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The Problem of Stuttering in Certain North American Indian Societies

JOSEPH L. STEWART

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APPLICATIONS FOR MEMBERSHIP SHOULD BE ADDRESSED TO THE EXECUTIVE SECRETARY

Foreword

In this investigation nearly two decades of exploratory study and consideration of cultural variation in the problem called stuttering have come to fruit in a substantial harvest of data and provocative interpretation. Joseph Stewart's findings and his discussion of them constitute a firm basis for a broadening and intensification of relevant anthropological and clinical research.

The findings indicate that hesitant and repetitious speech does not, in and of itself, constitute or give rise to the problem of stuttering. Indeed, this indication is dramatized in Joseph Stewart's observation that reduplicative language forms, reflected necessarily in repetitive utterance, are encouraged in the speech of children among the Ute, for whom neither the problem of stuttering nor a word for it exists, and that among the Cowichan Indians of Vancouver, who have both the word and the problem, reduplicative language forms and repetitive speech are not encouraged. The data suggest, further, that absence and presence of the stuttering problem are associated, respectively, with relatively more and less permissive and warm child rearing practices, and with relatively less and more competition, particularly with respect to ceremonial speaking, among families and among individuals, especially young children, identified with family groups.

In these and related respects, this study has served to extend to the cross-cultural plane the hypothesis, derived from data obtained within a single culture, that the problem called stuttering involves an interaction of at least three factors: (a) the listener's readiness to perceive or notice the speaker's disfluencies of speech, and to evaluate them as unacceptable, or abnormal, and to classify them as stuttering; (b) the frequency and types of the speaker's disfluencies; and (c) the speaker's tendency to perceive the listener's negative reactions to his disfluencies and to interpret them as significant or threatening, and to evaluate his own disfluencies, therefore, as unacceptable, or abnormal, to classify them as stuttering, and to develop avoidant reactions to them accordingly. This hypothesis, and the data from which it has been derived, are presented most fully in *The Onset of Stuttering,* University of Minnesota Press, 1959. The possibility of applying this interactional hypothesis to other problems in addition to that of stuttering, in intrafamily, intracultural, and cross-cultural contexts, appears to warrant extensive further study. Findings to date imply that the relevant interactions are mediated significantly by the language systems, considered with regard to their semantic and structural aspects, which the interacting persons share in varying measures and by which their perceptual, evaluative, and overt behavior patterns are crucially structured. Joseph Stewart's data and his theoretical considerations of them serve to reinforce and elaborate this hypothesis in particularly engaging and heuristic ways.

Research antecedent to the present study and reported principally by Johnson in the *Quarterly Journal of Speech*, 30, 1944, 330-337 (reprinted in somewhat elaborated form in Chapter 17 of *People in Quandaries*, New York: Harper, 1946), by John Snidecor in the same *Journal*, 33, 1947, 493-495, and by Johnson and associates in *Stuttering in Children and Adults*, 1955, and *The Onset of Stuttering*, 1959, University of Minnesota Press, was supported in part by grants from the Louis W. and Maud Hill Family Foundation. The present investigation, and its publication, were supported by grants from the United States Office of Vocational Rehabilitation. Professor David B. Stout of the University of Buffalo, then Professor in the Department of Sociology and Anthropology of the University of Iowa, contributed generously to the planning and directing of this study from the resources of his professional experience and wisdom. I should like to express my personal appreciation of the indicated support and cooperation that have made this program of research possible and of the dedicated and competent investigative and interpretive craftsmanship demonstrated by Joseph Stewart in the execution of the study reported in this Monograph.

Wendell Johnson
Iowa City, Iowa
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Professor David B. Stout supervised the training of the investigator in anthropological methods, directed those aspects of the study most concerned with anthropology, and was a source of constant encouragement from the inception of the investigation to its conclusion.

At the Mesquakie Indian Settlement, thanks are due Mr. Eugene Fugle, University of Iowa, and Mr. Robert Rietz, University of Chicago, for their aid in the preliminary field training. Mrs. Patricia Papakee Brown contributed many hours in her service as informant, critic, and friend.

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The Problem of Stuttering in Certain North American Indian Societies

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Introduction

JOSEPH L. STEWART

The interrelationships of language, culture, and the individual have interested linguistic scholars in their investigations of human behavior (*61*, *62*, *78*, *79*). How these interrelationships may also pertain to such disturbances in the verbal expression of language as speech deviations has received less attention. In the case of stuttering, for example, occasional references to the existence of this problem in societies outside our own have generally come from ethnologists, and others, who have been in close contact with these other peoples. An omission in most such reports (*10*, *16*, *40*, *41*, *45*) is the definition of the term or description of the behavior referred to as 'stuttering.'

It is presumed that these observations refer to the relative lack of speech fluency shown by a particular speaker. As considered here, the problem of stuttering encompasses much more. Under the terms of Johnson's 'general interaction hypothesis' (*37*), the problem of stuttering first arises in the sensitivity of a listener to the nonfluency of a speaker, leading to an unfavorable evaluation of this nonfluency and its subsequent classification as 'stuttering.' A second variable involves the kinds and degrees of the speaker's nonfluency. A third is the degree of the speaker's sensitivity to the evaluative reactions of the listener, and perhaps to his own nonfluency. The resultant interaction between speaker and listener may result in the onset of a problem of stuttering. A nonfluent speaker, not aware of or not concerned over his nonfluency, and not having his speech met with the disapproval of listeners around him, can hardly be considered as having a problem of stuttering.

A comprehensive review of publications relating culture to the problem of stuttering was presented by Morgenstern (*50*, p. 225), beginning with an observation made in 1861 by Hunt that in 'uncultivated nations' there had never been reported the existence of 'any savage labouring under an impediment of speech.' A conclusion of one of these relatively early authors (Allen, 1910) that stuttering is a phenomenon accompanying civilization has, as a more recent counterpart, the conclusion by Bullen (1945) that, in general, people in 'nonliterate cultures' do not stutter.[1]

A more recent consideration of the cultural determinants of stuttering is

Joseph L. Stewart (Ph.D., University of Iowa, 1959) is Assistant Professor, School of Speech, at the University of Denver. This monograph is based on a Ph.D. dissertation completed at the University of Iowa under the direction of Professor Wendell Johnson, Department of Speech Pathology and Audiology and the Department of Psychology, and Professor David B. Stout, Department of Sociology and Anthropology. This investigation was supported by a research grant and by a fellowship award from the Office of Vocational Rehabilitation, Washington, D. C.

[1]The term 'nonliterate,' as defined by Herskovits, '. . . simply describes the fact that these people do not have written languages.' (*26*, p. 363).

provided by the reports of Johnson (*34*) in 1944 and one of his students, Snidecor (*68*), in 1947 on the nonincidence of stuttering among the Bannock and Shoshone Indians of Idaho.[2] These publications constitute what are probably the first reliable direct reports of nonstuttering societies by investigators familiar with stuttering and specifically looking for incidence of the problem within the designated cultures. The most noteworthy aspect, perhaps, of these reports was that these societies were not acquainted with stuttering and that neither had a word for it in its language. This observation raised the question of whether there was no word for stuttering because the problem did not exist or whether it did not exist because there was no word for it, and so no evaluative reactions were prompted by its use.

In another Indian society, the Navaho, the rarity of stuttering has been reported despite the observation that there is a Navaho word meaning 'Stutterer' used as a nickname (*10*, p. 3). That the Navaho do have such a word is suggested by Leighton and Kluckhohn (*45*, p. 14):

> If a parent breaks a pot, the baby's "soft spots" will not close at the proper time or (according to other informants) the child will stutter or stammer or have other speech difficulties.

While employed as a teacher on the Navaho Reservation in Arizona and Utah, a former student at the University of Iowa, George Kriehn (*39*), investigated the question of the presence of stuttering among the Navaho. In a series of communications with Wendell Johnson, who prompted and directed the investigation, Kriehn stated that he asked several Navaho teacher-interpreters if they had ever heard of the superstition that a child will stutter if his mother breaks a pot. None of the teachers questioned had heard of this, even though they came from widely separated areas of the reservation. With the assistance of Father Berard Haile, a Franciscan monk whose knowledge of the Navaho language is presumably quite extensive, Kriehn investigated the meaning of the Navaho word which had been translated, by Haile, as 'stuttering.' Kriehn concluded that the word means 'just a waiting' and that, according to Father Haile, there is no other possible meaning of the word and no stigma attached to the behavior to which the word refers. From this report it would appear that the Navaho word designates behavior that is not relevant to the problem of stuttering as previously discussed.

The most recent report of stuttering in a 'nonliterate' cultural context was that of Lemert (*46*). This investigation followed up the report published in 1915 by Edward Sapir (*62*) of 'abnor-

[2]Miss Harriet Hayes, a teacher in a school maintained by the United States government for Bannock and Shoshone children, was a graduate student at the University of Iowa in the summer of 1942, and she carried with her to Idaho in the fall of that year an outline for a study of stuttering among these Indians. Upon her return to Iowa in the summer of 1943 she reported to Professor Wendell Johnson, director of the proposed study, that she had been unable to find any stutterers among the Indians. That was the first indication that the problem of stuttering was not present in these societies. Johnson subsequently encouraged another of his students, John Snidecor, to carry out further investigations among the Bannock and Shoshone tribes, with special attention to the question of whether these people possessed any words in their languages comparable to 'stuttering' and to the matter of their child rearing practices.

mal types of speech' among the Nootka Indians of British Columbia in which two references were made to stuttering:

> A fifth, not uncommon, speech defect among the Nootka is stuttering. Stutterers, like all other persons who have something abnormal about their speech, are derided by being imitated. (p. 190)

and

> The most northern Nootka tribe . . . are said to be all stutterers and are accordingly imitated in jest. (p. 194)

Lemert (*46*) not only reported that the Nootka, as well as the neighboring Kwakiutl, Salish, Haida, and Tsimshian have stutterers and a word for stuttering well defined in the language, but also that there is evidence of the existence of this type of speech impairment long before any contact with white society.

The presence or absence of the problem of stuttering does not appear to be accountable on the basis of a 'primitive' or 'nonliterate' designation alone. With the possible exceptions of the Lemert (*46*) and Morgenstern (*50*) studies, however, there has been, to date, no published report of research systematically concerned with the cultural determinants of stuttering among so-called 'nonliterate' peoples.

The need for such investigations is recognized by anthropologists. Kluckhohn (*41*, p. 944), for example, stated:

> The incidence of various behavior disorders also indicates cultural influence. Stuttering, for example, seems to be determined by a combination of biology, culture, and personal life history . . . Joseph and Murray report only one case of stuttering among two hundred Carolinian and Chamorro adults . . .
>
> However, the fact that I have been unable to find a single unequivocal case of complete absence of stuttering among a people suggests that biological or idiosyncratic life history factors can be productive of stuttering in all cultures. On the other hand, impressive differences in degree of incidence suggests that cultural influences are operative. The matter needs much more careful and systematic examination; present data are spotty and reported much too casually—often the mention of a case demonstrates only the fact that stuttering was observed, but one cannot be certain that this was the sole case in the population in question.

Conversely, as noted above, the stuttering reported is rarely described and the mention of a case might not be considered as a factual demonstration of stuttering within the context of the particular culture. In the Joseph and Murray (*40*, p. 287) reference cited by Kluckhohn, for example, under the heading of 'psychoneuroses,' the authors reported:

> In the absence of information from natives, we were limited to our own observations in forming an estimate of the type and frequency of neurotic symptoms. In our sample of children we found one Carolinian boy of nine years with a slight but definite stutter. . .

Dennis (*16*, p. 270) has similarly referred to the existence of stuttering among the Hopi:

> The next in the family, a boy of seventeen, steals, stutters, and is stupid in school.

There is no information presented, in either of these examples, as to whether the boys reported were considered to be stutterers *within their own cultures* or solely by virtue of the investigators' 'own observations.' Nor is there in either case any report of the reactions of the so-called 'stutterer' to his speech and the evaluations of it by other members of the group.

Morgenstern (*50*) attempted to estimate the incidence of stuttering in other societies through a questionnaire sent to 'reliable field workers . . . currently in the field' inquiring if the

person had 'personally observed stammering' in either children or adults, if the word for such behavior existed in the language, if parental concern existed over fluency in the children, and if the speech so defined was considered undesirable or was ridiculed. Those responding to the questionnaire were then asked for more detailed information on the incidence of stuttering and the points of importance regarding the speech in these cultures compared with stuttering in European and American societies.

From the results of this survey, Morgenstern concluded that the following fractions of those peoples reported on had never known the existence of stuttering: in New Guinea, the Wapishianas, Patamonas, Akawaio, and Garia; in Borneo, the Kelabits; in Malaya, the Negrito, Senoi, and Aboriginal Malay; in India, the Sonthals, Bhuyans, Gatwas, Turis, and Tantis. Among Africans, only the Hausa (Moslems of northern Nigeria) of the entire West Coast of Africa are reported as not having any problem of stuttering.

Statement of the Problem

The purpose of this study was to investigate, through the comparative method of anthropology, certain cultural variables which may be factors in the determination and subsequent perpetuation of the problem of stuttering and to account for and relate these variables within the context of the cultures involved. The comparative method is concerned with the investigation of a difference between two or more groups and an evaluation of the variables relating to this difference. The difference considered in this study was the presence or absence of the problem of stuttering and investigation was made of this difference as a possible function of culturally determined variables with reference to which two groups of 'nonliterate' peoples might be found to differ. Implications that may be drawn from the findings may then be considered with reference to our own culture.

The following questions were selected for investigation:

a. Are there variables, and interrelationships among variables, in which cultures differ and are these differences between cultures associated with the presence or absence of the problem of stuttering?

b. Can these variables then be isolated for study and the significance of their relationship to the problem evaluated statistically?

c. Does the language structure of a group in which the problem of stuttering exists and that of a group in which it is absent reflect differences between the cultures that may be functionally related to the presence or absence of the problem of stuttering?

Procedure

It seemed appropriate, in view of the findings of the previously cited investigations, to follow precedent by comparing two Indian groups on the basis of the presence or absence of the problem of stuttering. The Nootka, Kwakiutl, and Salish tribes of British Columbia, the 'stuttering group,' were selected for comparison with the Ute tribes of Colorado and Utah, the 'nonstuttering group.' The accessibility of these peoples for study, and the fact that they fit the 'nonliterate' criterion, further supported this selection.

The designation of the Vancouver Island tribes as the 'stuttering group' was based on Lemert's findings as reported (*46*). The selection of the Ute as the 'nonstuttering group' followed from reports obtained by Wendell Johnson in interviews with two physicians who stated that they had investigated the Ute community near Vernal, Utah, with relative thoroughness and had concluded that there was no stuttering within the group (*38*). Substantiation of this point, and the verification of the absence from the Ute language of a term equivalent to 'stuttering' was obtained by the present investigator in communications with a Ute tribal official (*69*). That the Ute are of Shoshonean stock and speak a Shoshonean language (*25, 43, 59*) constituted further presumptive substantiation in view of the Johnson-Snidecor findings relative to the Shoshone (*34, 68*).

The investigation involved first-hand study of the indicated groups through recognized anthropological methods. Emphasis was placed upon direct interviewing, informant interviewing, and cultural observation, through the procedure outlined below. The field work was carried out between June 14 and October 5, 1958.

The problem of adequate definition of stuttering in the context of the particular culture was carefully considered as an initial step in the investigation so that such behavior as the repetitive speech form reported for the Navaho by Bullen (*10*, p. 4) would not be confused with stuttering as noted in our own society:

> Many Navahos although fluent speakers sometimes repeat the initial syllable of a word. Dr. Molholm said he asked the interpreter at the hospital why the people did this as they did not seem emotionally upset and there seemed no apparent cause for stumbling speech. The interpreter replied that "they are hunting for the proper word in expressing their mind. It means they are looking for a word to express what they want to say next."

A similar observation among the Mohave Indians was reported by Devereux (*18*, p. 269), who classified this mannerism as 'mumbling':

> Mohave informants, conversing with the interpreter about matters which they were not quite certain, sometimes cease to speak in a manner which obviously subsumes an audience, and engage in a sort of musing psuedo-monologue, marked by a blurring of pronunciation, and sometimes also by a lowering of the pitch of the voice and slowing down of the normal tempo of speech. The mumbler's behavior gives one the impression that he is retesting and reappraising his knowledge by means of verbalization. He utters his sentences hes-

itantly, and seems to listen to his own voice, as though he were thinking "This doesn't sound quite right" or else "This does sound right, doesn't it?" I have never heard an informant use mumbling in a hostile or resistive manner.

The basic crtieria for determining the existence of the problem of stuttering within a group were taken to be that the relevant aspects of speech were regarded by members of the group as deviant and subject to disapproval. Further, the linguistic concept of stuttering as revealed by the existence in the language of one or more words essentially equivalent to the word 'stuttering' must have been present. The final stipulation was that the behavior involved in the act of stuttering consisted of culturally unacceptable hesitation forms in speech, and reactions on the part of the speaker and listener to such hesitations. Additionally, it was expected that the speaker show exertions of effort in speaking that were apparently motivated by concern over the possible difficulty in initiating or continuing the act of speaking and apprehension over the failure to proceed smoothly. These criteria appear to fit the behavior reported by Lemert (*46*).

The interview data were recorded in coded form for machine processing. The machine coding procedure used, with certain additions and modifications, was developed in research on stuttering carried on at the University of Iowa by Johnson. Subject to the informant's approval, the interviews were tape recorded.[3]

[3]The recording instrument used was an Amplicorp Magnemite portable spring motor tape recorder, model 610 DV. The recordings were made at 7-1/2 inches per second, single track, on mylar-based weather-balanced 900-foot tapes.

A seven-point scale, similar to that reported by Whiting and Child (77), was used to record data that were not completely obtainable through direct questioning but that could be gained through relating observed behavior to informant report. Aspects of family interrelationships, ceremonial activity associated with change of status, methods of weaning and toilet training, etc., were rated on the basis of reports obtained and observations made by the investigator. Comparisons of the two groups were then made on individual items through statistical analysis.

Supplementary data in the form of motion pictures and still photographs were also obtained from each area.

The investigation extended from the prenatal and postnatal developmental history of the child, through his acceptance into the group to his expected attainment of adult status.

The interview was structured to obtain information about the parents' attitudes toward the child before birth, aspirations for the child, sex preferences, preparations and ceremonial activities for the birth, etc. The investigation of postnatal development concerned the cultural standards relating to infancy and the growth and socialization of the child with additional references to speech development. The specific systems of behavior studied were nursing and feeding behavior, toilet training, sexual behavior, dependence, and aggression. The procedure represented a modification of that employed by Whiting and Child (77) since the dimensions they established were felt to be as useful for present purposes as any other fractionation of behavior.

Case history data relative to the

problem of stuttering were also obtained and recorded.

Other adult and childhood attitudes toward other deviants, such as the crippled, blind, deaf, etc., were investigated along with the incidence of speech problems other than that of stuttering, including those accompanying cerebral palsy or cleft palate.

The linguistic differences between the groups were studied, with particular reference to the language of the child. Basic to this aspect of the investigation was the previously reported information pertaining to the presence or absence of a word comparable to 'stuttering' in each society under consideration. It was presumed that at some point in the history of the 'stuttering group' there developed a linguistic concept of deviance that was applied to certain speech behavior and that a linguistic comparison between the groups might result in relevant implications.

The investigator underwent a program of training in order to become familiar with the method of cross-cultural research. First, through utilization of the Human Relations Area Files, a number of 'nonliterate' societies were studied with emphasis upon the systems of socialization cited above.[4] A program of field training was then initiated during the spring of 1958 under the supervision of experienced anthropologists and under the sponsorship of the Department of Sociology and Anthropology of the University of Iowa.[5] This period of training was spent at the Mesquakie Indian Settlement near Tama, Iowa, and provided for the refinement and modification of the investigative procedure described below.

The selection of the Cowichan Reserve for the most intensive study of the 'stuttering group' followed from several considerations. The Cowichans are a Salish-speaking people, the language group which was most extensively studied by Lemert (*46*). This reserve had the largest population of any on Vancouver Island and it was felt that the desired number of parental interviews could be more readily obtained there. The response by the Tribal Council to the request for permission to conduct the study was so favorable that further inquiries were not necessary.

The Cowichan Reserve roughly borders the town of Duncan, about 40 miles north of Victoria, and is composed of six villages: Somenos, Koksilah, Clemclemlits, Comeakin, Khenipsen, and Quamichan. There are also a number of Indian residences which are not within a village proper and others within the town of Duncan. The population of this group is given in the report of the 1954 census as 872 persons (*17*). Chief Elwood Modeste (*97*) and Superintendent J. V. Boys (*83*) estimated the current population to be 1000 persons.

[4]The Human Relations Area Files are maintained by a nonprofit research corporation, established in 1949 to collect, organize, and distribute information of significance to the natural and social sciences and the humanities. It is sponsored, supported, and controlled by 16 member universities and is creating a library of knowledge on each of the peoples of the world in coded and classified form readily available to the researcher.

[5]Mr. Eugene Fugle, of the University of Iowa, who was engaged in anthropological research among the Mesquakie, assumed the responsibility for this portion of the training. Mr. Robert Rietz, of the University of Chicago, was also most generous with his time and assistance.

At the time of the investigation, about two-thirds of the native population had left the reserve for the summer to take migrant labor jobs in the United States.

The procedure followed in each case was to make an initial contact with the householder to explain and discuss the purpose of the investigation. If the reactions of the householder were favorable, arrangements were made to return at a later time for the interview. The informant was then better prepared for the questioning since it was done at his or her convenience and the investigator was given at least two opportunities for observation of the family. A total of 40 households were contacted, representing nearly all those inhabited at the time in which there were children in the younger age ranges. Of the total number contacted, three declined at the outset to be interviewed and seven others later could not be interviewed for a variety of reasons, such as having gone on vacation, illness, domestic problems, etc. Of the total of 30 child-training interviews obtained, nine were with informants from Somenos, seven from Koksilah, five from Duncan, five from Quamichan, three from Comeakin, and one from Khenipsen. No interviews were obtained at Clemclemlits, as the two families there who had children were among those that could not be interviewed at the time of the second contact.

The interview was conducted in each case in the home of the informant and in all but three instances the greater portion of the interview was tape-recorded; one declined to be recorded and equipment malfunctioning prevented the recording of the other two.

Another seven persons, in addition to the parents, were interviewed for information pertaining to various aspects of the culture, such as history, old and new customs, etc.

The second Salish Reserve contacted was at Nanaimo, 30 miles north of Duncan.[6] The residence of a 69-year-old man, reputed to be a stutterer, was visited on four occasions; the local Chief, Edison White, was interviewed twice, and the home of an 11-year-old girl, reputed to be a stutterer, was visited twice.

The Sheshaht band of Nootka-speaking people of the West Coast, located near Alberni, and the Port Alberni Residential School were also contacted briefly.[7] The wife and oldest son of the Chief, Adam Shewish, served as informants in his absence. Another Nootka informant, married to a Cowichan man, had been previously interviewed at her home in Quamichan.

The final Northwest Coast group contacted was the Kwakiutl band at Campbell River. Mrs. Sam Henderson, a life-long resident of the area, served as informant for both the Campbell River and nearby Cape Mudge villages.[8]

In addition to fulfilling the requirement of apparently having no problem of stuttering, the Ute tribe was considered to qualify for purposes of the present study as the 'nonstuttering group' on the basis of these considerations: the full-blood population of 1340 persons (*76*) was comparable to the Cowichan population; the effects of

[6]The Nanaimo population, 1954 census, is given as 371 persons (*17*). Chief Edison White (*103*) estimated the current population to be 500 persons.

[7]The reported 1954 population of this band is given as 213 persons (*17*).

[8]The combined population of both villages, 1954, is reported as 337 persons (*17*).

acculturation upon these people have been less than in certain other American Indian groups; the Ute have been subject to comparatively little ethnological investigation (*51*) and were therefore a less 'sophisticated' group; and, the investigator's own background of observation and interest in Ute custom and history had extended over a period of several years.[9, 10]

The Uintah-Ouray Reservation is located in the Uintah Basin of Duchesne and Uintah Counties in northeastern Utah, approximately 150 miles east of Salt Lake City. The total area of the reservation is 1,060,000 acres. The original Uintah Reservation was established for the Uintah Ute of Utah in 1861. In 1880, following the Meeker Massacre, the Whiteriver Ute from Colorado were established within the Uintah Reservation and two years later the Uncompahgre band, from southern Colorado, were established upon the Ouray Reservation to the south of the Uintah (*76*). In subsequent years, the Uintahs and Whiterivers have so intermingled as to be almost considered a single group while the Uncompahgres have retained their identity as a group occupying, in the main, the same area to which they were originally assigned. Although a certain amount of intermixing has occurred, the two groups have remained essentially distinct within a common cultural configuration.

The procedure employed in Utah was in some respects a modification of that used on Vancouver Island. On the advice of a tribal authority and an experienced field team in the area the interviews were not tape-recorded.[11] Instead, responses were recorded or scored in longhand at the time of the interview.

The first of the parental interviews was conducted after the investigator had been on the reservation for a period of three weeks so that the Ute had ample opportunity to become aware of his presence and purpose in being there. In addition, the cooperation afforded by tribal authorities through the weekly Ute-language radio broadcasts and the tribal newspaper further aided in clarifying the position of the investigator in relation to the tribe. As a result, the 30 interviews were obtained from the first 33 homes contacted. The death of one of the children between the first and second contact, linguistic difficulties when no interpreter was present, and marital discord at the time of the contact accounted for the three in-

[9]Under the Ute Partition Act, a full-blood Ute is defined as follows: 'Full-blood Utes are identified as those enrolled persons who possess one-half degree Ute Indian blood and a total of Indian blood in excess of one-half. Exception to this definition are full-blood persons who elect to become mixed bloods upon application which must be approved by the Secretary of the Interior.' Mixed bloods are 'members of the Ute Tribe who cannot meet the Ute blood requirements of a full-blood and those full-blood persons who have been approved for enrollment with the mixed bloods.' (*76*, p. 18).

[10]Acculturation, as defined by the Social Science Research Council and quoted by Herskovits '. . . comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original patterns of either or both groups.' (*26*, p. 471).

[11]Mr. Y. T. Witherspoon and Mr. Reed Hansen, of the Bureau of Indian Services of the University of Utah, had suggested that the use of a tape-recorder might prove a handicap in the establishment of rapport; Mr. Francis McKinley, Director of Community Services for the tribe, concurred in this opinion and no attempt was made to introduce the recorder into any of the interviews.

stances in which no interview resulted. In addition to the parental interviews, another dozen interviews were carried out with informants who provided data concerning various aspects of the Ute culture.

