of the roles of father and mother and son and daughter is not ignored in the kinship terminology, for the Washo have two terms meaning "parent" and one meaning "child." In only two instances does role behavior fail to agree with terminological usage: mother's brother is not distinguished from either older brother or father's sister. Consequently, of the 120 possible comparisons among the roles of the three generations studied, 118 support the assumption of a close fit of role and terminological system.

Since the terminological system is apparently changing in the face of a relatively stable social structure, at least some of the causes of this change lie outside social organization. What are the cultural causes which appear capable of modifying Washo role behavior so as to produce the emerging system of kinship terminology? In the case of the cousin terms, we must seek

cultural causes which would reduce the importance of cousins as compared to siblings, thus setting the stage for the terminological distinction. This result would tend to follow the introduction of a money economy and the subsequent individualization of the society. As we have seen, cooperative activity has lessened among the Washo; and this presumably has meant that distant relatives are not as important as they once were. Consequently, the roles played by cousins have become progressively different from the roles of siblings, and this has been reflected in the kinship terminology. The

merging of mother's brother and father's brother and of brother's child and sister's child probably is due to three major causes. The first is the individualization of the society, which reduces the importance of relatives not in the nuclear family; the second is the loss of nonsororal polygyny; and the third is the knowledge of the English kinship terminology, which may function as a kind of model for the new Washo kinship terminology. The cultural causes of the changes in Washo kinship terminology suggested here must be regarded only as hypotheses. Their verification requires comparative data.

CONCLUSION

This study has presented an analysis of changes in Washo culture and social organization. It has suggested that the changes in the Washo system of kinship terminology can be explained best by the hypothesis that cultural factors may affect kinship terminology directly instead of indirectly by first modifying elements of formal social structure, such as residence rules and kinds of kin groups. This hypothesis hinged on showing that role behavior is closely correlated with kinship terminology. This assumption was substantially verified by data derived from the role profile test; the Washo role behavior was shown to correlate closely with the new, emerging kinship system. Since changes in formal social structure could not adequately account for changes in the terminological system, it was concluded that cultural factors have directly affected role behavior, thereby causing terminological modification. Finally, some possible cultural factors were suggested to account for changes in role behavior.

The role profile test provided much of the data upon which the foregoing demonstration has been based. It has shown itself to be a useful and sensitive instrument for the collection of role data. Its principal value is that it can be treated statistically, and this permits objective role comparisons within a society. Such comparisons can be made just as easily between societies, provided the same statistical analysis is used. The test has some limitations. First, it deals only with the qualities of roles and does not test for their content. Second, the categories may have to be modified from society to society, for there is no certainty that the categories used for the Washo would be satisfactory for other tribes. The test is not meant to replace observation and interviewing; but at the same time it reveals role patterning that would escape all but the most careful and prolonged field work. The role profile test seems to me a most promising technique for the study of role behavior.

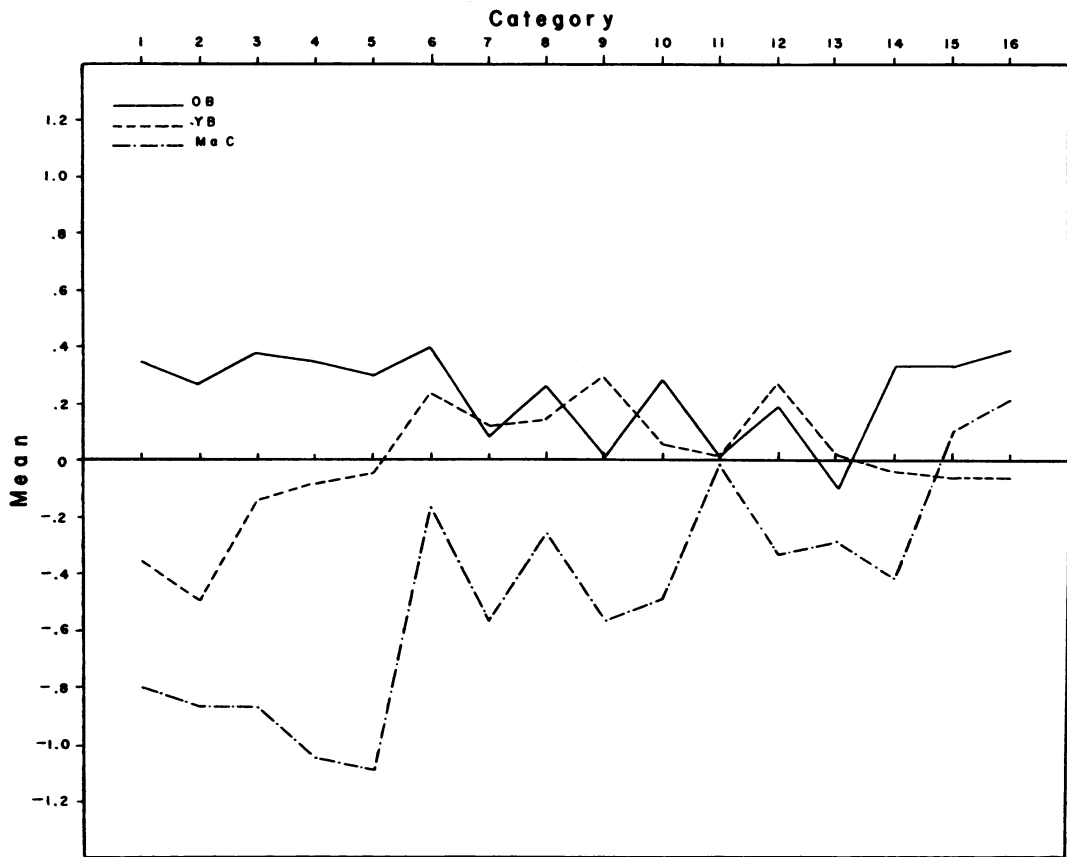


Fig. 2. Comparison of role profiles: older brother, younger brother, and male cousin (male informants).

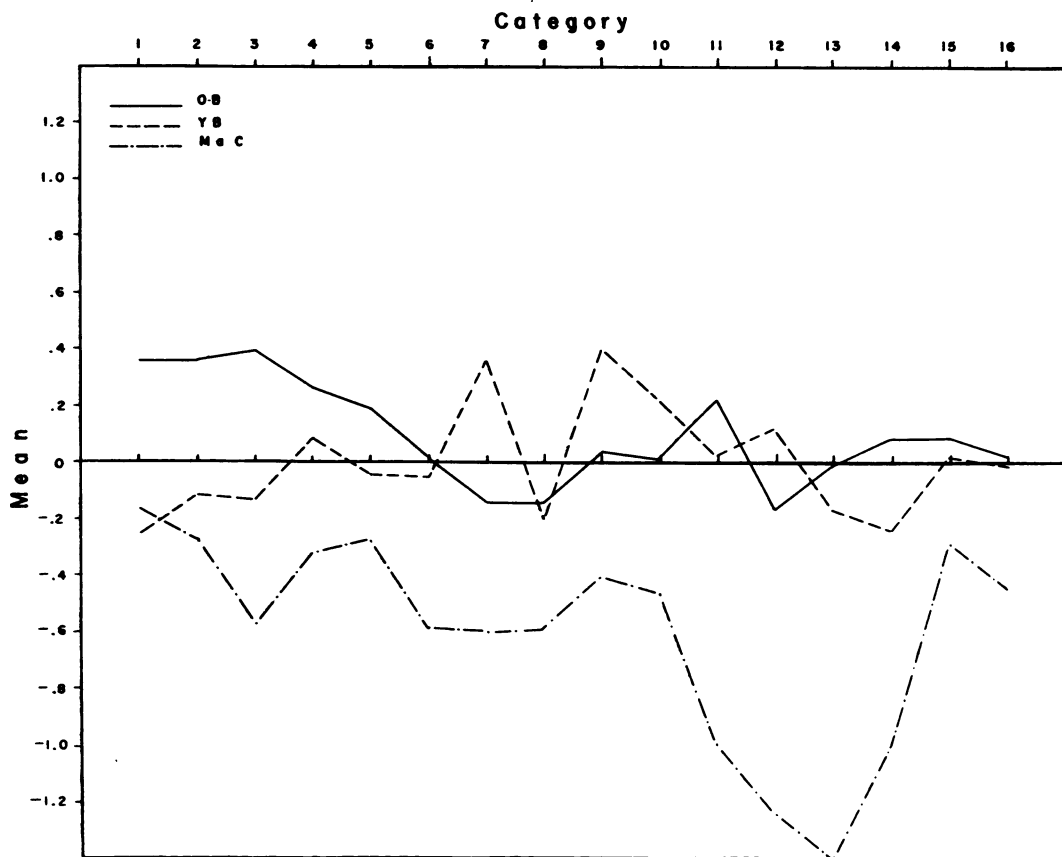


Fig. 3. Comparison of role profiles: older brother, younger brother, and male cousin (female informants).

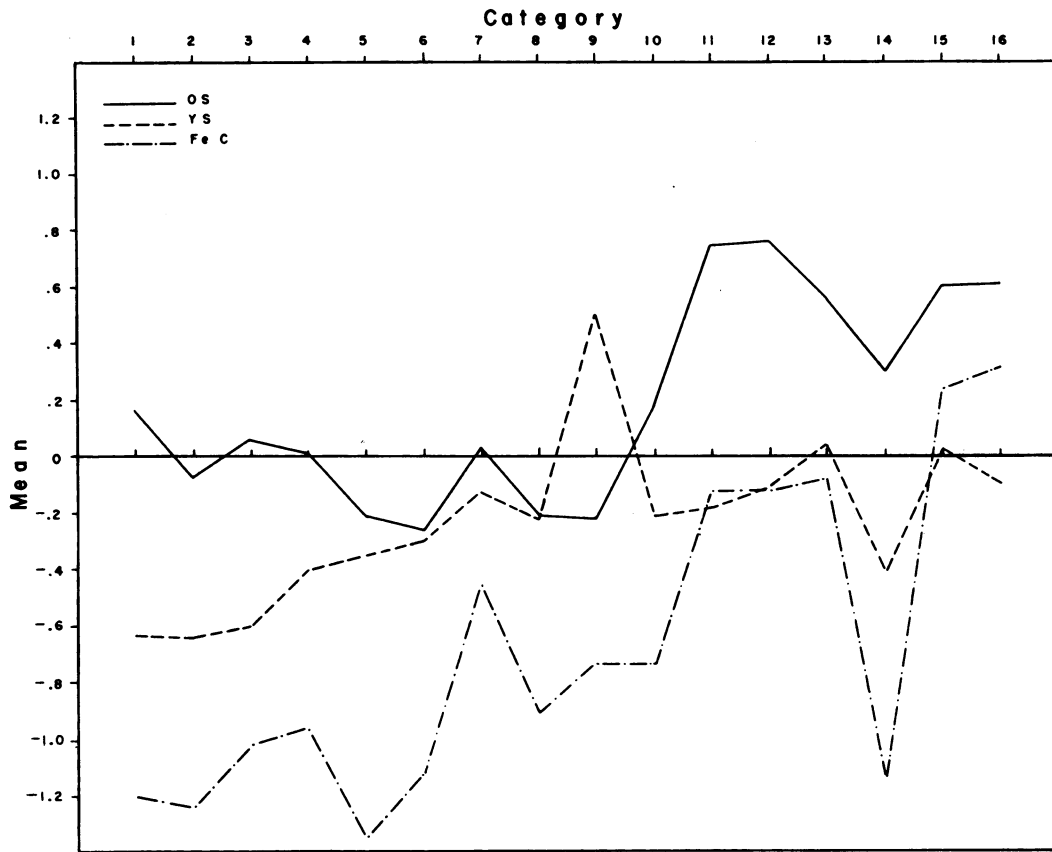


Fig. 4. Comparison of role profiles: older sister, younger sister, and female cousin (male informants).

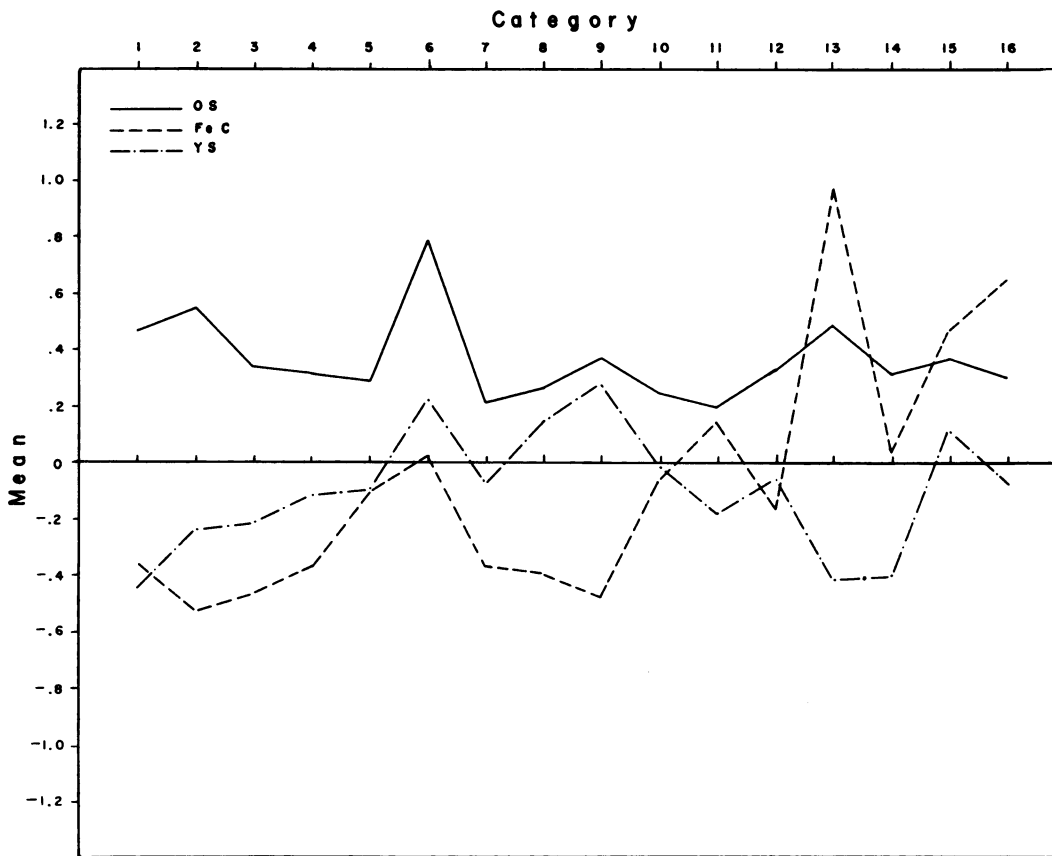


Fig. 5. Comparison of role profiles: older sister, younger sister, and female cousin (female informants).

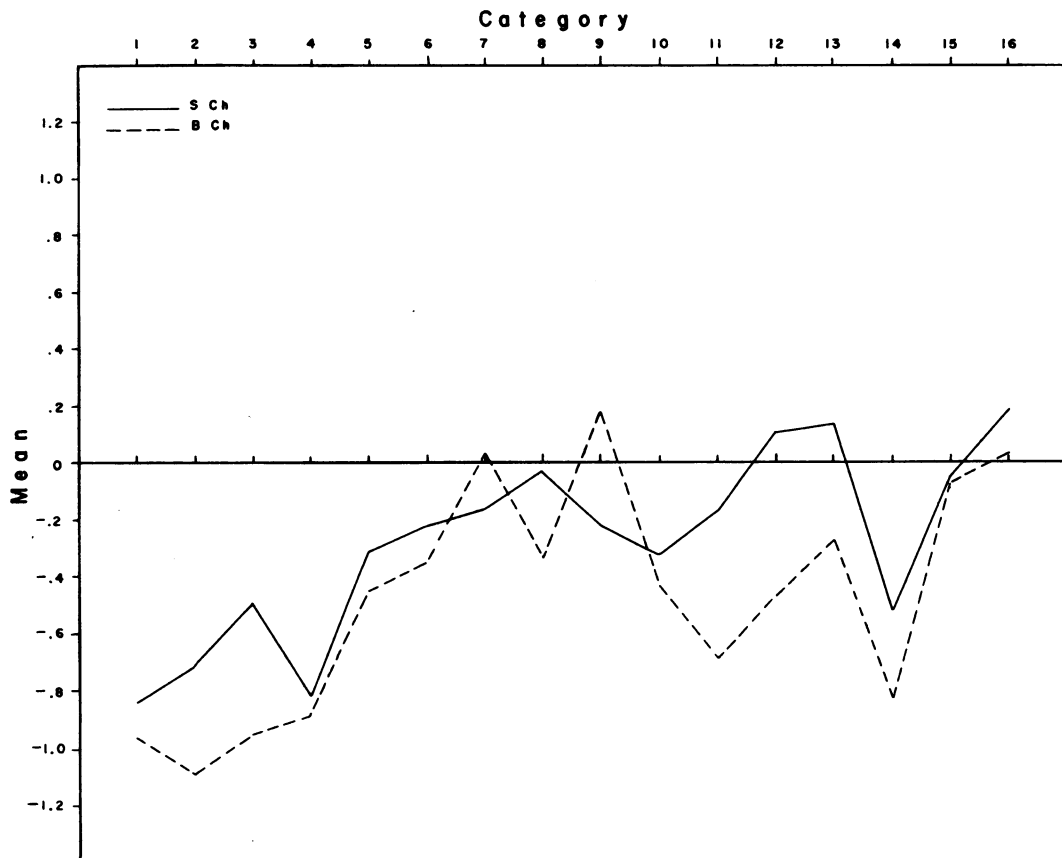


Fig. 6. Comparison of role profiles: brother's child and sister's child (male informants).

