

Relation to Head of Household Data in the Population Census

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Relation to Head of Household

- Is included in most population censuses
- Reflects an interest in household composition, but also operational concern with complete enumeration
- Often incompletely tabulated and little used
- Unit record data allows innovative uses

The Own-Children Method

- An innovative use of census data pioneered more than 20 years ago by Lee-Jay Cho uses census data to produce retrospective annual series of age-specific birth rates for 15 or more years prior to a census
- An extension of the method of **reverse survival** that works by *matching children to mothers in households* to ascertain age of mother at birth of each child

Birth History Reconstruction

- An extension of the own-children method developed by Norman Y. Luther
- Produces birth histories from census data by matching children to mothers and imputing deceased and 'non-own' children
- Powerful but complex procedure, requires unit record data, children ever born

The Mother-Child Relation

- For own-children and birth history reconstruction, we want to identify children in a household with their mothers, if present in the household
- For every suitable pair of persons in the household, we want to decide whether a mother-child relationship exists

Inferring (Mother,Child) Pairs

- If the head of household is female and there are persons in the household whose relation to head is 'child' the inference is trivial
- *If* child means 'child' and not 'child or child-in-law'; as in the 1990 Chinese census
- If the head is male, child of head may be child of previous wife of head

The Matching Process

- The best way to understand the matching process is to study listings of census person records, grouped by household and showing relevant information
- Study households one by one and consider what inferences you can make about mother-child relationships

Here's an Example

H	M	41	M	-----
S	F	44	M	3020
C	M	17	S	-----
C	M	12	-	-----

Can you guess what the codes mean?

This is a Very Easy Case!

- We have a male head of household aged 41, his spouse aged 44 (note!), and two male children of the head
- Are the children of the head children of the spouse of head? For certain? Probably?
- Here's a clue: the woman had borne three sons, of whom two were surviving at the time of the census

Illustrative Household Listing

- The above is a single case from among many thousands provided in the file `hhlist.txt` provided in the **resources** directory
- Your exercise for today involves perusing this file and looking at a small, judgemental sample of other more complicated cases
- Questions or comments?

History of Matching

- Matching originated with the development of the own-children method
- Purpose was solely to get ages of mother assigned to reverse-survived births, *i.e.*, a very narrow technical purpose
- Many people who have worked extensively with own-children estimates have never looked at the sort of example you just saw

Extension of Matching

- When you look at specific cases, however, you will quickly realize that many inferences of relationship between household members are possible
- Broad example: try to distinguish *families* from *households* and to identify all relationships within nuclear and extended families

Defining Household Variables

- Matching may be used in combination with individual information of all kinds to define many **household variables** for use in **household tabulations**
- Example: intergenerational literacy information, what proportion of illiterate parents have literate children (above relevant age limit)

Questions?
Comments?
Discussion?