While there are no Indian villages located on the Ute Reservation in the sense that the Vancouver Island villages represent aboriginal places of residence, there are several small towns within its borders that are of predominantly Indian population. The two largest of these are Whiterocks, in the Uintah-Whiteriver section, and Randlett, in the Uncompahgre area. Other communities within the reservation proper include Fort Duchesne, the seat of governmental and tribal authority, Ouray, and Alterra. Several towns of predominantly white population lie within or adjoin the borders of the reservation, and the city of Roosevelt is, in effect, surrounded by Indian lands. Of the 30 households in which interviews were obtained, one was in Whiterocks, six in the Whiterocks rural area, eight in Randlett, four in the Randlett rural area, five in Ouray, four in Fort Duchesne, one in the Arcadia rural area, and one in Roosevelt.

Cultural Background and History

The need for adequate bases of comparison between cultures with respect to such complex behavior as that associated with child development and training has been stated by Schriver and Leacock (*65*, p. 208):

> It is also true that salient elements relating to childhood can only be perceived after the culture as a whole has been thoroughly studied. Often, incidents seemingly trivial when they take place reveal themselves later as manifestations of principles important in the cultural pattern of development.

In the comparison of such highly diverse societies as those of the Northwest Coast and the Great Basin Ute, it seems essential that there be a certain amount of historical background against which to view present-day customs. Accordingly, each area is discussed separately in the following sections before direct comparisons between the groups are presented.

Northwest Coast. The Vancouver Island societies, consisting of the Kwakiutl, Nootka, and Salish peoples, are distinguished on the basis of the language spoken by each. The Cowichan and Nanaimo bands are of the Salish group.

The Indian cultures of the Northwest Coast show a measure of similarity. Drucker (*19*, p. 6), for example, stated:

> Along this rugged and bountiful coast lived a number of Indian nations who differed among themselves somewhat in physical characteristics, differed considerably in language, but shared a number of fundamental cultural patterns that, in combination, comprised Northwest Coast civilization.

Benedict (*3*, p. 160) noted the distinctiveness of the Northwest Coast culture as compared to other Indian societies:

> The Indians who lived on the narrow strip of Pacific seacoast from Alaska to Puget Sound were a vigorous and overbearing people. They had a culture of no common order. Sharply differentiated from that of the surrounding tribes, it had a zest which it is difficult to match among other peoples. Its values were not those which are commonly recognized, and its drives not those frequently honored.

A basic consideration in the examination of any group is the economic structure upon which it is based.

Drucker (*19*, p. 4) described some of the aspects of economic life which had bearing upon the evolution of these societies:

> Marine resources may be considered first. We have seen that they were tremendously rich, and in addition partly seasonal . . . (the) abundance of these resources made a relatively dense population possible, once techniques had been devised to exploit them properly.

This abundance of food, coupled with plentiful timber for building material, aided in the eventual development of relatively permanent places of residence and a well-defined social structure. Sapir (*63*, p. 470), discussing primarily the West Coast tribes, traced this development as follows:

> . . . the Indians of the West Coast had abundant means for subsistence at their disposal . . . (furthermore) . . . the unusually great rainfall of the coast country made it necessary for the Indians to house themselves in substantial shelters, and . . . (the) inexhaustible supply of readily worked wood . . . gave the Indians all that was necessary for the building of large houses . . . (the) village community with its definite number of house groups may, then, be expected to be the most fundamental social unit in this area. . . .

The Northwest Coast peoples have been noted for their elaborate, prestige-based social order that evolved from these beginnings. Among the Vancouver Island groups, the people who seem to have been most concerned with this aspect of the culture were the Kwakiutl.

A great deal has been written concerning the Kwakiutl and the 'potlatch' which played a major part in the acquisition and maintenance of individual prestige. Codere (*13*, p. 5), for one, has discussed the dynamics of this process:

> The Kwakiutl are remarkable for the degree of their preoccupation with social rank and the manner in which every aspect of their culture seems to focus upon this preoccupation. A long series of hereditary social positions was ranked in order of social greatness and intricately elaborated and differentiated by a wealth of titles, crests, and ceremonial privileges. Although the positions were hereditary and too few to go around, it was not a static system or one in which participation and interest was limited to the six-hundred-odd position holders. This came about because of the Kwakiutl principle that each position had to be upheld continually by means of property distribution called "potlatches," and because everyone was involved to some extent in receiving and giving property at potlatches and in the dramatic public and festival nature of potlatching.

Two basic principles underlying the social order of the Northwest Coast have been described by Drucker (*19*, p. 108):

> . . . first . . . the fundamental social unit (aside from the biologic family consisting of a man, his wife, and their children) was the autonomous local group consisting of a *lineage* (a formalized, named group of relatives who trace descent to a common ancestor exclusively through one line—in our area, through the maternal line), or an *extended family* (a social division less rigidly formalized or defined, in which descent may be reckoned through either line, or both) . . . it made no difference whether formal alliances were made with similar social divisions, for while such units united at times for purposes of common defense or for ceremonial ends, they never surrendered certain highly important rights. Second, social status, involving the so-called system of rank, derived neither from heredity alone, nor from wealth, but from a combination of the two.

Many rights and privileges came with membership in the family, including the use of economic resources derived from family land holdings, the use of certain dances, masks, and ceremonies, and the use of certain names (*19*, *21*, *63*). The lowest class in the society was made up of those not related to the extended family and the slaves and their descendants (*19*, *63*).

Unless a member of the slave class, a man could raise his standing in the social structure and so long as he could maintain this position, through potlatching and other means, he was entitled to keep it (*3, 19, 21*). Individual status could, in some measure, also be passed on to the children although rank was not automatically assumed at birth. The establishment of the child as a person of status had to be made at the proper time following the prevailing custom (*2, 19*). The influence of status bestowal upon the child, then, influenced child training practices and behavior.

The assumption of prerogatives and change in status were announced and validated through the potlatch (*2, 19*). A proficient speaker was vital to such occasions and oratory was a highly-prized skill which brought honor and acclaim to the orator (*13, 64*). As a result, the great orators of the village were often imitated by the young boys and skill in verbal accomplishment was rewarded in terms of prestige (*64, 103*).

The tribal organization common to the Plains Indians was unknown among the Coast Salish. In its place was the extended family, which lived in the 'big houses' during the winter when the group residence was most permanent. During the summer months, the residents moved to the various hunting and fishing sites away from the winter villages to lay away the necessary provisions for the ensuing winter. A grouping of 'big houses' constituted a village and many of the inhabitants claimed kinship by descent from a common ancestor (*2, 19, 63, 67*, 72).

The highest near-official of the Salish, who had no 'chiefs,' was the 'siem' (or 'sia'm'). Respect and deference are denoted by the term and, according to Suttles (72), it means 'Sir' or 'Madam' in direct address and 'gentleman' or 'lady' in reference. The 'siem' of a particular family was, in most cases, the eldest male of the group who could claim, and retain, the highest status within the group. Early in the present century, Hill-Tout (*28*, p. 357) described the role of the 'siem' among the Tcil'Qē'uk (mainland Cowichan):

> The people were divided into the usual threefold division of chiefs, notables, and base folk. The chieftaincy or headship of the tribe was practically hereditary; though the people could depose their chief and elect another in his place if they were dissatisfied with his supervision of the tribe, or his conduct was such as to make him a bad director. I say *director*, rather than *ruler*, because the sia'ms of the Salish were rarely, if ever, rulers in the ordinary sense of the word. They were rather overseers or fathers of the tribe, the sia'm combining in himself the character and functions of a common father and high-priest; the office, indeed, being more sacerdotal than imperial.

Actions of the individual that involve the rights of others were dictated by a traditional set of rules or 'advice' which was, theoretically, the possession of only the 'high class' people (72, *103*). These rules of behavior were inculcated in the child by elders of the family from the time he was able to comprehend. Chief Edison White, himself the grandson of one of the last of the 'siem' at Nanaimo, described this process of education (*103*): '(like) when it's drizzling rain, that fine penetrating (rain) . . . constantly . . . they tried to make it penetrate very gently but very deeply.'[12] The formal instruction of the children took place every morning and evening with a lecture by

[12]Persons interviewed in the course of this investigation are referred to by their full names; authors quoted are referred to by last name only.

a family elder. The effectiveness of these rules of conduct was described by Barnett (*2*, p. 241).

> Ignorance of the rules excused no one; every well-bred person was familiar with them and took pride in his knowledge of them. It was part of good breeding, almost of etiquette, to respect and observe them, and it was beneath the dignity of an aristocrat to commit a breach. It was certainly to his material advantage not to do so, for his social, and therefore political, position rested, in large part, upon his support of the commonly recognized group good.

Within the biological family considerable stress was placed upon the family name and how it stood in relation to others within the class structure. Since status was dependent not only upon wealth and inheritance, but also upon a 'good name,' an individual could, through misconduct, damage and lower the prestige of his entire family.

The concern over the family name extended to individual marriages and the marriage contracts were not only between man and wife, but between their respective families as well. It might be expected that such marriages would be frequently stable and so the children would not only be under the influence of parents, but also grandparents (*19*, *47*).

The biological family was, from its inception, under the constant influence of elaborate and complex rules and traditions. Persons wishing to be married seldom had much choice in the selection of their mates. The parents of the couple involved determined the match since the factors of enhancing status by marrying 'higher' as opposed to the loss of status by marrying 'lower' were of great importance to both families concerned. Additionally, since rights to desirable family names and land holdings were hereditary, the children of profitable unions stood to gain in stature as well (*2*).

The formal marriage proposal, publicly made by the boy's father, was reacted to as a complete surprise by the bride's family, although a previous understanding usually had been reached.

The groom's party would proceed to the girl's house, taking important men and an array of food and property with them. At the door of the house, the 'speakers' accompanying the group would begin their oratory concerning the greatness of the two families and the desirability of a marriage. Once inside the house, the groom would be deposited inside the door on a pile of blankets. Here he would remain for several days, completely ignored by the bride's family. The proposal was concluded after several days of speeches when the girl's father presented speakers of his own (*2*).

The marriage ceremony was held on the following day. The villagers were invited to the house and the 'speakers' for both sides praised the virtues of the families. When the speeches were concluded, gifts between the families were exchanged to be distributed among the populace in the bride's and groom's villages (*2*).

The ritualistic pattern established at the time of the marriage carried over into other phases of family life. During pregnancy, tabus incumbent upon the woman were many and included dietary restrictions as well as the avoidance of looking at many objects such as certain animals and parts of animals. Any contact with death or suffering was also to be avoided (*2*). This latter tabu was reported several times in the course

of the parental interviews among the Cowichans.

The birth took place in a secluded area of the house or in a separate structure away from the house, with a midwife in attendance. In common with other Salish groups, the Nanaimo and Cowichan midwife might also be a ritualist possessing certain magic forms to aid in the birth. Following the birth, both parents were confined and under tabu for four days (*2*).

The child was first exposed to ceremonial life soon after his birth when friends of the family were invited in for what was usually an informal meal (*2*). Edison White (*103*) stated that the child might receive his first name at this time or at the time he learned to walk, and Barnett (*2*) gave the age of initial naming as around one year. This first name was a temporary one and served until the child could assume his adult name. Edison White reported that the Nanaimo custom was to hold a naming ceremony on a small scale, perhaps restricted to the family circle. Prior to receiving his baby name the child was referred to simply as 'boy,' 'girl,' or 'little one.' The name given a child came from the pool of names from either parent's family and, once the child assumed his adult name, his baby name was once again available for use, if so desired, by another child (*2, 103*).

Customs followed in the training of the child were also culturally well-defined. Edison White spoke of the old customs being severe by modern standards, even though physical punishment was not often employed. Children were impressed at an early age with the value of being industrious and learned that laziness was not tolerated (*103, 104*). When a boy was about 10 years old, the custom of the cold bath was initiated. Each morning, winter or summer, the boys of the family would be expected to go to the river to bathe (*104*). David Charlie (*86*), an elderly Cowichan man, said that he was expected to dive into the water three times before the ritual was completed. Initially, his father would cut a switch at the riverside and, as David said, 'I like that cold water better than I like that stick!' Both David Charlie and George White (*104*) maintained that, as a result of such rigorous training, the Indian youth of their time were much more healthy and rugged than they have been since the custom died out.

Children were expected to do a measure of work from the time they were very young, beginning with such chores as helping to keep the house clean. By the time a boy was about 12, he was expected to work alongside the men (*104*).

Instructions regarding the prerogatives and rights of the family were passed on to the children in the same manner as were the prevailing customs and mores. Along with possessing more knowledge, the higher class families seem to have felt the need for more rigorous child training. George White (*104*), whose father was a latter-day siem at Nanaimo, felt that his own upbringing was perhaps a little more severe than that of others in the community. Boaz (*6*, p. 463) made particular reference to this aspect of child training at Nanaimo:

> Chiefs' children were carefully brought up. They were instructed in all arts. They were enjoined not to steal, and always to speak the truth. They were not allowed to eat

> until late in the evening, in order to make them industrious. Young men who returned from a successful hunting expedition were required to distribute their game among the whole tribe. Poor people did not train their children as carefully as chiefs and rich people.

The beginning of adolescence also called for ceremonial observance in Salish life. The first-noticed voice break in the male and the report of menarche in the female were the criteria establishing this time. The boy was expected to retire to the woods on a spirit quest to enlist the aid of the supernatural world in his adult life. The rigors and hardships of such quests are a familiar part of the folk-lore of the Northwest Coast. The girl was isolated at menarche and was under a set of rather formalized tabus that governed her actions and determined the outcome of her life as an adult. At the conclusion of these acts the ceremonial recognition of change in status was held (*2*).

At this time the adult name was assumed by the adolescent. Edison White (*103*) described the procedure followed at Nanaimo. A village 'speaker' would outline why the individual had a right to the name being bestowed. In so doing, it was necessary to trace back the genealogies of both parents to show the origin of the name, since it also came from the family reserve of names, and to document the family rights to the name. The orator would charge some of those present to be witnesses, by presenting them with money or with goods, to the establishment of the name and the rights of the person to it. The witnesses would then have to stand and publicly accept the responsibility of remembering what had been told them.

Throughout the accounts of the ceremonial life on the Northwest Coast is the dominant role of the 'professional speaker,' whose function at public affairs was to speak on behalf of the host. Edison White (*103*) stated that even up to the present day, adults will try to mimic a good speaker to see if they can do as well. Chief White reported that the speaker is a prominent person in all the tribes along the coast, and among the Salish groups is most utilized among the Saanich and Cowichans.[13]

Colorado-Utah. The amount of published ethnological data concerning the Ute Indians is considerably less than that relating to the Indians of Vancouver Island. Opler (*51*, p. 122) has noted the scarcity of such information:

> Since the Ute have been less studied than practically any other people of the United States, no real attempt could be made to point out the interrelation of traits and complexes we call Ute, and surely, no effort to follow the fortunes of this culture in anything like an historical sequence was at all possible.

For the present purposes, an extensive study of the remote past is not crucial. Relevant published information concerning the Ute for the period since the days just preceding initial encroachment of white settlers upon Ute lands, supplemented by material obtainable from native informants, seems to be sufficiently detailed for purposes of comparison. While much more exten-

[13]Chief White is an excellent speaker himself and he feels that this ability is a factor contributing to his having been elected Chief for all but two of the eleven years the elective system had been in effect. On the basis of his abilities as a speaker, he was elected spokesman for all the Vancouver Island tribes to welcome the then Princess Elizabeth to the Island in 1954.

sively studied, the Northwest Coast culture is recorded in detail from about the same point in time as that of the Ute.

Information pertaining to prereservation and early reservation customs and attitudes toward children and child training practices were obtained from three women informants, one from each tribal division of the reservation. Each of these informants was a grandmother and none was further away from the prereservation history than from the generation preceding her own.

While the Northwest Coast peoples established a semipermanent place of residence, the Ute were seasonal nomads. The Uncompahgre and White-river tribes made their summer home in the Rocky Mountains of Colorado until winter forced their migration south as far as the plateaus of northern New Mexico, following the game trails as a source of food (*14, 51, 52*). While the Northwest Coast people are seen to have been rich with plentiful food, the Ute found the entire year to be marked by a shifting struggle for existence. Since the Ute had no method of controlling their food supply, they were of necessity forced to spread themselves thinly over the great land area they occupied (*51, 76*). As a result, the concept of individual land ownership never evolved and the ensuing prestige associated with owning property could not develop. The scattering of the tribe into small units over a large land area tended to prevent the development of a large and complex social structure and the subsequent class divisions.

While the individual Ute could identify with a tribal subdivision, his contacts and interactions with his fellows were so limited that as a rule he needed to look no further than his own immediate family for authority. A demarcation between the biological family and the extended family was not entirely clear. Lang (*44*, p. 24) suggested the use of the term 'the household' in preference to 'the family.'

> The reason for this is that certain units which were often made of the father, mother and children sometimes included also married children and their spouses, the grandparents and often some more distantly related person or some child who had been adopted. . . . The household is also a more stable group than is the biological family. People move quite often and the younger married members of a household may live first for a year or two with the mother's sister or brother, or with the grandparents.

The elders of the family, by virtue of their accumulated knowledge, served as the source of authority for the family (*52*).

The institution of the chief as the source of tribal authority was in effect at the times when the band was united and came as a later development in Ute history (*14, 52*). A Ute chief therefore differed from a Salish siem in that the chief's office was a political one and extended beyond family boundaries and was more authoritarian as well.

Marriage among the Ute was a relatively simple matter and was established when courtship became intimate to the extent that sexual relations had taken place. Ceremonialism associated with marriage existed to the extent that the girl's female relatives erected a new tipi for the couple (*52*). Marriage was less often permanent among the Ute than among the Salish. Viewed against the background of the evolution of the two cultures, such a contrast is not unexpected, nor is the corresponding

cultural difference in attitude toward the sanctity of marriage and chastity in general. Among the Salish, the seduction of an upperclass girl was punishable by death (*2*), while among the Ute the absconding with another man's wife was not treated seriously, a common retaliation being the husband shooting his rival's best horse (*44*).

Cultural differences pertaining to childbirth appear to be relatively minor. Ute women delivered, with the aid of a midwife, in a place apart from neighboring encampments. Tabus incumbent upon the pregnant woman were primarily dietary to keep the fetus small for easy delivery (*71*). Informants reported very little prenatal restriction, with the observation that most such 'magic' or supernatural tabus were imposed following birth. Postnatal tabus of both groups were quite similar, encompassing the restriction and isolation of both parents for a set period of time, dietary restrictions, use of scratching sticks, and other such means of insuring a desirable future for the child (*2*, *52*, *71*).

The naming of the Ute child followed the father's ceremonial lying-in of four days after the birth. The naming was ceremonial in that it was at this time that a grandparent released the father from his tabu status. The ceremony, however, was directed to the attainment of longevity and skill in hunting for the father rather than directly relating to the child or his name (*52*).

According to Stewart (*71*), however, naming usually occurred after the child was weaned or when he first walked. The child was named for some characteristic he had shown, or after a natural object, bird, or plant. The inheritance of name or family ownership of names did not exist.

Child training practices of the Ute did not follow the rather rigid and formalized pattern described for the Salish. Opler (*52*, p. 132) reported on this aspect of Ute life:

> The care with which children were trained and guided by the entire extended family reflects both the cherishing of children felt among the Ute as well as the solidarity of this dominant social unit. By virtue of its economic cooperation and closely knit interests, the aboriginal family made every effort to develop children into industrious and useful members of the group. In this effort, not only the parents, but their siblings, grandparents, and the elder siblings of the child, all cooperated more or less equally . . . and all, certainly, felt deep concern for his welfare. Although every effort was made to hasten this development, to make the child industrious and helpful in the family circle, child-adult relationships were not without their humor and fun. For example, children were told of the queer tabus incumbent upon them. They were many, but were always announced with a tongue-in-cheek air of dry humor.

The child's role in the community life was established at an early age. An older, same-sexed sibling was the first instructor, supplanted later by parents and grandparents in guiding the child into adult behavior. By adolescence, the young Ute was expected to participate in the economic life of his family as an adult (*52*).

Ute girls were secluded at menarche and instructed by a female elder on the tabus she would be under from then on during menstruation. The pubescent boy was taken on a hunt and rubbed with the blood of the game killed in order to obtain for him the desirable attributes of the animal (*52*).

The good speaker was recognized in Ute society, although not in the same sense as has been noted for the Salish.

In two of the Ute bands the 'best talker' became chief, according to Stewart (*71*). Harriett Johnson (*94*) reported that the 'best talker' was judged by his ability to speak up for his people and thus represent their thoughts and desires rather than by verbal accomplishment and oratorical style. It might be presumed, however, that the better speaker might also be the one more likely to speak up for his people and in this sense have his proficiency recognized, albeit indirectly.

The Ute child was not expected to exhibit formal speech proficiency, or to emulate tribal orators, in contrast to the expectations of some of the Northwest Coast peoples.

Results

Child Training Procedures

In order to investigate the variables that may accompany the presence or absence of the problem of stuttering in the societies studied, it was first necessary to define the areas where such variables might be found to exist. Since research evidence indicates that the onset of the problem of stuttering occurs in childhood (*37*), the child questioned about in each case was the one who had most recently gained proficiency in his language or languages and, preferably, was within the age range of two-and-one-half to five years. The child selected did not fit these criteria in a few instances, such as those in which there was only one child who was more than five years old, or there was a singleton not yet at the lower age limit, or the child most closely fitting the criteria was not present at the time of the interview. It was inevitable that in some instances comparisons among the various children of the household would be made by the informant, and while this information was of interest and provided further insight into patterns of child training, it was not included in the coded interview, but was recorded separately.

The interview had three purposes: first, to provide information about the development and training of a particular child; second, to obtain the parents' evaluation of the rate of development and the adequacy of training; and, third, to provide an opportunity for the investigator to relate the observed behavior of the child in his own environment to the parental report and evaluation of the child. A detailed report of the scaling procedure is presented in the Appendix.

The process of socialization of the child was studied with a view to its relation to the presence or absence of the problem of stuttering. Socialization was considered to involve the directing and channeling of the child's behavior according to specific, culturally-determined patterns, and it is recognized that the patterns so encouraged are but a portion of the multitude of available choices. The various dimensions of socialization are not clear-cut and considerable overlapping among them occurs.

The two statistical tests used to analyze the coded interview data were Fisher's *t* formula for testing the difference between means, and the chi square test of independence (*22*). Differences between means were evaluated only when no marked skewness was apparent in the distribution. The ratings obtained in response to the items represented on Card 2 were collapsed in each case into two cells for each group and the resultant two-by-two contingency table was tested by chi square. The cut-off points along the scale varied from item to item; they were selected in each case at a point along the scale where a clear break was discernible. These points are indicated in the distributions presented in the Summary Table

(Appendix). In any case in which the theoretical frequency in any cell of the two-by-two table was less than five, a chi square analysis was not attempted.[14] In the few cases in which there was no overlap between the two groups, no statistical test was felt to be necessary since the difference was, on its face, significant.

One special caution needs to be expressed regarding the interpretation of the statistical results. The assignment of a precise number to data as imprecise as an informant response may be misleading if it is assumed that the mathematical treatment of the number is actually a treatment of the data. Accordingly, while the results of the statistical analysis are presented, such presentation is intended to be a guide to the reader in the interpretation of a direction of differences rather than as showing a 'real' difference between the groups. The author is of the opinion that any further or more profound interpretation of such results would be a misuse of statistics as a research tool.

In the presentation of findings, information of a general nature pertaining to the constitution of the two groups is presented first. Information recorded in columns 1-5 in each card identify the card and the individual it represents. In presenting the data for any item for which a statistically significant difference was found, the level of confidence is presented in parentheses; all further information pertaining to the test used, score distributions, etc., may be found in the Summary Table.

General •

Card 1
Column:

6. Method of data collection. In all 30 Cowichan households, the interview was conducted with the informant. Twenty-nine of the Ute interviews were obtained in the same manner, and in one household the father served as interpreter for the mother and the investigator.

7. Tribal affiliation. All 30 Cowichan families were affiliated with one or another of the subgroups consolidated under the general term Cowichan. Intermarriage between groups does not change the tribal affiliation, which is determined by place of residence. Among the Ute, where tribal distinctions are more pronounced, 15 informants were from Uncompahgre households, six from Uintah-Whiteriver households, five from Uintah-Whiteriver-Uncompahgre mixed households and four from households in which one parent was wholly or partially non-Ute. In two of these instances, the father was Navaho, in one the mother was Ute-Shoshone, and in one the mother was of all three Ute designations and the father a mixture of several non-Ute tribes with white. In all cases the children were classified as Ute full-bloods under the definition presented above.

8. Primary informant. Twenty-seven mothers, two fathers, and one older sibling served as the Cowichan informants; 23 mothers, five fathers, one grandmother, and in one case the grandmother and mother together, served in that capacity among the Ute.

[14] In three cases the theoretical frequency so closely approximated five (being in each instance 4.9 or above) that the test was run. These cases, none of which proved to be statistically significant, are so noted in the Summary Table.

9. Language used by informant. Among the Cowichans, English was the predominant language used by 29 informants, with the native Salish dialect predominating in only one household. Twenty-eight Ute informants reported their native language as the primary one, and two reported English as the primary language of the household.

10-11. Amount of education of father. The mean educational level of the Cowichan fathers was 6.1 grades completed. The Ute mean was 6.9 grades completed.

12. Kind of education of father. Thirteen Cowichan and six Ute fathers attended Indian schools exclusively, three Cowichans and two Ute attended mixed Indian-white schools exclusively, and six Cowichans and eight Ute attended both kinds of school at various times. Information was not available for the remaining fathers in each sample.

13. Source of income. The two groups show no overlap on this item, since the Ute were, at the time of this investigation, receiving a per capita payment from the government for land settlements. With this qualification considered, there were one Cowichan and 14 Ute families dependent solely upon welfare or governmental provision. Two Cowichan and one Ute family had some supplemental income in addition to welfare payments, one Cowichan family was dependent solely upon part-time work by the father, 19 Cowichan and five Ute fathers were employed full-time, one Cowichan owned his own business and four Ute were engaged in full-time agriculture or stock-raising. One family in each group was dependent upon aid from others in the family in addition to the father. Two Cowichan families, deserted by their fathers, were dependent upon the mother's parents for support. In one Cowichan family the father was temporarily laid off from work but was normally employed full-time. In the remaining Ute families, there were three in which the father engaged in part-time agriculture or stock-raising and one in which the father was both employed and a part-time farmer. In three cases (two Cowichan and one Ute) the information was unobtainable.