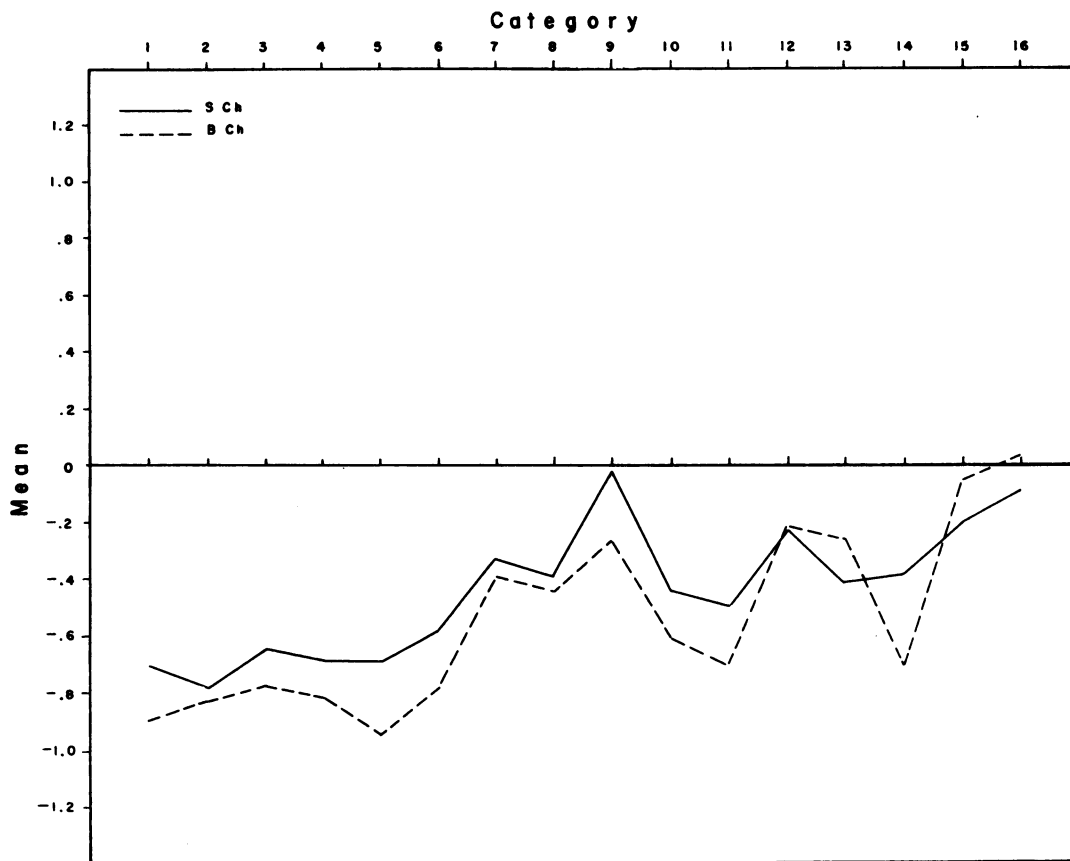


Fig. 7. Comparison of role profiles: brother's child and sister's child (female informants).

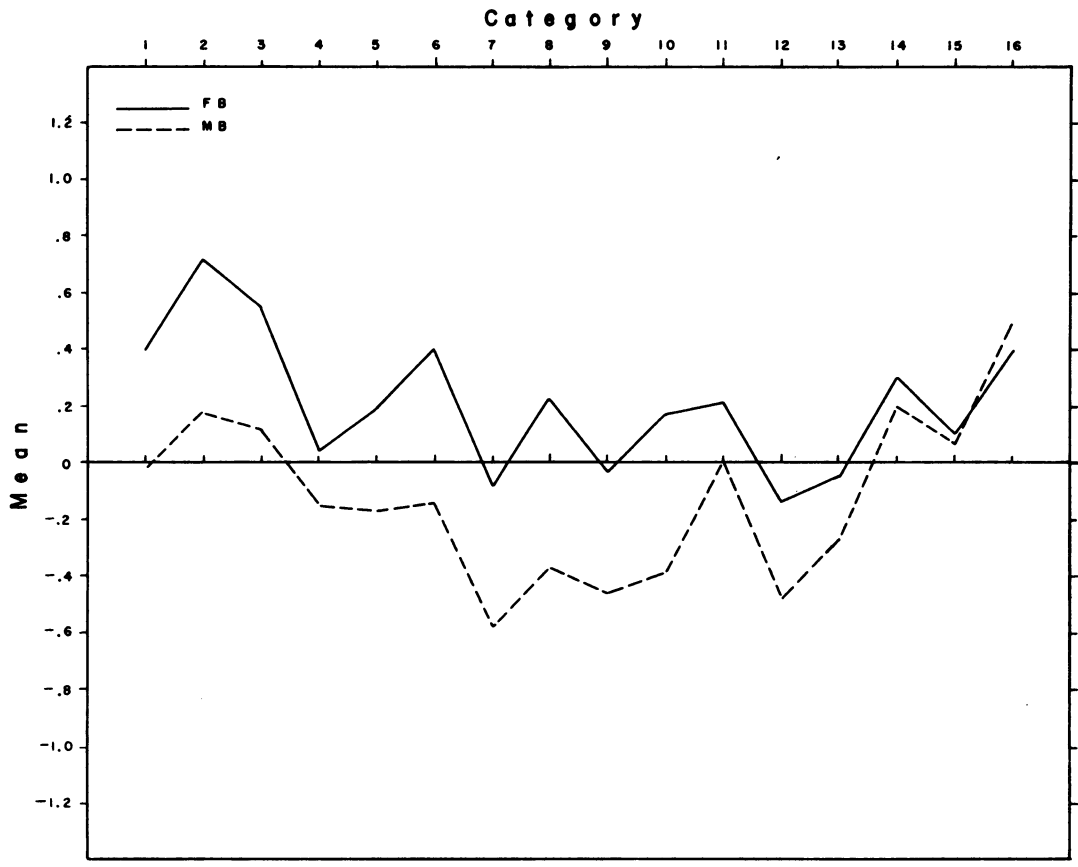


Fig. 8. Comparison of role profiles: father's brother and mother's brother (male informants).

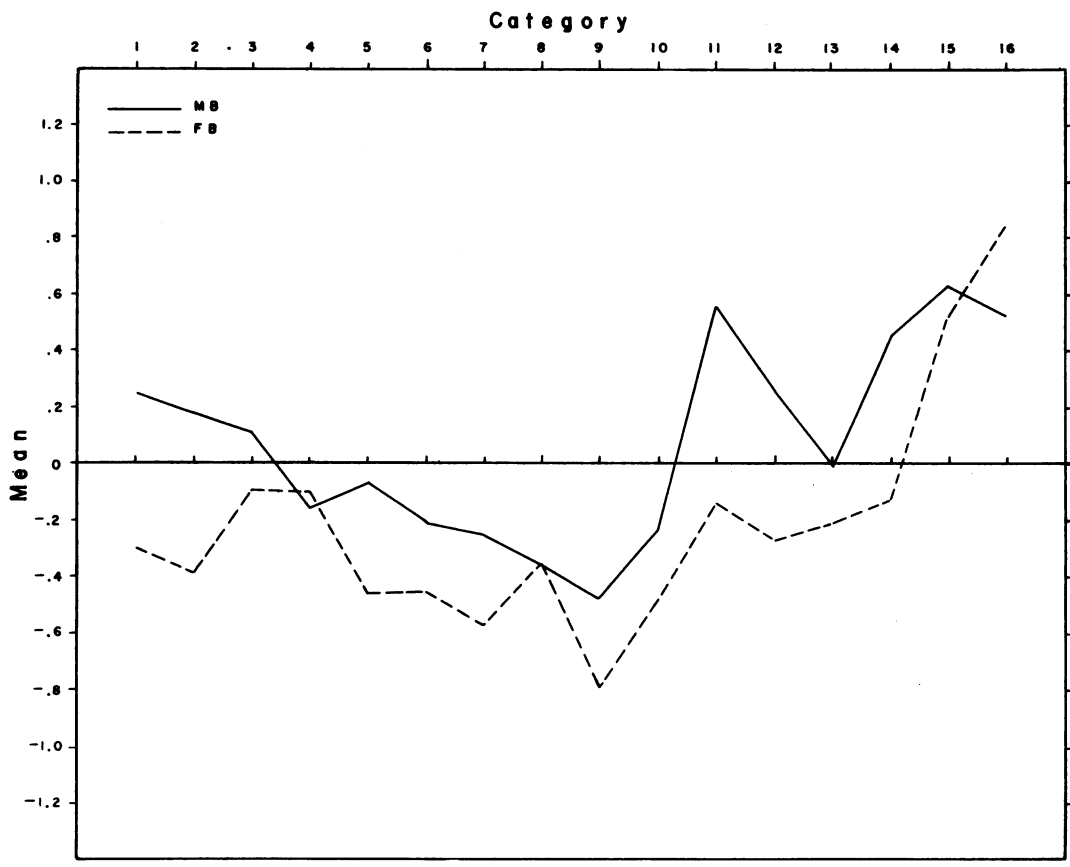


Fig. 9. Comparison of role profiles: father's brother and mother's brother (female informants).

APPENDIXES

APPENDIX I
 STATISTICAL ANALYSIS: TABLES OF MEANS, STANDARD ERRORS
 OF THE MEANS, AND 95 PER CENT CONFIDENCE LIMITS

This appendix contains the statistical analysis of the protocols of the role profile test. The abbreviations are as follows: father (F), father's brother (FB), father's sister (FS), mother (M), mother's brother (MB), mother's sister (MS), older brother (OB), younger brother (YB), older sister (OS), younger sister (YS), male cousin (MaC), female cousin (FeC), son (So), daughter (D), brother's child (BCh), and sister's child (SCh). Each table gives the number (No.), mean (\bar{X}), standard error of the mean ($S_{\bar{X}}$), and the 95 per cent confidence limits.

CATEGORY 1

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	1.10	.18	.74	1.46
FB	14	.40	.16	.08	.72
FS	13	.35	.22	-.09	.79
M	20	.76	.14	-.48	1.04
MB	12	-.02	.21	-.44	.40
MS	11	.28	.13	.02	.54
OB	14	.35	.19	-.03	.73
YB	17	-.35	.12	-.59	-.11
OS	12	.17	.12	-.07	.41
YS	12	-.63	.20	-1.03	-.23
MaC	5	-.80	.29	-1.38	-.22
FeC	4	-1.20	.20	-1.60	-.80
So	9	-.60	.13	-.86	-.34
D	10	-.93	.14	-1.21	-.65
BCh	10	-.96	.14	-1.24	-.68
SCh	11	-.84	.19	-1.22	-.46
Female					
F	21	.86	.15	.56	1.16
FB	16	-.30	.20	-.70	.10
FS	10	-.09	.31	-.71	.53
M	26	1.02	.10	.82	1.22
MB	15	.25	.26	-.27	.77
MS	18	.60	.15	.30	.90
OB	22	.36	.16	.04	.68
YB	22	-.25	.12	-.49	-.01
OS	24	.47	.12	.23	.71
YS	21	-.44	.17	-.78	-.10
MaC	3	-.16	.14	-.44	.12
FeC	4	-.35	.24	-.83	.13
So	19	-.44	.20	-.84	-.04
D	18	-.49	.14	-.77	-.21
BCh	24	-.89	.13	-1.15	-.63
SCh	25	-.70	.08	-.86	-.54

CATEGORY 2

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	1.23	.08	1.07	1.39
FB	14	.72	.14	.44	1.00
FS	13	.07	.23	-.39	.53
M	20	.99	.10	-.79	1.19
MB	12	.18	.19	-.20	.56
MS	11	.15	.16	-.17	.47
OB	14	.27	.08	.11	.43
YB	17	-.49	.08	-.65	-.33
OS	12	-.07	.14	-.35	.21
YS	12	-.64	.13	-.90	-.38
MaC	5	-.87	.23	-1.33	-.41
FeC	4	-1.24	.30	-1.84	-.64
So	9	-.63	.14	-.91	-.35
D	10	-1.11	.13	-1.37	-.85
BCh	10	-1.09	.14	-1.37	-.81
SCh	11	-.71	.12	-.95	-.47
Female					
F	21	.46	.17	.12	.80
FB	16	-.39	.20	-.79	.01
FS	10	-.26	.25	-.76	.24
M	26	1.01	.15	.71	1.31
MB	15	.18	.15	-.12	.48
MS	18	.87	.14	.59	1.15
OB	22	.36	.14	.08	.64
YB	22	-.11	.13	-.37	.15
OS	24	.55	.15	.25	.85
YS	21	-.23	.17	-.57	.11
MaC	3	-.27	.58	-1.43	.89
FeC	4	-.52	.47	-1.46	.42
So	19	-.44	.15	-.74	-.14
D	18	-.45	.17	-.79	-.11
BCh	24	-.82	.11	-1.04	-.60
SCh	26	-.78	.12	-1.02	-.54

CATEGORY 3

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	.80	.18	.44	1.16
FB	14	.55	.18	.19	.91
FS	13	-.31	.24	-.79	.17
M	20	.80	.18	.44	1.16
MB	12	.12	.11	-.10	.34
MS	11	.04	.17	-.30	.38
OB	14	.38	.17	.04	.72
YB	17	-.14	.16	-.46	.18
OS	12	.06	.19	-.32	.44
YS	12	-.60	.24	-1.08	-.12
MaC	5	-.87	.13	-1.13	-.61
FeC	4	-1.02	.30	-1.62	-.42
So	9	-.20	.28	-.76	.36
D	10	-.83	.22	-1.27	-.39
BCh	10	-.95	.29	-1.53	-.37
SCh	11	-.49	.13	-.75	-.23
Female					
F	21	.76	.19	.38	1.14
FB	16	-.09	.17	-.43	.25
FS	10	-.29	.25	-.79	.21
M	26	1.03	.14	.75	1.31
MB	15	.11	.18	-.25	.47
MS	18	.23	.19	-.15	.61
OB	22	.39	.19	.01	.77
YB	22	-.13	.17	-.47	.21
OS	24	.34	.14	.06	.62
YS	21	-.21	.18	-.57	.15
MaC	3	-.57	.37	-1.31	.17
FeC	4	-.46	.31	-1.08	.16
So	19	-.29	.17	-.63	.05
D	18	-.55	.18	-.91	-.19
BCh	24	-.77	.11	-.99	-.55
SCh	26	-.64	.10	-.84	-.44

CATEGORY 4

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	.77	.17	.43	1.11
FB	14	.04	.21	-.38	.46
FS	13	-.32	.32	-.96	.32
M	20	.89	.14	.61	1.17
MB	12	-.15	.16	-.47	.17
MS	11	.26	.26	-.26	.78
OB	14	.35	.11	.13	.57
YB	17	-.08	.13	-.34	.18
OS	12	.01	.18	-.35	.37
YS	12	-.40	.22	-.84	.04
MaC	5	-1.05	.24	-1.53	-.57
FeC	4	-.96	.26	-1.48	-.44
So	9	-.02	.19	-.40	.36
D	10	-.15	.34	-.83	.53
BCh	10	-.89	.31	-1.51	-.27
SCh	11	-.82	.11	-1.04	-.60
Female					
F	21	.56	.20	.16	.96
FB	16	-.10	.19	-.48	.28
FS	10	-.50	.29	-1.08	.08
M	26	1.01	.15	.71	1.31
MB	15	-.16	.22	-.60	.28
MS	18	.03	.18	-.33	.39
OB	22	.26	.17	-.08	.60
YB	22	.09	.14	-.19	.37
OS	24	.32	.14	.04	.60
YS	21	-.11	.21	-.53	.31
MaC	3	-.32	.11	-.54	-.10
FeC	4	-.37	.20	-.77	.03
So	19	-.07	.17	-.41	.27
D	18	-.10	.21	-.52	.32
BCh	24	-.81	.15	-1.11	-.51
SCh	26	-.68	.09	-.86	-.50

CATEGORY 5

CATEGORY 6

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	.30	.22	-.14	.74
FB	14	.19	.25	-.31	.69
FS	13	-.20	.24	-.68	.28
M	20	.60	.20	.20	1.00
MB	12	-.17	.15	-.47	.13
MS	11	.23	.20	-.17	.63
OB	14	.30	.14	.02	.58
YB	17	-.05	.14	-.33	.23
OS	12	-.21	.25	-.71	.29
YS	12	-.35	.19	-.73	.03
MaC	5	-1.09	.22	-1.53	-.65
FeC	4	-1.35	.13	-1.61	-1.09
So	9	.36	.26	-.16	.88
D	10	.08	.42	-.76	.92
BCh	10	-.45	.33	-1.11	.21
SCh	11	-.31	.24	-.79	.17
Female					
F	20	.69	.16	.37	1.01
FB	15	-.46	.19	-.84	-.08
FS	9	-.45	.34	-1.13	.23
M	25	.93	.11	.71	1.15
MB	15	-.07	.26	-.59	.45
MS	17	.00	.17	-.34	.34
OB	21	.19	.20	-.21	.59
YB	21	-.04	.19	-.42	.34
OS	23	.29	.15	-.01	.59
YS	20	-.09	.22	-.53	.35
MaC	2	-.27	.58	-1.43	.89
FeC	3	-.10	.55	-1.20	1.00
So	18	.25	.18	-.11	.61
D	17	.13	.18	-.23	.49
BCh	23	-.94	.12	-1.18	-.70
SCh	25	-.68	.09	-.86	-.50

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	.42	.18	.06	.78
FB	14	.40	.26	-.12	.92
FS	13	-.57	.19	-.95	-.19
M	20	.05	.24	-.43	.53
MB	12	-.14	.21	-.56	.28
MS	11	-.24	.20	-.64	.16
OB	14	.40	.20	.00	.80
YB	17	.24	.18	-.12	.60
OS	12	-.26	.17	-.60	.08
YS	12	-.30	.21	-.72	.12
MaC	5	-.16	.48	-1.12	.80
FeC	4	-1.12	.24	-1.60	-.64
So	9	.70	.30	.10	1.30
D	10	-.09	.29	-.67	.49
BCh	10	-.35	.30	-.95	.25
SCh	11	-.22	.30	-.82	.38
Female					
F	20	.10	.19	-.28	.48
FB	15	-.45	.21	-.87	-.03
FS	10	-.63	.27	-1.17	-.09
M	25	.74	.18	.38	1.10
MB	15	-.21	.17	-.55	.13
MS	17	-.08	.17	-.42	.26
OB	21	.01	.14	-.27	.29
YB	21	-.05	.11	-.27	.17
OS	23	.79	.12	.55	1.03
YS	20	.23	.23	-.23	.69
MaC	2	-.58	.27	-1.12	-.04
FeC	3	.03	.57	-1.11	1.17
So	18	-.03	.24	-.51	.45
D	17	.56	.16	.24	.88
BCh	23	-.77	.17	-1.11	-.43
SCh	25	-.58	.14	-.86	-.30

CATEGORY 7

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	.23	.21	-.19	.65
FB	14	-.08	.20	-.48	.32
FS	13	-.47	.28	-1.03	.09
M	20	.61	.19	.23	.99
MB	12	-.58	.18	-.94	-.22
MS	11	-.14	.21	-.56	.28
OB	14	.08	.22	-.36	.52
YB	17	.12	.21	-.30	.54
OS	12	.03	.20	-.37	.43
YS	12	-.12	.20	-.52	.28
MaC	5	-.56	.57	-1.70	.58
FeC	4	-.45	.51	-1.47	.57
So	9	.27	.27	-.27	.81
D	10	.06	.35	-.64	.76
BCh	10	.03	.26	-.49	.55
SCh	11	-.17	.31	-.79	.45
Female					
F	20	.03	.20	-.37	.43
FB	15	-.57	.21	-.99	-.15
FS	10	-.34	.34	-1.02	.34
M	25	.19	.18	-.17	.55
MB	15	-.25	.21	-.67	.17
MS	17	-.39	.21	-.81	.03
OB	21	-.14	.17	-.48	.20
YB	21	.36	.15	.06	.66
OS	23	.22	.18	-.14	.58
YS	20	-.07	.19	-.45	.31
MaC	2	-.59	.20	-.99	-.19
FeC	3	-.36	.28	-.92	.20
So	18	.70	.18	.34	1.06
D	17	.90	.22	.46	1.34
BCh	23	-.39	.16	-.71	-.07
SCh	25	-.32	.14	-.60	-.04

