

August 3, 1972

To: Atoll Populations Conference Participants

From: Michael J. Levin

While computerizing the Yanomamo data collected by Napoleon A. Chagnon I have developed a number of simple programs which are potentially useful to anthropologists while they are in the field and while they are analyzing their data after fieldwork. Among these are programs which will print genealogies for given individuals, determine biological relationships among people within a population, and compile and display various demographic and socio-cultural data for traditional analysis. I am now preparing to use these techniques in the research leading to my dissertation.

I have discussed at some length with Vern Carroll the possibility of using atoll data in the dissertation, and we have both become increasingly enthusiastic as I have computerized his data. Therefore, I am proposing to you that in exchange for the use of certain of your demographic data, that I shall do as much analysis for you as is possible given constraints of time and energy. If all sixteen participants agree to the use of certain of their data, a section of the monograph in preparation will be devoted to a comparative analysis of the atoll societies with respect to demography and marriage patterns. This will be useful not only to demonstrate what kinds of behavior exist on atolls, but also to summarize the ethnographic information presented in other papers in the conference.

I have developed the following form which I suggest as a means of assembling information from the diverse sources anthropologists use to collect data. A similar form has been used with several graduate students who have gone into the field and are sending back data to me; it has also been used by several students on their return from field work to assemble collected data. If two forms are put on one ditto master, and then the sheets cut in half, they fit conveniently into 4 x 6 card boxes, and are usable for other types of analysis. If the information is sent to me in this form, I can easily punch cards directly from the coded information. However, this is only a suggestion. It is possible to code and punch cards from almost any set of data which has been systematized in some way. Here is the form, with explanations:

SAMPLE CODING SHEET

ID: Ethnic Identity: Sex:

Name(s):

Date of Birth: Code: Place of Birth:

Father(s): Code: Mother:

Adopters

Marital Status: First Menses: Age: Place:

Spouses                      Date of Marriage      Place of Marriage      Date/Reason for Termination

(1)

(2)

(3)

(4)

Residence at Time of Census:

Group Identification: Clan: Sub-clan: Lineage:

Occupation: Religion:

Date of Death: Place of Death:

Cause of Death: Native Concept:

Western Nomenclature:

Children, in order of birth:

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The following explanations should be helpful in constructing the coding sheet which is most useful for your atoll. (This is important: you want to develop a set of codes which you find you are most comfortable using and fits your needs the best. As long as you are systematic (e.g., you always code the mother in the same place on the card) then I can punch the cards easily).

ID. Leave blank. I will fill these in myself, and will number all fathers, mothers, and spouses. The computer will check and list the children.

Names. List all alternate names for an individual, but note which is used most often. You must name all individuals who occur in a genealogy in order to get a complete genealogy. So include stillborn, known abortions, infanticides, etc.

Name such babies as so-and-so's daughter or son or child. All people who appear in the father's, mother's, or spouse's column should appear as an 'ego' as well. Don't worry about missing people; I will send you a print-out with the problems I can't solve as soon as the first information is punched. Therefore, it is not worth your while to try to check every case. However, try to have all names.

Ethnic Identity. Code 1. Unquestionably 'native'; 2. Unquestionably 'alien'; 3. May be considered 'alien' or 'native' depending on the context; 4. Not known. 'Aliens' who are neither resident, married to a 'native', nor the parent of someone in categories (1) or (3) above probably should not be included in the 'total population'.

Date of Birth. Note under "Code" whether the information comes from: 1. subject or subject's mother; 2. other informant; 3. official census or register. Precede the date with "c" if approximate or if there are conflicting records. If no date of birth is known; note the census year some place, give the age, and whether estimation is from: 4. Physical appearance; 5. Calculated with respect to historical events; 6. Rank order and curve fitting (a la Rose); 7. Subject's self-report; 8. Photograph.

Place of Birth. Be as specific as possible in giving information on places of birth, marriage, and death. If housesites are known give these. Provide a map with a key to these (if possible and practical). Give name of island for foreign births.

Father(s) Code. 1. If unquestioned (biological and social); 2. If generally (but not universally) agreed; 3. If only some say (minority view); 4. If informant alone asserts. Record each father mentioned, and give the code for each.

Adopters. If there are multiple or serial adopters note this on the front of the cards or papers, and give names on the back. I can number these and compare biological relationships among adopted and real relationships. You might wish to develop a code for the status of the adoption (e.g., 'formal', 'informal').

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Marital Status. Record: 1. Unmarried; 2. Married (defined as openly living together); 3. Separated (not living together, other than 'temporarily'); 4. Divorce (not living together and unlikely to reunite); 5. Widowed.

Spouses. Record all spouses on cards. Precede date with "c" if approximate or estimated. Try to distinguish order if possible. If marriage terminated, attempt to give date and reason.

Residence. Record place at time of census. If away from home atoll, note reason.

Death. Precede date by "c" if estimated or approximate. For cause of death note native and Western cause if known. For child deaths, note: 1. Induced abortion; 2. Spontaneous abortion; 3. Still birth; 4. Infanticide; 5. Born live but died within a week; 6. Died within a month; 7. Died within first six months; 8. Died before one year.

N.B. These need not be the only categories. We can construct residential histories if given sequential data on residences with respect to major historical events (e.g., a typhoon). Also, if you are interested in land tenure or production, if you code this information I shall be very happy to run programs which will compile your data for you.

I shall do four major studies with the cross-cultural data. In general, we should see if atolls of different population sizes and composition have statistically significant variations in behavior.

1. Age and sex pyramids for each atoll. Age and sex pyramids will be formed for each atoll in the ethnographic present, and for different years in the past (if sufficient data is available). Also, if there is time, simple simulations will be run to predict population size in the future. We should see the effect of immigration and emigration as well as different population/land ratios and how these effect the age structure.

2. Differential fertility. Determination for the age of first live birth for all mothers and all fathers, difference of age of spouses at marriage, number of children per marriage and spacing of children, age at first marriage for spouses by sex, and number of spouses per person will be made. With this information we can see if there have been changes over the last generation or two generations in age at marriage and the beginning of child-bearing and raising and note how this effects the expanding population size of many of the islands.

3. Migration matrices. For each individual we should try to collect maximal data on movements among the villages and to the "outside world" during the life time. Minimal data is obtained by dates and places of birth, marriage and death. Other data can be obtained from the computer, e.g., places and dates of offsprings' birth. This information will allow us to see the extent of migration in and out of the population and to see if this has been changing over the last few generations.

4. Marriage patterns and marriage rules. Programs have been developed to compare biological relationships among spouses in populations. The programs can also be applied to any group of people within or between populations (e.g., relationships among important political or religious figures could be determined). In those societies where there are marriage rules, it should be possible to compare the rules with the actual practices. If housesites are known and plotted, then the relationship between biological and physical distances can be determined.

Needless to say, since the population of Micronesia is expanding very rapidly, it is important to understand what the dimensions of this expansion are, and to predict the extent of the continued population growth. I hope that these studies will serve the dual purpose of allowing us to see what the current demographic situation is, and to help predict what the circumstances may be in five, ten or twenty years.

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