14-17. Age of informant. The mean Cowichan informant age was 351.9 months (29.3 years) with a range from 17 to 45 years. The mean Ute informant age was 394.4 months (32.9 years) with a range from 20 to 55 years. In many cases the ages presented were approximations since many of the informants were unsure of their dates of birth and could only guess their ages.

18. Total number of pregnancies. The mean number of pregnancies for the Cowichan mothers was 5.0; for the Ute, 4.8.

19. Children now living. The mean number of living children was 4.0 for the Cowichans and 4.3 for the Ute.

20. Preferred sex of child before birth as stated by mother. Nineteen Cowichans, and no Ute, expressed a preference. (1%)

21. Preferred sex of child before birth as stated by father. One Ute father expressed a preference, compared to 10 Cowichan fathers. (1%)

25-30. Age of child questioned about. The mean Cowichan age was 46.4 months (three years, 10 months) with a range from 12 to 87 months (one to 7.3 years). The mean Ute age was 58.9 months (four years, 11 months) with

a range from 26 to 156 months (2.2 to 13.2 years).

Card 2

Column:

6. Sex of child observed. The Cowichan sex division was 17 females and 13 males; the Ute division was 16 females and 14 males.

7. Tribal affiliation. Same information as recorded in Column 7 on Card 1.

8. Educational level of child. Twenty-nine of the Cowichan children and 24 of the Ute children were too young for school. One Cowichan and five Ute were in the early elementary grades (1-3) in mixed white and Indian schools and one Ute was in a mixed junior high school class.

9. Initial impression of child observed. Twenty-one of the Cowichan children showed mixed reactions of shyness and withdrawal in the initial contact with the investigator, as did twenty-three of the Ute children. Nine Cowichan and five Ute children were either outgoing or extremely outgoing and in two cases the Ute children were not present at the time of the investigator's initial contact and no judgment was made.

Socialization. The dimensions of socialization (nursing and feeding, toilet training, sexual behavior, dependence, and aggression) were selected with a view to the desired analysis. The interrelationships among the categories are such that one item in the procedure might relate to more than one of the areas of investigation. This is seen in such items as the age at which weaning was completed, for example, which relates not only to the nursing and feeding of the child but to dependency as well. While the results are presented in fractionated form, it is to be understood that the various areas overlap.

Nursing and Feeding. The items in this category related primarily to the feeding behavior of the child, the initial indulgence by the parent, age of initiation of weaning, severity of weaning procedure, and age when weaning was accomplished. The information recorded on Card 1 (the report of the informant on the age of the child when weaning was begun and terminated) was, for the most part, 'objective.' The information on Card 2 (the judgment of the investigator concerning the relative severity of the weaning process) was essentially 'subjective' and based upon more variables than the responses recorded on Card 1. Other factors, in addition to socialization, may also play a part in the weaning process. One of the Ute children, for example, was weaned when her only nursing bottle was accidentally broken. Since she showed no dissatisfaction at not having the bottle replaced, she was given solid foods to eat from then on. In such a case as this, in which the judgment of the investigator determined the response recorded, it was his policy to try to relate the effect of the action upon the child, as reported by the informant, with the circumstances surrounding the activity at the time. In the case of a Ute child who was weaned at five years of age by having been left with her grandmother for several days and having no contact with her mother, the severity of the weaning process was judged as more severe than would have been the case had age alone been the criterion

since the child reportedly reacted quite intensely to the experience.

Card 1

Column:

34-35. Age (in months) of weaning from breast to bottle. A total of 19 Cowichan and 26 Ute mothers did not wean the child to the bottle. Ten Cowichan and two Ute mothers did wean to the bottle. (5%)

36-37. Age when weaning to bottle was accomplished. All informants in both groups, except one who could not remember, reported the change to be an immediate one and completed within the same month in which it was initiated. The mean age of completion of weaning to bottle was 5.2 months for the Cowichans and 8.5 months for the Ute.

Card 2

Column:

13. Initial nursing indulgence. Nursing indulgence was defined by the rigidity with which a nursing schedule was followed, the frequency and freedom of nursing by the child, and the usual amount of time allowed for the individual feeding. The Ute were the more indulgent. (1%)

Toilet Training. These items related to the acceptance by the child of direct control over his excretory processes and his mastery of this control. An added factor, which had to be accounted for, was the frequently encountered uncertainty on the part of informants as to the time a child's training had been initiated and when it was considered to have been completed. In many instances an older child had almost the entire responsibility for the toilet training of the younger sibling and the informant was unaware of the course the training period had run. While the interview provided for a distinction between bowel and bladder training and day and night bladder control, in the majority of instances the parent had not made such distinctions and looked upon the training period as encompassing simultaneous bowel and bladder control. In these cases, the same date was recorded for both. The establishment of the time when training was considered completed followed the previous example.

Insofar as the judgments recorded on Card 2 are concerned, a basic evaluation made pertaining to the severity of the training process was that of whether or not punishment was an accompanying factor and, if so, to what degree. How the particular training procedure might vary with the age of the child also needed to be considered. One of the Cowichan children was reported to have 'trained herself' at the age of one year, before her mother had initiated a program of training, by following the example set by her older siblings. In such a case, the age of the child at the time of training would tend to make for a rating of relative severity; however, since the severity was, in effect, self-imposed this added factor reduced the rating of the judged severity.

Card 1

Column:

67-68. Age bladder training, day, completed. The mean ages reported were 18.0 months for the Cowichans and 26.3 months for the Ute. (1%)

69-70. Age bladder training, night,

initiated. The mean ages reported were 10.9 months for the Cowichans and 16.2 for the Ute. (1%)

71-72. Age bladder training, night, completed. The mean ages reported were 16.6 months for the Cowichans and 25.6 months for the Ute. (1%)

73-74. Age bowel control completed. The mean ages reported were 18.2 months for the Cowichans and 25.8 for the Ute. (1%)

Card 2
Column:

20. Severity of toilet training. The Ute were the less severe. (1%)

Sexual Socialization. At the conclusion of the investigator's training period among the Mesquakie, the dimensions of sexual behavior and training were reduced to those covered by three items: Modesty training, heterosexual play relationships, and parental attitude toward sex as expressed in the home. No statistically significant differences between the groups were found on these items.

Dependence and Physical Development. Dependent behavior refers to those activities of the child which need the assistance of another person for their completion. Dependence is considered as an acquired mode of response growing out of the period of helplessness in infancy. As the child grows older, he is expected gradually to supplant his dependence with independence as a consequence of his advances in development and socialization. The methods used by the parents to insure the independence of the child, and the age of the child when such methods were put into effect, were of primary interest in this portion of the investigation.

Dependent behavior interrelates with the other dimensions of socialization. An accompaniment to child training which is not under parental control is the acquisition of skills through physical maturation. Since the development of such skills is necessary for the attainment of independence, these data are included here.

Card 1
Column:

32. Sleeping hours. The degree of independence allowed the child in establishing his own sleeping hours as opposed to the imposition of parentally-determined sleeping hours was the distinguishing factor in this item. The Ute were the more permissive in allowing the child to establish his own sleeping times. (1%)

45-46. Age when child sat alone. The mean reported ages were 7.3 months for the Cowichans and 6.3 for the Ute.

47-48. Age when crawled or crept. The mean reported ages were 8.9 months for the Cowichans and 8.5 months for the Ute.

49-50. Age when child stood alone. The mean reported ages were 11.0 months for the Cowichans and 11.7 months for the Ute. A significantly different number of informants responded to this item (27 Cowichan and 12 Ute). (1%)

51-52. Age of first steps. The mean reported ages were 14.0 months for the Cowichans and 13.5 months for the Ute.

53-54. Age of self-feeding with implement. The mean reported ages were 14.8 months for the Cowichans and 13.2 months for the Ute.

55-56. Age when child's early physical development was considered to be

complete. This item referred to the reported age when the child was able to assume the responsibility for feeding himself at meal-times, could walk with ease, and was physically able to be left alone in the immediate vicinity of the house. The mean reported ages were 22.3 months for the Cowichans and 15.6 months for the Ute.

Card 2
Column:

10. Mother-child interaction during interview. Only eight Ute and five Cowichan children showed close interaction with the mother during the interview; 11 Cowichan and 10 Ute children were in close contact with the mother for part of the interview only; three Cowichan and seven Ute children were not in the room at the time of the interview, and 10 Cowichans were present but showed minimal interaction with the mother during the interview. The lack of interaction in many cases was due to the mother directing a sibling to care for the child being discussed while she and the interviewer were talking. In the remaining cases, the informant was a person other than the mother.

17. Age when crying was no longer tolerated. The Ute were the more tolerant of crying at the later age levels. (5%)

21. Initial attention. Judgments of initial attention depended primarily upon the statements of the informant as to how much time was taken in attending to or being in close contact with the child, especially in the period preceding walking. In most cases it was possible to arrive at a judgment on the basis of present attention paid a younger sibling and relating this, by comparison, to the child questioned about. The Ute showed the greater amount of initial attention. (1%)

22. Amount of body contact (amount of actual physical contact between mother and child). The Ute showed the greater amount of body contact. (1%)

23. Age of reduction of body contact. The Ute reduced the amount of body contact with the child at a later age. (1%)

24. Gradualness of reduction of body contact. The Ute showed the more gradual reduction in amount of body contact. (1%)

41. Brevity of transition to adult conformity. The judgment of the relative brevity of this transition was based, in part, upon the informant's report as to when the child in question would be expected to behave in ways appropriate to an adult. The Ute anticipated the more gradual transition to adult conformity. (1%)

Aggression-Discipline. The essential information sought in this category concerned the balance between the tendency for the child to show aggressive behavior and the methods utilized by the parents to inhibit or modify such behavior. Information about the forms that aggression may take and the means that may be used for its suppression was obtained as a by-product of the more basic inquiry. The judgments made on these items related, in part, to the balance of competition and cooperation between the child questioned about and his peers and older and younger siblings, as well as to the parent-child interaction.

Card 2
Column:

32. Temper tantrums. Fewer Ute than Cowichan children were reported to have had temper tantrums. (1%)

36. Disobedience of parents. Less disobedience was reported for the Ute child. (5%)

42. Severity of punishment. The Cowichans reported the more severe punishment. (1%)

43. Frequency of punishment. The Cowichans reported the more frequent punishment. (1%)

Speech and Language Development. If Johnson's theory of stuttering (*34, 36, 37*) is valid in the cross-cultural sense, the two groups studied would be expected to differ with respect to parental evaluations of the language development and speech proficiency of the children to the degree that their cultures differed in incidence of the stuttering problem. It might also be hypothesized that if the Northwest Coast peoples do represent a 'stuttering society' they might have points of view, pertaining to speech proficiency, in common with contemporary North American white culture.

Card 1
Column:

57. Speech environment. More Ute than Cowichan children were from bilingual environments. (1%)

58-59. Age of first word. The reported mean ages were 14.4 months for the Cowichans and 15.4 for the Ute.

60-61. Age of first short combinations of words. The reported mean ages were 19.2 months for the Cowichans and 19.9 months for the Ute.

62-63. Age of first sentences. The reported mean ages were 26.1 months for the Cowichans and 31.1 for the Ute.

64. Evaluation of the child's speech by the parents. More Cowichan parents made an evaluation of the child's speech. (1%)

Card 2
Column:

25. Standards of speech fluency. More Cowichan parents had standards of speech fluency for the child. (5%)

26. Age of meeting standards of fluency. Cowichan parents expected earlier attainment of speech fluency standards. (1%)

27. Stress associated with conformity to speech standards. Cowichan parents reported more stress associated with conformity, by the child, to standards of speech. (1%)

Nonsignificant Items. The following items, which comprised the remainder of those on both cards, either showed no statistically significant differences or were not amenable to statistical evaluation. Those items not tested are marked by an asterisk.

Card 1
Column:

22. Prenatal care
*23. Birth preparations
*24. Reason for specific birth preparations
*31. Sleeping arrangements and restrictions
*33. Nursing
38-39. Age of initiation of weaning to solid foods
40-41. Age when weaning to solids was accomplished
*42. Cleanliness of child in infancy
*43. Early crying behavior
*44. Amount of early crying

58-59. Age of first word
*60-61. Age of first short combinations of words
*62-63. Age of first sentences
65-66. Age when bladder training, day, was initiated
Card 2
Column:
11. Prenatal regimen
*12. Ceremonial accompaniments to birth
14. Age of weaning
15. Severity of weaning
16. Crying indulgence
18. Initial toilet training indulgence
19. Age of initiation of total toilet training
28. Amount of talking in home by child
29. Modesty training
*30. Heterosexual play relationships
*31. Parental attitude toward sex as expressed in the home
33. Physical aggression
34. Verbal aggression
*35. Amount of property damage by child
37. Competition and cooperation, with siblings
38. Competition and cooperation, with peers
39. Competition and cooperation, with older children
40. Competition and cooperation, with younger children
*44. Concern over handedness
*45. Manner of handedness change (no cases of change of handedness were reported in either group)
*47. Age of assumption of adult role
*50. Parents' aspirations for child
*51. Extent to which aspirations of parents for child appear realistic
*52. Acceptance of deviants from cultural norms

Intercultural Comparisons. Intercultural comparisons on certain items from this study and those from other research carried out in our own culture are presented in Table 1.

TABLE 1. Ages of attainment of physical and verbal skills by Indian and white children as reported by their parents.

Item	*Mean Age in Months*			
	*Study III**		*Indian Groups*	
	Control	*Experimental*	*Ute*	*Cowichan*
Age child first crept or crawled	7.5	7.6	8.5	8.9
Age child first sat alone, unsupported	6.4	6.4	7.3	6.3
Age child took first unassisted steps	12.0	12.3	14.0	13.5
Age child first fed self with spoon (or implement)	15.4	14.8	13.2	14.8
Age at initiation of bladder control training	15.1	13.5	16.2	12.1
Age at initiation of bowel control training	13.0	11.8	16.2	11.5
Age at completion of day-time bladder control	21.4	21.6	26.3	18.0
Age at completion of night-time bladder control	25.9	26.7	25.6	16.6
Age at completion of bowel control	20.4	20.0	25.8	18.2
Age child spoke first words	10.8	10.9	15.4	14.4
Age child spoke first sentences	21.0	21.8	31.1	26.1

* From *The Onset of Stuttering* (*37*). The Experimental group consisted of 150 white children, alleged to be stutterers, and their parents. The Control group consisted of 150 white children, alleged to be nonstutterers, and their parents.

Study III, from *The Onset of Stuttering* (37), was a controlled comparison of 150 allegedly nonstuttering children and their parents (the control group) with 150 allegedly stuttering children and their parents (the experimental group). All were of the white race, and the groups were matched for age, sex, and socio-economic status.

The information presented in Table 1 is felt to show the relative evaluations of members of each group concerning the development and certain aspects of the training of their children. The Ute children, who seem to have the least expected of them, are reported to be rather consistently behind all the other children in most of the dimensions investigated. The Cowichan children, while not experiencing the permissiveness afforded the Ute, were still behind the white children on the early developmental items. The Cowichan children were consistently ahead of all others on the toilet training items, in both initiation and completion. On initiation of bladder and bowel control items, the Cowichans resembled the white experimental group, while the white control group resembled the Ute. On the speech items, the rankings approach what might be predicted on the basis of the relative pressure applied on children in the various groups to learn speech, with the white children of both experimental and control groups earliest in attainment, followed next by the Cowichans and then by the Ute.

Incidence and Case Studies of Stuttering

The following procedure was employed to obtain an estimate of the incidence of the stuttering problem on Vancouver Island, as well as to study the speech of any persons reported to be stutterers. A demonstration tape-recording was made prior to the field work by a graduate student in speech pathology at the University of Iowa who had been regarded, clinically, as a stutterer. The sample presented on the tape-recording was approximately five minutes in length; the speaker simulated speech that was regarded as representative of the range from very mild to very severe stuttering. The investigator used this recording to demonstrate to those unfamiliar with the general American use of the English word 'stuttering' the sort of speech behavior in which he was interested. Each informant was asked if he had ever known an Indian who was regarded by his family or the community as a stutterer. Whenever a person was reported as a stutterer further available information was obtained as to the amount and kind of speech hesitation exhibited, reactions of the listeners, cultural evaluation of the speech, reported onset and development, and the informant's own feelings and evaluations concerning the speech behavior. To provide a basis of comparison, the informant listened to the demonstration tape-recording until he heard a portion that most nearly approximated the speech of the person about whom he was speaking. This procedure further clarified the informant's definition of 'stuttering.' Reports of stutterers, and definitions of the term, varied widely among the Indian population. The stutterers reported by Cowichan informants and the card numbers of the informants who reported them are listed in Table 2. Reported stutterers still living in the area

TABLE 2. Persons reported as stutterers by Cowichan informants.

Informant Card Number	*Person Reported as Stutterer*	*Description and Evaluation of Speech*
0010	Jack Mandel*	Mild speech hesitations; shows no embarrassment, not concerned or distressed by speech, seems to be unaware of anything wrong with his speech.
0010	Joe Black†	More distressed by his speech than J. Mandel, but does not hesitate to speak; termed 'quite severe' by informant.
0011	Joe Black	'Not severe.'
0011	Informant's father**	Not like any portion of the demonstration tape; does not stutter at the present time.
0012	Jimmy Jack*	No repetition in speech, but inhales sharply when excited and speaks slowly. Shows no embarrassment over his speech.
0013	Jimmy Jack	No description could be elicited from informant.
0014	Informant's sister-in-law†	Interjects (ah) before words.
0016	Jack Mandel	Repetition of (ah) and (st) blends, interjection of (ah). Does not appear to be concerned over his speech.
0016	Informant's brother	No longer is thought to stutter, but used to get 'red in the face' from muscular tension during speech. Was said not to be embarrassed by his speech.
0018	Jimmy Jack	Not as severe as 'mild' portion of demonstration tape-recording.
0019	Jimmy Jack	Not repetitive. Interjects (ah). Not as severe as 'mild' portion of demonstration tape-recording but was reported to be embarrassed by his speech.
0020	Jimmy Jack	Repetitive, similar to 'mild' portion of tape; was reported to have been ridiculed by schoolmates about his speech.
0021	Jimmy Jack	No description could be elicited from informant.
0024	Informant's cousin†	Was said to have been at one time repetitive when excited, but not so at present.
0026	Informant's sister**	Used to be regarded as a stutterer, but is not now.
0029	Jimmy Jack	No description could be elicited from informant.
0029	Informant's cousin†	Very mild repetition of words.
0031	A five-year-old female acquaintance†	Repeats syllables occasionally when excited.
0032	Jimmy Jack	No description could be elicited from informant.
0033	Jimmy Jack	No description could be elicited from informant.
0034	Jimmy Jack	Jimmy Jack was said by informant to present a more severe problem than Jack Mandel.
0034	Jack Mandel	
0035	Jimmy Jack	Informant went to school with Jimmy, but doesn't remember much about Jimmy's speech other than that he was thought to stutter.
0038	Jimmy Jack	No description could be elicited from informant.
0038	Anthony Paul, Jr.	Informant's son; used to regard what he did as stuttering. He was said to have quit doing the things that were regarded as stuttering at 16. Formerly repeated two or three times on word or sound but had no accompanying muscular tensions.
0039	Anthony Paul, Jr.	Informant's brother-in-law; his speech was always accepted and he was never penalized because of the things he did that were looked upon as stuttering.
0039	Two female classmates of informant at Kuper Island School†	Repetitive, much like Anthony Paul, Jr. No penalty or embarrassment associated with speech.

* Formerly a Cowichan resident, but not so at present time.

† Not a resident of Cowichan Reserve.

** 0011 and 0026 are sisters. 0011 (reported to have been a stutterer at one time by 0026) reported that her father stuttered, a notation omitted by 0026. There was nothing noted in recorded interview of 0011 that would be called stuttering by the investigator.

were interviewed and a speech sample was obtained from each of them for later analysis.

Cowichan. The Superintendent of the Cowichan Agency and the Chief of the tribe were questioned to establish the presence of any Indians regarded as stutterers. The Cowichan Agency includes all the Salish-speaking bands on Vancouver Island from Qualicum south to and including Esquimalt and Sooke. Of the total population of 2,780 persons under Agency jurisdiction, Superintendent J. V. Boys (*83*) could recall only one man, living at Nanaimo, who, he said, stuttered very mildly. Chief Elwood Modeste (*97*) added the name of one other man, a former Cowichan resident now living in Esquimalt. Superintendent Boys also remarked on the hesitancy and lack of fluency of many older Indians when speaking English, with the comment that this might often be mistaken for stuttering if the listener were unaware of the difficulties encountered by the speaker when attempting to communicate in a language with which he is not very familiar.

Questioning native informants as to the whereabouts of reputed stutterers served to supplement the information obtained from the above sources. Several of the reported stutterers were eliminated for a variety of reasons. In a few instances, for example, the reputed stutterer was found to speak normally and the usage of the label had referred to other speech behavior such as hesitation in speaking an unfamiliar English word, or inarticulateness accompanying embarrassment or shyness. The descriptions given of several persons reported to be stutterers, and the informant's evaluation of the speech in each case, are presented in Table 2 and show the extent to which the term 'stuttering' is unclear and misleading when used by itself in an investigation of this sort.

The reported stutterers for whom there was direct information available were two Cowichan and two Nanaimo Indians. Pseudonyms are used in referring to these persons in the following report.

The person most frequently identified as a stutterer was Jimmy Jack. Jimmy left the Cowichan Reserve two years previously to make his home in Washington state. His parents, Wayne and Mable Jack, and several siblings live on the reserve and the investigator became well-acquainted with the family. During three visits to the Jack household, the problem of stuttering was discussed and investigated thoroughly.

The history given by the Jacks is that of a 'stuttering family.' Wayne was reported to have stuttered until he was 18 years old. At that time he was said to have become fluent and reportedly he now stutters only about once every three or four months, after he has had a few drinks. Wayne was the least cooperative member of the family and most of the information concerning his speech, and that of others in the family, was furnished by Mable (*92*). Mable had been informed of Wayne's stuttering by her sister-in-law, as Wayne was said to have overcome the problem prior to his marriage. Wayne reportedly didn't know how he overcame his speech difficulty and an estimate of the severity of his alleged stuttering or of the problem it presented was not available.

Jimmy Jack was considered to be a stutterer by all the members of his family. At the time of the investigation, Jimmy was 27 years old. According to his mother, 'when he first started to talk he couldn't name something he wanted to name it for a long time.' She said she felt that 'this boy is taking over (the stuttering of) his father.' Jimmy was first considered to be a stutterer by an aunt (Wayne's sister, cited above, who appears to have been the member of the family most concerned over speech fluency) when he was about two years old and in the early stages of speech development. The aunt had been alone with Jimmy and had later asked Mable if she knew that he stuttered. Neither parent had noticed anything wrong with Jimmy's speech prior to this time. Sometime later, before he was three years old, Jimmy stuttered for the first time in the presence of his mother, according to Mable, who reported that she was in the kitchen when Jimmy burst into the room with some apples he had picked for her and began, very excitedly, to tell her about them. As he spoke he began repeating, in Salish, on the order, according to Mable's account, of 'I-I-I-brought you some apples.' Mable reported that, being occupied with her cooking, she replied, 'Shut up! Don't talk that way!' Jimmy then left the room and rejoined the other children outside. According to Mable, this is the only time she definitely remembers having told Jimmy not to speak as he had been doing. She did state that the older children frequently told Jimmy to 'start over again' when he did repeat and that they teased him a great deal when he became repetitive. Mable reported that it was the ridicule of his speech that caused Jimmy to leave his home on Vancouver Island and relocate in the United States.

From these reports, and those of informants outside the family, Jimmy seems to fit the criteria of 'stutterer' established at the outset of the investigation. Reports differed as to the pattern of Jimmy's speech, the main discrepancies being concerned with whether or not he was highly repetitive or more inclined to interject meaningless sounds and syllables into his speech. It is probable that the form of his alleged stuttering varied with the situation. So far as can be determined from informant reports, Jimmy would not be judged severe in comparison with most white stutterers in our own society. Jimmy reportedly performed very little behavior such as facial grimacing, twisting of the head, etc., although his brother Vincent (*92*) reported that he closed his eyes occasionally while trying to say what he wished. Vincent also reported that Jimmy repeated to the extent that 'you get tired of waiting for a word' and yet, according to Vincent, he ordinarily repeated the initial syllable only three or four times. Jimmy was not known to substitute words he felt he could say for those on which he thought he would stutter, but ordinarily he would continue to repeat the first sound or syllable until he felt able to complete the word. Mable and Vincent both stated that Jimmy's rate of speech in English was quite rapid compared to that of most other bilingual Indians and that when he consciously slowed down his rate of speaking he was more fluent. This point was later substantiated by another informant in a different part of the reserve. Contradictory statements from various in-

formants leave the matter open to question, but since Jimmy was first labeled a stutterer when he knew only the Salish language, it is likely that his problem was bilingual. From an evaluation of the reports of all the informants, the severity of Jimmy's stuttering problem would be represented by a rating of two or three on the Iowa Scale of Severity of Stuttering. All informants who compared Jimmy's speech with that on the demonstration tape felt that Jimmy's speech problem had never been, at worst, as severe as that represented by the mild portion of the tape-recorded speech sample.

Mable Jack said that her sister-in-law had expressed the belief that Jimmy's speech problem was caused by older children in the family blowing on his face when he was five or six months old. It was her view that when he later began learning to talk he had to inhale sharply as though reacting to having his face blown upon. This same belief was expressed at one other household, with the added statement that a child also should not be fanned before he learns to talk.

Jimmy was born about one month prematurely and weighed only four pounds, six ounces at birth. He was reported to have been a frail baby and a source of concern to his parents. About the time he was first considered to be a stutterer, Jimmy was severely ill from an unidentified disease. At one point he was completely paralyzed, and when the attending physician gave up hope of the boy's recovery he was taken to a local Indian medicine man and eventually recovered. At the time of this illness, which was of long duration, Jimmy was cared for constantly by his parents, the father staying near him all night and the mother all day.

