

# Male age-specific fertility rates

Call with Bruno

## Own child method

$$f_{a-x}(t-x) = \frac{\frac{C_{x,a}(t)}{L_x}}{W_a(t) \frac{L_{a-x-0.5}^f}{L_{a-0.5}^f}}$$

where  $C_{x,a}(t)$  are own children aged  $x$  of women aged  $a$  enumerated in a census conducted at time  $t$ ,

$W_a(t)$  are women aged  $a$  at  $t$ ,

$L_x$  inflates the numerator to account for the children dying,

similarly  $\frac{L_{a-x-0.5}^f}{L_{a-0.5}^f}$  inflates the denominator to account for the mothers dying.

- Perform this computation for males
- $L_x$  comes from period life table in year  $t-x$ ?
- $L_x^f$  comes from period life table in year  $t-a$ ? (might be an issue to get it by ethnic group)
- Correction for unmatched children? (Higher for the case of father?)
- Sum  $f_{a-x}$  over reproductive ages in year  $t-x$  and get proportionate AFSR,  $f_x^{Om}(t-x)$ ?

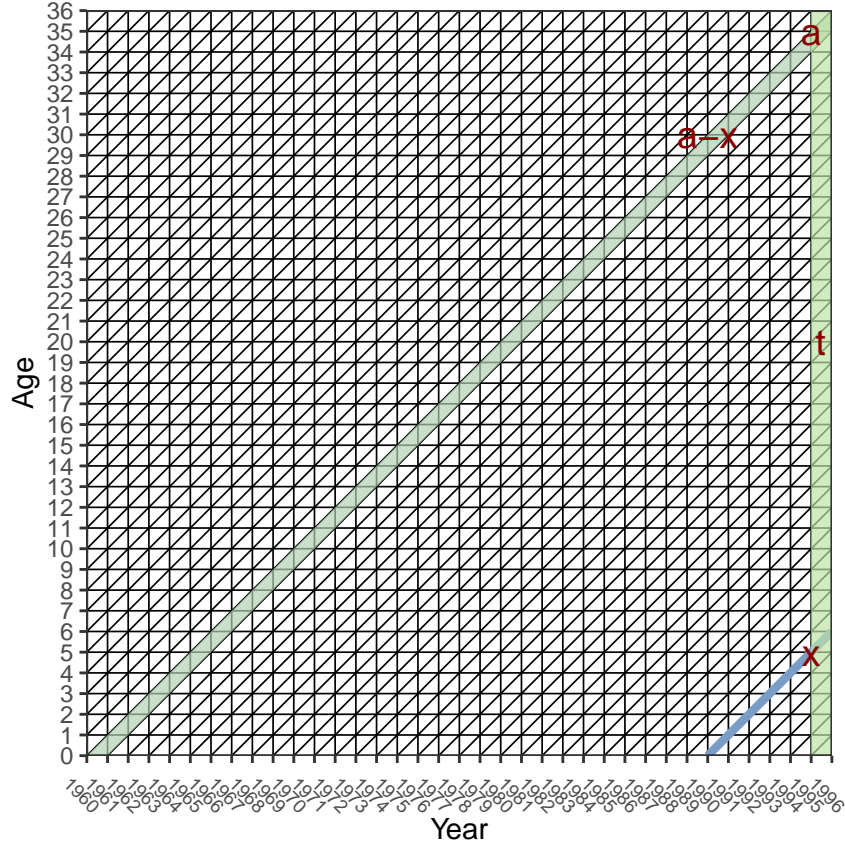


Figure 1: Visualization of formula

### Required data

- Number of children in single years by age of their fathers in single years (matched children)
- Number of children not living with their fathers by single years (unmatched children)
- Total number of women by single years
- Level of mortality both sexes and for female

### Schoumaker (2019)

$$TFR^m(t) = \frac{B(t)}{\sum_{x=15}^{79} f_x^{Om}(t) \cdot M_x(t)}$$

$$ASFR_x(t) = TFR^m(t) \cdot f_x^{Om}(t)$$

- Use own-child method to get both  $TFR^m(t)$  and  $f_x^{Om}(t)$ ? Or directly to get  $f_x^m(t)$ ?

### Points from call

- IPUMS: American community survey (yearly)
  - Apply own-child method per ethnic group

- Reverse survival on 5 years
- Var *poploc* for children <5 years old
- 80% live with their father
- 20% have dead father/father living in another HH: need to be redistributed