CATEGORY 8

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	.16	.19	-.22	.54
FB	14	.23	.28	-.33	.79
FS	13	-.53	.30	-1.13	.07
M	20	.34	.21	-.08	.76
MB	12	-.37	.21	-.79	.05
MS	11	.07	.20	-.33	.47
OB	14	.26	.15	-.04	.56
YB	17	.14	.17	-.20	.48
OS	12	-.21	.22	-.65	.23
YS	12	-.22	.23	-.68	.24
MaC	5	-.26	.55	-1.36	.84
FeC	4	-.91	.26	-1.43	-.39
So	9	.62	.27	.08	1.16
D	10	-.03	.36	-.75	.69
BCh	10	-.34	.27	-.88	.20
SCh	11	-.03	.26	-.55	.49
Female					
F	20	.28	.21	-.14	.70
FB	15	-.35	.24	-.83	.13
FS	10	-.60	.29	-1.18	-.02
M	25	.54	.16	.22	.86
MB	15	-.36	.16	-.68	-.04
MS	17	-.24	.20	-.64	.16
OB	21	-.14	.17	-.48	.20
YB	21	-.20	.21	-.62	.22
OS	23	.26	.16	-.06	.58
YS	20	.15	.22	-.29	.59
MaC	2	-.58	.27	-1.12	-.04
FeC	3	-.39	.34	-1.07	.29
So	18	.45	.20	.05	.85
D	17	.82	.19	.44	1.20
BCh	23	-.44	.15	-.74	-.14
SCh	25	-.39	.15	-.69	-.09

CATEGORY 9

CATEGORY 10

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	- .09	.21	- .51	.33
FB	14	- .03	.18	- .39	.33
FS	13	- .70	.25	-1.20	-.20
M	20	.19	.19	-.19	.57
MB	12	-.46	.19	-.84	-.08
MS	11	-.10	.23	-.56	.36
OB	14	.01	.23	-.45	.47
YB	17	.29	.19	-.09	.67
OS	12	-.22	.19	-.60	.16
YS	12	.50	.23	.04	.96
MaC	5	-.57	.36	-1.29	.15
FeC	4	-.73	.36	-1.45	-.01
So	9	.83	.27	.29	1.37
D	10	.45	.28	-.11	1.01
BCh	10	.18	.34	-.50	.86
SCh	11	-.22	.32	-.86	.42
Female					
F	20	-.16	.21	-.58	.26
FB	15	-.79	.14	-1.07	-.51
FS	10	-.95	.21	-1.37	-.53
M	25	.14	.18	-.22	.50
MB	15	-.48	.21	-.90	-.06
MS	17	-.47	.17	-.81	-.13
OB	21	.04	.21	-.38	.46
YB	21	.40	.17	.06	.74
OS	23	.37	.14	.09	.65
YS	20	.28	.19	-.10	.66
MaC	2	-.40	.40	-1.20	.40
FeC	3	-.47	.36	-1.19	.25
So	18	.63	.18	.27	.99
D	17	.61	.18	.25	.97
BCh	23	-.26	.19	-.64	.12
SCh	25	-.02	.15	-.32	.28

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	.23	.21	-.19	.65
FB	14	.17	.19	-.21	.55
FS	13	-.59	.26	-1.11	-.07
M	20	.54	.20	.14	.94
MB	12	-.39	.19	-.77	-.01
MS	11	.09	.22	-.35	.53
OB	14	.28	.20	-.12	.68
YB	17	.06	.13	-.20	.32
OS	12	.18	.28	-.38	.74
YS	12	-.21	.25	-.71	.29
MaC	5	-.49	.52	-1.53	.55
FeC	4	-.73	.44	-1.61	.15
So	9	.25	.36	-.47	.97
D	10	.02	.29	-.56	.60
BCh	10	-.43	.30	-1.03	.17
SCh	11	-.32	.27	-.86	.22
Female					
F	20	.46	.15	.16	.76
FB	15	-.48	.25	-.98	.02
FS	10	-.33	.36	-1.05	.39
M	25	.72	.14	.44	1.00
MB	15	-.24	.19	-.62	.14
MS	17	-.54	.19	-.92	-.16
OB	21	.01	.17	-.33	.35
YB	21	.22	.17	-.12	.56
OS	23	.25	.16	-.07	.57
YS	20	-.01	.23	-.47	.45
MaC	2	-.46	.15	-.76	-.16
FeC	3	-.06	.20	-.46	.34
So	18	.33	.21	-.09	.75
D	17	.30	.21	-.12	.72
BCh	23	-.60	.17	-.94	-.26
SCh	25	-.43	.15	-.73	-.13

CATEGORY 11

CATEGORY 12

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	.07	.21	-.35	.49
FB	14	.21	.25	-.29	.71
FS	13	.54	.19	.16	.92
M	20	-.30	.17	-.64	.04
MB	12	.00	.18	-.36	.36
MS	11	.34	.15	.04	.64
OB	14	.01	.20	-.39	.41
YB	17	.01	.20	-.39	.41
OS	12	.75	.19	.37	1.13
YS	12	-.18	.24	-.66	.30
MaC	5	-.02	.64	-1.30	1.26
FeC	4	-.12	.57	-1.26	1.02
So	9	-.16	.32	-.80	.48
D	10	-.55	.35	-1.25	.15
BCh	10	-.69	.26	-1.21	-.17
SCh	11	-.17	.30	-.77	.43
Female					
F	19	.58	.23	.12	1.04
FB	14	-.14	.21	-.56	.28
FS	9	.26	.38	-.50	1.02
M	24	.53	.21	.11	.95
MB	14	.56	.16	.24	.88
MS	16	-.10	.21	-.52	.32
OB	20	.22	.16	-.10	.54
YB	20	.02	.17	-.32	.36
OS	22	.20	.17	-.14	.54
YS	20	-.18	.18	-.54	.18
MaC	2	-.99	.68	-2.35	.37
FeC	3	.15	.29	-.43	.73
So	18	-.06	.21	-.48	.36
D	17	-.36	.20	-.76	.04
BCh	22	-.70	.15	-1.00	-.40
SCh	24	-.49	.14	-.77	-.21

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	.09	.27	-.45	.63
FB	14	-.14	.24	-.62	.34
FS	13	.33	.26	-.19	.85
M	20	-.12	.16	-.44	.20
MB	12	-.48	.28	-1.04	.08
MS	11	.20	.17	-.14	.54
OB	14	.19	.20	-.21	.59
YB	17	.27	.19	-.11	.65
OS	12	.76	.20	.36	1.16
YS	12	-.11	.21	-.53	.31
MaC	5	-.33	.53	-1.39	.73
FeC	4	-.12	.57	-1.26	1.02
So	9	-.38	.24	-.86	.10
D	10	-.41	.32	-1.05	.23
BCh	10	-.47	.22	-.91	-.03
SCh	11	.11	.28	-.45	.67
Female					
F	19	-.35	.17	-.69	-.01
FB	14	-.27	.23	-.73	.19
FS	9	-.46	.42	-1.30	.38
M	24	.11	.19	-.27	.49
MB	14	.26	.26	-.26	.78
MS	16	.35	.22	-.09	.79
OB	20	-.17	.22	-.61	.27
YB	20	.12	.14	-.16	.40
OS	22	.33	.21	-.09	.75
YS	20	-.05	.17	-.39	.29
MaC	2	-1.23	.44	-2.11	-.35
FeC	3	-.16	.31	-.78	.46
So	18	.31	.24	-.17	.79
D	17	.29	.20	-.11	.69
BCh	22	-.21	.18	-.57	.15
SCh	24	-.22	.17	-.56	.12

CATEGORY 13

CATEGORY 14

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	-.08	.19	-.46	.30
FB	14	-.05	.21	-.47	.37
FS	13	.43	.28	-.13	.99
M	20	-.09	.21	-.51	.33
MB	12	-.27	.31	-.89	.35
MS	11	.69	.15	.39	.99
OB	14	-.10	.25	-.60	.40
YB	17	.02	.19	-.36	.40
OS	12	.56	.28	.00	1.12
YS	12	.04	.16	-.28	.36
MaC	5	-.29	.48	-1.25	.67
FeC	4	-.08	.69	-1.46	1.30
So	9	-.28	.22	-.72	.16
D	10	-.64	.24	-1.12	-.16
BCh	10	-.27	.29	-.85	.31
SCh	11	.14	.26	-.38	.66
Female					
F	19	.13	.17	-.21	.47
FB	14	-.21	.26	-.73	.31
FS	9	.46	.44	-.42	1.34
M	24	.15	.19	-.23	.53
MB	14	-.01	.22	-.45	.43
MS	16	.53	.24	.05	1.01
OB	20	-.01	.17	-.35	.33
YB	20	-.16	.18	-.52	.20
OS	22	.49	.18	.13	.85
YS	20	-.41	.20	-.81	-.01
MaC	2	-1.40	.28	-1.96	-.84
FeC	3	.98	.34	.30	1.66
So	18	.08	.23	-.38	.54
D	17	-.03	.17	-.37	.31
BCh	22	-.26	.13	-.52	.00
SCh	24	-.41	.18	-.77	-.05

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	.70	.24	.22	1.18
FB	14	.30	.19	-.08	.68
FS	13	-.23	.19	-.61	.15
M	20	.51	.20	.11	.91
MB	12	.20	.24	-.28	.68
MS	11	.38	.17	.04	.72
OB	14	.33	.24	-.15	.81
YB	17	-.04	.21	-.46	.38
OS	12	.30	.19	-.08	.68
YS	12	-.41	.17	-.75	-.07
MaC	5	-.42	.30	-1.02	.18
FeC	4	-1.13	.34	-1.81	-.45
So	9	-.53	.23	-.99	-.07
D	10	-.83	.19	-1.21	-.45
BCh	10	-.84	.21	-1.26	-.42
SCh	11	-.52	.11	-.74	-.30
Female					
F	19	.73	.27	.19	1.27
FB	14	-.13	.24	-.61	.35
FS	9	-.15	.40	-.95	.65
M	24	.57	.17	.23	.91
MB	14	.45	.23	-.01	.91
MS	16	.21	.19	-.17	.59
OB	20	.08	.16	-.24	.40
YB	20	-.24	.14	-.52	.04
OS	22	.32	.14	.04	.60
YS	20	-.40	.19	-.78	-.02
MaC	2	-.99	.68	-2.35	.37
FeC	3	.04	.09	-.14	.22
So	18	.15	.22	-.29	.59
D	17	-.34	.22	-.78	.10
BCh	22	-.71	.15	-1.01	-.41
SCh	24	-.38	.09	-.56	-.20

CATEGORY 15

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	-.40	.22	-.84	.04
FB	14	.10	.21	-.32	.52
FS	13	.62	.20	.22	1.02
M	20	-.65	.17	-.99	-.31
MB	12	.06	.21	-.35	.48
MS	11	.35	.19	-.03	.73
OB	14	.33	.19	-.05	.71
YB	17	-.06	.19	-.44	.32
OS	12	.60	.24	.12	1.08
YS	12	.02	.29	-.56	.60
MaC	5	.10	.63	-1.16	1.36
FeC	4	.24	.65	-1.06	1.54
So	9	-.12	.22	-.56	.32
D	10	-.37	.29	-.95	.21
BCh	10	-.07	.29	-.65	.51
SCh	11	-.05	.28	-.61	.51
Female					
F	19	-.26	.22	-.70	.18
FB	14	.51	.16	.19	.83
FS	9	.65	.35	-.05	1.35
M	24	-.38	.18	-.74	-.02
MB	14	.63	.22	.19	1.07
MS	16	.59	.13	.33	.85
OB	20	.09	.21	-.33	.51
YB	20	.02	.18	-.34	.38
OS	22	.37	.20	-.03	.77
YS	20	.12	.15	-.18	.42
MaC	2	-.28	1.40	-3.08	2.52
FeC	3	.47	.36	-.25	1.19
So	18	-.68	.13	-.94	-.42
D	17	-.72	.15	-1.02	-.42
BCh	22	-.06	.17	-.40	.28
SCh	24	-.20	.19	-.58	.18

CATEGORY 16

	No.	\bar{X}	$S_{\bar{X}}$	95% Confidence limits	
				Lower	Upper
Male					
F	19	-.36	.19	-.74	.02
FB	14	.39	.21	-.03	.81
FS	13	.69	.14	.41	.97
M	20	-.65	.17	-.99	-.31
MB	12	.49	.18	.13	.85
MS	11	.43	.19	.05	.81
OB	14	.39	.19	.01	.77
YB	17	-.06	.20	-.46	.34
OS	12	.61	.22	.17	1.05
YS	12	-.10	.17	-.44	.24
MaC	5	.21	.57	-.93	1.35
FeC	4	.31	.66	-1.01	1.63
So	9	-1.00	.15	-1.30	-.70
D	10	-1.14	.16	-1.46	-.82
BCh	10	.03	.19	-.35	.41
SCh	11	.19	.30	-.41	.79
Female					
F	19	-.25	.20	-.65	.15
FB	14	.84	.20	.44	1.24
FS	9	.76	.32	.12	1.40
M	24	-.51	.18	-.87	-.15
MB	14	.52	.20	.12	.92
MS	16	.61	.14	.33	.89
OB	20	.02	.15	-.28	.32
YB	20	-.01	.18	-.37	.35
OS	22	.30	.17	-.04	.64
YS	20	-.07	.19	-.45	.31
MaC	2	-.44	1.23	-2.90	2.02
FeC	3	.65	.52	-.39	1.69
So	18	-.67	.17	-1.01	-.33
D	17	-.67	.17	-1.01	-.33
BCh	22	.03	.20	-.37	.43
SCh	24	-.09	.16	-.41	.23

APPENDIX II
STATISTICAL ANALYSIS: COMPARISON OF ROLES

This appendix is a comparison of the differences in the means of the roles of all relatives in all categories. When the 95 per cent confidence intervals about the means fail to overlap, the roles are considered to differ significantly. The x's in the tables indicate that the 95 per cent confidence intervals of two given roles fail to overlap and that the difference in behavior of these two roles is therefore significant. First, the comparison is given by category. Then, on page 395 (top), there is a table which is a summation of the preceding sixteen categories.

The table at the bottom of page 395 compares the mean of a particular relative as rated by males with the mean of the same relative as rated by females. The comparison is made for all relatives in all categories. When the confidence intervals fail to overlap, they are marked with an x.

The abbreviations are the same as those used in Appendix I.

CATEGORY 1

CATEGORY 2

Male																					
		F F								M M O Y O Y				M F				B S			
		F F		M M		O Y		O Y		a e		S		C C		o D		h h			
		F	B	S	M	B	S	B	S	S	C	C	o	D	h	h					
F		x			x	x	x	x	x	x	x	x	x	x	x	x					
FB										x											
FS										x											
M					x					x	x	x	x	x	x	x					
MB														x	x	x					
MS										x	x	x	x	x	x	x					
OB										x											
YB																					
OS																					
YS																					
MaC																					
FeC																					
So																					
D																					
BCh																					
SCh																					

Female																					
		F F								M M O Y O Y				M F				B S			
		F F		M M		O Y		O Y		a e		S		C C		o D		h h			
		F	B	S	M	B	S	B	S	S	C	C	o	D	h	h					
F		x	x							x											
FB					x																
FS					x																
M																					
MB																					
MS																					
OB																					
YB																					
OS																					
YS																					
MaC																					
FeC																					
So																					
D																					
BCh																					
SCh																					

Male																					
		F F								M M O Y O Y				M F				B S			
		F F		M M		O Y		O Y		a e		S		C C		o D		h h			
		F	B	S	M	B	S	B	S	S	C	C	o	D	h	h					
F		x	x																		
FB																					
FS																					
M																					
MB																					
MS																					
OB																					
YB																					
OS																					
YS																					
MaC																					
FeC																					
So																					
D																					
BCh																					
SCh																					

Female																					
		F F								M M O Y O Y				M F				B S			
		F F		M M		O Y		O Y		a e		S		C C		o D		h h			
		F	B	S	M	B	S	B	S	S	C	C	o	D	h	h					
F		x																			
FB																					
FS																					
M																					
MB																					
MS																					
OB																					
YB																					
OS																					
YS																					
MaC																					
FeC																					
So																					
D																					
BCh																					
SCh																					

CATEGORY 7

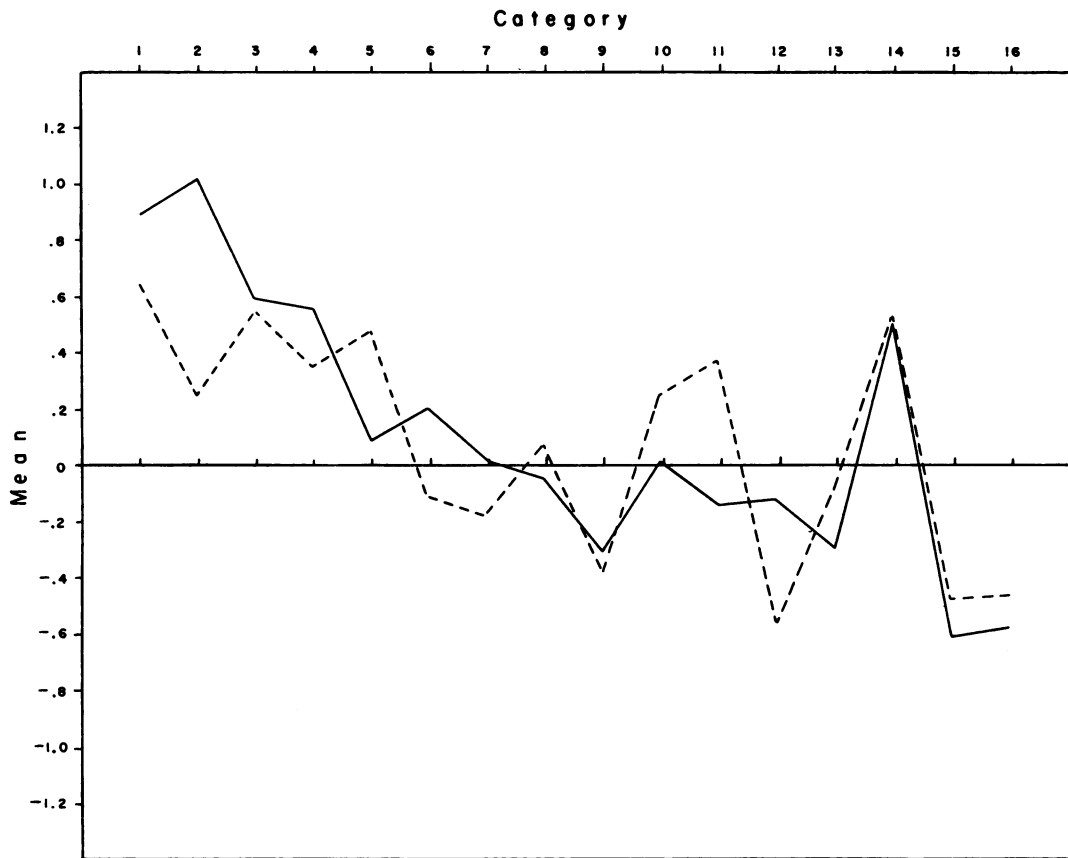
CATEGORY 8

Male	
	F F M M O Y O Y a e S B S F B S M B S B B S S C C o D h h
F	
FB	x
FS	x
M	x
MB	
MS	
OB	
YB	
OS	
YS	
MaC	
FeC	
So	
D	
BCh	
SCh	
Female	
	F F M M O Y O Y a e S B S F B S M B S B B S S C C o D h h
F	
FB	x x
FS	x x
M	x
MB	x x
MS	x x
OB	x x
YB	x x
OS	x
YS	x x
MaC	x x
FeC	x x
So	x x
D	x x
BCh	
SCh	