Jimmy was teased about his speech by his brothers and sisters during his preschool years. After he entered school, Jimmy's classmates laughed at him because of his speech, causing him a great deal of embarrassment, according to an informant who went to school with him. Jimmy quit school after the sixth grade and went to work. His mother said that when he quit smoking and drinking at the age of 22, Jimmy's stuttering became more severe and had remained so. Jimmy was reportedly most fluent during oral recitations at church, when he could read in chorus with others.

During the period of onset of the problem Jimmy was taken to a local physician who, according to the mother, informed the parents that 'if he didn't get over it he'd keep on doing it.' No attempts at correction were made.

Jimmy's older brother Vincent was present during each of the interviews and stated that he, too, was a stutterer, although not as severe as Jimmy. 'He's *really* a stutterer' was Vincent's comparison. Vincent did not recall how he came to think of himself as a stutterer, but his mother reported that he first had trouble when he began drinking, at the age of 14. At the time of the interviews, Vincent was, according to his statements, only bothered by his speech when he had had too much to drink or 'just when I talk to kinda big shots I stutter.' Vincent described his stuttering as like 'two words coming in at once' and 'a lot of words I don't know in English, I stutter when I try to say.' He did not repeat sounds, syllables, or words but interjected sounds

such as 'uh, ummmm' while trying to think of the appropriate English word. He might then repeat the word to himself after having said it—'kind of whisper it'—to keep it in his memory. He said he did not have any difficulty in Salish, which he learned prior to English. Partly because of his lack of knowledge of English, Vincent quit school before he had finished the first grade and his learning of English was limited to what he could accomplish by listening to 'outsiders.' The last time Vincent had stuttered was three or four months previously, he said, and he could not recall the instance prior to that one. He was unable to imitate or demonstrate the behavior to which he referred as his stuttering and stated that he never knew he was doing it until he had already begun. The investigator was unable, at any time he conversed with Vincent, to observe anything in Vincent's speech behavior that would approach stuttering. It would appear that Vincent was exhibiting the sort of speech behavior previously reported by Superintendent Boys. The investigator had the opportunity, while among the Ute, to observe a very similar instance of nonfluency accompanying inebriation which is reported in detail below.

No distinction between 'stuttering' and 'nonfluency' was made in the Jack family. Mrs. Jack consistently used the term 'stuttering' or its Salish equivalent to describe both. No distinction between the speech behavior of Vincent and that of Jimmy, except in degree, was made by their mother.

The final member of the family considered to be a stutterer was Billy Jim, a grandson of the Jacks who had made his home with them since he was four years old. Mable felt that Billy, now nine years old, had recently become 'worse' but was unable to say exactly why she thought so. Billy resembled Vincent in his speech behavior in that he was said to have no difficulty while speaking Salish and to stutter only in English. At the time of the initial contact, Billy was extremely shy and hesitant about getting too close to either the interviewer or the recorder. In response to the urging of the several other children present, he did consent to speak into the recorder for several minutes. Colored picture cards were shown to Billy and he was asked to describe the depicted action. A total of 16 responses made up of 73 words was obtained. Later analysis showed the sample to contain four nonfluencies; two repetitions, one revision, and one interjection. Such data as are available on the speech fluency of children at age levels nearest to that of Billy (children two to eight years old and college freshmen) indicate that this amount of nonfluency is much more characteristic of the speech of normal speakers than of clinically diagnosed stutterers (*35*). On only one occasion did the investigator observe an instance of nonfluency, a syllable repetition, in Billy's speech, although he and Billy carried on relatively long conversations at least five other times.

Although Jimmy Jack was the person most frequently reported as a stutterer by the Cowichan informants, none of the other reputed stutterers in the family was so reported by an informant outside the family.

The last Cowichan stutterer to be described was discovered accidentally on the final day of field-work at the reserve. When the subject of stutter-

ing arose in the course of the interview, the informant, Mrs. Anthony Paul (*98*), stated that her son, Anthony, Jr., had stuttered as a child. Since the young man and his mother were both present, it was possible to obtain as much information as either could recall pertaining to the onset and pattern of his reportedly distinctive speech behavior.

Anthony was the only one of her eight children now living for whom any nonfluent speech was noted by the mother. She said his speech had been characterized by initial syllable repetition, seldom more than two or three repetitions of any one syllable, followed by the production of the rest of the word. At no time did Anthony exhibit any facial distortions or muscular strain in speaking and both informants maintained that the problem was not severe.

When Anthony first began to speak in sentences, the mother said she heard him repeat and told him not to do so. He was not teased, ridiculed, nor, presumably, otherwise penalized for his speech at any time so far as anyone in the family could recall. The instances in which he was told to quit repeating, however, may have been frequent, since the mother readily recalled having so instructed him, although she could not remember other behavior about which she was questioned. Mrs. Paul was from a mainland Salish group and did not speak the Cowichan dialect and so referred to Anthony's manner of speaking by using the English word "stuttering" instead of the equivalent local Indian term. No one in the family could recall with certainty when Anthony was first classified as a stutterer.

Anthony reportedly never stuttered in the Salish language, which he learned after he learned English, so his only deviant speech behavior had been in the language he was learning at the time he was first thought to be a stutterer.

Now in his early twenties, Anthony reported overcoming his speech difficulty by the time he was 16 by talking as much as he could to as many people as possible. Asked if he ever withdrew from speaking situations, he stated, 'No, I talked more . . . the more I talked . . . the more I got over it.' Anthony was no longer considered to be a stutterer by any member of his family and he was not reported as one by any other informant interviewed.

Although school was not in session at the time of the investigation, an estimate was obtained from authorities at St. Catherine's Indian School (Cowichan Day School) of the incidence of speech difficulties among Indian children. Lemert (*46*, p. 168) had previously reported that 'out of a population of 110 "quite a few" students were stated to have trouble with "g" sounds associated with self-consciousness and embarrassment.' According to the Sister Superior (*101*) of the school, none of the children currently in attendance were considered to be stutterers. She did report that the articulation of many was considered faulty or slovenly, according to white standards, but that those who had had 'elocution lessons' in school were adequate speakers. One first-grade Indian boy was reported to have had a 'bit of a stammer' when asked to speak before the class. This was thought by the teacher to result from a combination of 'poor home factors,' shyness, and a feeling of inade-

quacy in school work. His teacher had reported that as he became more satisfactorily adjusted to school and better acquainted with his classmates his self-consciousness disappeared and his speech became fluent. The 'trouble with "g" sounds' reported above may result from the fact that the Salish language does not contain the [ŋ] sound and many of the children habitually use [n] in the final position of words ending in 'ing' (*90*).

Nanaimo. The man most frequently reported as a stutterer, next to Jimmy Jack, was Joe Black, a 69-year-old resident of the Nanaimo Reserve. Mr. Black was interviewed on four occasions and his son was interviewed twice (*82*, *81*).

Joe Black represented the closest link with the 'old culture' who could report highly detailed information directly related to the problem of stuttering. A life-long Nanaimo resident, he was a son of one of the latter-day 'siem' of the community, and retained considerable prestige among the older members of the village.

Joe Black exhibited speech behavior that the investigator classified as stuttering. On the four occasions he was interviewed, however, the most severe rating made of Joe's speech by the investigator was a rating of two on the Iowa Scale of Severity of Stuttering.

Joe Black had stuttered for as long as he could remember and did not recall the first time he was aware that he was speaking differently from anyone else. He said that the onset of his stuttering occurred under the following circumstances. When still a child, he awoke early one morning and, feeling hungry, went to the area of the big house where the food was kept. When his mother awoke later in the morning, she found Joe unconscious on the floor, with his mouth full of cake. When he regained consciousness and began to speak he was stuttering and had done so ever since. Joe could not personally recall the incident, but it had become an item in the family history. His mother interpreted the incident as a seizure by a 'ghost' and the deviant speech as a remnant of the spiritual power which had overtaken him. Since the spirit quest and supernaturalism formed an integral part of this culture (*2*, *3*, *19*), such a reaction to the event would not be unexpected. Michael Kew (*95*), staff anthropologist at the Provincial Museum in Victoria, remarked to the investigator at a later date that had this event occurred when he was older, Joe Black would probably have been picked to be a native dancer since a prerequisite to such selection is the manifestation of 'power' of supernatural origin.

Joe Black antedated the time when the problem of stuttering at Nanaimo began to be influenced by white settlers in the area and reported that in the 'old days' he had known a 'few' Indian stutterers. He felt that stuttering had never been as prevalent among the Indians as it is now among the white population on the island.

Mr. Black reported, and his statement was corroborated by both his wife and son, that his speech had presented much more of a problem in the past. According to the description furnished by his son (*81*), Mr. Black's stuttering had been similar to that reported for Jimmy Jack, involving the repetition of certain initial syllables several times, with an occasional accom-

panying eye closure until the word was spoken. The son reported that formerly his father, after repeating the initial syllable several times, would remain silent at times for as long as 20 or 30 seconds until he felt that he could say the entire word without difficulty.

When questioned about the present-day incidence of stuttering in the area, Mr. Black reported that speech difficulties of any kind were not much in evidence. He did report having met, two weeks previously, a young Nootka Indian from one of the small islands off the West Coast who was one of the few Indian stutterers he had seen in recent years. Joe reported that when he talked with the Nootka man, he turned his head away and did not look at him since, he said, it makes the stutterer feel better to know that he is not being observed at the time he is having difficulty with his speech.

Mrs. Black was of the opinion that giving a child a 'good slap' when he stutters would assure that he'd 'get over it quick.' The slap was not meant to be administered as punishment, but as a method of distracting the child from what he was doing.

As the son of a high-ranking man in the community, Joe's upbringing was said to have been more severe than that of other children. Joe did not report any instances in which his speech worked an unnecessary hardship on him to the extent that he was singled out for special treatment or correction.

Additional insight was provided later by Joe's son, Ed, when questioned about the Nanaimo term for 'stuttering.' Unable to recall the word for some time, Ed stated that he had not heard it since his paternal grandmother had died, 25 years previously. He could not recall having heard another Indian use the term but 'my grandmother used to be very upset about it and I used to hear her discussing it with my grandfather.'

Table 3 contains a summary of the analysis of a tape-recorded sample of

TABLE 3. Nonfluency analysis of samples of the speech of Joe Black and Mary Yale.

	Joe Black		*Mary Yale**			
			Condition 1		*Condition 2*	
Type of Nonfluency	*Number of Nonfluencies*	*Nonfluencies per 100 Words*	*Number of Nonfluencies*	*Nonfluencies per 100 Words*	*Number of Nonfluencies*	*Nonfluencies per 100 Words*
Interjection	7	.50	2	1.11	7	2.87
Sound or Syllable Repetition	45	3.27	21	11.66	4	1.64
Word Repetition	23	1.67	15	8.33	9	3.70
Sound Prolongation	(20)	1.45			(3)	1.23
Initial	12				3	
Final	8				0	
Total	95	6.89	38	21.11	23	9.44
Total Number of Words	1373		180		243	

* Condition 1, reading. Condition 2, spontaneous speech.

Joe Black's speech obtained on the occasion of the final interview with him. At the time of this recording, Mr. Black stuttered more severely than during any of the previous interviews. The norms most suitable for purposes of comparison are those of white male college students, and in total nonfluencies per 100 words Joe ranks below the fifth decile for male nonstutterers and below the first decile for stutterers (*35*). Because of the discrepancy in ages between Joe and those in the normative group, such comparisons have limited validity and no precise estimate of the severity of Joe's stuttering compared to that of white males of his age level is possible.

The analysis of Joe Black's recorded speech sample revealed a total of 20 sound prolongations, all but five on the [s] sound or [s] blends in the initial position. All 12 final position prolongations were also on the [s] sound. Three additional nonfluencies for which there are no standard categories of comparison, and which might be described as sharp phonations accompanying inspiration, were also noted to have occurred.

During the final interview with Chief Edison White (*103*), an attempt was made to estimate the incidence of stuttering at Nanaimo, and it was determined that there was one person reputed to stutter for each generation of Indians living on the reserve. Joe Black represented the oldest generation; a commercial fisherman, Johnny Edwards (who was not in Nanaimo at the time of the investigation), represented the contemporary adult generation; and his step-daughter, Mary Yale, the only child reputed to stutter, was a representative of the youngest generation.

Edison White had known Johnny Edwards all his life and he felt that Johnny no longer stuttered severely. When he was younger, Johnny's speech was reported to be characterized by his repeating a syllable two or three times and pausing before saying the rest of the word. As far as Edison could recall, Johnny was never ridiculed or penalized because of his speech by any of the other children in the neighborhood.

The inclusion of Mary Yale came from the report by Edison White's son that she 'stutters like everything.' Mary and her mother were interviewed and a motion-picture sequence of Mary in the act of reading aloud for several minutes was obtained along with several recorded samples of her speech.

Mary's mother, Mrs. Johnny Edwards (*88*), spoke very little English and much information that otherwise might have been obtained was not gained, even with the assistance of a sister-in-law who served as interpreter. Mary was 11 years old and had spoken in her present manner for as long as her mother could remember. The mother stated that Mary learned English first and could speak very little of the Salish language, a point which the investigator was inclined to question for two reasons; first, had this been the case, Mary would have found communication with her mother a near-impossibility, and, second, at the time the mother was of the opinion that the investigator was looking into Mary's home as a representative from her school, which in the past had discouraged the children from speaking their native languages.

Mary was one of 14 children; in addition, her mother had adopted two other children and very little information about Mary's early development and training was remembered by the mother. She did report that Mary was never told to speak in any different manner and was never penalized for her speech. Whether or not anyone in her family had ever termed Mary a stutterer is unclear, but it was apparent that her mother considered Mary's speech to be different from that of the other children. Mrs. Edwards reported no concern over Mary's speech and had never compared her manner of speaking with that of her husband. Mary's aunt, Mrs. Harvey Edwards (*87*), who made her home with the Johnny Edwards family, stated that Mary was repetitious only when she was excited or distraught.

Later on, while at the Port Alberni Residential School, another evaluation of Mary's speech was obtained from the office manager of the school, Mr. E. F. Peake (*99*). Mr. Peake described Mary Yale as speaking 'shyly' and with some hesitation, but he did not feel that she stuttered.

The fluency analysis of Mary's speech, summarized in Table 3, shows a wide variation in the amount of nonfluency between the spontaneous speaking and reading conditions. At least two factors are hypothesized as influencing this difference; (a) the reading passage contained many words that Mary was unfamiliar with and was more appropriate for use with an older person, and (b) her desire to perform adequately and her inability to do so because of the difficulty of the material appeared to add to her uncertainty and nonfluency.

Port Alberni. In order to survey other Indian locales on Vancouver Island for estimates of the incidence of the problem of stuttering and other speech difficulties, two other reserves were briefly contacted. The first of these was that of the Sheshaht band of Nootka Indians located near Port Alberni.

The Superintendent of the West Coast Agency, Mr. N. W. Garrard (*70*), had stated in previous correspondence that 'I have yet to find an Indian who stutters. I know none in this agency have impediments in speech. . . .' The West Coast Agency has jurisdiction over virtually all the Nootka-speaking bands on Vancouver Island.

A former resident of the Sheshaht village who had moved to the Cowichan Reserve, Mrs. Juanita Elliott (*89*), had been interviewed previously. Mrs. Elliott is a granddaughter of Dan Watts, a Nootka chief who had served as an informant for Edward Sapir (*62*). Juanita did not know of any Nootka Indian with a speech problem of any sort and was not familiar with the 'abnormal speech forms' reported by Sapir (*62*). She did not know any Nootka term equivalent to 'stuttering' and remarked, 'Up there the language is dying so much amongst the young people that they're just speaking English. . . . I don't know anyone that stutters.'

Mrs. Adam Shewish and her son, Edward (*100*), served as informants for the Sheshaht group. Neither informant knew of any resident of the area who was considered to be or ever to have been a stutterer. The only deviant speech noted was that of a 10-year-old boy who substituted [θ] for [s] and

two elderly residents who were deaf mutes. Mrs. Shewish knew of one resident, now deceased, who many years ago was considered to be a stutterer. No other speech difficulties were known to exist, by either informant, among any of the neighboring Nootka tribes.

The Port Alberni Residential School was also visited and Mr. E. F. Peake (*99*), cited above, was questioned. In his 30 years at the school, Mr. Peake had not known of an Indian student who was considered to stutter. The nearest thing to any deviant speech he could recall was the substitution of [s] for [ʃ] by some of the Haida children from the Queen Charlotte Islands and this apparently had been due to the absence of [ʃ] from the Haida language. The area served by the school includes the Queen Charlotte Islands, the mainland groups of Bella-Bella, Bella-Coola, Skeena River, North Westminster and, on the Island, the area from Nanaimo south through Duncan and Victoria. The languages represented at the school include Haida, Tsimshian, Kwakiutl, and Salish. The report from the school was of particular interest in view of the statement by Lemert (*46*, p. 168) that 'at the Port Alberni school there were two stutterers for a population of 240. . . .'

Campbell River-Cape Mudge. In the absence of the local chief, Mrs. Sam Henderson (*91*) served as informant for the Kwakiutl bands at Campbell River and nearby Cape Mudge. Mrs. Henderson reported no known stutterers living in either locale at the present time although in the 'old days,' according to her, stuttering seems to have been more common. One of her grandfathers, who died when Mrs. Henderson was 11 years old, was said to have been a stutterer but she did not remember enough about how her grandfather spoke to be able to elaborate upon or describe just how his speech was different from that of other persons. In her lifetime, Mrs. Henderson had known of no Indian, child or adult, with any sort of speech difficulty.

If Jimmy Jack, Joe Black, Johnny Edwards, and Mary Yale are all considered to be stutterers, the incidence of stuttering in the groups contacted, with a total population of approximately 2,050, is about two per thousand, or 0.2 per cent.[15]

Judgments of Listeners

A rating session was held at the University of Iowa at the conclusion of the field research to determine the judged severity of the speech of the reputed stutterers who had been recorded, and to obtain evaluations of this speech on an intercultural basis.

The listeners were eight doctoral level graduate students in the Department of Speech Pathology and Audiology. All had had previous course-work in stuttering research and theory, and all were experienced in speech therapy with stutterers.

The samples presented were five segments from interview recordings of Mary Yale, Joe Black, and Vincent Jack. Three of the samples were from Mary Yale, two while she was reading and one while she responded to picture

[15]An apparently widely accepted estimate of stuttering in the United States is 0.7 per cent (*1*). Since this estimate is based on only that portion of the population between five and 21 years of age, a comparable Indian estimate would not include Black, Edwards, or Jack.

cards. A motion picture of Mary, taken at the time she recorded the reading sample, was presented with the final speech segment.

The judges were asked to listen to these five speech samples, which were of varying length, and at the conclusion of each sample to rate the speaker on the Iowa Scale of Severity of Stuttering. The judgments were to be based upon the listener's own criteria of what he interpreted as stuttering and the relative severity of the stuttering. The scale values range along a seven-point continuum from 'no stuttering' to 'very severe stuttering.' The results of the listener judgments are summarized in Table 4.

The order of presentation of the samples was (a) Mary Yale, reading, (b) Joe Black, spontaneous conversation, (c) Mary Yale, spontaneous response to picture cards, (d) Vincent Jack, spontaneous conversation, (e) Mary Yale, reading. Vincent Jack's sample was included for the purpose of seeing how the judges would evaluate a speaker, somewhat unsure of himself in the English language, who was labeling himself as a stutterer and talking about how his stuttering affected him. The recordings of Mary Yale were spaced in order to keep the judges from recognizing her voice between samples and being influenced on a current judgment by a previous rating.

In order to determine how the previously observed variability of nonfluency of Mary Yale's speech would affect the judges' ratings, the differences among the three sample means were tested statistically by a Friedman two-way analysis of variance by ranks (*66*). The statistic obtained by this test is chi square with degrees of freedom equal to one minus the number of treatments. The obtained value of 10.6 was significant at the 1% level of confidence. This is interpreted as showing that, on the basis of stuttering severity,

TABLE 4. Judged ratings of severity of stuttering on five speech samples from three reputed stutterers.

	Sample Number				
Judge No.	*1* *Mary Yale*	*2* *Joe Black*	*3* *Mary Yale*	*4* *Vincent Jack*	*5* *Mary Yale*
1.	5	2	3	2	6
2.	4	2	1	1	1
3.	4	2	1	1	3
4.	3	2	1	1	3
5.	4	3	2	1	3
6.	5	2	3	1	4
7.	5	3	3	1	2
8.	6	2	1	1	2
Mean Rating	4.50	2.25	1.87	1.13	3.0
Range	3–6	2–3	1–3	1–2	1–6

the judges rated the samples as not coming from the same speaker. Inspection of the rank values showed sample three, the spontaneous sample of Mary's speech, to be judged least severe. The variability of Mary's speech is reflected by the mean values presented in Table 4. The sample rated most severe was a reading sample judged on the basis of the audible aspect alone. When the motion picture was presented simultaneously with recorded speech, severity was judged 1.5 mean scale values less severe.

A factor which may have affected the ratings for sample five should be noted. At the time the data were obtained, Mary had a head cold and throughout the sample was seen and heard to 'sniffle' many times. Two of the judges, at the conclusion of the rating session, stated that they had interpreted this behavior as part of Mary's stuttering because of the similarity, in their opinion, of this action with muscular activity associated with stuttering. The extent to which this factor might have influenced other judges and the overall rating is a matter of conjecture.

The mean rating of the sample from Joe Black was .25 higher than that made by the investigator at the time of the interview, and the mean rating of Vincent Jack was .13 higher than that made by the investigator. Only one of the eight judges reacted to Vincent's statements about his speech rather than the speech itself, with seven rating him one (no stuttering) and one rating him two (very mild stuttering). At the time she was interviewed and recorded, Mary Yale was not judged to be a stutterer by the investigator due to her lack of concern over her nonfluency, the fact that she was noticeably nonfluent only when reading, and her ready acquiescence to being recorded and photographed.

The Iowa Adaptation and Consistency Test for Stutterers was used as the reading task material for the analysis of Mary's nonfluency. The results of the test show Mary to have committed 67 nonfluencies over five readings. She showed a −5.55% adaptation of frequency of repetition and a percentage of consistency of 39.7% over all readings. In overall number of nonfluencies per 100 words for each reading, Mary was quite consistent from reading to reading, as shown by the following results for each reading: (a) 20.55, (b) 21.66, (c) 17.22, (d) 16.11, (e) 21.66.

The Indian Word for 'Stuttering'

Among the Cowichans, the Salish word for 'stuttering' does not seem to be a predominant term in the individual Indian's vocabulary. Informants in only four families were able to recall the Indian term; one of these (0020 in Table 5) reported two such words, the second of which was later found to be an inappropriate usage. All four of the families, which included the Jack family, were seen to be closer to the 'old culture' in several respects. The first informant knowing the word, for example, recalled it from a folk-tale told him by his grandmother. This informant was also the only one reporting the tabus and restrictions he was expected to follow when his voice was changing and puberty was considered to have begun. The three remaining families were among the few contacted in which the children were expected and

encouraged to learn Salish prior to or coincidentally with English.

The word for stuttering reported by all these informants, as recorded in the International Phonetic Alphabet, was *sʌtsʌts*, with some minor variations in pronunciation given by different informants. This closely approximates the term *o'tsa'tsa* reported by Lemert (*46*, p. 171). At Nanaimo, the term reported was *hʌs-sʌtsʌts*, which seems to be a variation of the Cowichan term. Edison White (*103*), when asked about the term, had considerable difficulty in remembering the proper pronunciation. It was not until a subsequent interview, six days later, that he was able to pronounce the word with certainty that it was correct.[16] As pronounced by Chief White, *hʌs-sʌtsʌts* appeared to be onomatopoeic; the initial *hʌs* was followed by a brief pause, then by *sʌtsʌts*, rather rapidly and with force.[17]

The definition of the term implies that the speech deviance is 'permanent, physical, and uncontrollable' according to Chief White and a stutterer is one who has 'trouble getting his words out properly.' As far as he knew, there is no judgment or evaluation implied by the term and it is descriptive, the 'same as "green" or "yellow" or any other word.'

The term *skeykulskwels*, reported by Lemert (*46*, p. 171) was said, by both Edison White and Joe Black (*82*), to have a secondary usage not quite equivalent to 'stuttering,' the preferred usage being equivalent to 'can't talk.' The inability referred to may be either organic or nonorganic in origin, the latter case illustrated by the example of a shy person being called upon to speak at a large gathering and replying *skey-kul-skwels* ('I can't talk'). The implication here is that the lack of speech is due to a lack of confidence rather than physical disability. If used in the sense of 'stuttering,' the term implies stuttering of such severity that the individual is unable to speak at all.

One Ute informant reported the existence of a word in the Ute language for 'stuttering,' which she declined at the time to specify. At the conclusion of the field research, when no other informants had claimed knowledge of such a term, the original informant, when interviewed again, gave the expression as *kasu-ʌpagəwats*.

Francis McKinley (*96*), a Ute tribal official, was then asked to give his translation of the word, which was 'not talking straight, or to the point'; figuratively, 'beating around the bush.' The original informant, when subsequently informed of this definition, agreed with it, but added, 'Isn't that what *you* mean by "stuttering"?'

Reported Nonfluency in Children's Speech

Comparatively few informants, six Cowichans and four Ute, reported a

[16]The 'myth of advice' and privileged knowledge, discussed in Chapter 2, was seen in operation in this instance. Chief White, being unsure of the proper word, contacted several of the elderly, high-status men of the community for verification since they were, traditionally, the 'retainers of knowledge.' White compared the system with that of present-day white society, where theoretically everyone has an opportunity for higher education but it is generally the upper classes who take advantage of the opportunity and can afford to do so.

[17]This is consistent with the terms used for 'stuttering' in other societies. Morgenstern (*50*, p. 256) stated 'The word for stammering is onomatopoeic in the overwhelming majority of languages reported.'

period of nonfluency at some point in the child's development, as shown in Table 5.

Two Cowichan informants are of special interest in the way in which they reacted to and evaluated the nonfluent speech (*84, 93*). Both labeled the child's behavior as 'stuttering' (number 0020 in Salish, number 0028 in English) but their respective reactions to both the label and the behavior were different.

As a girl, Mrs. Ben Jakes (*93*), number 0020, was a neighbor of Jimmy Jack and went to school with him for several years. The attitude of the other school children towards Jimmy's speech made a lasting impression on her. 'They used to laugh at him when he was talkin' all the time . . . it used to make him worse then.'

Her own son, Paul, who was six at the time of the investigation, was a premature baby and weighed less than five pounds at birth. He also had severe spasms of the esophagus that necessitated surgery when he was three days old and he was not dismissed from the hospital until he was five months old. Not long after that, the boy contracted tuberculosis and was sent to the sanatorium at Nanaimo. When he was discharged and sent home he was a little over three years old.

Mrs. Jakes reported that Paul 'was stutterin' when he first started talkin' . . . he was pretty bad; I thought he wouldn't get over it.' She and her hus-

TABLE 5. Nonfluency or repetition in children's speech reported by six Cowichans and four Ute.

Informant Card Number	*Description*
	Cowichan
0020*	At the time he started talking, her son was a 'stutterer.' By the age of four he had 'gotten over his stuttering.'
0024	Daughter repeated words in English, her first language, 'in order to learn the words.' At present, she is doing 'the same thing' at age six, in the Salish language, which she is in the process of learning.
0026	Reported nonfluent stage in daughter, age four, at the present time.
0028*	Eldest son, age four, 'stutters and thinks quite a long time before he finds the words. . .'
0030	Reported nonfluent stage in four-year-old boy.
0033	Three-year-old son just in nonfluent stage. A neighbor and playmate of boy referred to by number 0028.
	Ute
0043*	Daughter, age five, 'kind of stuttered' a year previously.
0044	Reported babbling stage of daughter when 6–8 months old.
0049*	Eldest boy 'kind of stuttered' at 4–5 years of age. Informant a sister of 0043.
0062	Daughter, now six years old, used 'baby language' when first learning speech.

* Reported in detail in body of text.

band used to talk to Paul about his speech and have him repeat words over again if he showed any difficulty saying them. When questioned about any other techniques used, Mrs. Jakes stated, 'When you look at him when he's talkin' or speak loud to him he gets worse . . . (so) . . . we just talk natural to him . . . ' Paul was taken to a local physician when the family concern over his speech continued to grow. The doctor reportedly told the parents to be patient with the boy and 'try not to holler at him when he's like that and he'd get over it. And he did, too.'

Paul was said to have been about four years old when his speech became fluent enough not to cause his parents any further concern. At the time of the interview, Paul was observed to be speaking quite fluently. A tape-recording of his speech was obtained by having him respond to picture cards. This was later analyzed. In a sample of 50 responses made up of 170 words, Paul was noted to have been nonfluent five times; three of his nonfluencies were classified as interjections and two as revisions. No repetitions were noted. None of these nonfluencies were regarded as stuttering by the investigator.

The second informant to refer to her son's speech as stuttering was Mrs. John Brant (*84*), number 0028. While being questioned about her son's speech development, she remarked that 'when I'm tryin' to make conversation with him he—let's see, what is it he says—he stutters . . . ' Later on, when asked if Billy had ever been nonfluent, she replied that he 'stutters and thinks a long time before he finds the words he needs to express (his idea) . . . ' She said that this occurred, as a rule, on words with which he was less familiar.

Billy was not penalized for his nonfluent speech and it was never called to his attention, or evaluated as undesirable by his parents, so far as could be determined. At the time of the interview, Billy was three months beyond his fourth birthday and his nonfluency had been noticed a relatively short time. Mrs. Brant was one of the mothers who seemed most aware of 'norms' for children and she could readily remember most of Billy's developmental stages, in spite of having three other children younger than he. Billy said his first word at one year, his first short combinations of words at 18 months, and he was beginning to use sentences at 24 months. Compared to other children, however, Billy was 'a little bit slow,' according to Mrs. Brant.

Mrs. Brant said she had observed stuttering similar to Billy's in the speech of other children, and she accepted what she called his 'stuttering' as something to be expected in children's speech.

Two Ute informants, numbers 0043 and 0049, also used the term 'stutter' in describing nonfluency in their childrens' speech. The two women are sisters and each used the expression that one of their children 'kind of stuttered' when about four years of age. Both informants were interviewed after having heard the Ute-language radio broadcast in which the investigator's presence and purpose for being on the reservation were announced.

Alice Yazz (*106*), number 0043, reported that her daughter's speech had been nonfluent the previous year. The girl's speech was repetitive enough for the parents to notice it, but neither parent 'did anything about it' except laugh and joke with the daughter until

she, too, laughed. Donna, the daughter, was never called a stutterer in English, the only language common to the Ute mother and Navaho father, and the determination that her speech was similar to stuttering seems to have been made after the investigator's presence had been made known.

Alice reported that her husband, Lee, repeated words in much the same fashion as Donna when he had taken a few drinks, and that she could gauge his state of inebriation on the basis of his fluency. This behavior appeared to be similar to that reported by Wayne and Vincent Jack at the Cowichan Reserve. The investigator was able to observe the speech of Lee Yazz under these conditions. His speech was characterized by effortless whole-word repetitions. Lee had not been aware of this speech behavior until his wife called it to his attention.

The second informant reporting her child's speech as being similar to stuttering was Alice Yazz's sister, Hattie Ziah (*107*), number 0049. Her son was heard repeating sounds when he was between four and five years of age. The boy and his mother laughed when these instances were noticed and in time he quit repeating as much and apparently nothing more was said about it prior to the interview.

Incidence of Other Speech Problems

In addition to the problem of stuttering reported from Vancouver Island, the following speech problems were reported or observed: two persons with speech difficulties associated with cleft palate in the Cowichan-Nanaimo area, one a 70-year-old male and the other a young boy of unknown age. One teen-age girl at Nanaimo was reported to 'lisp.' Two deaf mutes and one boy with a sound substitution were reported at Alberni. There were two deaf mutes at the Ute Reservation, one of whom also had a cleft palate. A young boy was also reported to have a cleft palate.

No cerebral palsied Indians were seen or reported in any of the areas investigated.

Discussion

Child Training and Development

Although the information obtained about the various aspects of child training and behavior was recorded in fractionated form, the wisdom of discussing these aspects or dimensions separately is open to question. Therefore, the various dimensions are discussed in relationship to one another.

One further caution is necessary in interpreting the statistical results. Ideally, individual items tested should be independent of one another, but this has not always been the case. Separate items to test the severity of weaning and the length of weaning, for example, may be thought of as testing different phases of the total behavior. Similarly, tests of differences in duration of body contact with the child are also related, in varying degree, to such other aspects as initiation and completion of nursing, or the acquisition of motor skills. The differences found to exist between the two groups, then, should be regarded as differences with respect to various single aspects of a complex total pattern.

Insofar as the prenatal patterns relate to later practices and viewpoints, the only significant differences found between the two societies were in sex preferences before birth. Both the mothers and fathers among the Cowichans were more often found to have had such a preference. How much influence this might have had on later disappointment or further expectation must remain a matter of conjecture.

Prenatal tabus involving dietary restrictions and other specific modes of conduct were reported by more Cowichan than Ute women, but frequently in a derogatory or depreciating manner as a vestige of the 'old way' of thinking that was no longer believed in. Many of those reporting the observance of such tabus did so with the explanation that it was done in deference to the wishes of an elder of the family, rather than in the usual, personal sense.

The underlying factor that serves to unite the various phases of training during the periods of infancy and early childhood is that of the eventual attainment of independence by the child. The child's development of motor skills, coinciding with the lessening of his dependence upon others, may be viewed as one criterion for establishing the beginning of independence. Body contact with another person, usually the mother, is closely related to early dependence. This early parent-child interaction has been discussed by Frank (*20*, p. 47):

> The infant's need for contacts, for nuzzling, cuddling, patting, and his usually quick and accepting response to these tactile messages may be largely derived from his uterine experiences which have exercised his tactuality. Each infant differs in his "needs," his susceptibility, response, and in the time when he will relinquish these infantile experiences and accept alienation from close contact with the mother.

Frank (*20*, p. 49) also related the early needs of the child to his later development:

> It may not be unwarranted to assume that the infant initially has a primitive tactile

> sensitivity and capacity for response which is acute at birth in varying degrees in individual infants and which needs to be functionally operative and fulfilled as an early stage in his development. Denial or deprivation of these early tactile experiences may compromise his future learning, such as speech, cognition, symbolic recognition, and his capacity for more mature tactile communication. . . .

Other investigators, in separate reports on each of the groups discussed here, have noted the amount of dependence that parents seem to expect from the children. Schriver and Leacock (*65*, p. 198), for example, cited an observation made while among the Coast Salish of the Harrison River:

> From infancy on, great confidence is placed in the ability of the child to look after itself and it is expected to do so whenever it is physically possible.

Opler's (*52*, pp. 130-131) observations of the Ute parent-child interaction supports the view that the Ute are more body contact oriented, and less inclined to accelerate independence:

> In the main, children were indulged and generously spoiled. Even to this day they are often breast-fed until the age of four or five. As babies, they are fondled and caressed constantly . . . it is noteworthy that the lip-kiss, rare among primitive peoples generally, is found among the Ute restricted to smaller children as public display of affection.

The differences between the two groups were statistically significant on all items pertaining to body contact between mother and child, with the Ute more often found maintaining such contact. The difference noted between mothers who breast-fed their children and those who weaned to a bottle was also statistically significant. The Cowichan mothers, again, were those who reduced the possibility of contact to the greater extent by weaning. The few Ute mothers who did wean to a bottle did so at a later time. The Cowichan mothers also showed a tendency for less nursing indulgence, hence less body contact. This is not to suggest, however, that such behavior is of a rejecting nature or a reflection of lack of love for the child. As can be seen by the mean number of pregnancies for the mothers interviewed (five for the Cowichans, 4.8 for the Ute) compared to the mean ages of the mothers (29.4 years for the Cowichans, 30.1 for the Ute), at least part of the foreshortened indulgence might be attributed to the presence of a younger sibling necessitating the accelerated independence imposed upon the child. This, in turn, may be traced to the pattern found in the Ute culture wherein the mother observed a period of continence of one year's duration following the birth of a child (*52*). No similar report was made for the Cowichans and it may be that the Ute custom in spacing the birth order somewhat makes easier the indulgence of a particular child. A point related to bottle feeding and dependence was made by one of the Ute informants, Stella Chapoose (*85*), who reported that while more of the younger Ute mothers were tending to use the bottle, she had advised her own daughters to breast-feed their children 'or else your baby won't be your own.' Stella felt that if the child were bottle-fed the mother would not feel required to be with the child as much and might rely on her own parents to care for it in her stead.

Further substantiations of the point of view that the Ute prolong the child's dependence were noted in other differences between the groups. The regulation of sleep, for example, while

probably not nearly so severely regulated as in contemporary North American culture, did reflect the imposition by the Cowichan parent of a further measure of control or orderliness upon the child. The Cowichans' tolerance of crying, as indicated by the age when crying is no longer acceptable behavior, was considerably lower than that of the Ute.

In the judgment of the investigator, the Ute as a whole were more body contact oriented in their overall interactions with their fellows than were the Cowichans. Very little physical contact, between parent and child, child and child, or between adults was observed at the Cowichan Reserve. It was not uncommon to see Ute children of elementary school age being comforted in the laps of their mothers, and younger children in almost constant physical contact with parents or older siblings. The instances in which Cowichan mothers were observed holding their children were limited and, in most cases, were those in which the children were so young that they could not be left alone during the interview, or, as occurred several times, the children were being restrained from interfering with the recording apparatus. On one occasion, a child of two years was held throughout the interview; during the interview it was found that he had injured both legs and was unable to walk or crawl and was being carried about as a matter of necessity. In many cases, the lack of body contact appeared to be necessitated by the presence of younger siblings who were also demanding the mother's time and attention. One Cowichan informant reported that it was not customary to allow a child to cry for long or to carry him any more than necessary as it might 'spoil' him into expecting such attention more often.

In addition to being factors affecting degree of dependence, the early aspects of nursing and toilet training are also those that might be considered among the more time-consuming and disruptive of household routine. All differences reported in toilet training, except that of initiation of day-time bladder control, were statistically significant. Insofar as severity of bladder and bowel training, initiation and completion of night bladder control, completion of day bladder control, and initiation and completion of bowel control were concerned, the Ute all reported later initiation and completion and less severe training procedures. The relationship between these factors of training and independence training appears self-evident since the earlier the child is able to maintain this control the earlier will he cease to require, in this respect, attention and help from the mother. The methods of training utilized by the parents in each group showed the relative emphasis placed upon this dimension of socialization. While there was a tendency in the Cowichan society for an older sibling to assist in the training of the child, this tendency was more marked among the Ute. If the Ute child being trained were the oldest or only child, the mother provided the teaching by example when she felt the child was old enough to understand what was expected of him. If the child had an older sibling, the sibling assumed the responsibility for the child's training. Many informants did not know when the child had been trained or how long the process had taken. In such cases this

information usually was provided by the child in the family whose responsibility it had been.

The Cowichan child was not severely taken to task in most cases when voluntary control was not immediately forthcoming, but was encouraged and more closely supervised at a younger age than the Ute. One of the Cowichan informants, Walter Elliott (*90*), reported that the 'first word' the local children learn is *skwal*, which he translated as 'I want to go out and take a rest.'

Although the Cowichan parents started training the child at an earlier age and were more concerned over his rate of acquiring control, they were nonetheless more demanding or concerned than the Ute in the relative sense only. Compared to many other groups, the Cowichans would not seem to be extreme in these respects. Schriver and Leacock (*65*, p. 199), in their report of the Harrison River Salish, discussed methods of toilet training which were similar to many of those reported to the present investigator:

> As there is no fixed schedule in daily life, so there is no set regime to meet in personal training or in the satisfaction of the child's bodily needs. The autonomy engendered by training in self sufficiency is given great consideration. It appears that children are allowed considerable personal leeway in the matter of toilet training though here again ample opportunity for early training is given. Mrs. Bobb put her children on the pot "as soon as they could sit." Henry Joe's "accidents" apparently did not result in any punishment, and Mrs. Harris seemed to regard Maisie's incomplete training merely as a slight inconvenience. She would exclaim, "Listen, don't wet your pants anymore," but her voice lacked emphasis or irritation, and when Maisie defecated in the front yard, she was not punished.

The differences between the groups on the physical development items were small with the exception of the age when overall physical development of early-learned motor skills was felt to be complete. The Ute mean age on this item, however, was computed from the responses of only nine of the 30 informants questioned who could report a specific answer.

The Ute informants throughout were less able to report a definite time for the attainment of the particular skill being discussed. It might be inferred from this that the Cowichan informants were more aware of the developmental progress of the individual child and might, possibly, be the more concerned over the progress of the child. This would seem to be consistent with the observations of the difference between the two groups regarding the relative periods of dependence and encouragement of independence of the children.

The childrens' relationships with other persons, whether siblings, peers, or adults, also reflected differences between the groups on the aggression and discipline items. No differences were found on the competition-cooperation items. It was the judgment of the investigator that, although it did not appear with sufficient frequency in the specific families to make a statistically significant difference, there was a tendency for aggressiveness on the part of the younger Ute children toward older children that was accepted without question. This aggression was almost invariably directed upward, regardless of the age level of the participants. This behavior also extended to include adults and was seen in such acts as the striking or kicking of a parent with only a passive reaction to the activity by the adult. An observation similar to this

one was also made by Opler (*52*, p. 131):

> Young children . . . are happy, active, and impulsive. It is a matter of common observation that the more mischievous often take liberties quite heedlessly, not scrupling to bite or strike adults, parents included. Punishment for such action is always interpreted as needless cruelty on the part of the adult.

A final dimension of the socialization process that most commonly was limited to children past the age of infancy was that of discipline coexisting with aggression. While neither group appeared to be as severe in disciplinary measures as we might expect in our own society, there were significant differences between the groups. The two items on which differences were found were those of reported temper tantrums and parental disobedience, with the Cowichans reporting the greater incidence of such behavior by their children. In light of the observations made concerning parental indulgence and tolerance of children's behavior, such differences would not be entirely unexpected. A child who has the freedom experienced by the Ute child would not be expected to have a temper tantrum and disobedience of parents would not be likely to result where relatively little seems to have been expected from the child in the first place. In addition, the parental method of enforcing expected behavior through the joking relationship, discussed below, would leave little room for any outward disobedience in those instances where the child did have a standard to meet.

In frequency and severity of punishment, the Cowichans were found to be less permissive with their children. Although the differences were statistically significant, inspection of the Summary Table shows both groups were predominantly permissive and on the least severe end of the scale. The cut-off point used to collapse the scale into two-by-two contingency tables for the chi square test on these items was, in each case, between one (least severe) and two. Consequently, while the differences were statistically significant, neither group would have been evaluated as 'severe,' by contemporary white standards, in the enactment of punishment.

The comparative lack of physical punishment of the Indian child has been noted and partially explained by Pettitt (*54*, pp. 8-11).

> There is little in any of these references to explain lax discipline. Rather, stress is put upon the family responsibility to see that a child turns out well. The child growing up undisciplined in character is no asset to his parents. We must look further for the cause of child indulgence; in short, we must examine other phases of primitive culture.
>
> 1.) It seems obvious that the chief inhibition to corporal punishment as a disciplinary measure derives from the fact that pain per se cannot be used as a fear producing, coercive force in a social milieu which places a premium upon ability to stand pain and suffering without flinching. . . .
>
> 2.) Underlying almost all punishment there is the idea that it is given for the good of the individual, but also that it, or the authority for it, comes from outside the group directly involved. . . .
>
> 3.) A third widespread feature of primitive culture which tends to inhibit corporal punishment is the close linking of childhood with the supernatural world. . . .
>
> 4.) A fourth factor which may have contributed positively to the marked parental indulgence of children in North America, even if to a minor degree only, is the widespread use of so-called "cradleboards."

Comparison of the two groups through informant report provides further insight into the existing differences in this aspect of child training. A Cow-

ichan, Walter Elliott (*90*), compared the 'old way' with the present-day by saying that in methods of discipline the old-time Indians 'really drove it into them!' but that now the 'days of using the rod is finished.' Children in his youth might have been spanked or beaten for misbehavior but 'they'd never hit them anywhere where it'd cause calamity in years to come.' Present-day discipline had, in his opinion, 'fell out . . . There's no discipline any more.' The reports previously noted from George White (*104*) at Nanaimo appear to support the view held by Elliott.

Pettitt (*54*, p. 6) reported the use of physical punishment on the Northwest Coast in which the cause for punishment was not behavior disapproved of solely by the family, but was an offense against the culture:

> In the Northwest Coast area and marginal regions children who failed to observe puberty taboo or demurred at vision quests were showered with hot coals or whipped, sometimes with a digging stick, a formidable instrument.

The Ute method of child discipline was accomplished less directly, through joking and mild ridicule. Where leniency seemed to be the rule in this society, it might be supposed that the children were never corrected or guided into acceptable behavior. However, this was not the case. Stella Chapoose (*85*) and Harriett Johnson (*94*) both said that the parents were expected to provide the model for the child to follow and show him by example the behavior expected. Talking back to elders, or otherwise showing disrespect, was particularly frowned upon.

At no time during the field research did the investigator see a Ute child physically disciplined in any manner.

The institution of the 'joking relationship' in Ute society pertains not only to children, but to adults as well. It was not uncommon to see a Ute child being chased by his mother, to the accompaniment of a seemingly violent verbal chastisement. The child invariably laughed at the incident and was joined by the 'angry' parent. On several occasions, a child was observed who appeared to be deliberately disobeying a parent until the parent exhibited some overt act of 'hostility' at which time the child would carry out what was requested of him, usually to the merriment of any other children or adults who were present. Both Harriett Johnson and Stella Chapoose stated that this manner of education accomplished the desired result with no antagonism being aroused.

The specific form of the joking relationship may vary with the group utilizing it. In some societies it is seen in the form described by Pettitt (*54*, p. 51):

> As with other forms of disciplinary practice, it should be observed in passing, the tendency is to place the responsibility on someone outside of the immediate family group, leaving the most dangerous mockery to those with supernatural protection, the masked or disguised disciplinarians. The existence of such privileged relatives or, occasionally, specific but unrelated persons, is so well marked as to call for a special term, "the joking relationship."

The joking relationship utilized by the Ute, which did not call for the use of masks or disguises, appears to be more closely allied to that reported by Joffe for the Fox (*33*, p. 306):

> The Fox have the institution of joking relatives. Reciprocal joking obtains between nepotic relatives, and siblings-in-law. Between the latter pairs of relatives, obscene joking is the rule and nepotic joking mani-

fests itself usually in teasing and in the playing of pranks.

Ridicule as a method of social control was also used in both Cowichan and Ute society. Most frequently reported in a mild form, such as chiding an older child by referring to him as 'baby,' the linguistic operation often used was that of diminution in a derogatory manner. Ridicule was not necessarily limited to children, according to Pettitt (*54*, p. 50):

> The use of ridicule . . . is apparently world-wide in distribution among primitive peoples. For the American Indian, Wissler says: "The whole control of the local group in aboriginal days seems to have been exercised by admonition and mild ridicule instead of by force and punishment."

The statement by Lemert (*47*, p. 400) that on the Northwest Coast 'child-rearing techniques . . . relied almost exclusively upon verbal indoctrination' seems appropriate to both Cowichan and Ute society.

The final judgment made pertaining to the period of independence training was that of an overall estimate of the severity of the socializing process. This difference, as might be predicted in advance since the judgment was based upon a combination of previously judged factors, was statistically significant, with the Ute being the more lenient. Lang (*44*, pp. 27-28) related many of these factors in his observations of the Ute parent and child:

> Traders and white farmers and even officials of the Indian Agency often complain that Indian children are spoiled. It would perhaps be better to say that Indian children are treated quite differently than white children. During the Sun Dance a child may come to his father or mother and beg for a hamburger or candy, and he is seldom refused regardless of the request or the time of day. It is considered bad to have a child or small baby cry. An older sister will always run to the crying baby and either change it or give it the bottle. When a mother is nursing her baby, she does not wait until it cries to feed it, but she will nurse it before it cries, anticipating its every want. When the Indians had their meetings in an attempt to get some money from the tribe's oil royalties, their strongest argument was that they needed the money, not for themselves, but to clothe the children when they were to go back to school in September. They wanted them to be as well dressed as their white school mates. Children are taken everywhere with the parents and although, by Western cultural standards, little outward affection is shown a child, the whole family spends more of its time together than the white family.

Differences noted in the evaluations of the speech and language facility of the child are consistent with other observations and reports of the process of child raising in each of the societies. The first of these differences related to the language environment itself, with more of the Ute children found to have bilingual backgrounds. Ute was generally the language used by the child until he entered school. He then spoke English at school and a combination of Ute and English at home. Younger siblings who did not learn English from their parents then had the opportunity to learn it from the school-age children of the family and neighborhood. The young adults appeared to have equal facility in either language and it was not uncommon to hear English words intermixed within a predominantly Ute sentence. Occasionally these terms were for objects not provided for in the Ute language, such as 'car,' 'television,' etc., but the use of an English word for which there was a Ute counterpart was also frequently seen. There were some Cowichan homes in which the Salish language was spoken, but in most instances if the child learned the language at all, it was the one in which he showed

less proficiency. Many of the children knew but a few words of their native language and were hesitant to use these, particularly around strangers.

Those items pertaining to the speech development of the child which were dependent upon an evaluation and, in some cases, subsequent reaction on the part of the parents were all found to be statistically significant. These results show the Cowichan parents more inclined to evaluate the child's speech achievement, have established standards of fluency which the child is presumed to meet, expect the standards to be met by a more or less specified age, and emphasize conformity to these standards. In addition, there appear to be fundamental differences, discussed below, in the ways in which the people in each group view the process of language learning.

The Cowichans were seen to report a lower mean age of first word, lower mean age of short combinations of words, and lower mean age of first sentences. These differences, while consistent, were relatively small but do show a certain similarity of observation on the part of informants in each group. Compared to the variability in the number of informants responding to other questions about the child, a greater awareness of the child's language development was seen for both Ute and Cowichan. It may be that part of this consistency of response is because speech develops later than some of the physical skills.

No differences were found in the amount of speech in the home by the child, with no child reported in either group who was considered underverbalized.

Linguistic Comparisons

The Sapir-Whorf-Korzybski Hypothesis. Basic to the question, posed earlier, of the influence of the word for 'stuttering' in being itself a partial causative factor of the problem is the Sapir-Whorf-Korzybski hypothesis. According to Hoijer (*31*, p. 92), the initial formulations leading to the hypothesis were presented in an essay by Sapir (*61*, p. 162) which contained the following statement:

> Language is a guide to "social reality." Though language is not ordinarily thought of as of essential interest to the students of social science, it powerfully conditions all our thinking about social problems and processes. Human beings do not live in the objective world alone, nor alone in the world of social activity as ordinarily understood, but are very much at the mercy of the particular language which has become the medium of expression for their society. It is quite an illusion to imagine that one adjusts to reality essentially without the use of language and that language is merely an incidental means of solving specific problems of communication or reflection. The fact of the matter is that the "real world" is to a large extent unconsciously built up on the language habits of the group. No two languages are ever sufficiently similar to be considered as representing the same social reality. The worlds in which different societies live are distinct worlds, not merely the same world with different labels attached.

This central idea was further developed by Benjamin Lee Whorf (*78*, p. 221) in his formulation of the concept of 'linguistic relativity':

> . . . the "linguistic relativity principle," . . . means, in informal terms, that users of markedly different grammars are pointed by their grammars toward different types of observations and different evaluations of externally similar acts of observation, and hence are not equivalent as observers but must arrive at somewhat different views of the world.

Whorf (*79*, pp. 212-214) expanded this notion further in another essay:

> Formulation of ideas is not an independent process, strictly rational in the old sense, but is part of a particular grammar, and differs, from slightly to greatly, between different grammars. We dissect nature along lines laid down by our native languages. The categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscopic flux of impressions which has to be organized by our minds—and this means largely by the linguistic systems of our minds. We cut nature up, organize it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organize it in this way—an agreement that holds throughout our speech community and is codified in the patterns of our language. The agreement is, of course, an implicit and unstated one, BUT ITS TERMS ARE ABSOLUTELY OBLIGATORY: we cannot talk at all except by subscribing to the organization and classification of data which the agreement decrees.
>
> This fact is very significant for modern science, for it means that no individual is free to describe nature with absolute impartiality but is constrained to certain modes of interpretation even while he thinks himself most free. . . . We are thus introduced to a new principle of relativity, which holds that all observers are not led by the same physical evidence to the same picture of the universe, unless their linguistic backgrounds are similar, or can in some way be calibrated.