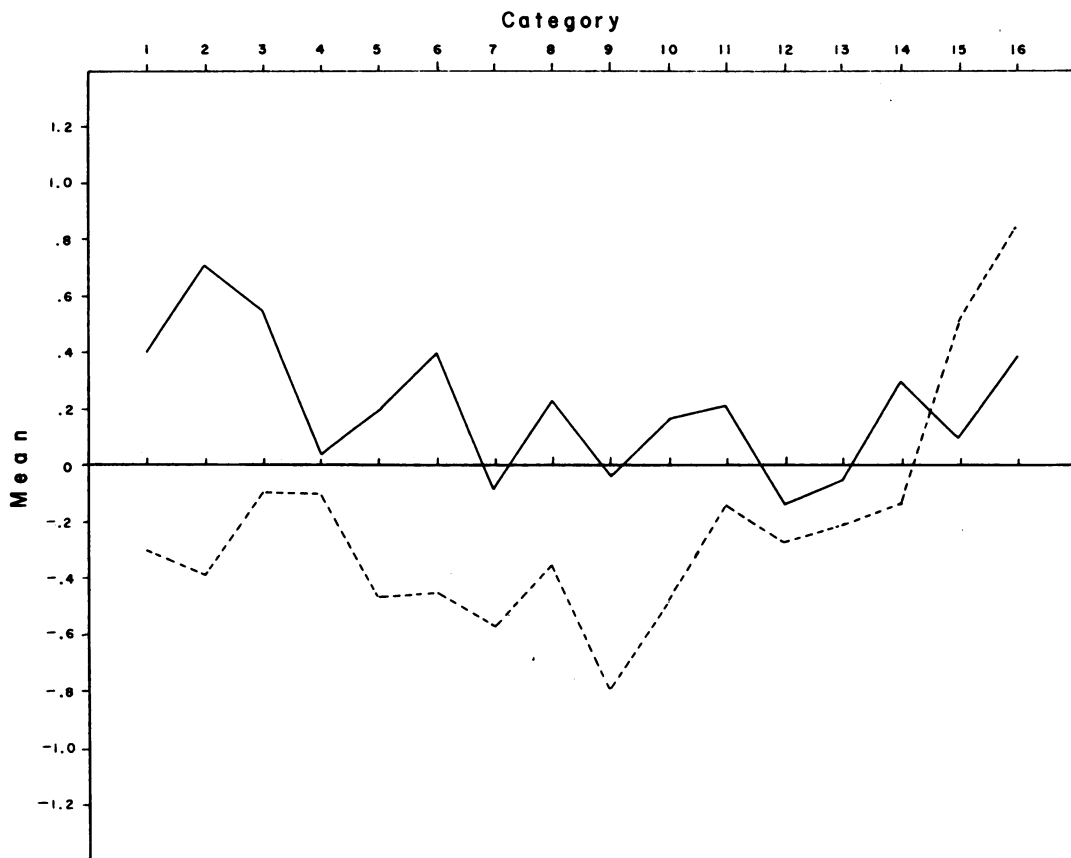
Male	
	F F M M O Y O Y a e S B S F B S M B S B B S S C C o D h h
F	
FB	x
FS	x
M	x
MB	x
MS	x
OB	x
YB	x
OS	
YS	
MaC	
FeC	x
So	
D	
BCh	
SCh	
Female	
	F F M M O Y O Y a e S B S F B S M B S B B S S C C o D h h
F	
FB	x
FS	x
M	x x x
MB	x
MS	x x
OB	x
YB	x
OS	x x
YS	
MaC	x x
FeC	x
So	x x
D	x x
BCh	
SCh	

APPENDIX III
ROLE PROFILES

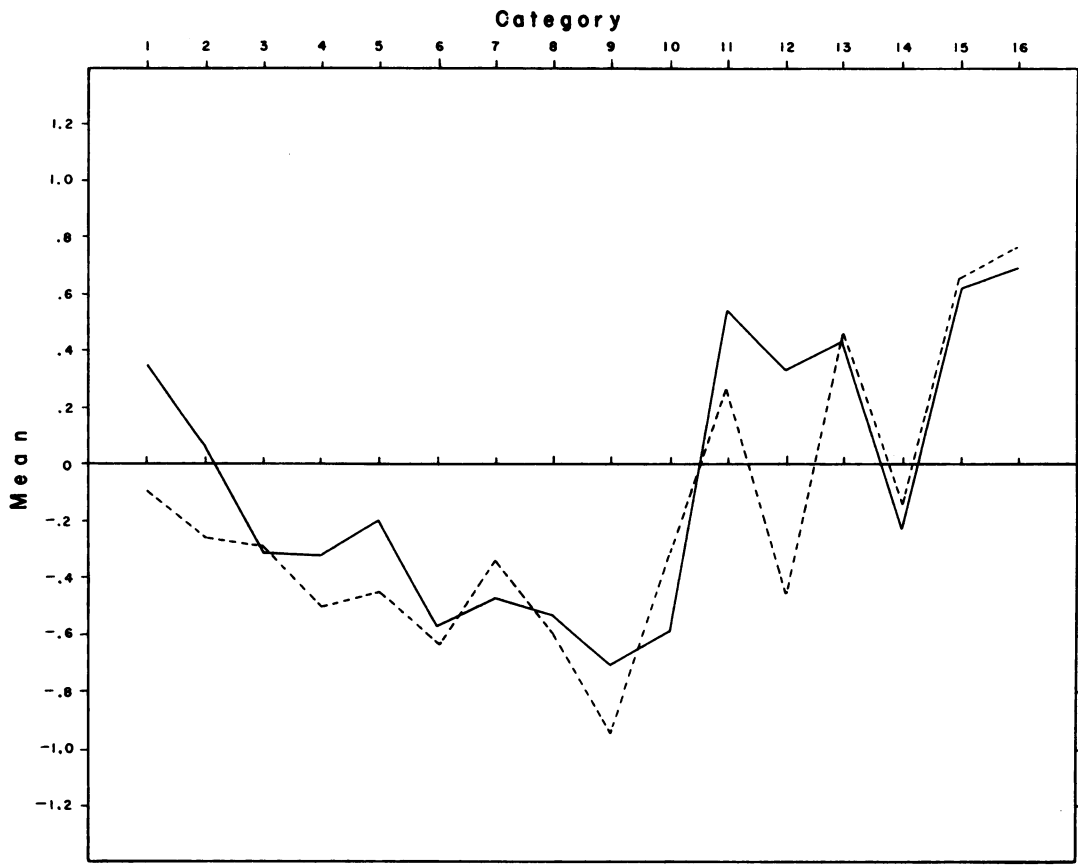
This appendix contains the graphs of the means of each relative in all the categories of behavior.



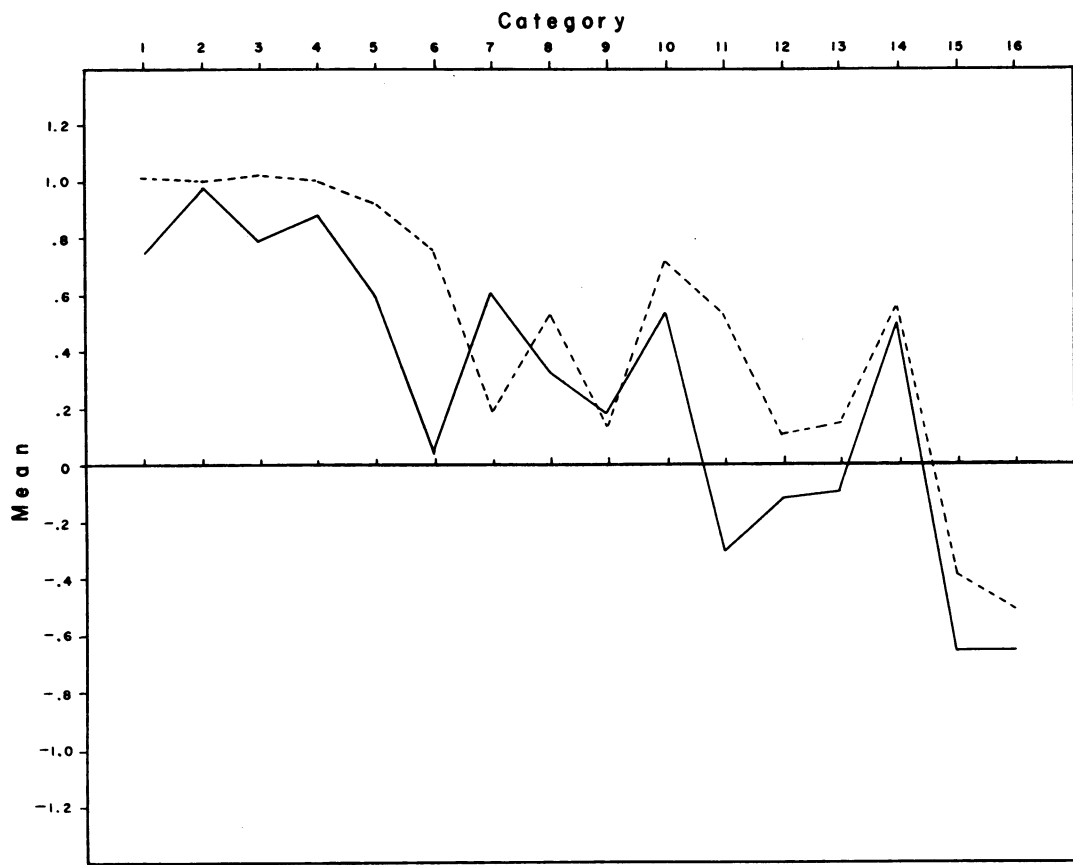
Graph 1. Role profile of father for males (solid line) and females (broken line).



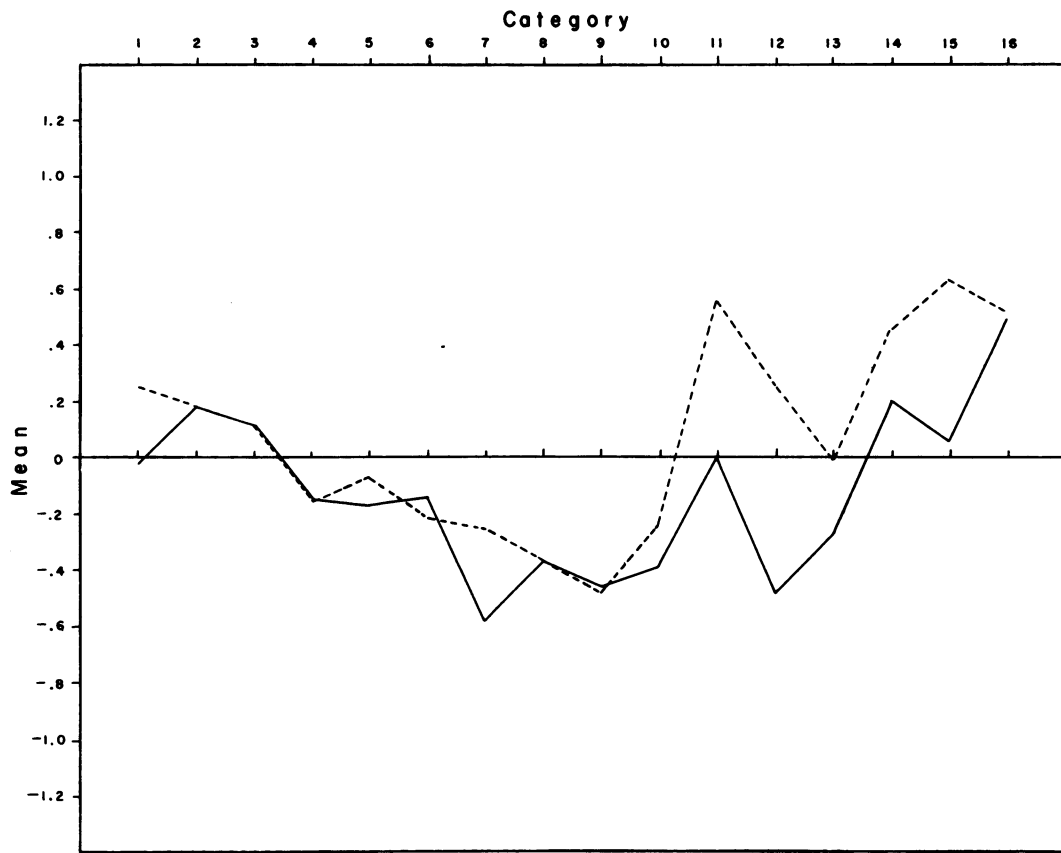
Graph 2. Role profile of father's brother for males (solid line) and females (broken line).



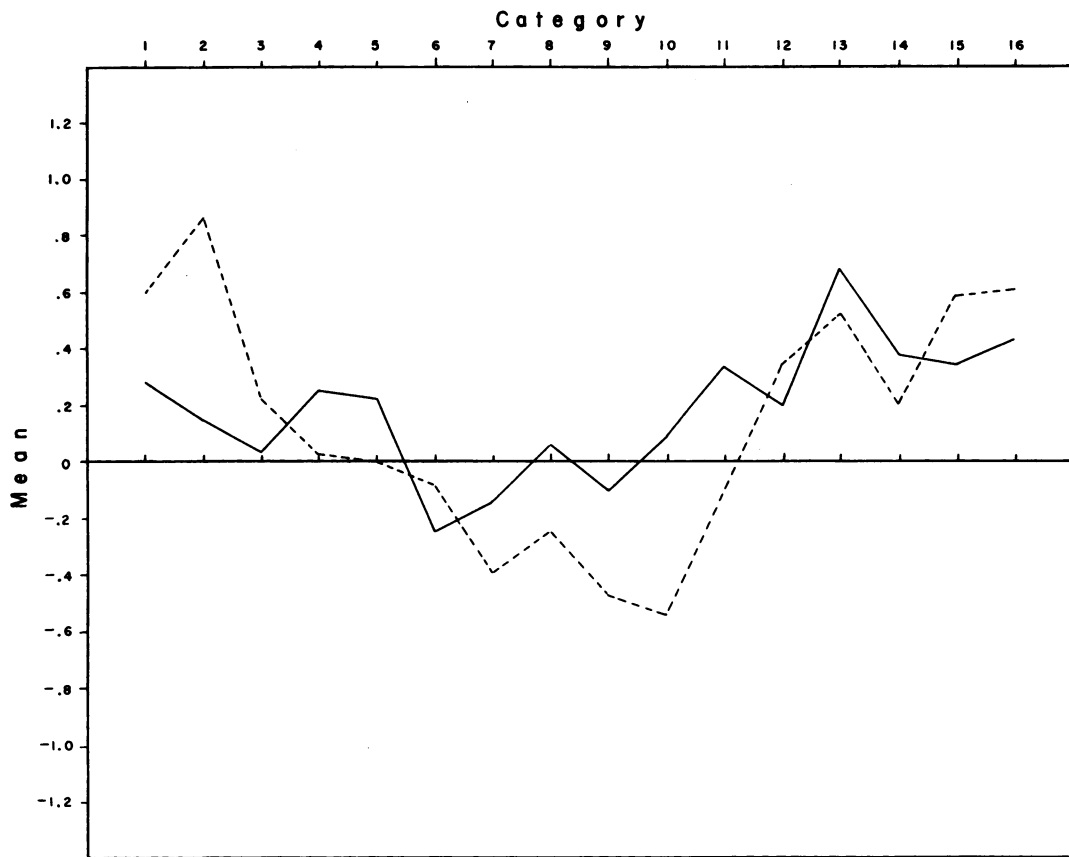
Graph 3. Role profile of father's sister for males (solid line) and females (broken line).



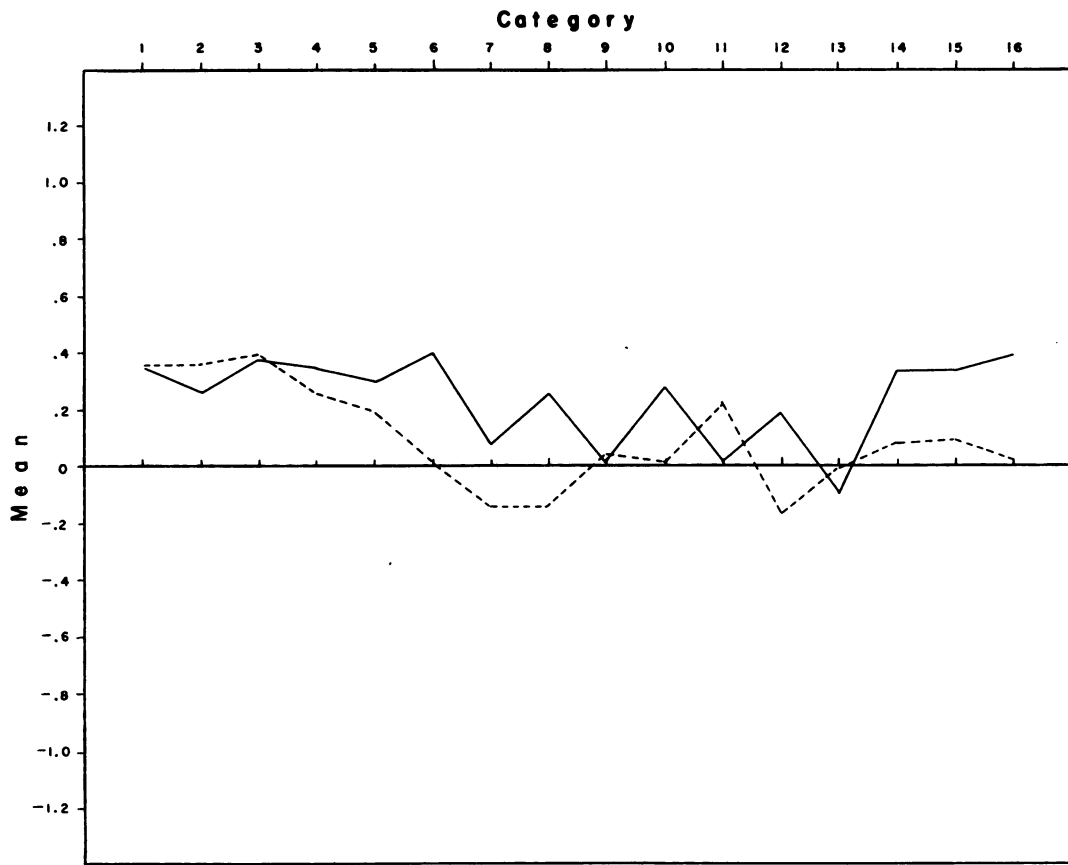
Graph 4. Role profile of mother for males (solid line) and females (broken line).