The modification of the hypothesis to include Korzybski is a relatively recent development. Rapoport (*55*, p. 89), for example, states that since Korzybski applied the concept to problems of mental hygiene 'the hypothesis is applicable to the individual. The individual's own specific linguistic habits are supposed to color his perceptions, attitudes, and behavior.' Korzybski's contribution, then, is felt to be that of reducing the general, culture-wide concepts of the hypothesis to the level of the specific individual within the culture.

In this sense, the hypothesis is felt to be relevant to the present investigation. We know, for example, of no culture where everyone is felt to be a stutterer, yet we do know of those where some persons are considered to stutter and others where no one is so classified. Although the language of a society may impose certain patterns of perception relevant to nonfluent speech, specific problems of stuttering are a matter of evaluation of nonfluent speech in relation to interactions among individuals within the society.

The Languages of the Groups

Of historical interest is a comparison, made late in the last century by Horatio Hale (*5*, pp. 554-555), which involves the languages under consideration:

> The languages of the tribes west of the Rocky Mountains may be divided into two classes, which differ very strikingly in their vocal elements and pronunciation. These classes may be denominated the northern and southern, the latter being found chiefly south of the Columbia, and the former, with one or two exceptions, on the north of that river. To the northern belong the Tahkali-Umqua (or Tinneh), the Salish, the Chinook, and the Iakon languages, with all on the northwest coast of which we have any knowledge. The southern division comprehends the Sahaptin, the Shoshoni, the Kalapuya, Shase, Lutuami, and all the California idioms so far as we are acquainted with them. Those of the northern class are remarkable for their extraordinary harshness, which in some is so great as to almost surpass belief. The Chinooks, Chikailish, and Killamuks appear actually to labour in speaking; an illusion which proceeds no doubt from the effect produced on the ear of the listener by the harsh elements with which their languages abound, as well as the generally rough and dissonant style of pronunciation. . . .
>
> The southern languages are, on the other

> hand, no less distinguished by softness and harmony. The gutteralls are found in two or three, into which they seem to have been introduced by communication with the northern tribes. . . . Difficult combinations of consonants rarely occur, and the many vowels make the pronunciation clear and sonorous. There is, however, a good deal of variety in this respect, some of the languages, as the Lutuami . . . being smooth and agreeable to the ear, while the Shoshoni . . . though soft, are nasal and indistinct.

The languages indigenous to Vancouver Island (Nootka, Kwakiutl, and Coast Salish) are not mutually intelligible, although there is evidence that once they were of common origin. Sapir, quoted by Swadesh *(74)*, considered Nootka and Kwakiutl together as the Wakashan language. The two branches of the Wakashan, according to Swadesh *(73*, p. 106), are 'about as far apart as English and Scandinavian. Dialects within Nootka . . . and those within Kwakiutl . . . are not as far apart as English and Dutch.'

It was with Salish that the investigation was most concerned as Cowichan is a dialect of this language.

Boas and Haeberlin (*24*) classified 35 dialects in the Salish language. Vogelin, according to Swadesh (*74*, p. 164), 'using the criterion of mutual intelligibility as reported by Boas, Teit, and others, classifies them into fifteen languages or groups of (more or less) mutually intelligible dialects.' Eight of the 15 were classified as Coast Salish with Cowichan, Nanaimo, and Lower Fraser considered as a single dialect. The placement of Cowichan has varied with the system of classification. Boas and Haeberlin (*24*) combined the Cowichan and Lower Fraser dialects and listed Nanaimo separately. Much earlier, Boas (*6*, p. 454), referring to the K·auētcin (Cowichan) language, reported:[18]

> This dialect of the Coast Salish is spoken on Vancouver Island from Saanitch Inlet to Nonoos, on the islands north of Saanitch Peninsula and on the Lower Fraser River as far as Yale. The language as spoken on Vancouver Island and on the mainland shows slight dialectic differences. . . . I have given elsewhere some notes on the tribes of Cowichan River and of Nanaimo which belong to this group.

Hill-Tout (*28*), in his studies of the Lower Fraser Indians, dealt chiefly with the Tcil'Qē'uk (which, according to Sapir (*57*), is the Cowichan group) and the Kwa'ntlEn tribes. The grouping of these two dialects was termed Halkome'lEn (Halkomelem). With some variation in terms, this classification seems consistent with the early Boas (*6*) system and appears to be quite similar to the one reported by Vogelin (*74*).

The Ute language is from the Shoshonean branch of the Uto-Aztekan stock and is related to the Bannock, Hopi, Comanche, Northern Paiute and other languages of the Great Basin, California, and Mexico (*25, 43, 59*). The Shoshonean branch is subdivided into three groups, one of which has been termed Ute-Chemehuevi. Lamb (*43*, p. 97) stated that the Ute, Southern Paiute, and Chemehuevi dialects 'are dialects of one and the same language. This language can be called "Ute" in preference to the longer and potentially confusing alternative name, "Southern Paiute."'

[18]The system of phonetic transcription used throughout is that used by the particular author quoted. The International Phonetic Alphabet is used in the report of all terms given by the present investigator.

Reduplication and Diminution

If the acquisition of language is viewed as a dynamic learning process, a language of the child might be expected to evolve as a preliminary to the language of the adult. Two processes common to both the language of the adult and the language of the child are those of reduplication and diminution. The relationship of reduplication to repetition makes further investigation pertinent and imperative.

Bloomfield (*4*, p. 218) defined reduplication, in many forms, through example:

> *Reduplication* is an affix that consists of repeating part of the underlying form, as Tagalog [su:-'su:lat] 'one who will write,' ['ga:mit] 'things of use'; [ga:-'ga:mit] 'one who will use.' Reduplication may be of various extent: Fox: [wa:pame:wa] 'he looks at him': [wa:-wa:pame:wa] 'he examines him,' [wa:pa-wa:pamewa] 'he keeps looking at him.' It may differ phonetically in some conventional way from the underlying word: ancient Greek ['phajnej] 'it shines, it appears': [pam-'phajnej] 'it shines brightly'; Sanskrit ['bharti] 'he bears': ['bi-bharti] 'he bears up,' ['bhari-bharti] 'he bears off violently.'

Sapir (*60*, pp. 76-78) commented upon the universality of this process and explained some of the functions it serves in language:

> Nothing is more natural than the prevalence of reduplication, in other words, the repetition of all or part of the radical element. The process is generally employed, with self-evident symbolism, to indicate such concepts as distribution, plurality, repetition, customary activity, increase of size, added intensity, continuance. . . .
>
> The most characteristic examples of reduplication are such as repeat only part of the radical element. It would be possible to demonstrate the existence of a vast number of formal types of such partial reduplication, according to whether the process makes use of one or more of the radical consonants, preserves or weakens or alters the radical vowel, or affects the beginning, the middle, or the end of the radical element. The functions are even more exuberantly developed than with simple duplication, though the basic motion, at least in origin, is nearly always one of repetition or continuance.

The languages of Vancouver Island utilize the process of reduplication. Boas (*8*, pp. 444-445) described the function of reduplication in Kwakiutl:

> Reduplication is also used to express the diminutive of nouns, the idea of a playful performance of an activity and the endeavor to perform an action. It would seem that in all these forms we have the fundamental idea of an approach to a certain concept without its realization. In all these cases the reduplication is combined with the use of suffixes which differentiate between diminution, imitation, and endeavor.

Sapir (*56*, p. 18) included a second Vancouver Island language, Nootka, in his remarks on reduplication in the languages in this area:

> Both Kwakiutl and Nootka make use of two kinds of reduplication, one in which the first consonant, first vowel, and second consonant of the stem are repeated, and one in which only the first consonant and vowel are repeated; the former type is employed in forming iterations, the second in forming plurals and distributives and with certain suffixes. . . . In Nootka the repeated vowel is in all cases the same as that of the stem, in Kwakiutl the second type of reduplication has a definite vocalism . . . in the reduplicated syllable.

Sapir (*57*, p. 1) later mentioned the existence of reduplication in many of the Northwest Coast languages, including Salish:

> One of the most characteristic grammatical processes of a group of Northwest Pacific Coast languages, embracing the Tsimshian, Kwakiutl-Nootka, Salish, and Chemakum linguistic stocks, is initial reduplication, employed in both noun and verb forms to indicate a variety of grammatical concepts, chiefly those of plurality, distribution, and iteration. The Salish languages in particular are known to make exuberant use of reduplication for grammatical purposes, but the subject, which seems to bristle with irregularities and intricacies of detail, has never been adequately treated for any of the numerous dialects of the stock.

Reduplication serves various grammatical functions in the dialects of the Salish language. Haeberlin (*23*, p. 171) stated that '. . . apparently all Salishan dialects make use of the process of reduplication with the exception of Quinault . . .' and Hill-Tout (*27, 28, 29, 30*) reported the use of reduplication in many of the Salishan dialects he studied.

The usages of reduplication in the Cowichan dialect seems to follow, in general, those previously listed for the Salish language. Hill-Tout (*28*, p. 372) summarized the process for the Mainland Cowichan:

> Reduplication plays an important role in Teil'Qē'uk, as in other Salish dialects. Besides performing the functions of a plural it expresses also intensity, repetition, and prolongation of verbal action; it signifies also . . . diminution and its opposite, augmentation or increase; also collectivity, depreciation or inferiority, and several other qualities.

Boas (*7*, p. 667) noted two exceptions to this process in the Northwest Coast languages:

> Haida and Tlingit—which latter is spoken in southern Alaska—have found a number of morphological traits in common. While all the other languages of the North Pacific coast use reduplication for grammatical purposes, no trace of reduplication is found in these two languages.

Reduplication also is seen to serve several functions in the Ute language. Sapir (*59*, p. 71) stated that as a 'formal process, reduplication is always initial. Final reduplication occurs only in isolated words and has no formal derivational function. There are several distinct types of reduplication. The ideas expressed by the process are chiefly those of distribution, iteration and momentaneous activity.' In common with the Northwest Coast languages, reduplication in Ute is used to express plurality and number (*59*).

A second aspect of reduplication, in addition to its repetitive characteristic, that makes it of interest is as it relates to diminution. While not universally expressed through reduplication, diminution is one of the grammatical forms in which reduplication plays a major part. Boas (*8*, p. 526) stated this interrelationship as it exists in Kwakiutl:

> The diminutive is formed by the suffix -Em, which softens the terminal consonant; and by reduplication with ā vowel. Generally the stem is reduplicated, but in case of ambiguity the whole word may be repeated.

Boas gave as an example of this form of reduplication the Kwakiutl word *bEk*^{u} (man) which, when reduplicated, becomes *bā'bagum* (boy).

The Salish language also expresses diminution by reduplication. Hill-Tout (*28*, p. 385 ff.) cited such usages from the Halkomelem dialect as *k·'āmi* (maid) reduplicated to *k·ä'k·ami* (young girl). Diminution is expressed through reduplication in adjectives such as *ēyE'sik* (darling, or dear, applied to a baby boy) and *eyEs* (applied to a baby girl). The adjective *ämē'mEl* (little, or small) is also reduplicative.

Thus far, the uses of reduplication to express diminution and affection in the Cowichan dialect have been seen as an expression of an adult referring to a child or young person. In common with children in other Salish-speaking groups (*5, 24, 29, 30*), Cowichan children used nonreduplicative words to refer to their parents. In the Siciatl dialect, spoken just north of Nanaimo, the tendency was for children to foreshorten the adult words for parents and thus 'mother,' *(tan)*, became *ta* and 'father,' *(man)*, became *ma (24, 29)*.

A comparative vocabulary of Northwest Coast dialects, presented in Table

TABLE 6. Comparative vocabulary of certain Northwest Coast languages.

Stock	*Dialect*	*'Boy'*	*'Girl'*	*'Infant'*
Kwakiutl-Nootka	Heiltsuk	qāpqō'	kyayā'lam	
	Kwakiutl	bā'bākum (little man)	(diminutive)	
	Nootka. Ts'eciath			nā'iak·ak·
Salish	Snanaimuq (Nanaimo)	suēk ā'tl (young man)	slEniā'ltl (young woman)	k·ä'ela (male) k·ä'k·ela (female)
	Sk·qo'mic	āam	āa'mc'n	sk·ā'k'El

Stock	*Dialect*	*'Mother'*	*'Father'*	*'Child'*
Salish	Sk·qo'mic	tā'ā kē'iā	ma ma tcētct	mEn (plural: mEnmEn)
	Catloltq			mā'ana
	PEntlatc			mE'na
	Siciatl			mē'man
	Snanaimuq (Nanaimo)	tan*	man*	stlē'tlēk·atl
	Cowichan	mɛ*	tɛ*	mʊnʌ*
	LkungEn (Songish)			nE'ñEneñga

* Reported by informants in the present investigation. Other words from Boas (*5*) and Hill-Tout (*27*).

6, shows the extent to which reduplicated words, similar to those discussed above, are used in this language. In only one dialect, Sk·qo'mic, are the terms for 'son' and 'daughter' nonreduplicative in the singular, although plurality is expressed in this manner.[19] This is also the one dialect, where information is available, in which the children's terms for their parents are reduplicative.

[19]This dialect was native to the mainland area between the Lilooet and the Lower Fraser. According to Hill-Tout (27, p. 495), "It shows resemblance to both the Al-Kome'lEm dialects of the Lower Fraser on the one hand and to the dialects of the interior on the other, but it is quite distinct from any of these, and possesses a grammatical formation, character, and vocabulary wholly its own, which renders it impossible for its speakers to hold extended converse with the neighboring tribes without the aid of the trade jargon."

The diminutive in Ute-Paiute follows a somewhat different form. According to Sapir (*59*, pp. 171-172), the diminutive is formed by the suffix 'ts⌊-[s], evidently an old Uto-Aztekan element . . . found in both noun and verb forms . . . (the) diminutive frequently expresses affection rather than smallness.' Examples of this usage are: *pavi'nI*, my older brother; *pavi'ts⌊nI*, my (dear) older brother, and, *patsi'nI*, my older sister; *patsi'ts⌊nI*, my (dear) older sister.

Some Ute words reported by informants acknowledged the child's level of development through the process of reduplication (*85*, *94*, *102*). In some of these terms, the diminutive suffix is repeated in each of two words, such as *mipuwltʃ natʃuwltʃ*, (tiny girl), from *natʃuwltʃ*, (small girl). The word for a new-born child, *nuduwʊts*, is

initially reduplicative. The word for 'woman,' *mamatʃ*, whether or not related to *mama* (mother) in the baby language, is also reduplicative and when modified by the reduplicated diminutive *natʃitʃi*, to become *natʃitʃi mamatʃ*, the meaning denotes a younger woman, or teen-age female.

The Speech of the Child

The child's use of reduplication, or repetition, in his speech deserves special attention.[20] The universality of this process in childrens' speech has been extensively commented upon and numerous examples of it have been reported from various parts of the world (*11*, *42*, *48*, *49*, *58*).

Jespersen (*32*, pp. 154-155) described reduplication in the early learning of language:

> In the nurseries of all countries a little comedy has in all ages been played—the baby lies and babbles his 'mamama' or 'amama' or 'papapa' or 'apapa' or 'bababa' or 'abababab' without associating the slightest meaning with his mouth-games, and his grown-up friends, in their joy over the precocious child, assign to these syllables a rational sense, accustomed as they are themselves to the fact of an uttered sound having a content, a thought, an idea, corresponding to it. So we get a whole class of words, distinguished by a simplicity of sound-formation—never two consonants together, generally the same consonant repeated with an *a* between, frequently also with an *a* at the end—words found in many languages, often in different forms, but with essentially the same meaning.

Jespersen (*32*, p. 109) ascribed this process to 'the pleasure always felt in repeating the same muscular action until one is tired. The child will repeat over and over again the same movements of legs and arms, and we do the same when we wave our hand or a handkerchief or when we nod our head several times to signify assent, etc. When we laugh we repeat the same syllable consisting of *h* and a more or less indistinct vowel, and when we sing a melody without words we are apt to "reduplicate" indefinitely. Thus also with the little ones.'[21]

Lewis (*48*, p. 182) noted the tendency of children to reduplicate words that are not reduplicated in the adult language: 'It is evident that the child tends to assimilate adult words to a general pattern of reduplication. . .' Further, (*48*, p. 169) 'Conventional words, at the moment when the child first utters them, are already invested with a form due to the primary characteristics of his speech; they are almost entirely front-consonantal and they are to a large extent reduplicated . . . of the earliest half-dozen words of 27 children, 75 percent contain only front

[20]The distinction between repetition and reduplication, on the level of the speech of the child, is an arbitrary one. While reduplication in the adult language serves a grammatical function, in the language of the child it appears more as a nonfunctional part of the word, most appropriate only to small children. Winitz (80) seems to feel that reduplications in the child's speech are better classed as repetitions until the utterance acquires meaning as a word. For the present purposes, repetition is considered an 'error' component, extraneous to the word, which serves no linguistic function after the age of language acquisition. The babbling stage of speech development is considered to be essentially reduplicative in that there could be no errors of speech prior to the learning of language.

[21]Casagrande (*11*, p. 13) felt Jespersen's statement to be 'an over-simple explanation. A natural tendency to reduplicate may perhaps be granted and seems to be supported by the oft-made observation of the infant's babbling repetition of the same sound. This proclivity seems to have been tacitly recognized by adults and conventionalized by them in reduplicated baby words.'

consonants and 46 percent are reduplicated.'

Casagrande (*11*, p. 13) also commented upon these characteristics of the child's speech:

> Some baby words are to be found in all languages, written and unwritten. . . . In all these baby words two facts claim attention: the use of reduplication, and the use of simple phonemes, especially the labials, p, b, m, the stops t, d, k, g, and cardinal vowels. The use of simpler phonemes is probably explained in terms of the baby's limited ability to manipulate his speech organs, since learning to speak even one's native tongue involves the induction of an intricate set of motor habits and is a maturational process comparable to acquiring other skills as walking or skipping. But the problem of communication is not so easy of solution.

Some of the early words from several Indian baby languages which show these characteristics are presented in Table 7. While all the words in this table are reduplicative, the entire baby language is not completely composed of reduplicated words. In his early work on Indian child languages, Chamberlain (*12*) listed 18 words used by Algonkin-speaking children, 15 of which were reduplicative, and 21 Iroquois baby-words, nine of which were reduplicative. Chamberlin also noted the presence of the consonants [p], [b], and [m] in the Iroquois words which were, he said, foreign to the adult language. Kroeber (*42*), in his study of the speech of a Zuñi child, noted 18 different spontaneous words during the first week of observation, 12 of them reduplications. Of the six not reduplicated, one was *e*, the Zuñi word for

TABLE 7. Comparative vocabulary of Indian baby-words.*

English	*Ute*	*Zuni*	*Hopi*	*Comanche*	*Nootka*
mother	ma má	ma' ma	ya ya	pipia' (by some; from adult word, pia)	ma'·ma'
father	ta tá	ta' ta	ta ta		ta'·ta'
water, drink	ko kó, pa pá	tu' tu		papa'?	
desire to eat			ma ma	tata'?	
grandfather		na' na		toko'? toto'?	
brother		pa' pa (elder)	va va		
sister			ga ga		
sibling				taka'?	
desire to nurse			yo yo	cici'?	
dog		we' we		papo'?	
bird	ka ká			kaka'?	
desire to be carried	pa pá			mama'?	

Source: Kroeber (*42*) Dennis (*15*) Casagrande (*11*) Sapir (*58*)

* As Casagrande (*11*, p. 13) noted 'these function not as single, simple words, but as whole sentences, with many different . . . meanings . . . which are elucidated by gestures, intonations, and the context of the situation.'

'yes,' another the English word 'no,' and two more (*na* and *ai*) were apparently meaningless expressions of 'articulatory habit' and pain or inconvenience.

The tendency for the child to reduplicate seems to be reduced by the end of his second year. Lewis (*48*, p. 171) stated that by this time 'the high proportion of reduplicated words has greatly diminished.' Winitz (*80*) noted a marked decline in total repetitions between the 13-14 months age level and the 23-24 months age level. It might be inferred from these results that the refined control of the speech mechanism and the increase in language learning develop simultaneously. This process seems to result in a gradual but steady adoption of a less reduplicative adult language in favor of the highly repetitive infantile mode of speech.

Teaching the Child to Talk

The ways in which the 'primitive' child acquires language seem to be related to the extent to which his parents acknowledge the repetitiveness of his speech. Since we consider the problem of stuttering as first arising in the ear of a listener, the awareness of the listener to this characteristic, and his evaluation of it, is crucial.

Mead (*49*, pp. 36-37) described speech teaching in New Guinea where repetition was encouraged:

> Children are taught to talk through the men's and older boy's love of playing with children. There is no belief that it is necessary to give a child formal teaching, rather chance adult play devices are enlisted. One of these is the delight in repetition. Melanesian languages very frequently use repetition to give an intensity to speech. . . . This random affection for repetitiousness makes an excellent atmosphere in which the child acquires facility in speech. There is no adult boredom with the few faulty words of babyhood. Instead these very groping words form an excellent excuse for indulging their own passion for repetition.

The teaching of language seems to be recognized by some American Indian societies as a responsibility of the elders. Leighton and Kluckhohn (*45*, p. 32) noted this among the Navaho:

> The positive side of child training in this period is mainly a matter of constant encouragement in the acquisition of language and other skills. Someone is always talking to the baby, giving him words to imitate, telling him especially the proper kinship terms with which to address his various relatives, praising him whenever his random babblings appear to hit a meaningful sound combination.

Dennis (*15*) reported that the Hopi teach their children to talk and that they expect baby words to appear soon after one year of age. Casagrande (*11*, p. 11) described the teaching process of the Comanche:

> The Comanche language reveals an unusually rich and formalized vocabulary of special baby words which were used in teaching the child to speak. Their use began when the child was old enough to understand, at about one year according to informants, and dropped off as the child matured and learned the normal, adult locutions at the age of 3 to 4. If a child persisted in using these words after the age of 5 or so, it would be laughed at and ridiculed for its babyish ways.

Ute speech training was reported to begin in babyhood with the mother talking to the child in 'small words,' but his first words were not expected until about the time the child began to walk (*85*, *94*).[22] The child was then asked to perform simple tasks and to repeat what he had been told. After the oldest child

[22]Stella Chapoose (*85*) reported that many Ute babies learned to whistle before they learned to speak since the mother would often whistle softly to the baby to soothe it and the child then learned this as his first form of communication.

in the family learned his language, the role of the teacher of the younger siblings shifted to this child, much as in other aspects of training.

The Ute are aware of the distinction between 'baby talk' and the adult language and the children are encouraged to use their own repetitive language. One informant (*105*), the father of 12 children, was asked what would happen if a child used the adult word for water (pa) in place of the baby word (pa pá). He replied that the child would be 'corrected' by having the reduplicated term repeated to him since that is the way the child *should* talk.

Most of the Cowichan informants did not appear to be aware that the child needed to be taught to talk. Walter Elliott (*90*) reported that no method of teaching is utilized and that the children 'pick it (speech) right off hand.' If a child makes an error in speaking, he is corrected and the word is repeated slowly for the child. Other informants reported that their children learned to talk by 'picking it up' from other children.

The Cowichans apparently do not provide for a child language which differs from that of the adult and the process of reduplication by the child is not clearly recognized. Over a period of two weeks, Walter Elliott tried to list as many reduplicative Salish words as he could; none of the words were those that might be thought of as used predominantly or exclusively by children. Even the child's words for his parents [*mɛ*] for father, and [*tɛ*] for mother, are nonreduplicative. Such words as are available for the Salish dialects, as presented in Table 6, make it appear that the use of reduplication, especially as an expression of diminution or affection, is not reciprocal between parent and child and apparently in the province of the adult, rather than the child.

The Word for Stuttering

The word reported by all Cowichan informants, as noted previously, was essentially equivalent to *sʌtsʌts*. The term is reduplicative and onomatopoeic and involves the initial reduplication of the [*s*] phoneme. According to Boas (7, p. 655):

> . . . the laws which reduplication follows are very irregular. On the whole we may say that the prefixed *s* which is found in a very large number of Salish words is not affected by reduplication.

The prevalence of the term for stuttering in the old culture might be deduced from the reports of Hill-Tout (*28*, *29*, *30*). In three Salish dialects words for 'stuttering' and 'stutterer' were reported in his glossaries of commonly used terms. Two of these dialects are closely related, geographically and linguistically, to the Cowichan. The first of these, Tcil'Qē'uk, is spoken on the mainland across from the island Cowichan.

The term reported for this group, *luksEtcE'tc*, is translated by Hill-Tout (*28*, p. 376) as 'a stutterer.'

The second dialect, Siciatl, is spoken just north of Nanaimo. Terms from that dialect reported by Hill-Tout (*29*, p. 90) are *nuks-atcetc*, 'stutterer,' with the verb form, 'to stutter,' the stem, *atcetc*.

The final dialect reported by Hill-Tout (*30*, p. 216) is that of the Stlatl-umtl, an Interior Salish group. The verb form reported is *Ec naEnatc*, with *wa Ec naEnatcotl* and *netl Ec naEnatcotl* both given as 'he's a stutterer.'

The similarity of the Siciatl and Tcil'Qē'uk verb forms to the Cowichan *sʌtsʌts* becomes apparent when all three terms are pronounced aloud.

The internal relationships between these and other Coast Salish dialects, as calculated by Swadesh (75) on the basis of common vocabulary, are presented in Table 8.

The term for 'stuttering,' in all dialects reported, seems to give tacit recognition to the repetitive aspect of the speech through the process of reduplication. This appears to be consistent with uses of reduplication to express a repeated or continued activity.

The Indians Who Stutter

One factor common to Jimmy Jack, Joe Black, and Paul Jakes, in addition to having been brought up under the more direct influences of the old culture, is the existence of a physical involvement coinciding with the onset of what was judged to be stuttering. In the cases of Jimmy Jack and Joe Black, this physical accompaniment was assumed to be at least partially supernatural in character and, by having been causally associated, seems to have served to relieve the child and his parents of the responsibility for the seemingly deviant speech. Even though the child might have been told not to continue speaking as he was, the ultimate 'blame' lay not in him, but in the outside causative factor.

It is conjectured, therefore, that the severity of stuttering might be related to the severity of the socialization of

TABLE 8. Percentage of internal relationships among Coast Salish dialects.

Dialect	*Percentage of Common Vocabulary with Nanaimo (Cowichan)*
North Georgia Group	
Comox	27%
Seshelt	34%
Pentlatch (Siciatl)*	38%
South Georgia Group	
Squamish	59%
Nanaimo	
Fraser (Halkomelem)* Nanaimo	73%
Lkungen Group	
Lummi	47%
Lkungen	54%
Clallam	40%
Nootsak	56%

from Swadesh (75)

* Hill-Tout classifications in which a word for 'stuttering' was reported. One Interior Salish dialect Lilooet (Stlatlumtl), in which such a word was reported, is related 25% to Nanaimo (Cowichan).

the child and the degree to which the child is held responsible for his nonfluent speech.

For these reasons, among others, it might be hypothesized that the problem of stuttering in Vancouver Island Indian society is not as severe as in contemporary North American non-Indian cultures. Joe Black was often cited as the most severe stutterer living in the area investigated, yet the ratings of his speech by experienced speech clinicians were all on the lower end of the severity rating scale. Comparatively speaking, the severe stutterer, as we know him, must be rare, if he exists at all, in this area of Vancouver Island.

It is further hypothesized that the particular pattern of speech which is judged to be stuttering may vary among cultures as a result of the relative acceptability of different culturally-determined hesitation forms. The analysis of the speech of the one clear-cut stutterer recorded, Joe Black, points up the prevalence of nonfluent instances involving [*s*] and [*s*] blends. It seems likely that repetitions and prolongations of [*s*], in a language where this sound is rarely reduplicated (7), are undesirable hesitation forms. If this can be considered to be the case, the tendency for the child to be repetitive, now coupled with an evaluation of a listener that there is something about this pattern of speech that is incorrect, are the first two variables of the 'general interaction hypothesis' (*37*). The child's sensitivity may then cause him to focus upon those particular sounds, in this case the [*s*], which are most likely to be considered as errors. Should the problem of stuttering subsequently develop, a prevalence of nonfluency associated with [*s*] would not be unexpected. The Cowichan term for stuttering (*sʌtsʌts*) seems to take into account, in this case, three of the factors associated with it; the act of repetition, the sound repeated, and the tendency to prolong the sound between the syllables that comprise the term.

Osgood and Sebeok (*53*, p. 99) have theorized that 'hesitation pauses correspond to the points of highest statistical uncertainty in the sequencing of units in any given order.' It also might be hypothesized that the loci of stuttering for speakers of the Cowichan dialect would be found to relate to those places in the language where reduplication would be least likely to occur. It would seem reasonable to assume that if the loci of stuttering within our own society are related to specific order and word weights within the speech sequence, as reported by Brown (*9*), these loci would follow culturally-determined linguistic forms in cultures outside our own.

It seems likely that the Salish child, pursuing the seemingly universal processes of reduplication and repetition where the language makes no provision for his doing so, might have been observed more closely by the parents, particularly if they were looking for the manifestation of such factors as the spiritual visitation reported by Joe Black or the mysterious paralysis endured by Jimmy Jack.

Further, if such were the case, languages in which no reduplication is known, such as the Haida and Tlingit of the Northwest Coast (7), may be hypothesized as more likely to produce problems of stuttering, other factors being equal, than a language in which reduplication is known. Lemert (*46*)

reported the existence of stuttering in Haida society.

A further note of interest is that the onset of stuttering in the cases reported coincides with the age of onset established within our own culture (*37*).

A final observation of the present-day incidence of stuttering on Vancouver Island leads to the conclusion that a marked decrease in the problem of stuttering has taken place concurrently with the deterioration of the old culture. The term for 'stuttering,' and the evaluations prompted by its use, have been lost from general usage as the language has declined. The English word 'stuttering' does not seem to hold the same implications for the Cowichan Indian that *SATSATS* held. Few parents distinguished between stuttering and nonfluency in the child's speech, but calling the nonfluency 'stuttering' without the evaluation of undesirability is not sufficient to precipitate the subsequent behavior presumed under the 'general interaction hypothesis.' (*37*).

Substantiation for the Sapir-Whorf-Korzybski hypothesis as it might relate to the problem of stuttering is felt to have been obtained from the following considerations.

From her own accounts, Mable Jack (*92*) had never seen a stutterer, yet she apparently reacted to the speech of her son as her language had conditioned her to act. Even with no outside information, the term for 'stuttering' in the language was believed to describe what was to be expected as deviant.

No word for 'stuttering' exists in the Ute society and therefore no evaluations are prompted by its use. The normal speech habits, including reduplication and repetition, are noticed but are looked upon as expected and proper, rather than deviant.

In this sense, the Korzybskian application of the hypothesis seems apparent. The individual in the society, having his perceptions colored and preconditioned by the language common to his group and reacting to these outside impositions, is the crucial figure; it is in his perceptions and evaluations that the problem of stuttering is believed to begin.

Summary and Conclusions

The effect which cultural factors may have in the determination and perpetuation of the problem of stuttering has been considered for many years. Relatively recent publications (*10, 34, 46, 68*) have served to intensify interest in the existence or absence of the problem in North American Indian societies. The conclusions drawn from these reports indicate that the problem of stuttering is not known in the Bannock and Shoshone societies, while the problem is found in certain Northwest Coast tribes.

The present study investigated two American Indian societies. The Cowichans of Vancouver Island, a 'stuttering group,' were compared with the Ute, a 'nonstuttering group,' on variables in child training which may accompany the presence or absence of the problem of stuttering. Members of thirty households in each group were interviewed about various aspects of the training and socialization of a particular child in each family. The dimensions investigated were nursing and feeding, toilet training, sexual socialization, dependence, aggression, and speech and language development.

Each informant was questioned about the development of the child from the prenatal period through birth and infancy to the level of the child's attainment at the time of the interview. From other informants additional information was obtained concerning the cultural patterns and customs which may or may not have been directly related to the child training practices.

Three other Vancouver Island bands, the Sheshaht Nootka, Campbell River-Cape Mudge Kwakiutl, and Nanaimo Salish, were contacted briefly in order to obtain an estimate of the incidence of speech problems among them. The results of this inquiry indicate the incidence of stuttering to be approximately two per thousand, or 0.2 percent. Other speech problems were also infrequently reported.

The data from the family interviews were coded for punch-card analysis. Those items on which differences between the Cowichans and Ute were found to be statistically significant were as follows. More Cowichan mothers and fathers reported having held a prenatal sex preference. The Ute mothers were more indulgent in initial nursing of the infant. The Cowichans were less tolerant of children crying at ages beyond infancy. The Cowichans were more severe in toilet training and in severity and frequency of punishment. The Ute paid more initial attention to the infant, had more body contact with the child for a longer period of time and reduced the amount of body contact more gradually than did the Cowichans. On the speech items, the Cowichans had more established standards of speech fluency and stressed conformity to these standards.

There were few substantial differences between the groups in the reported ages of the children in their attainment of early-learned motor skills. There was a tendency on most such

items for the Cowichans' mean age to be slightly lower than the Ute.

All the significant differences indicated that the Ute were less demanding of the child and more tolerant in allowing him to establish his own rate of development in achieving independence.

The language structures and culturally-determined methods of teaching the child to talk were also investigated. The Sapir-Whorf-Korzybski hypothesis was believed to be subject to limited test. In this regard, the presence or absence of a term equivalent to 'stuttering' was of primary interest. The Salish language differed from that of the Ute in providing for verbal expression of a judgment represented by such a term equivalent to 'stuttering.' Due consideration is to be given to the possibility that the Salish language, unlike that of the Ute, tends, therefore, to influence its users to be attentive to nonfluency (to which the term in question refers in a loose sense) in the child's speech, and to evaluate such nonfluency as a deviant characteristic.

The role of reduplication (as in such terms as 'ma ma,' 'da da,' etc.) in the respective languages appears to reflect the extent to which the peoples in each society are aware of and tolerant of normal repetitions and hesitations in the child's speech. The Cowichans did not seem to expect that the child would reduplicate and repeat sounds, syllables, or words as he learned speech. The Ute, in whose language reduplication is highly characteristic of childhood usage, recognized this tendency in their children's speech and encouraged it. The Ute language also provides a means of recognition of the developmental stages of childhood through a vocabulary of different words applied to the child as he progresses from one stage to the next. The Salish (Cowichan) language does not provide for representation of the more subtle changes in childhood. Moreover, there is a 'diminutive' and 'affectionate' language characteristic of the verbal interchange between Ute parents and children—a sort of 'language of childhood' —and this is for all practical purposes not found among the Cowichans. A fundamental difference between the two groups, presumably related to the language differences noted, is seen in the acceptance of the role of the parent as a language teacher. The process of language learning was more clearly recognized by the Ute than by the Cowichans.

It is inferred that these various differences, when related to the evaluation by the Cowichans of speech repetition as undesirable, would indicate a greater likelihood of the development of the problem of stuttering in the Cowichan society.

The tolerance of the Ute in allowing the child to establish his own rate of development, in speech as well as in attaining independence, was more extreme than that of the less tolerant, but still relatively permissive, Cowichans.

The hypothesis that cultural factors may exist which, through an interaction with a combination of variables, tend to foster the development of the problem of stuttering seems tenable on the basis of the following conclusions.

a. The incidence of the problem of stuttering on Vancouver Island has apparently declined with the deterioration of the native Indian culture with its elaborate and highly competitive socioeconomic system and social stratification. The use of the native languages

is also seen to have declined and with it the formal, competitive speech rituals associated with the ceremonial aspects of the social system.

b. The difficulty experienced in speaking by those Indians who were considered to be stutterers does not seem to have been as severe as that of most clinically diagnosed stutterers in our own North American society. It is hypothesized that this may be related to the degree to which the child is held responsible for his own fluency in our culture. The Cowichans generally assumed that an outside factor, often supernatural in character, was the cause of the so-called deviance and this appears to have relieved the child of some of the responsibility for his speech behavior.

c. The native methods of child training still practiced by the Cowichans reflect the relatively limited extent to which growth is regarded as a dynamic process. The Cowichans seem to be less aware than the Ute that the child's independence training is dependent upon a certain level of development and maturation for its effectiveness. The differences between the languages of the two societies seem to reflect also the extent to which the successive developmental stages of the child are recognized through the terms by which he is called and the vocabulary used in speaking with him. It is hypothesized that this sensitivity to the child's growth and development might influence the parents' determination of the child's readiness for any particular dimension of socialization.

d. Support for the Sapir-Whorf-Korzybski hypothesis is believed to have been obtained on the basis of the reported reactions to the diagnostic use of the term equivalent to our 'stuttering.' In at least one instance, and possibly in others, usage of the term appeared to have exerted a more direct influence upon the mother's reaction to her son's speech than did her own objective observations. Further support is inferred from the apparent reduction in incidence of the problem on Vancouver Island during the past 25 to 50 years associated with a substantial decrease in use of the native term for 'stuttering.'

e. It is further hypothesized that, since some hesitations in speech are considered to be deviant while others are not so considered, the particular hesitation form that is evaluated as stuttering will vary among societies. A person is more likely to judge a particular type of hesitation form as stuttering if, in his society, that hesitation form is unacceptable. If nongrammatical reduplication in the language is an unacceptable hesitation form, for example, repetition might be expected as a part of the speech pattern of the person considered to be a stutterer. Should a society in which the problem of stuttering is known consider repetition as an acceptable hesitation form and some other hesitations as unacceptable, repetitive speech would not be expected to characterize those persons considered to be stutterers in that society.

References

1. American Speech and Hearing Association Committee on the Mid-century White House Conference, Speech disorders and speech correction. *J. Speech Hearing Dis.*, 17, 1952, 129-137.
2. Barnett, H. G., *The Coast Salish of British Columbia*. Eugene, Oregon: Univ. of Oregon Press, 1955.
3. Benedict, Ruth, *Patterns of Culture*. New York: Mentor, 1956.
4. Bloomfield, L., *Language*. New York: Holt, 1956.
5. Boas, F., Sixth report of the North-Western tribes of the Dominion of Canada. *Brit. Ass. Advanc. Sci.*, 60, 1890, 553-715.
6. Boas, F., On the North-Western tribes of Canada—Ninth report. *Brit. Ass. Advanc. Sci.*, 64, 1894, 453-463.
7. Boas, F., and Farrand, L., the North-Western tribes of Canada—Twelfth and final report. *Brit. Ass. Advanc. Sci.*, 68, 1898, 628-688.
8. Boas, F., Kwakiutl, in Handbook of American Indian Languages. *Bull. Bur. Amer. Ethnol.*, 40, part 1, 1910, 423-659.
9. Brown, S. F., The loci of stutterings in the speech sequence. *J. Speech Dis.*, 10, 1945, 181-192.
10. Bullen, Adelaide K., A cross-cultural approach to the problem of stuttering. *Child Develpm.*, 16, 1945, 1-88.
11. Casagrande, J. B., Comanche baby language. *I.J.A.L.*, 14, 1948, 11-14.
12. Chamberlain, A. F., Notes on Indian child language. *Amer. Anthrop., o. s.*, 3, 1890, 237-241.
13. Codere, Helen, Fighting with property. *Monographs of the American Ethnological Society*, XVIII, 1950.
14. Cook, Anne M., The northern Ute. *Amer. Anthrop.*, 40, 1938, 627-630.
15. Dennis, W., *The Hopi Child*. New York: Appleton-Century, 1940.
16. Dennis, W., The socialization of the Hopi child. In L. Spier, A. I. Hallowell, and S. S. Newman (Eds.), *Language, Culture, and Personality*. Menasha, Wisconsin: Sapir Memorial Publication Fund, 1941.
17. Department of Citizenship and Immigration, Indian Affairs Branch. *Census of Indians in Canada*, 1954. Ottawa: 1955.
18. Devereux, G., Mohave voice and speech mannerisms. *Word*, 5, 1949, 268-272.
19. Drucker, P., *Indians of the Northwest Coast*. New York: McGraw-Hill, 1955.
20. Frank, L. K., Tactile communication. *Etc.*, 16, 1958, 31-79.
21. Goldman, I., The Kwakiutl of Vancouver Island. In Margaret Mead (Ed.), *Cooperation and Competition Among Primitive Peoples*. New York: McGraw-Hill, 1937, 180-210.
22. Guilford, J. P., *Fundamental Statistics in Psychology and Education*. New York: McGraw-Hill, 1950.
23. Haeberlin, H. K., Types of reduplication in the Salish dialects. *I.J.A.L.*, 1, 1918, 154-174.
24. Haeberlin, H. K., and Boas, F., Sound shifts in the Salishand dialects. *I.J.A.L.*, 4, 1927, 117-136.
25. Hale, K., Internal diversity in Uto-Aztekan: I. *I.J.A.L.*, 24, 1958, 101-107.
26. Herskovits, M. H., *Cultural Anthropology*. New York: Knopf, 1955.
27. Hill-Tout, C., Notes on the Sk·qo'mic of British Columbia, a branch of the great Salish stock of North America. *Brit. Ass. Advanc. Sci.*, 70, 1900, 472-549.
28. Hill-Tout, C., Ethnological studies of the mainland HalkomêlEm, a division of the Salish of British Columbia. *Brit. Ass. Advanc. Sci.*, 72, 1902, 355-449.
29. Hill-Tout, C., Report on the ethnology of the Siciatl . . . of British Columbia, a coast division of the Salish stock. *J. roy. Anthrop. Inst. G. B. and Ire.*, 34, 1904, 20-91.
30. Hill-Tout, C., Report on the ethnology of the Stlatlumtl of British Columbia. *J. roy. Anthrop. Inst. G. B. and Ire.*, 35, 1905, 126-218.
31. Hoijer, H., (Ed.), Language in culture: Proceedings of a conference on the interrelations of language and other aspects of culture. *American Anthropological Association Memoirs*, 56, memoir 79, 1954.
32. Jespersen, J. O. H., *Language: Its Nature, Development, and Origin*. London: Allen and Unwin, 1947.
33. Joffe, Natalie, The Fox of Iowa. In R. Linton (Ed.), *Acculturation in Seven American Indian Tribes*. New York: Appleton-Century, 1940, 259-332.
34. Johnson, W., The Indians have no word for it: I. Stuttering in children. *Quart. J. Speech*, 30, 1944, 330-337. Reprinted in more fully developed form in Chapter 17 of *People in Quandaries*. New York: Harper, 1946.

35. Johnson, W., and others, Speech fluency norms. Unpublished report of research carried out at the University of Iowa under a grant from the Louis W. and Maud Hill Family Foundation, St. Paul, Minnesota. Scheduled for publication, under a grant from the U. S. Office of Vocational Rehabilitation, as a *Monograph Supplement* of the *Journal of Speech and Hearing Disorders.*
36. Johnson, W., and others, *Speech Handicapped School Children.* New York: Harper, 2nd edition, 1956.
37. Johnson, W., and associates, *The Onset of Stuttering.* Minneapolis: University of Minnesota Press, 1959.
38. Interview of Herbert Fowler, M.D., and Jane Fowler, M.D., of Vernal, Utah, by Wendell Johnson, August, 1953.
39. Personal correspondence from George Kriehn, Brigham City, Utah, to Wendell Johnson, January 9, 1953.
40. Joseph, Alice, and Murphy, Veronica, *Chamorros and Carolinians of Saipan.* Cambridge, Massachusetts: Harvard University Press, 1951.
41. Kluckhohn, C., Culture and behavior. In G. Lindzey (Ed.), *Handbook of Social Psychology.* Cambridge, Massachusetts: Addison-Wesley, 1954.
42. Krober, A. L., The speech of the Zuñi child. *Amer. Anthrop.,* 18, 1916, 529-534.
43. Lamb, S. M., Linguistic prehistory in the great basin. *I.J.A.L.,* 24, 1958, 95-100.
44. Lang, G. O., A study in culture contact and culture change. The Whiterock Utes in transition. *Anthropological Papers, Department of Anthropology, University of Utah,* No. 15, 1953.
45. Leighton, Dorothea, and Kluckhohn, C., *Children of the People.* Cambridge, Massachusetts: Harvard University Press, 1947.
46. Lemert, E. M., Some Indians who stutter. *J. Speech Hearing Dis.,* 18, 1953, 168-174.
47. Lemert, E. M., Alcohol and the northwest coast Indians. *Univ. of California Publications in Culture and Society,* 2, 1955, 303-406.
48. Lewis, M. M., *Infant Speech.* New York: Humanities Press, 1951.
49. Mead, Margaret, *Growing Up in New Guinea.* New York: Morrow, 1930.
50. Morgenstern, J. J., Psychological and social factors in children's stammering. Unpublished Ph.D. dissertation, University of Edinburg, 1953. Abstracted in 36, pp. 220-221.
51. Opler, M. K., The southern Ute. *Amer. Anthrop.,* 40, 1938, 632-633.
52. Opler, M. K., The southern Ute of Colorado. In R. Linton (Ed.), *Acculturation in Seven American Indian Tribes.* New York: Appleton-Century, 1940, 119-206.
53. Osgood, C. E., (Ed.), and Sebeok, T. A., (Assoc. Ed.), Psycholinguistics, a survey of theory and research problems. *I.J.A.L.,* Memoir 10, 1954.
54. Pettitt, G. A., *Primitive Education in North America.* Berkely, Los Angeles: University of California Press, 1946.
55. Rapoport, A., General semantics: Its place in science. *Etc.,* 16, 1958, 80-97.
56. Sapir, E., Some aspects of Nootka language and culture. *Amer. Anthrop.,* 13, 1911, 15-28.
57. Sapir, E., Noun reduplication in Comox, a Salish language of Vancouver Island. *Memoir 63, Geological Survey of Canada.* Ottawa: Canada Department of Mines, 1915.
58. Sapir, E., Nootka baby words. *I.J.A.L.,* 5, 1929, 118-119.
59. Sapir, E., The Southern Paiute Language. *Proc. Amer. Acad. Arts. Sci.,* 65, 1930-31.
60. Sapir, E., *Language.* New York: Harcourt, 1949.
61. Sapir, E., The status of linguistics as a science. In D. G. Mandelbaum (Ed.), *Selected Writings of Edward Sapir.* Berkely, Los Angeles: University of California Press, 1949, 160-166.
62. Sapir, E., Abnormal speech in Nootka. In D. G. Mandelbaum (Ed.), *Selected Writings of Edward Sapir.* Berkely, Los Angeles: University of California Press, 1949, 179-196.
63. Sapir, E., The social organization of the west coast tribes. In D. G. Mandelbaum (Ed.), *Selected Writings of Edward Sapir.* Berkely, Los Angeles: University of California Press, 1949, 468-487.
64. Sapir, E., and Swadesh, M., Native accounts of Nootka ethnology. *I.J.A.L.,* Part II, 21, 1955.
65. Schriver, Joanne, and Leacock, Eleanor B., Harrison River childhood. In M. W. Smith (Ed.), *Indians of the Urban Northwest.* New York: Columbia University Press, 1949, 195-242.
66. Siegel, S., *Nonparametric Statistics for the Behavioral Sciences.* New York: McGraw-Hill, 1956.
67. Smith, Marian W., (Ed.), *Indians of the Urban Northwest.* New York: Columbia University Press, 1949.

68. Snidecor, J., Why the Indian does not stutter. *Quart. J. Speech,* 33, 1947, 493-495.
69. Personal correspondence from Francis McKinley, Ute Tribal Office, Fort Duchesne, Utah, to J. L. Stewart, February 21, 1958.
70. Personal correspondence from N. W. Garrard, Superintendent, West Coast Agency, Port Alberni, British Columbia, to J. L. Stewart, July 7, 1958.
71. Stewart, O. C., Culture element distributions: XVIII Ute-Southern Paiute. *Anthrop. Rec. Univ. Calif., 6,* 1942, 231-360.
72. Suttles, W., Private knowledge, morality, and social classes among the Coast Salish. *Amer. Anthrop.,* 60, 1958, 497-507.
73. Swadesh, M., A structural trend in Nootka. *Word,* 4, 1948, 106-119.
74. Swadesh, M., The linguistic approach to Salish prehistory. In M. W. Smith (Ed.), *Indians of the Urban Northwest.* New York: Columbia University Press, 1949, 161-173.
75. Swadesh, M., Salish internal relationships. *I.J.A.L.,* 16, 1950, 157-167.
76. Ute Indian Tribe, *Ute Ten Year Development Program.* Mimeographed report, published at Fort Duchesne, Utah, 1958.
77. Whiting, J. W. M., and Child, I. L., *Child Training and Personality: A Cross-Cultural Study.* New Haven: Yale University Press, 1953.
78. Whorf, B. L., Linguistics as an exact science. In J. Carroll (Ed.), *Language, Thought, and Reality.* Massachusetts: Technology Press, and New York: Wiley, 1956, 220-232.
79. Whorf, B. L., Science and linguistics. In J. Carroll (Ed.), *Language, Thought, and Reality.* Massachusetts: Technology Press, and New York: Wiley, 1956, 207-219.
80. Winitz, H., A quantitative study of the repetitions in children's speech in the second year of life. Unpublished M. A. thesis, University of Iowa, 1956.

Personal Interviews, Cited in Text

81. Mr. Ed Black, Nanaimo Village, Vancouver Island, B.C.
82. Mr. Joe Black, Nanaimo Village, Vancouver Island, B.C.
83. Mr. J. V. Boys, Superintendent, Cowichan Agency, Duncan, Vancouver Island, B. C.
84. Mrs. John Brant, Cowichan Reserve, Vancouver Island, B.C.
85. Mrs. Stella Chapoose, Alterra, Utah.
86. Mr. David Charlie, Cowichan Reserve, Vancouver Island, B.C.
87. Mrs. Harvey Edwards, Nanaimo Village, Vancouver Island, B.C.
88. Mrs. Johnny Edwards, Nanaimo Village, Vancouver Island, B.C.
89. Mrs. Juanita Elliott, Cowichan Reserve, Vancouver Island, B.C.
90. Mr. Walter Elliott, Cowichan Reserve, Vancouver Island, B.C.
91. Mrs. Sam Henderson, Campbell River, Vancouver Island, B.C.
92. Mrs. Mable Jack, and son, Vincent, Cowichan Reserve, Vancouver Island, B.C.
93. Mrs. Ben Jakes, Cowichan Reserve, Vancouver Island, B.C.
94. Mrs. Harriett Johnson, Whiterocks, Utah.
95. Mr. Michael Kew, Staff Anthropologist, Provincial Museum, Victoria, B.C.
96. Mr. Francis McKinley, Director, Community Services Division, Ute Indian Tribe, Fort Duchesne, Utah.
97. Chief Elwood Modeste, Cowichan Reserve, Vancouver Island, B.C.
98. Mrs. Anthony Paul, and son, Anthony, Jr., Cowichan Reserve, Vancouver Island, B.C.
99. Mr. E. F. Peake, Office Manager, Port Alberni Residential School, Port Alberni, Vancouver Island, B.C.
100. Mrs. Adam Shewish, and son, Edward, Sheshaht Village, West Coast Agency, Vancouver Island, B.C.
101. Sister Superior, St. Catherine's Indian School, Cowichan Reserve, Vancouver Island, B.C.
102. Mrs. Byrdie Tabbee, Ouray, Utah.
103. Chief Edison White, Nanaimo Village, Vancouver Island, B.C.
104. Mr. and Mrs. George White, Nanaimo Village, Vancouver Island, B.C.
105. Mr. Wallace Wissiup, Randlett, Utah.
106. Mrs. Alice Yazz, Randlett, Utah.
107. Mrs. Hattie Ziah, Randlett, Utah.

Appendix

Scaling Procedure

Columns 11 through 52 on Card 2 required the assignment of a rating by the investigator along a scale which ranged from one, representing the least amount of the attribute in question, to seven, which represented the greatest amount of the attribute in question. These ratings were made on the basis of the report of the informant and the observation of the investigator.

In order to familiarize the investigator with the method of cross-cultural research, data on a number of societies were obtained through the Human Relations Area Files. Through study of detailed information of these societies on the aspects of socialization under consideration, a range of comparative judging experience in these dimensions was obtained.

Following the establishment of this basis for comparison, the investigator conducted supervised research among the Mesquakie (Sac and Fox) tribe in Iowa using the interviewing procedure developed for the investigation.

The judgments to be made needed to be comparable between informants, so certain specific areas of inquiry within the general investigative procedure were included in the questioning of each informant. Three main aspects were considered prior to any rating on the dimension of socialization under consideration; initial satisfaction of the activity questioned about, reported socialization anxiety in this activity, and age of the child at the time of socialization.