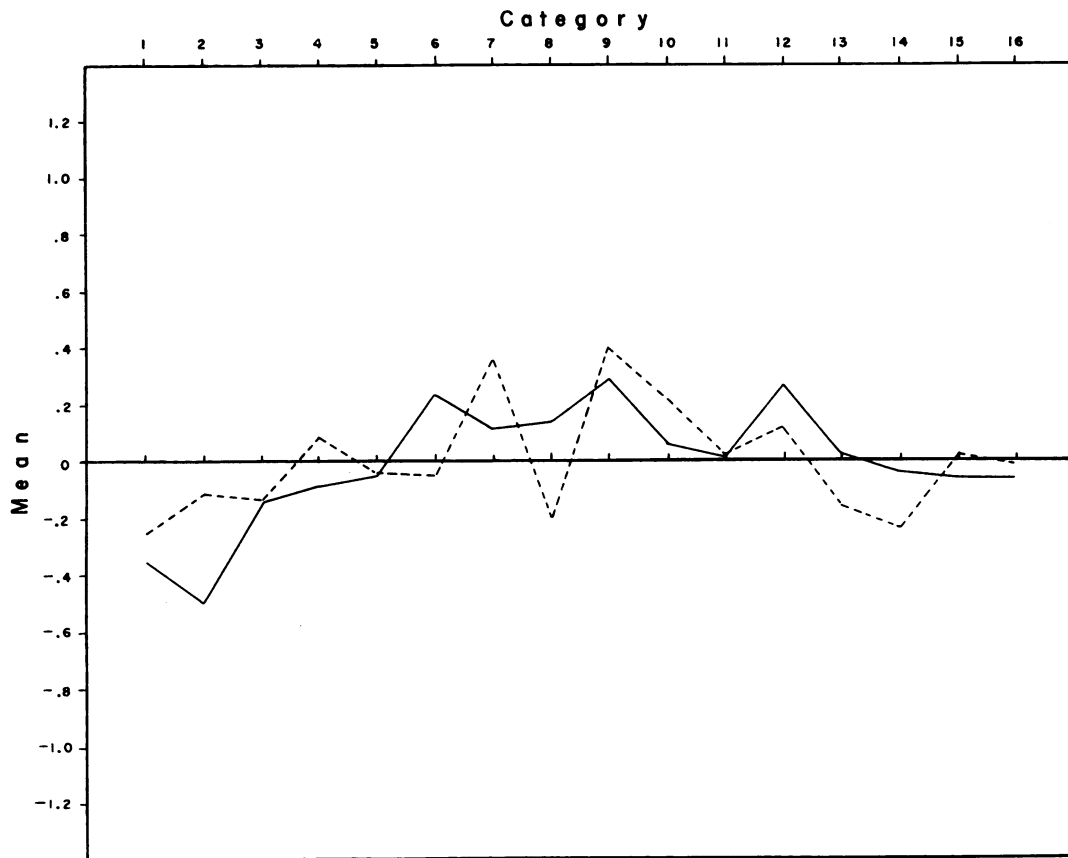
Graph 5. Role profile of mother's brother for males (solid line) and females (broken line).



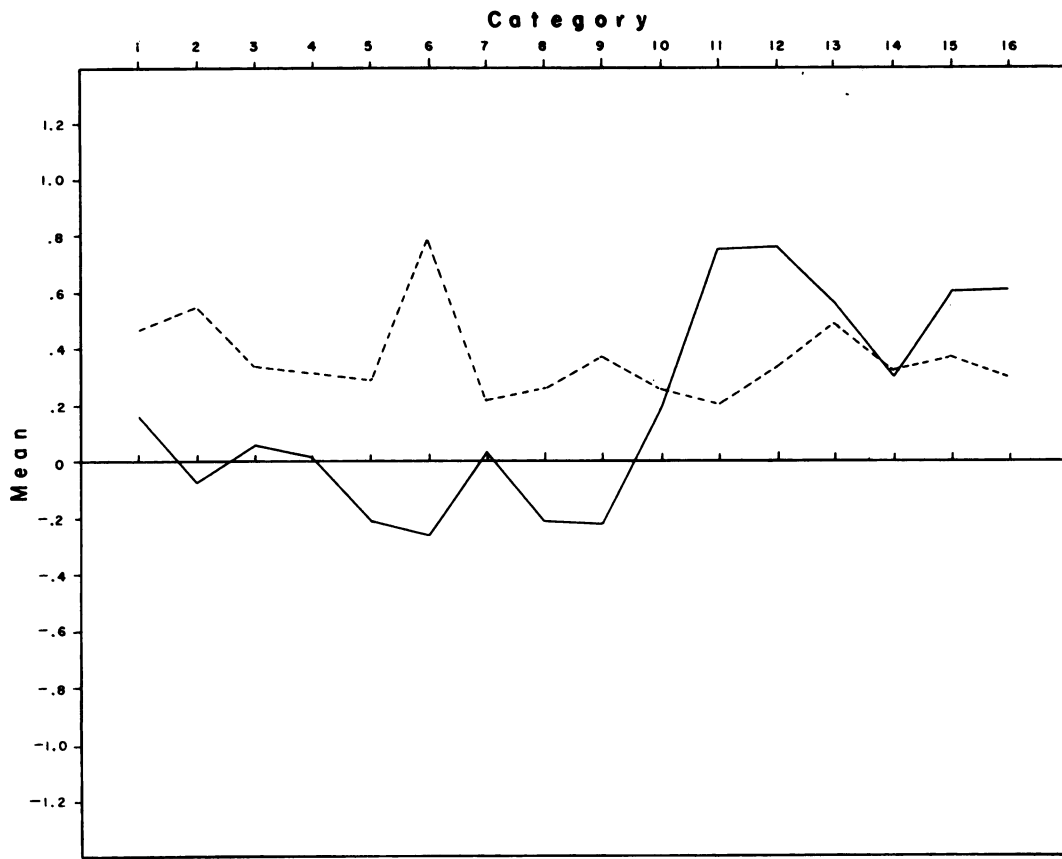
Graph 6. Role profile of mother's sister for males (solid line) and females (broken line).



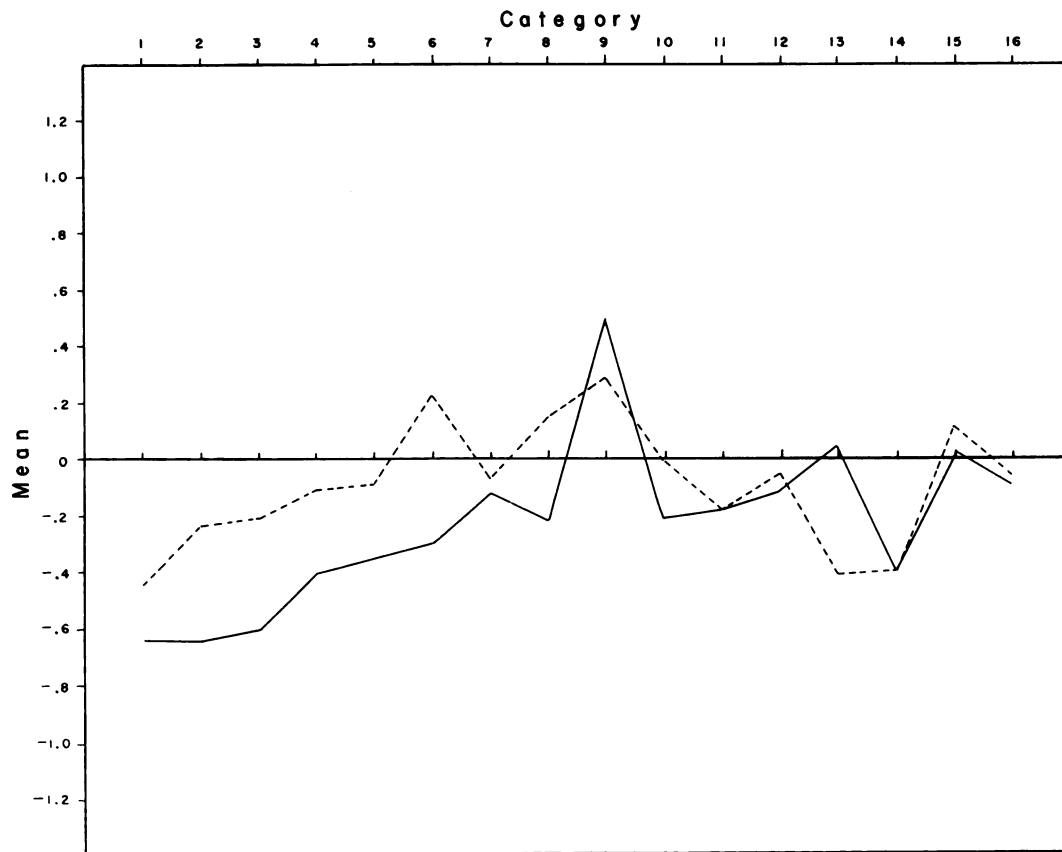
Graph 7. Role profile of older brother for males (solid line) and females (broken line).



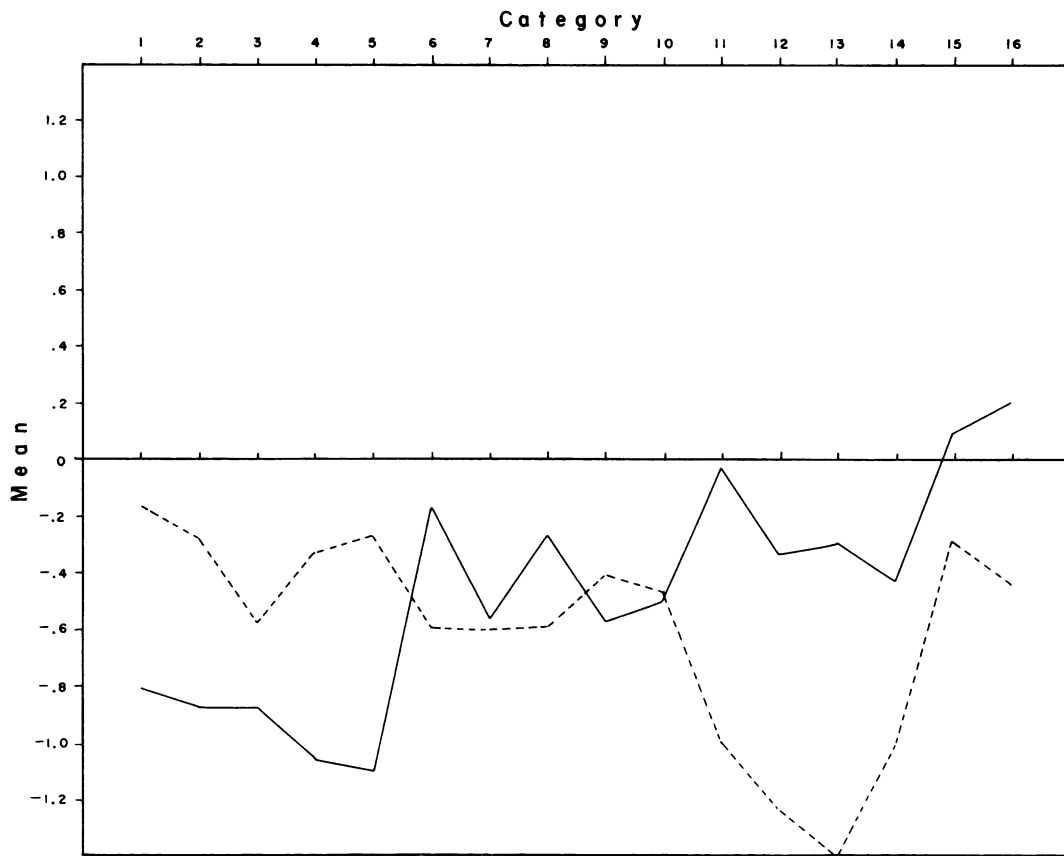
Graph 8. Role profile of younger brother for males (solid line) and females (broken line).



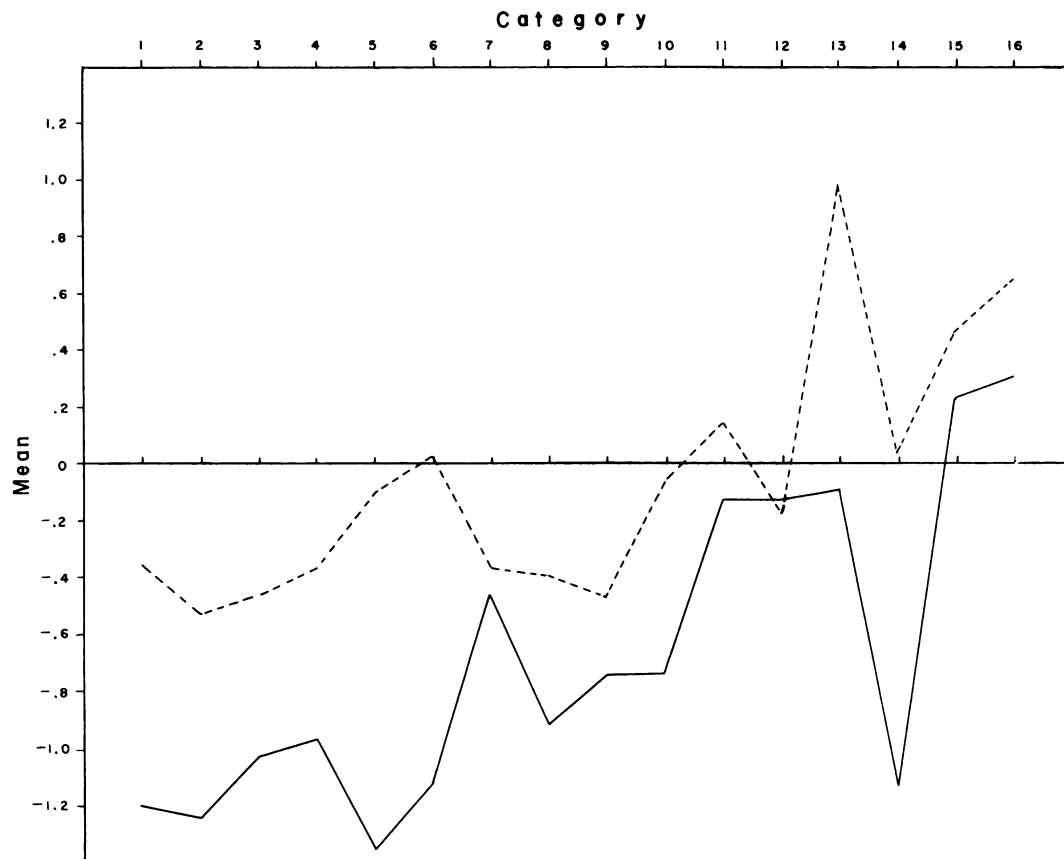
Graph 9. Role profile of older sister for males (solid line) and females (broken line).



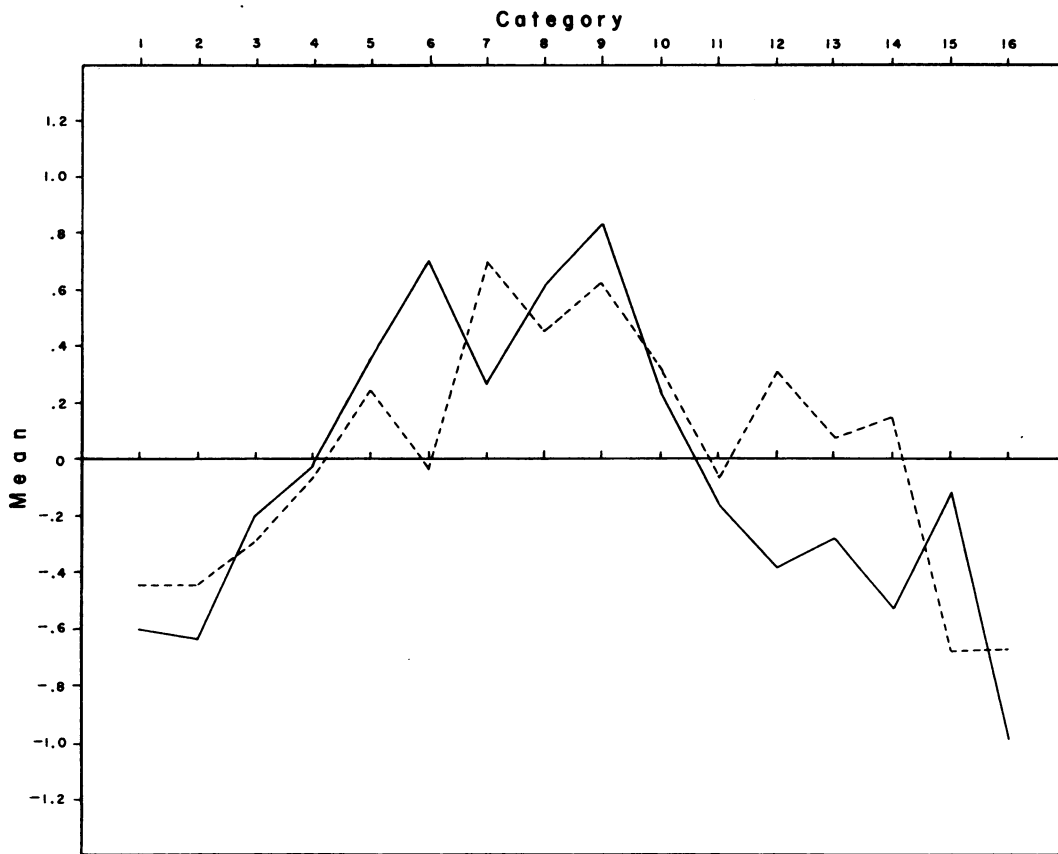
Graph 10. Role profile of younger sister for males (solid line) and females (broken line).



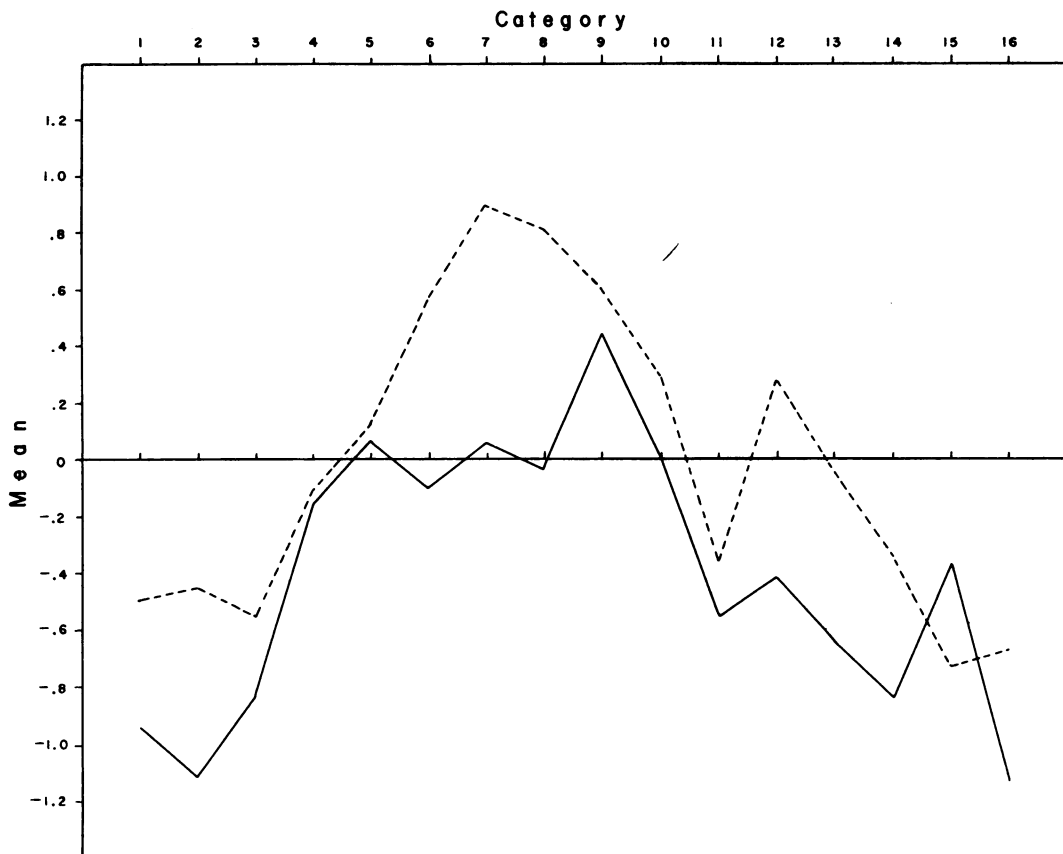
Graph 11. Role profile of male cousin for males (solid line) and females (broken line).



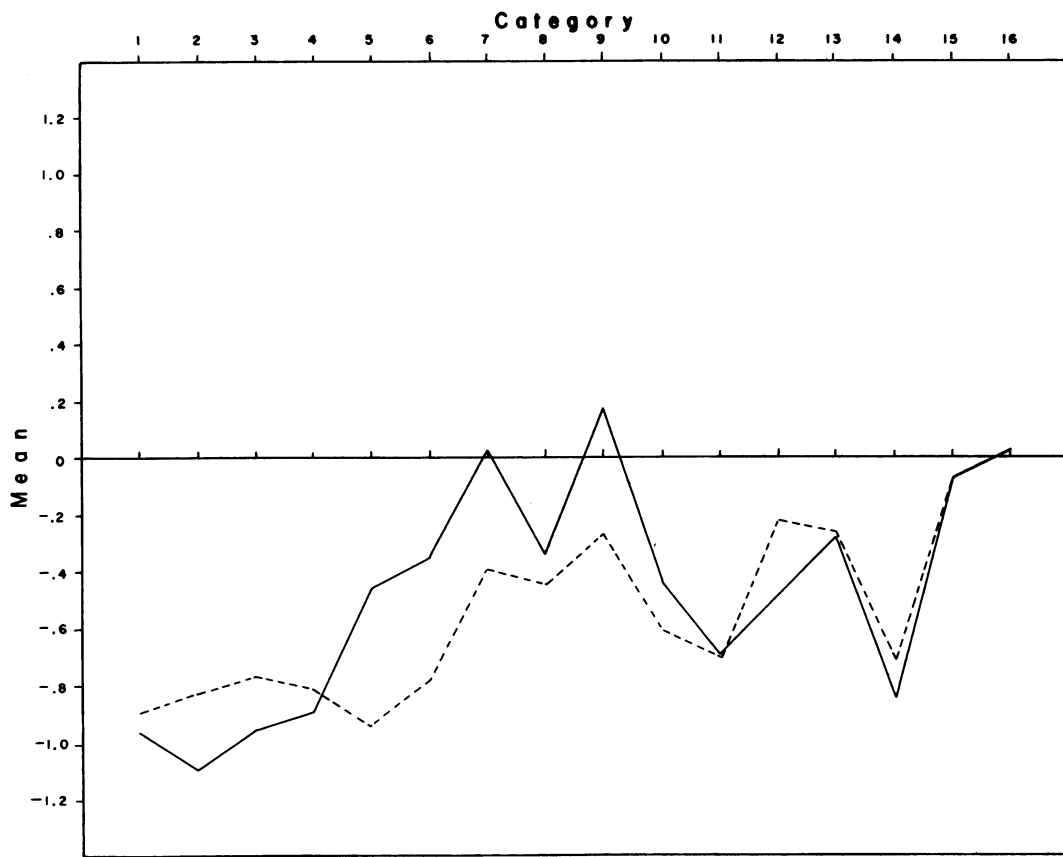
Graph 12. Role profile of female cousin for males (solid line) and females (broken line).



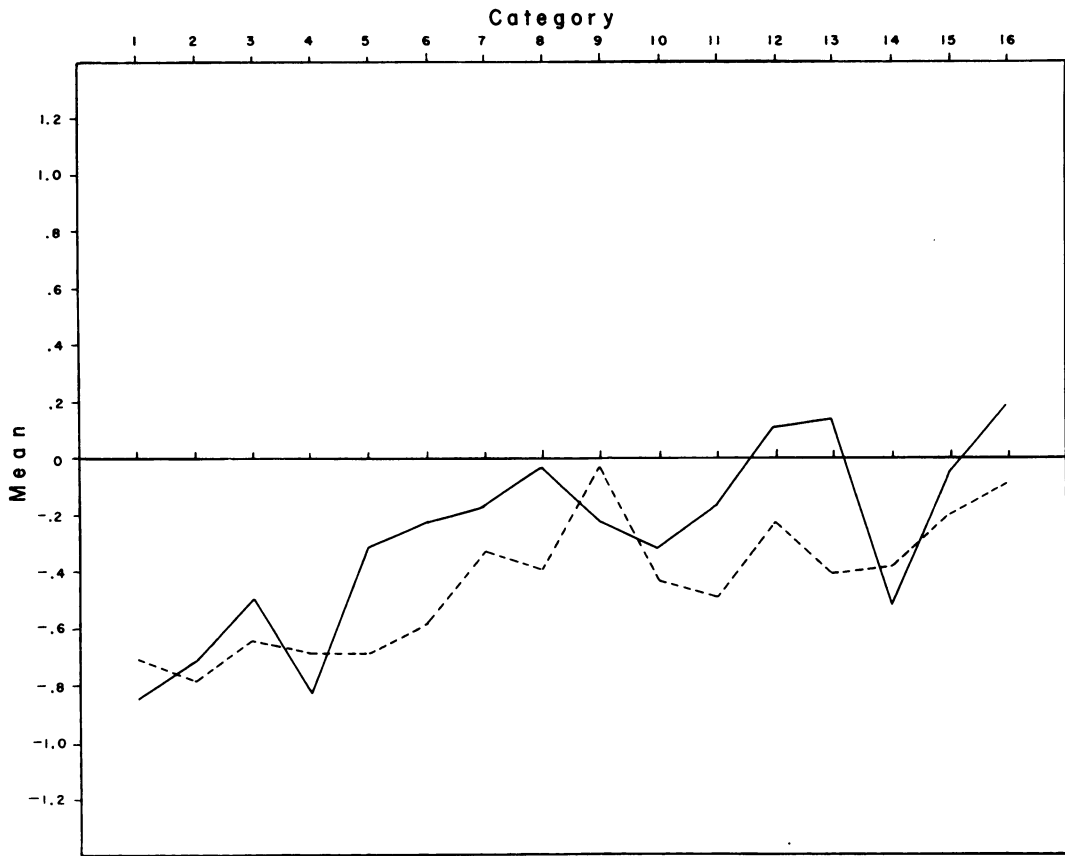
Graph 13. Role profile of son for males (solid line) and females (broken line).



Graph 14. Role profile of daughter for males (solid line) and females (broken line).



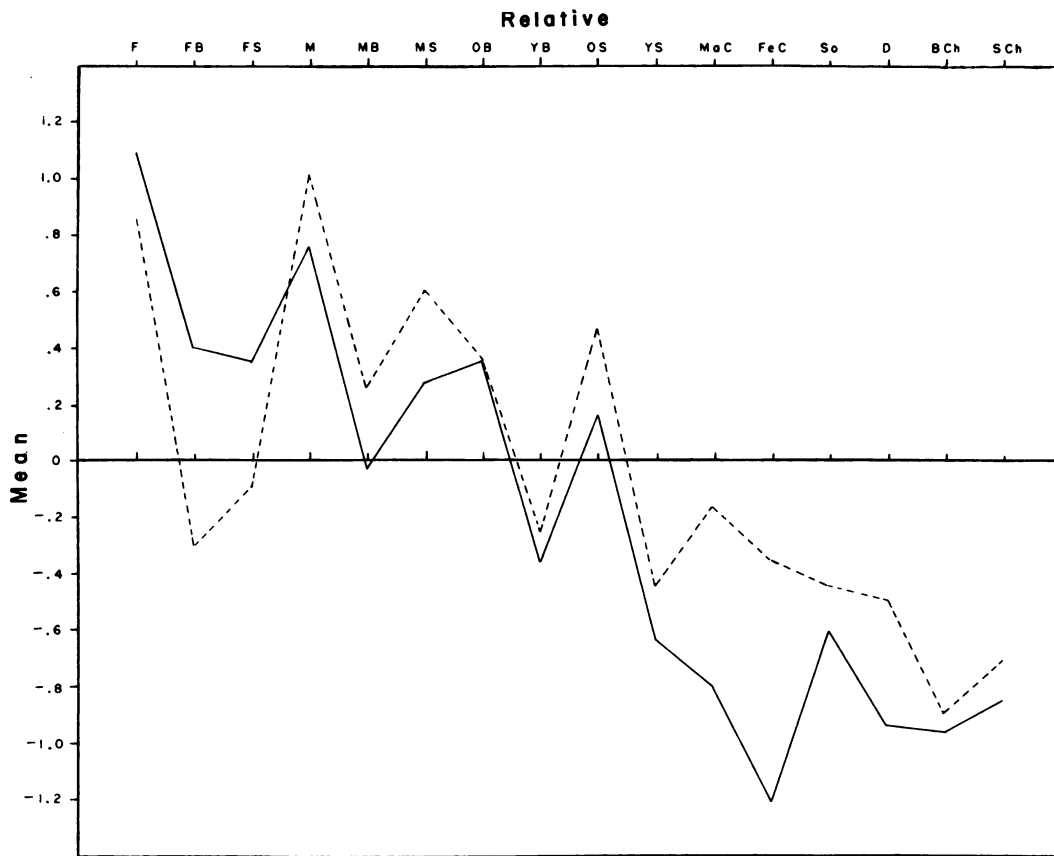
Graph 15. Role profile of brother's child for males (solid line) and females (broken line).



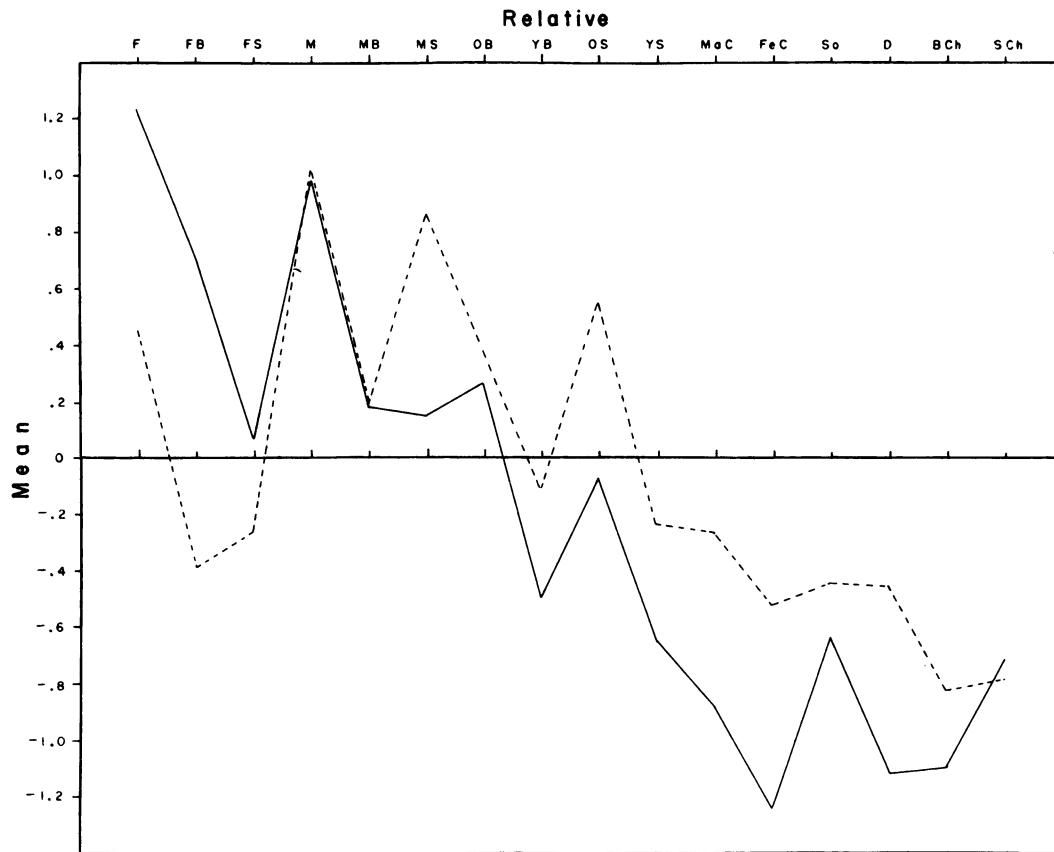
Graph 16. Role profile of sister's child for males (solid line) and females (broken line).

APPENDIX IV
GRAPHS OF THE SIXTEEN CATEGORIES
OF ROLE BEHAVIOR

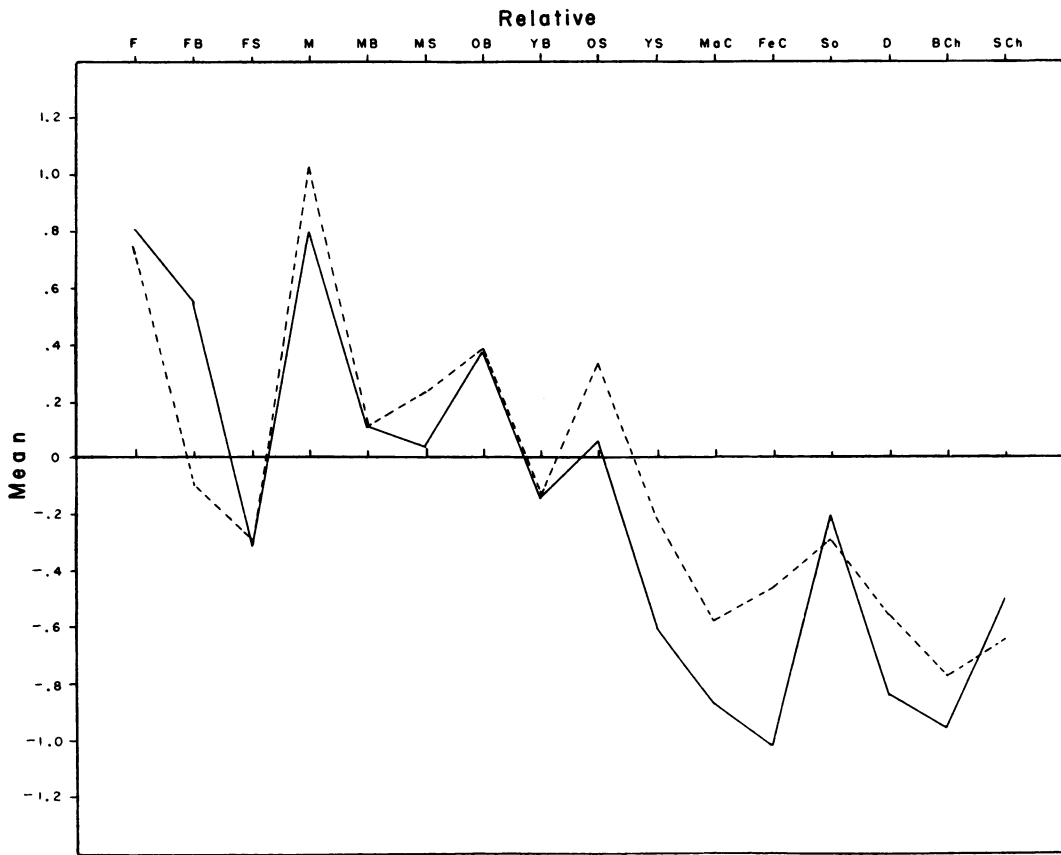
This appendix contains the graphs of each category of role behavior with the relatives on the x axis. The abbreviations are the same as those used in Appendix I.



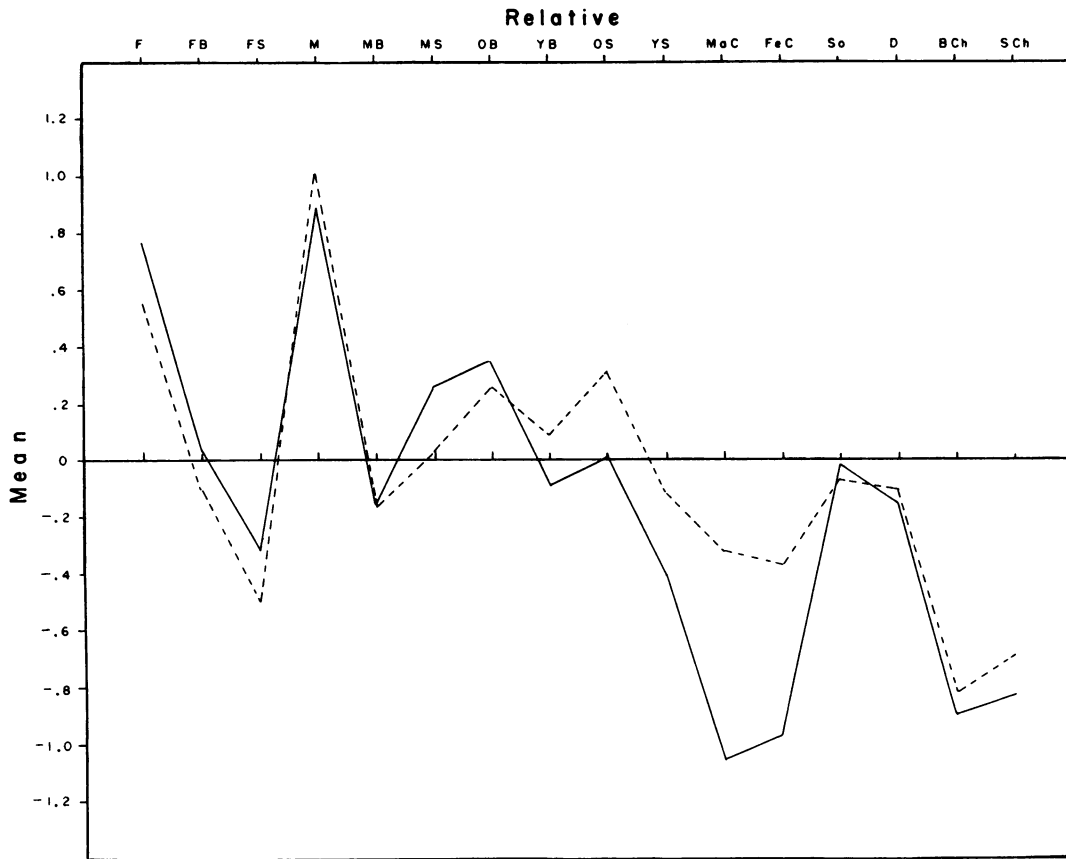
Graph 17. Category 1 (to order) for males (solid line) and females (broken line).