Information about initial satisfaction covered the following points: (a) Duration of the initial period. To use nursing as an example, questions were designed to determine how long the child was nursed, and when weaning was initiated and completed. (b) The amount of freedom allowed the child in the performance of these initial activities. Questions were designed to determine whether or not a nursing schedule had been followed, whether the parent or the child established the times for nursing, and the amount of time allowed for the individual feeding. (c) Amount of encouragement given the child in this regard. Questions were designed to determine whether or not the child's need for feeding was anticipated and the breast offered before he expressed the desire to nurse, or the length of time between the child's demand and the mother's fulfillment of the need. (d) Amount of concurrent anxiety. This information followed from the informant's report on how the child responded to whatever method and schedule of feeding were adopted and the child's reaction to the process of weaning.

Information about anxiety was obtained from the following questions: (a) Brevity. To use toilet training as an example, the time allowed for the completion of training was used as the basis for comparison. (b) Severity and frequency of punishment. To the extent that some parents used punishment

in conjunction with toilet training, the judgments reflected varying degrees of severity of training. (c) Signs of emotional disturbance in the children. This was the most difficult aspect to define, as intercultural criteria of 'emotional disturbance' were difficult to obtain. Some reports, however, did involve the evaluation that the child behaved in some way which the parent interpreted as a negative reaction to the training period.

The final factor involved in the judgment was the age of the child at the time of the socialization activity. This age was recorded as given and the chance for investigator bias entering into the judgment was minimized.

Whenever possible, the informant's report was compared with an observed activity. In many cases, this observation was made on the basis of comparing the child questioned about with a younger sibling who was undergoing one or more of the dimensions of socialization at the time of the interview. On other occasions, comparison was made with children other than siblings who were living in the same house or nearby.

Cross-checking of the responses to certain items shows a measure of internal consistency that is interpreted as demonstrating that the strived for objectivity of the investigator was at least approximated. The coded interview method is subject to limitation when used to compare societies. Differences in interpretation of what constitutes the measure under consideration present a serious obstacle to such comparisons. In the case of establishment of stages of speech acquisition, for example, a difference in such interpretation may account for item discrepancies. The Cowichans and Ute both reported similar ages for the first word and short combinations of words of the children questioned about. The ages when the child first began to use sentences shows the greatest discrepancy of any of the three items. It appears that the groups may have differed in the way in which the informants define 'sentences,' a difference which may be accounted for in the languages of the peoples.

The establishment of criterion measures for the various dimensions of investigation prior to the field work is necessary, yet in some instances such prior determination imposed an artifact on the results. This was felt to have been the case with the weaning items. The criterion selected in advance was the age of the child when the mother first began to feed him solid or semi-solid foods. For the Cowichans, such a criterion was meaningful in that the mothers generally tended to initiate weaning in this manner. Among the Ute, however, the mothers would supplement the child's diet without considering weaning as the end-result. Consequently, the statistical analysis showed no difference existing between the groups when in reality such a comparison was not completely justifiable.

In some instances, the informant did not know English well enough for some of the questions to be meaningful. On these occasions, the questions were rephrased until the informant signified that they were understood or until it appeared that real comprehension was doubtful. Only those responses which the investigator felt confident were reliable were recorded on the data sheet; all others were recorded as unclear responses.

Summary table of data obtained by means of 30 coded interviews in each of the Cowichan and Ute Indian societies.
Card 1

Column Numbers	*Items and Recording Codes*	*Cowichan*	*Ute*
1	Card number		
2– 5	Code number (family interviewed)		
6	Method of data collection		
	1 Personal interview, direct	30	29
	2 personal interview, interpreted		1
7	Tribal affiliation		
	1 Uncompahgre Ute		15
	2 Uintah-Whiteriver Ute		6
	3 Uncompahgre-Uintah-Whiteriver mixed		5
	4 Cowichan (Salish)	30	
	X other (specify)		4
8	Informant (in terms of familial unit)		
	1 mother	27	23
	2 father	2	5
	3 grandparent (specify)		1
	4 child	1	
	X other (specify)		1
9	Language used by informant		
	1 predominantly native	1	28
	2 predominantly English	29	2
10– 11	Amount of education of father, in grade level accomplished	Mean: 6.1	Mean: 6.9
		N*: 21	N*: 15
12	Kind of education of father		
	1 Indian school exclusively	13	6
	2 mixed white and Indian school exclusively	3	2
	3 both Indian and white schools at various times	6	8
	X response uncertain, unclear, or withheld	4	11
	R question not asked	4	3
13	Source of income†		
	1 governmental provision exclusively	1	14
	2 governmental subsidy supplemented by part-time work	2	1
	3 part-time job by father, no outside aid	1	
	4 full-time employment of father	19	5
	5 self-sufficient, agriculture or stock-raising		4
	6 owns business	1	
	7 income provided by others in addition to father	1	1

	8 other (specify)	3	4
	X response uncertain, unclear, or withheld	2	1
14- 17	Age of informant in months (approximated if necessary)	Mean: 351.9 (29.3 yrs.) S.D.: 31.5	Mean: 394.4 (32.9 yrs.) S.D.: 42.7
Prenatal			
18	Total number of pregnancies	Mean: 5.0	Mean: 4.8
19	Number of children now living	Mean: 4.0	Mean: 4.3
20	Preferred sex of child before birth by mother		
	1 boy preferred	8	
	2 girl preferred	2	
	3 no preference expressed	19	29
	R question not asked	1	1
		X²**: Number expressing preference	
		X² value: 9.79	
		Level of confidence: 1%	
21	Preferred sex of child before birth by father		
	1 boy preferred	10	1
	2 girl preferred	1	
	3 no preference expressed	16	28
	R question not asked	3	1
		X²: Number expressing preference	
		X² value: 9.44	
		Level of confidence: 1%	
22	Prenatal care		
	1 no special care or treatment	16	23
	2 mother observes dietary care only	5	3
	3 mother takes care with diet, avoids excessive work	9	4
		X² value: 2.64	
		Level of confidence: NS††	
23	Preparations for birth		
	1 at hospital, with doctor	29	29
	2 at home, with midwife	1	1
24	Reason for specific birth preparation		
	1 hospital, matter of preference	29	29
	2 home, economic reasons only		1
	X response uncertain, unclear, or withheld	1	

* N = number responding to item.
† All Ute interviewed received per capita payment in addition to scored response.
** X^2 needed for significance (df = 1): 5%, 3.84; 1%, 6.64. Yates's correction used on all chi squares.
†† Not significant

Column Numbers	*Items and Recording Codes*	*Cowichan*	*Ute*
Postnatal, Infancy, and Childhood			
25– 30	Birthdate of child questioned about	Mean Age: 46.4 months Range: 12–87 months	Mean Age: 58.9 months Range: 26–156 months
31	Sleeping arrangements and restrictions		
	1 cradleboard used*, child restricted most of time	2	1
	2 cradleboard used, child restricted during sleep		2
	3 cradleboard used, during day only		1
	4 child unrestricted during sleep	1	
	5 child unrestricted day and night, no cradleboard used	27	26
32	Sleeping hours		
	1 sleeping hours regularly defined and adhered to	19	1
	2 child sleeps when ready, no parental impositions	7	29
	3 day sleep not regulated, night sleep regulated	4	
		X^2: Restriction/no restriction X^2 value: 27.78 Level of confidence: 1%	
33	Nursing		
	1 never breast fed	9	9
	2 breast fed at one time, now weaned	19	20
	X response uncertain, unclear, or withheld	1	1
	R question not asked	1	
34– 35	Weaning—breast to bottle—age (in months) when initiated	Mean: 5.1	Mean: 8.5
	XX response uncertain, unclear, or withheld		
		X^2: Did/didn't wean X^2 value: 4.87 Level of confidence: 5%	
36– 37	Weaning—breast to bottle—age (in months) when completed	Mean: 5.2	Mean: 8.5
	XX response uncertain, unclear, or withheld	1	
38– 39	Weaning—to solid foods—age (in months) when initiated	Mean: 6.0	Mean: 8.6
	XX response uncertain, unclear, or withheld	S.D.: 3.34	S.D.: 6.06
		4	7
	RR question not asked		1
		t value: 1.798 Level of confidence: NS	
40– 41	Weaning—to solid foods—age (in months) when completed	Mean: 15.3	Mean: 17.6
		S.D.: 6.79	S.D.: 12.15
	OO not yet accomplished		1

	XX response uncertain, unclear, or withheld	3	4
		t value: .7999	
		Level of confidence: NS	
42	Cleanliness		
	1 baby bathed regularly, at least once a day	30	30
43	Crying—behavior		
	1 baby cries as a result of need	25	23
	2 baby cries for need and for attention	2	5
	3 baby cries primarily for attention	1	
	4 baby cries only when ill	1	
	X response uncertain, unclear, or withheld		2
	R question not asked	1	
44	Crying—amount		
	1 baby rarely, if ever, cries	6	8
	2 baby cries until need or comfort satisfied	17	16
	3 baby cries a great deal of the time	4	3
	X response uncertain, unclear, or withheld	1	2
	R question not asked	2	1
45– 46	Age (in months) when sat alone, unsupported	Mean: 7.3	Mean: 6.3
		S.D.: 1.80	S.D.: 1.53
	OO skipped stage		1
	XX response uncertain, unclear, or withheld	11	13
47– 48	Age (in months) when crawled or crept	Mean: 8.9	Mean: 8.5
		S.D.: 1.96	S.D.: 1.26
	OO skipped stage	5	3
	XX response uncertain, unclear, or withheld	9	15
	RR question not asked	1	
		X^2: Did/didn't respond to item	
		X^2 value: 2.58	
		Level of confidence: NS	
49– 50	Age (in months) when stood alone	Mean: 11.0	Mean: 11.7
		S.D.: 2.44	S.D.: 2.29
	XX response uncertain, unclear, or withheld	2	18
		X^2: Did/didn't respond to item	
		X^2 value: 14.3	
		Level of confidence: 1%	
51– 52	Age (in months) when took first unassisted steps	Mean: 14.0	Mean: 13.5
		S.D.: 3.81	S.D.: 3.32
	XX response uncertain, unclear, or withheld	1	6

* For period of not less than three months.

Column Numbers	*Items and Recording Codes*	*Cowichan*	*Ute*
53- 54	Age (in months) when first used implement to feed self	Mean: 14.8 S.D.: 4.84	Mean: 13.2 S.D.: 3.80
	OO not yet accomplished		2
	XX response uncertain, unclear, or withheld	7	11
	RR question not asked	6	4
		X^2: Did/didn't respond to item X^2 value: .04 Level of confidence: NS	
55- 56	Age (in months) when over-all physical skills considered complete	Mean: 22.3 S.D.: 10.77	Mean: 15.6 S.D.: 3.94
	OO not yet accomplished	2	2
	XX response uncertain, unclear, or withheld	7	12
	RR question not asked	4	7
		X^2: Did/didn't respond to item X^2 value: 2.54 Level of confidence: NS	
57	Speech environment		
	1 unilingual, English	12	
	2 bilingual, native and English	18	30
		X^2: Bilingual/unilingual X^2 value: 12.60 Level of confidence: 1%	
58- 59	Age (in months) of first word	Mean: 14.4 S.D.: 5.14	Mean: 15.4 S.D.: 5.55
	XX response uncertain, unclear, or withheld	11	11
		t value: .532 Level of confidence: NS	
60- 61	Age (in months) of first short combination of words	Mean: 19.2 S.D.: 5.06	Mean: 19.9 S.D.: 4.83
	OO not yet accomplished	2	3
	XX response uncertain, unclear, or withheld	11	16
		X^2: Did/didn't respond to item X^2 value: 1.47 Level of confidence: NS	
62- 63	Age (in months) of first sentences	Mean: 26.1 S.D.: 6.35	Mean: 31.1 S.D.: 6.72
	OO not yet accomplished	5	5

	XX response uncertain, unclear, or withheld	4	8
		X^2: Did/didn't respond to item	
		X^2 value: .44	
		Level of confidence: NS	
64	Evaluation of child's speech by parents		
	1 adequacy never evaluated	3	13
	2 considered adequate for age	13	11
	3 concern expressed over inadequacy	6	1
	4 considered highly adequate	8	4
	5 other (specify)		1
		X^2: Evaluation made/not made	
		X^2 value: 7.88	
		Level of confidence: 1%	
65- 66	Age (in months) bladder training initiated, day	Mean: 12.1	Mean: 16.2
		S.D.: 6.60	S.D.: 7.87
	XX response uncertain, unclear, or withheld	4	8
	RR question not asked	1	
		t value: 1.92	
		Level of confidence: NS	
67- 68	Age (in months) bladder training, day, completed	Mean: 18.0	Mean: 26.3
		S.D.: 6.67	S.D.: 7.70
	OO not yet accomplished	3	1
	XX response uncertain, unclear, or withheld	2	4
	RR question not asked	1	
		t value: 3.93	
		Level of confidence: 1%	
69- 70	Age (in months) bladder training, night, initiated	Mean: 10.9	Mean: 16.2
		S.D.: 5.12	S.D.: 7.87
	XX response uncertain, unclear, or withheld	6	8
	RR question not asked	1	
		t value: 2.63	
		Level of confidence: 1%	
71- 72	Age (in months) bladder training, night, completed	Mean: 16.6	Mean: 25.6
		S.D.: 4.73	S.D.: 7.55
	OO not yet accomplished	4	2
	XX response uncertain, unclear, or withheld	3	4
	RR question not asked	1	
		t value: 4.678	
		Level of confidence: 1%	

Column Numbers	*Items and Recording Codes*	*Cowichan*	*Ute*
73– 74	Age (in months) bowel control initiated	Mean: 11.5	Mean: 16.2
		S.D.: 6.27	S.D.: 7.87
	XX response uncertain, unclear, or withheld	5	8
	RR question not asked	1	
		t value: 2.21	
		Level of confidence: 5%	
75– 76	Age (in months) bowel control completed	Mean: 18.2	Mean: 25.8
		S.D.: 6.47	S.D.: 8.19
	OO not yet accomplished	3	1
	XX response uncertain, unclear, or withheld	2	4
	RR question not asked	1	
		t value: 3.537	
		Level of confidence: 1%	
Card 2			
6	Sex of child observed		
	1 male	13	14
	2 female	17	16
7	Tribal affiliation		
	Same as Card 1		
8	Educational level of child		
	0 too young for school	29	24
	1 early elementary (grades 1–3) Indian-white school	1	5
	2 junior high school, mixed Indian-white		1
9	Initial impression of child		
	1 extremely shy around adults outside family	2	2

	2 shy around unfamiliar adults only	10	14
	3 reserved, around adults, but not excessively	9	7
	4 outgoing	5	5
	5 extremely outgoing	4	
	6 judgment withheld (specify reason)		2
10	Observed mother-child interaction during interview		
	1 child present throughout, remains close to mother	5	8
	2 child present through part of interview only	11	10
	3 child not present at any time during interview	3	7
	4 child present, but interaction with mother minimal	10	
	5 other (specify)	1	5

Behavior rated on seven-point scale, judgments by investigator:

Prenatal and Birth

11 Ritualistic and compulsive prenatal regimen
1 very little or no such behavior reported
to
7 highly ritualistic and compulsive behavior

	1	*2*	*3*	*4*	*5*	*6*	*7*	*N*
Cowichan	16	4	4	4	2			30
Ute	23	3	2		1	1		30

Cut Off: 2

X^2 value: 2.33
Level of confidence: NS

12 Ceremonial accompaniments to birth
1 none
to
7 highly complex and structured ceremonial

	1	*2*	*3*	*4*	*5*	*6*	*7*	*N*
Cowichan	3	27						30
Ute	30							30

Level of confidence: Not tested

Postnatal

13 Initial nursing indulgence
1 highly indulgent
to
7 extremely restricted

	1	*2*	*3*	*4*	*5*	*6*	*7*	*N*
Cowichan		1	5	9	9	3		27
Ute		8	9	4	5			26

Cut Off: 3

X^2 value: 8.37
Level of confidence: 1%

14 Age of weaning
1 initiated very late (beyond 5 years)
to
7 initiated very early (before 3 months)

	1	*2*	*3*	*4*	*5*	*6*	*7*	*N*
Cowichan				1	7	17	1	26
Ute			1	3	8	8	3	23

Cut Off: 5

X^2 value: 1.93
Level of confidence: NS

15 Severity of weaning
1 extremely gradual
to
7 extremely abrupt

	1	*2*	*3*	*4*	*5*	*6*	*7*	*N*
Cowichan		2	1	5	14	4		26
Ute	2		1	5	5	7	4	24

Cut Off: 4

X^2 value: .02
Level of confidence: NS

Column Numbers	*Item and Recording Codes*	
16	Crying—initial indulgence 1 highly indulgent to 7 extremely restricted	*1 2 3 4 5 6 7 N* Cowichan 1 3 12 10 1 27 Ute 5 1 10 13 29 *Cut Off: 4 X^2 value: 0.5 Level of confidence: NS
17	Age when crying no longer tolerated 1 late (beyond seven years) to 7 early (less than one year)	*1 2 3 4 5 6 7 N* Cowichan 2 2 3 7 5 1 20 Ute 25 3 1 29 Cut Off: 2 X^2 value: 27.33 Level of confidence: 1%
Toilet Training		
18	Initial indulgence 1 highly indulgent to 7 extremely restrictive	*1 2 3 4 5 6 7 N* Cowichan 1 8 11 7 1 28 Ute 3 7 5 8 3 26 Cut Off: 4 X^2 value: 2.60 Level of confidence: NS
19	Age of initiation of training 1 very late (more than 5 years) to 7 very early (less than 6 months)	*1 2 3 4 5 6 7 N* Cowichan 4 8 12 3 27 Ute 2 1 4 8 8 23 Cut Off: 4 X^2 value: .97 Level of confidence: NS
20	Severity of training 1 extremely casual to 7 extremely severe	*1 2 3 4 5 6 7 N* Cowichan 9 14 2 25 Ute 1 11 9 5 26 Cut Off: 4 X^2 value: 8.78 Level of confidence: 1%
Attention and Dependency		
21	Initial attention 1 constant to 7 no more than necessary to accommodate needs	*1 2 3 4 5 6 7 N* Cowichan 1 5 1 16 6 1 30 Ute 2 15 6 4 27 Cut Off: 4 X^2 value: 19.40 Level of confidence: 1%

			1	2	3	4	5	6	7	N
22	Amount of bodily contact with child	Cowichan			4	5	14	7		30
	1 continual	Ute		1	17	8	2			28
	to							Cut Off:		3
	7 no bodily contact	X^2 value: 13.88								
		Level of confidence: 1%								
23	Age of reduction of bodily contact		1	2	3	4	5	6	7	N
	1 late (well beyond acquisition of motor skills)	Cowichan	1	8	2	1	8	8		28
	to	Ute		4	21	1	2			28
	7 early (prior to crawling)							Cut Off:		3
		X^2 value: 13.14								
		Level of confidence: 1%								
24	Gradualness of reduction of body contact		1	2	3	4	5	6	7	N
	1 very gradual	Cowichan		2	6	3	11	6		28
	to	Ute	1	4	19	3		1		28
	7 extremely abrupt							Cut Off:		3
		X^2 value: 16.42								
		Level of confidence: 1%								
Speech Development										
25	Standards of speech fluency		1	2	3	4	5	6	7	N
	1 no standards of fluency for children	Cowichan		5	15	5	4	1		30
	to	Ute	13	10	5	2				30
	7 rigid standards of fluency for children							Cut Off:		3
		X^2 value: 5.10								
		Level of confidence: 5%								
26	Age at which standards are presumed to be met		1	2	3	4	5	6	7	N
	1 no standards, hence no age	Cowichan		4	14	6	5	1		30
	to	Ute	13	11	5	1				30
	7 standards enforced as early as possible							Cut Off:		2
		X^2 value: 24.17								
		Level of confidence: 1%								
27	Stress associated with conformity		1	2	3	4	5	6	7	N
	1 no stress	Cowichan		9	15	2	2	1		29
	to	Ute	14	13	2	1				30
	7 extreme stress and emphasis relative to speech							Cut Off:		2
		X^2 value: 18.21								
		Level of confidence: 1%								

* Theoretical frequency 4.9

Column Numbers	*Items and Recording Codes*								
28	Amount of talking in the home by child		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*N*
	1 child dominates home speaking situations	Cowichan			2	17	8	2		29
	to	Ute			2	17	5	3		27
	7 little or no speech in home by child							Cuf Off:		4
		X^2 value: .01								
		Level of confidence: NS								
Sex Training										
29	Modesty training		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*N*
	1 initiated late as modesty not a matter of concern	Cowichan		2	3	5	10	5	3	28
	to	Ute	1		5	2	9	4	1	22
	7 initiated very early (less than one year)							Cut Off:		4
		X^2 value: .06								
		Level of confidence: NS								
30	Heterosexual play relationships		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*N*
	1 not restricted at any age	Cowichan	24		1					25
	to	Ute	23							23
	7 highly restricted at early age	Level of confidence: Not tested								
31	Attitude toward sex in the home		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*N*
	1 extremely frank and open	Cowichan		1	4	4	4			13
	to	Ute		1	1	6				8
	7 extremely restricted	Level of confidence: Not tested								
Aggression and Discipline										
32	Temper tantrums		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*N*
	1 never reported	Cowichan	5	4	10	3	3	4		29
	to	Ute	18	3	2	2	3			28
	7 very frequently reported							Cut Off:		2
		X^2 value: 9.35								
		Level of confidence: 1%								
33	Physical aggression		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*N*
	1 never reported	Cowichan		9	6	7	3	1		26
	to	Ute	8	11	5	3	1	1		29
	7 very frequently reported							Cut Off:		3
		X^2 value: 3.05								
		Level of confidence: NS								

34 Verbal aggression
1 never reported
to
7 very frequently reported

	1	2	3	4	5	6	7	N
Cowichan	8	7	3	4				22
Ute	16	6	3	2				27

Cut Off: 2

X^2 value: .55
Level of confidence: NS

35 Property damage
1 never reported
to
7 frequently reported

	1	2	3	4	5	6	7	N
Cowichan	14	3	3		1			21
Ute	12	2	2		1			17

Level of confidence: Not tested

36 Disobedience of parents
1 never reported
to
7 frequently reported

	1	2	3	4	5	6	7	N
Cowichan	1	7	4	6	5	1		24
Ute	6	9	8	3	2			28

Cut Off: 3

X^2 value: 4.69
Level of confidence: 5%

37 Competition and cooperation—with siblings
1 extreme cooperation
to
7 extreme competition

	1	2	3	4	5	6	7	N
Cowichan		3	9	9	3			24
Ute		1	13	4	2	1		21

Cut Off: 3

X^2 value: .68
Level of confidence: NS

38 Competition and cooperation—with peers
1 extreme cooperation
to
7 extreme competition

	1	2	3	4	5	6	7	N
Cowichan		3	15	6				24
Ute		1	11	3	1			16

*Cut Off: 3

X^2 value: .14
Level of confidence: NS

39 Competition and cooperation— with older children
1 extreme cooperation
to
7 extreme competition

	1	2	3	4	5	6	7	N
Cowichan		1	16	7	2			26
Ute		1	14	4	3	1		23

Cut Off: 3

X^2 value: .08
Level of confidence: NS

40 Competition and cooperation—with younger children
1 extreme cooperation
to
7 extreme competition

	1	2	3	4	5	6	7	N
Cowichan		2	12	9	1			24
Ute		7	7	2	1	1		18

Cut Off: 3

X^2 value: .98
Level of significance: NS

* Small theoretical frequency

Column Numbers	*Items and Recording Codes*								
41	Brevity of transition from childhood behavior to adult conformity		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*N*
	1 very gradual transition	Cowichan		2	7	8	12			29
	to	Ute	1		22	6	1			30
	7 very abrupt transition							Cut Off:		3
		X^2 value: 10.60								
		Level of confidence: 1%								
42	Severity of punishment		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*N*
	1 very mild	Cowichan	2	8	15	3				28
	to	Ute	21	8	1					30
	7 very severe							Cut Off:		1
		X^2 value: 21.36								
		Level of confidence: 1%								
43	Frequency of punishment		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*N*
	1 infrequent or never	Cowichan	1	12	14		1			28
	to	Ute	21	9						30
	7 very frequent							Cut Off:		1
		X^2 value: 24.40								
		Level of confidence: 1%								
44	Concern over handedness		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*N*
	1 no concern shown	Cowichan	17	5	4	1				27
	to	Ute	25							25
	7 extreme concern that child be right-handed	Level of confidence: Not tested								
45	Manner of handedness change		*X*			*R*				*N*
	1 very gradual	Cowichan	29			1				30
	to	Ute	25			5				30
	7 very abrupt	Level of confidence: Not tested								
	X inappropriate, or handedness not changed									
	R question not asked									
Age of Assumption of Adult Role (as indicated by participation in ceremonial functions, change to adult status through rites of passage, etc.)										
46	Rigidity of conforming to cultural norm		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*N*
	1 no cultural norm apparent	Cowichan	10	11	5	1				27
	to	Ute	29		1					30
	7 highly formalized norm, strict conformity							Cut Off:		1
		X^2 value: 20.71								
		Level of confidence: 1%								

47 Age of assumption of adult role
1 physiological maturity (puberty or later)
to
7 very young (2–3 years)

	1	2	3	4	5	6	7	N
Cowichan	20		3		3			26
Ute	29				1			30

Level of confidence: Not tested

48 Severity of socializing process
1 very gradual
to
7 very severe

	1	2	3	4	5	6	7	N
Cowichan		1	12	9	7			29
Ute		3	23	3				29

Cut Off: 3

X^2 value: 11.27
Level of confidence: 1%

49 Role of sex in determination of attitude toward child
1 sex differences recognized and compensated for
to
7 no recognition of sex differences in development

	1	2	3	4	5	6	7	N
Cowichan	1	1	1	5	3	6	4	21
Ute	1	1	5	6	2	3	4	22

*Cut Off: 3

X^2 value: 1.00
Level of confidence: NS

50 Aspirations for child observed
1 not clearly defined
to
7 highly detailed and defined

	1	2	3	4	5	6	7	N
Cowichan	3	15	9	1				28
Ute	13	7	2					22

Level of confidence: Not tested

51 Extent to which aspirations appear realistic
1 extremely realistic
to
7 extremely unrealistic

	1	2	3	4	5	6	7	N
Cowichan		16	8					24
Ute	9	9						18

Level of confidence: Not tested

52 Acceptance of deviants from the norm (crippled, blind, etc.)
1 complete acceptance
to
7 extreme non-acceptance

	1	2	3	4	5	6	7	N
Cowichan		22	4					26
Ute	4	6						10

Level of confidence: Not tested

* Small theoretical frequency