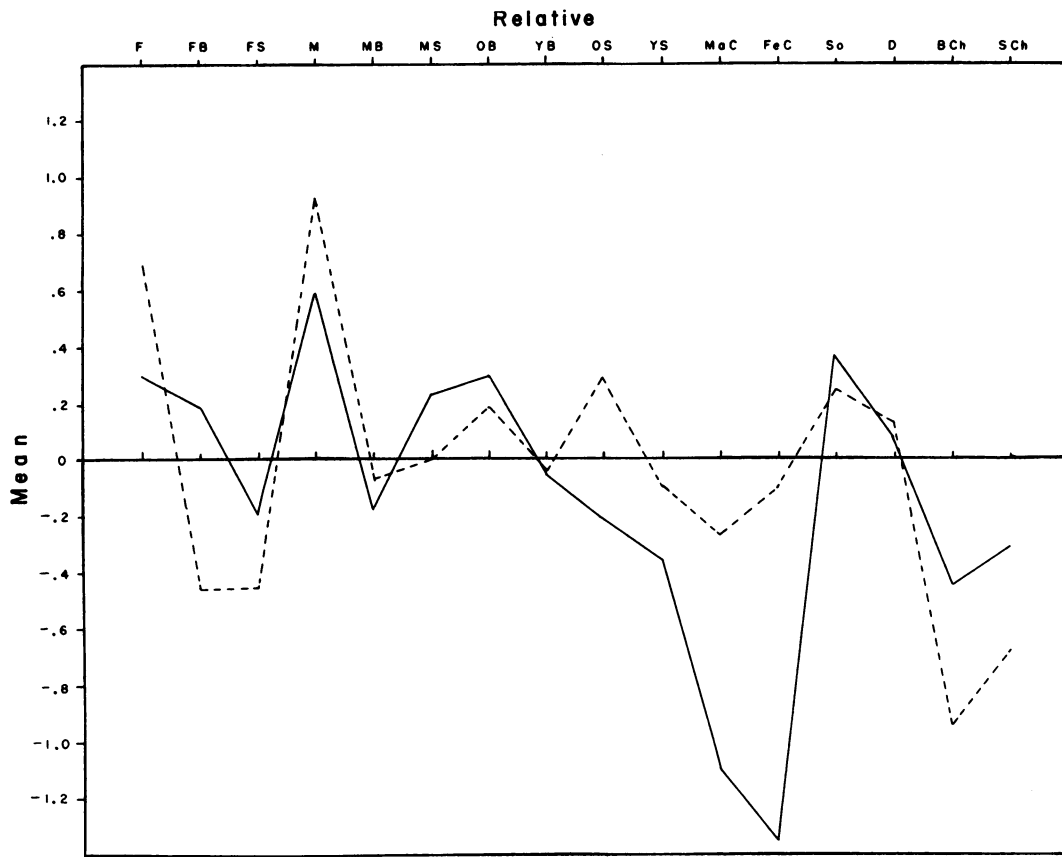
Graph 18. Category 2 (to teach) for males (solid line) and females (broken line).



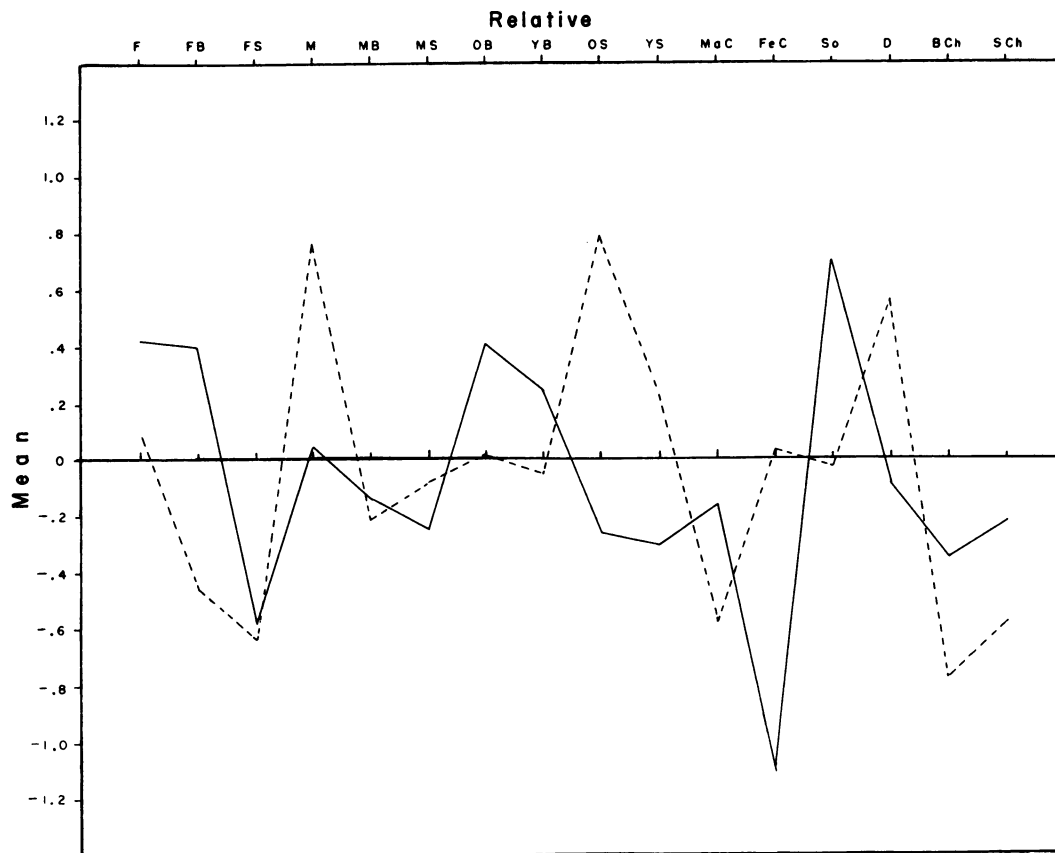
Graph 19. Category 3 (to help) for males (solid line) and females (broken line).



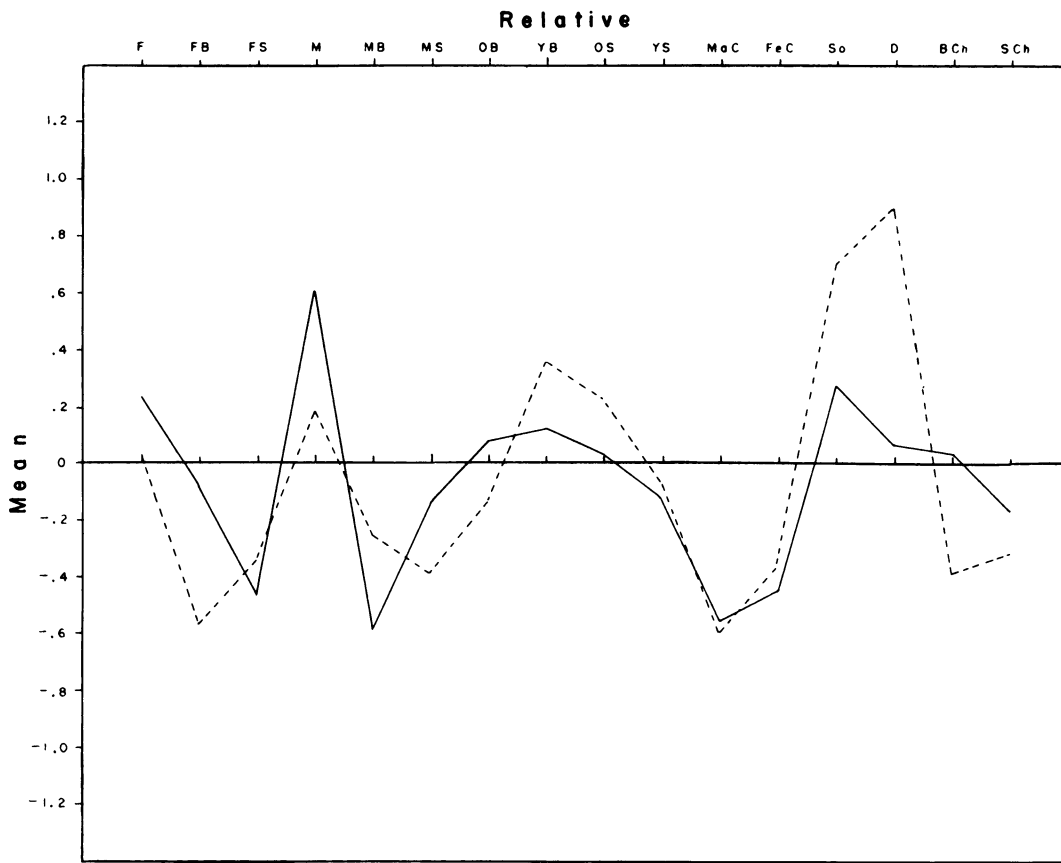
Graph 20. Category 4 (to sympathize) for males (solid line) and females (broken line).



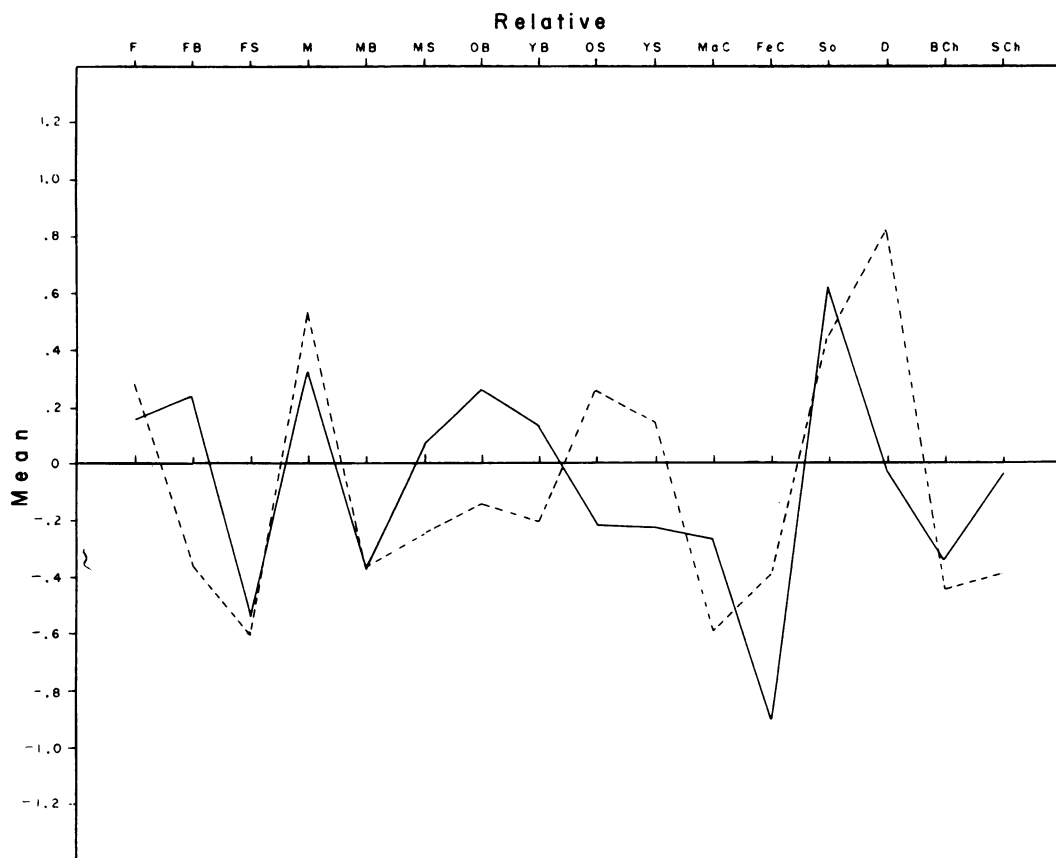
Graph 21. Category 5 (to like) for males (solid line) and females (broken line).



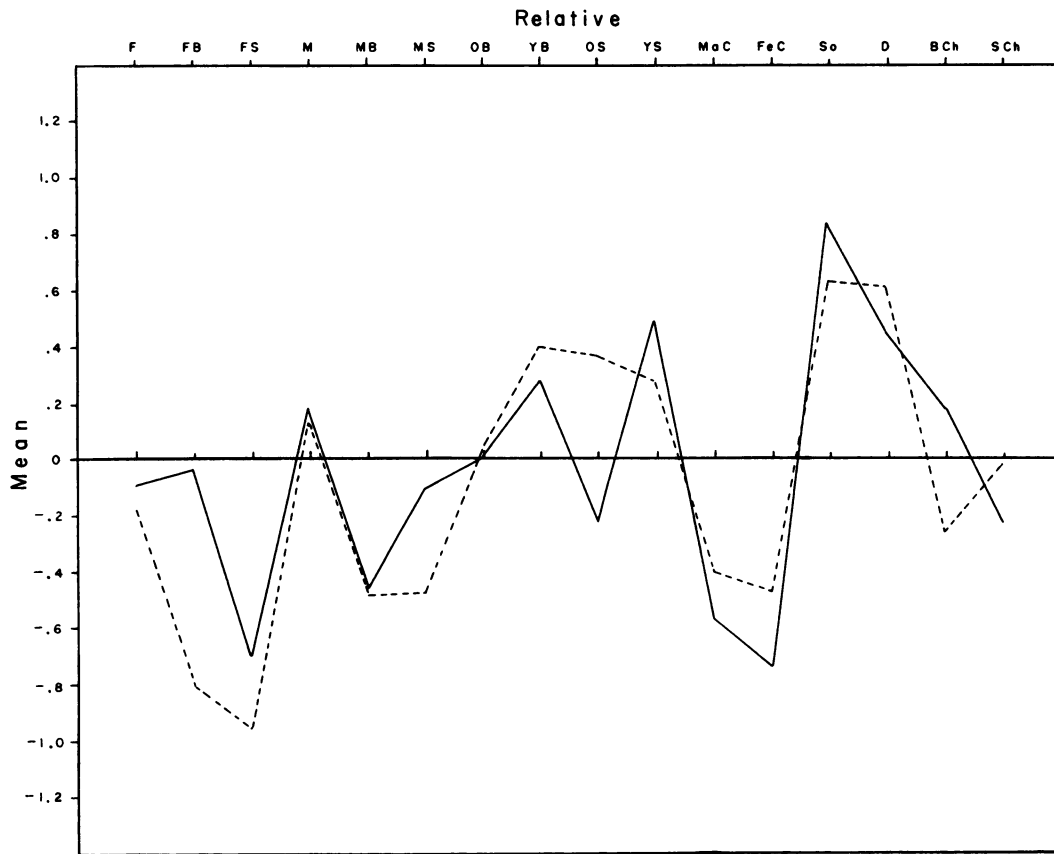
Graph 22. Category 6 (to cooperate) for males (solid line) and females (broken line).



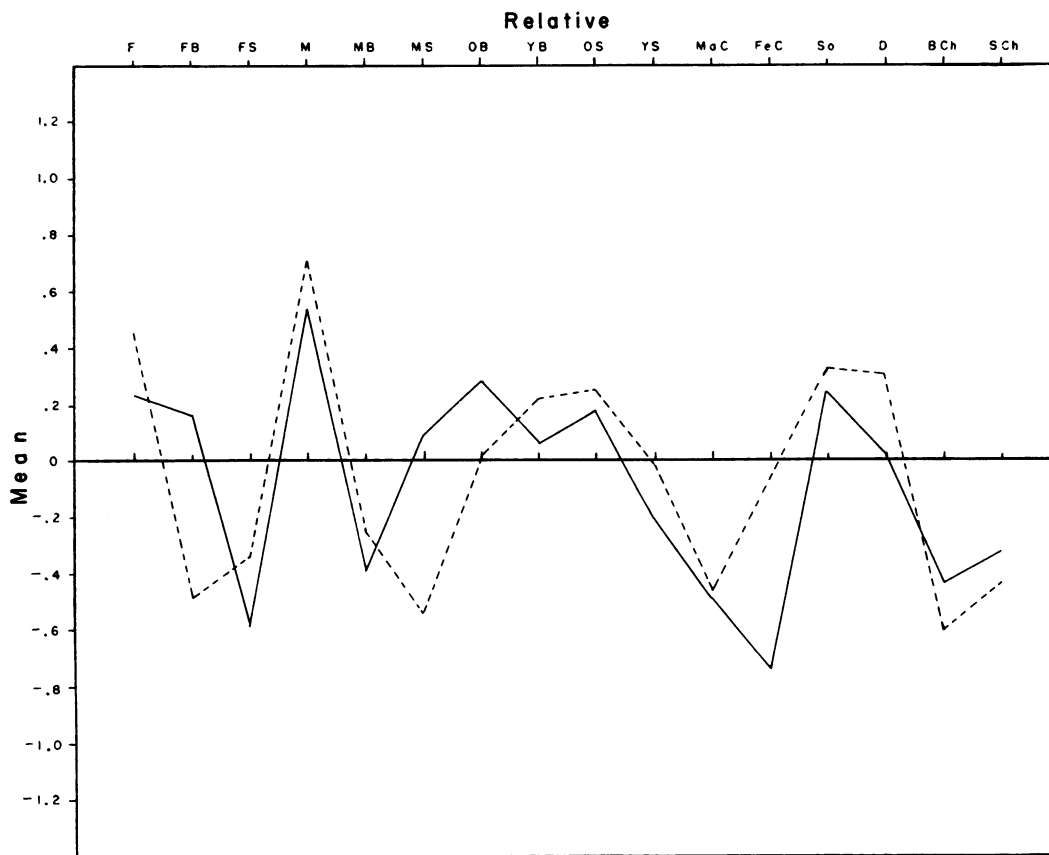
Graph 23. Category 7 (to depend) for males (solid line) and females (broken line).



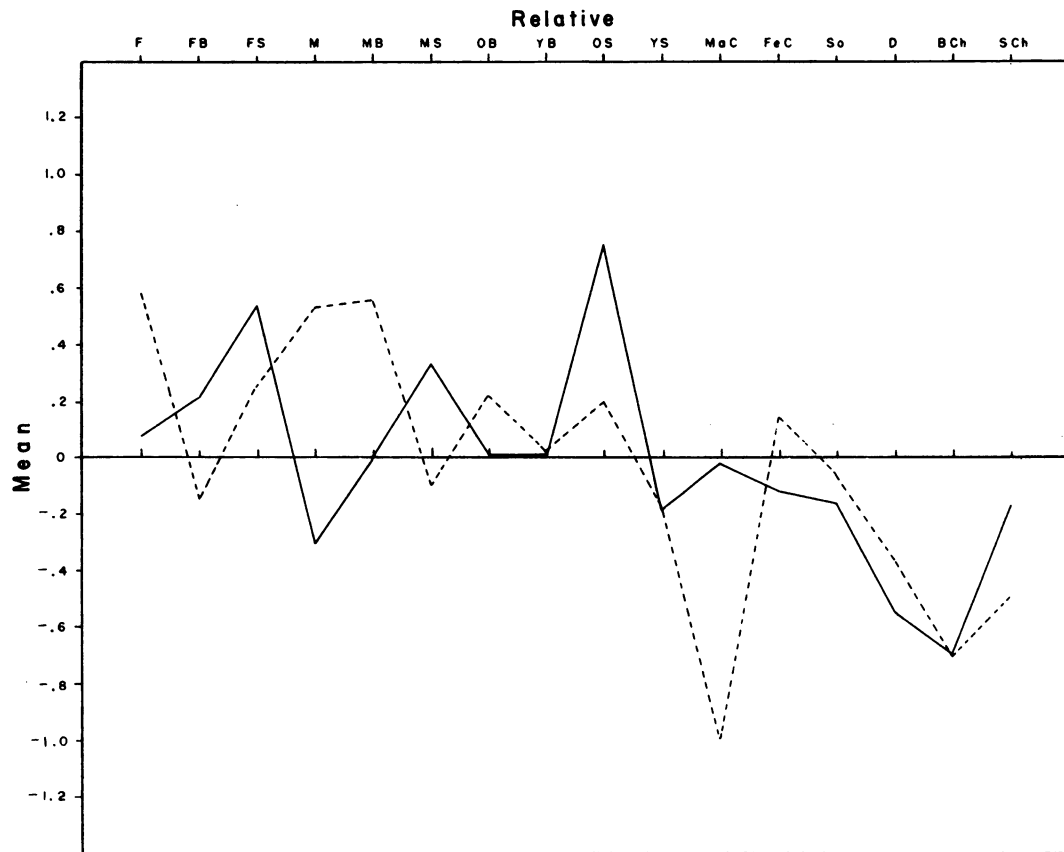
Graph 24. Category 8 (to respect) for males (solid line) and females (broken line).



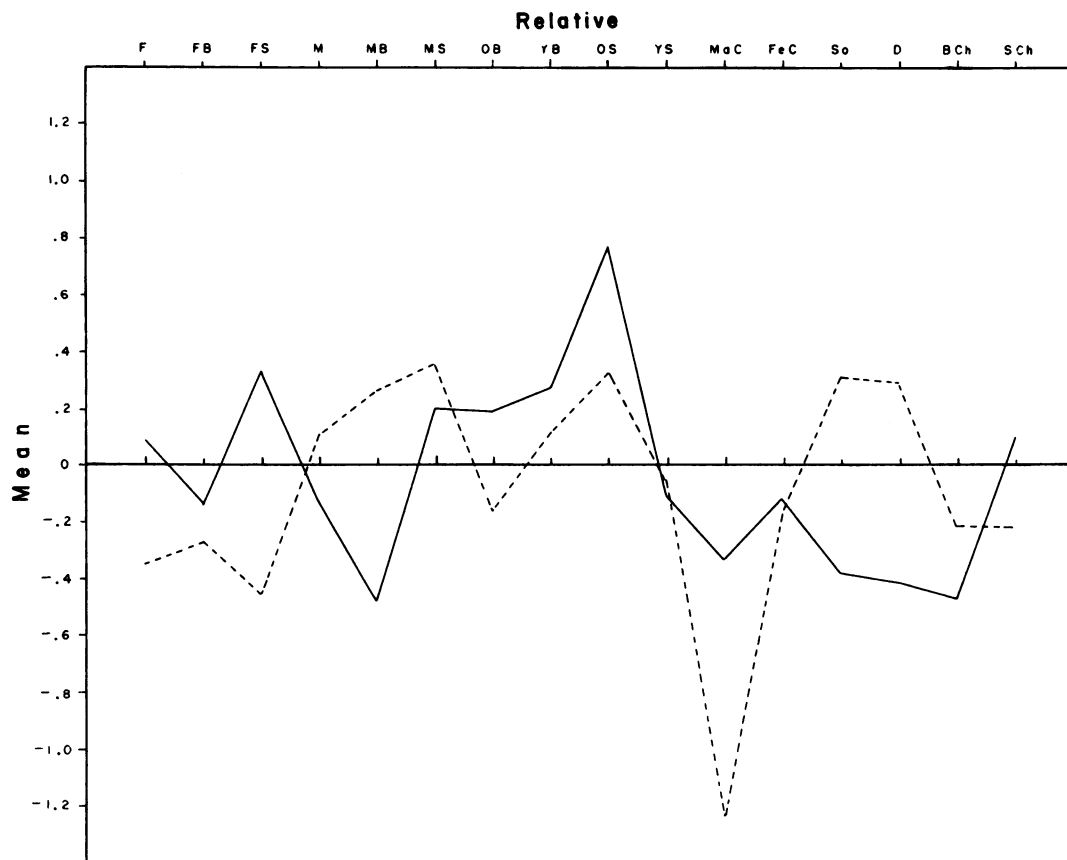
Graph 25. Category 9 (to obey) for males (solid line) and females (broken line).



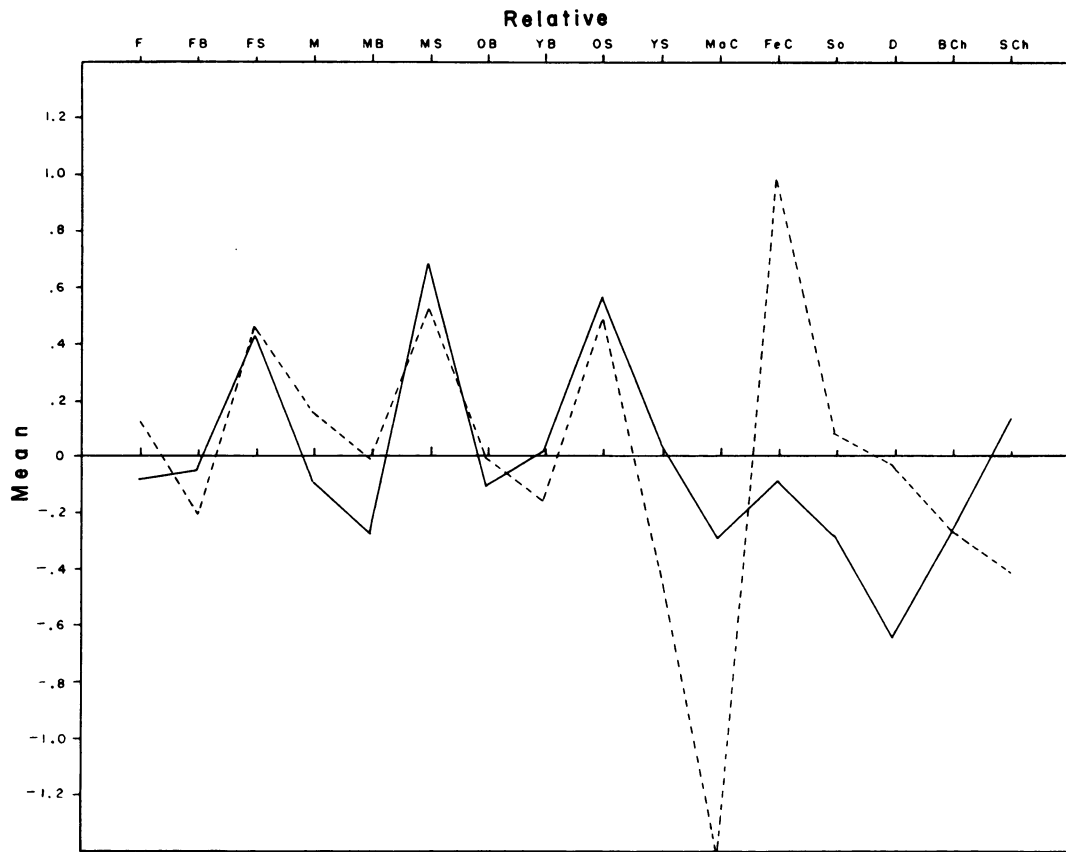
Graph 26. Category 10 (to want approval) for males (solid line) and females (broken line).



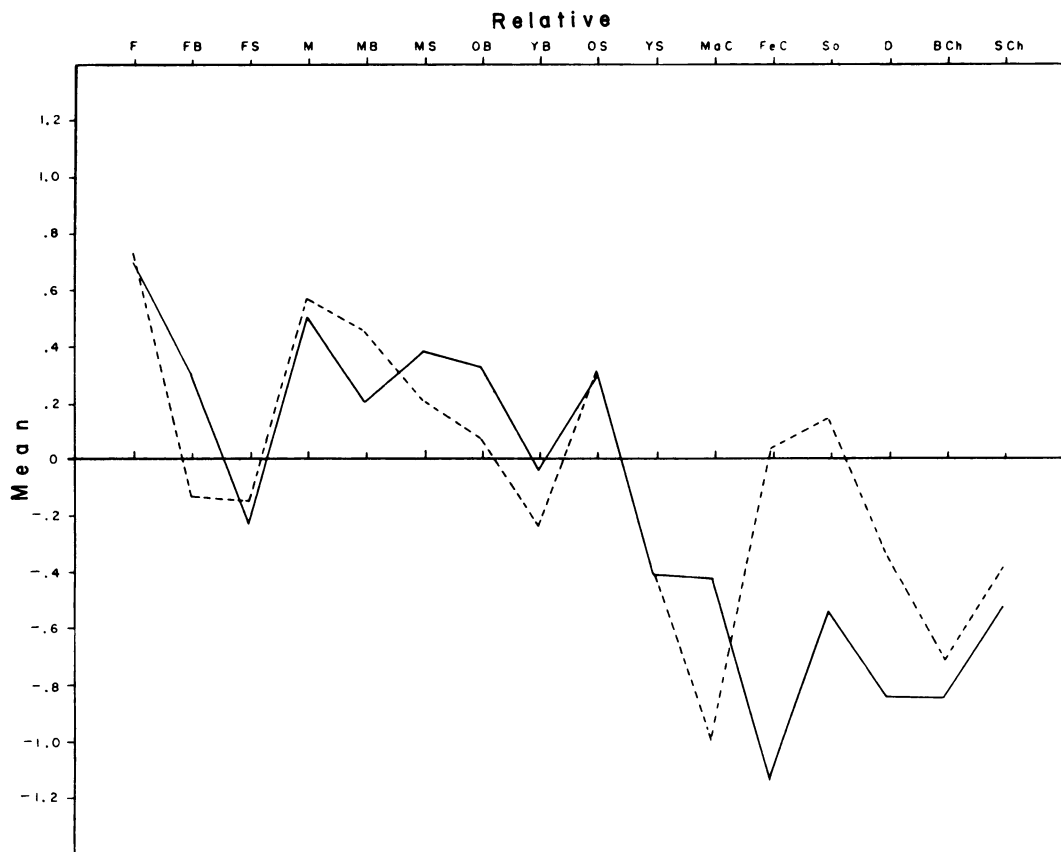
Graph 27. Category 11 (to suspect wrongdoing) for males (solid line) and females (broken line).



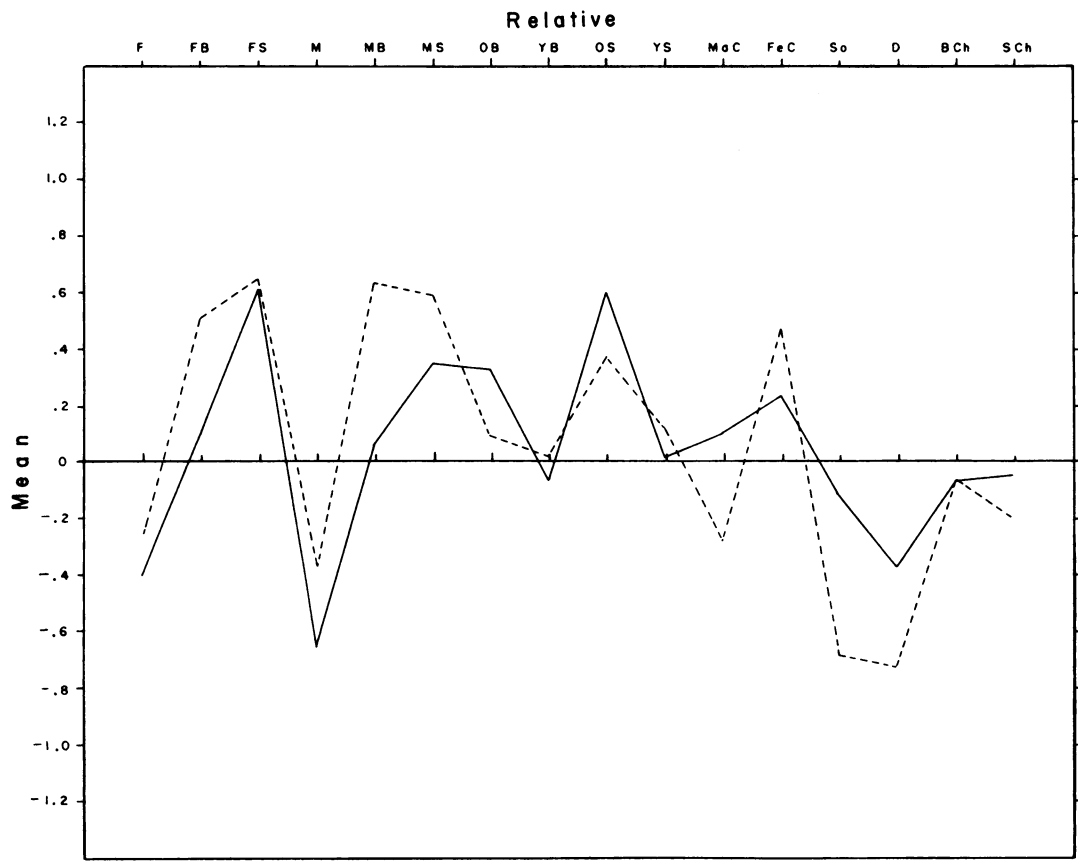
Graph 28. Category 12 (to nag) for males (solid line) and females (broken line).



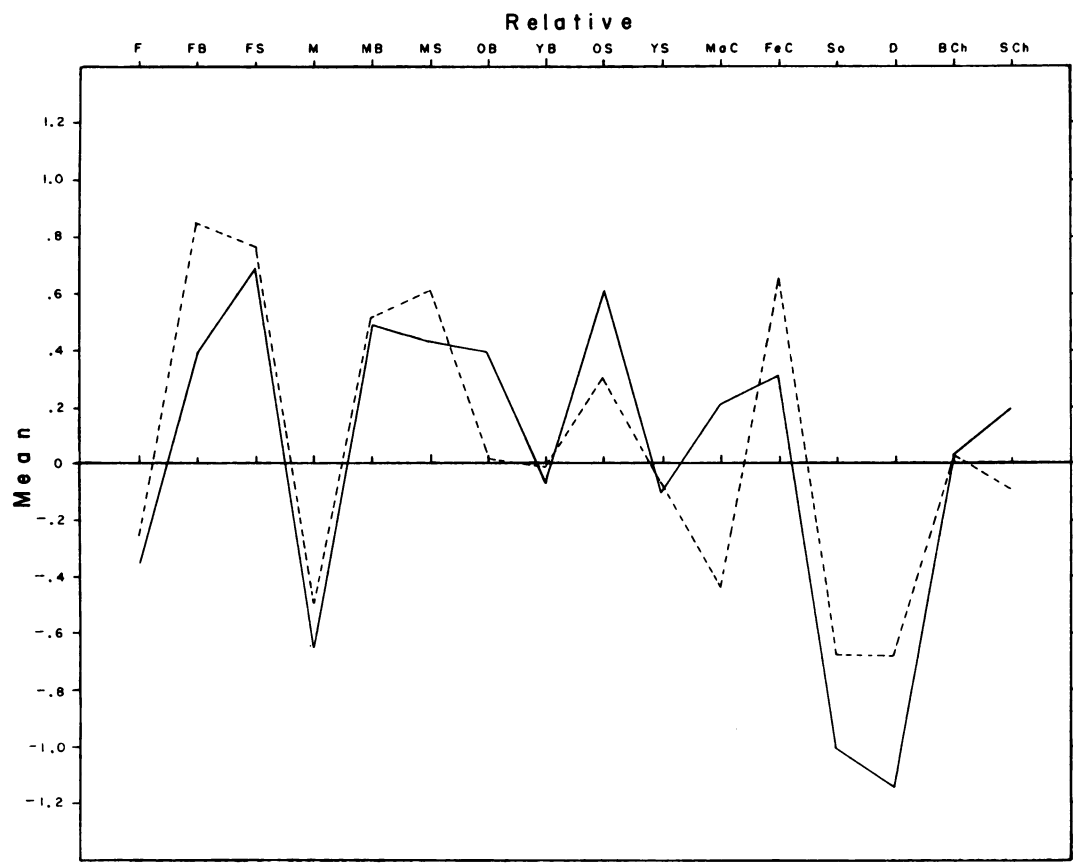
Graph 29. Category 13 (to disapprove) for males (solid line) and females (broken line).



Graph 30. Category 14 (to punish) for males (solid line) and females (broken line).



Graph 31. Category 15 (to refuse help) for males (solid line) and females (broken line).



Graph 32. Category 16 (to reject) for males (solid line) and females (broken line).

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Abbreviations

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BAE-B	Bureau of American Ethnology, Bulletin
JRAI	Journal of the Royal Anthropological Institute
FMNH-PAS	Field Museum of Natural History, Publications, Anthropological Series
PMM-B	Public Museum of the City of Milwaukee, Bulletin
SI-MC	Smithsonian Institution, Miscellaneous Collections
SWJA	Southwest Journal of Anthropology
UC	University of California Publications
-PAAE	American Archaeology and Ethnology
-AR	Anthropological Records
UCAS-R	University of California Archaeological Survey, Reports
UW-PA	University of Washington, Publications in Anthropology

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