

# Supplementary Figures

## The formal demography of kinship: A matrix formulation

Hal Caswell  
Institute for Biodiversity and Ecosystem Dynamics  
University of Amsterdam  
Amsterdam, The Netherlands

[h.caswell@uva.nl](mailto:h.caswell@uva.nl)

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This supplementary document contains a complete set of kinship outputs based on mortality and fertility schedules for Japan in 1947 and 2014. For details of calculation and interpretation, see the paper.

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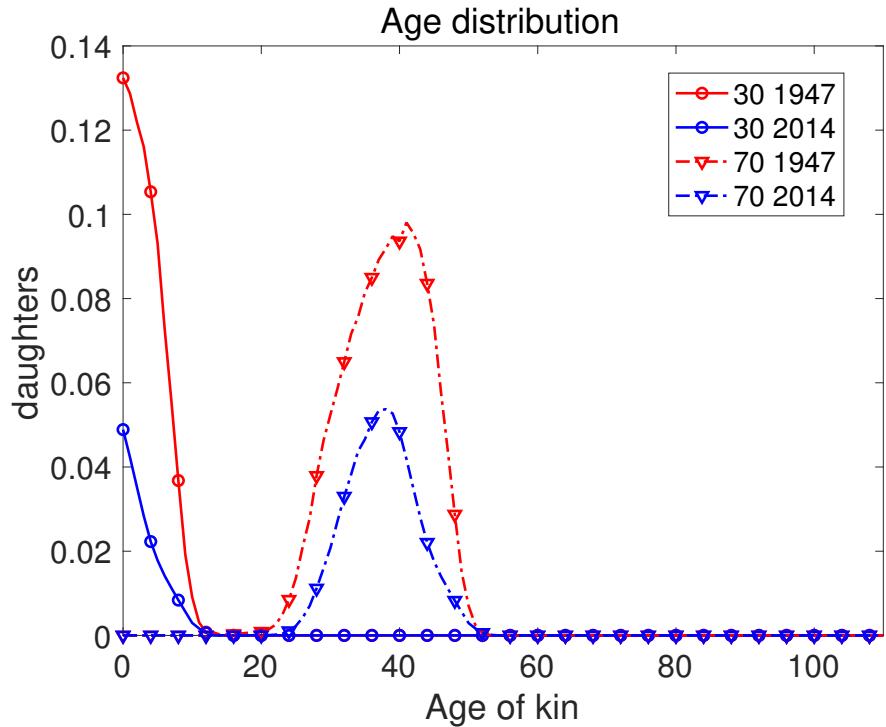
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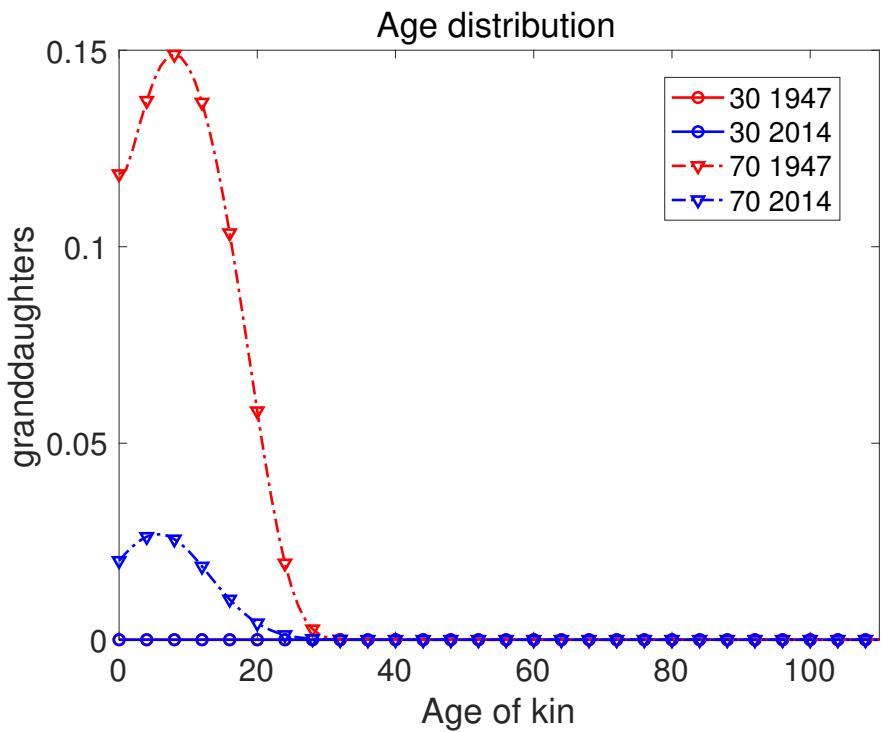
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## 1 Age distributions

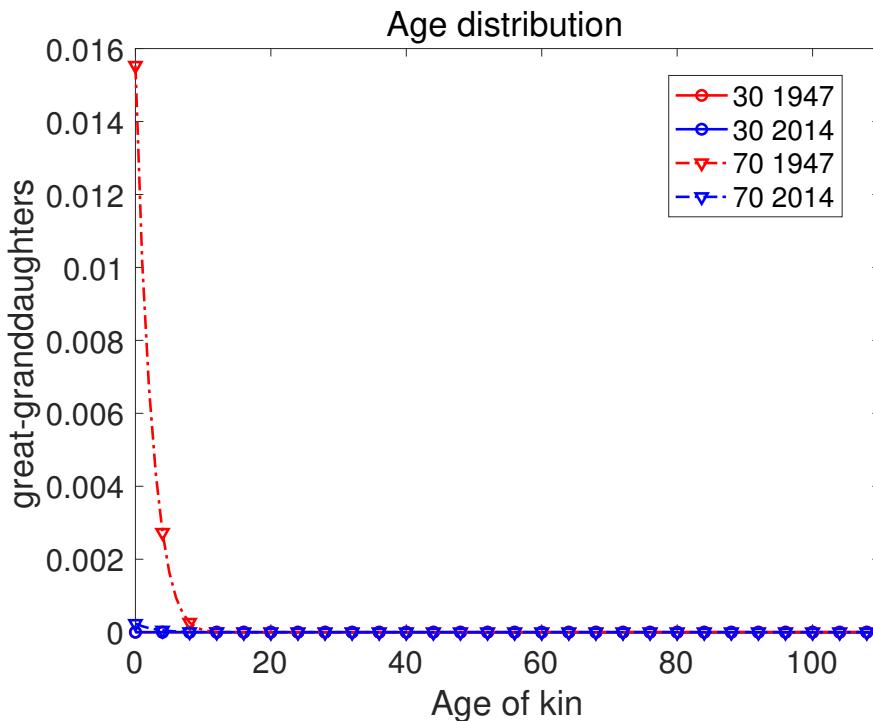
Age distribution: daughters



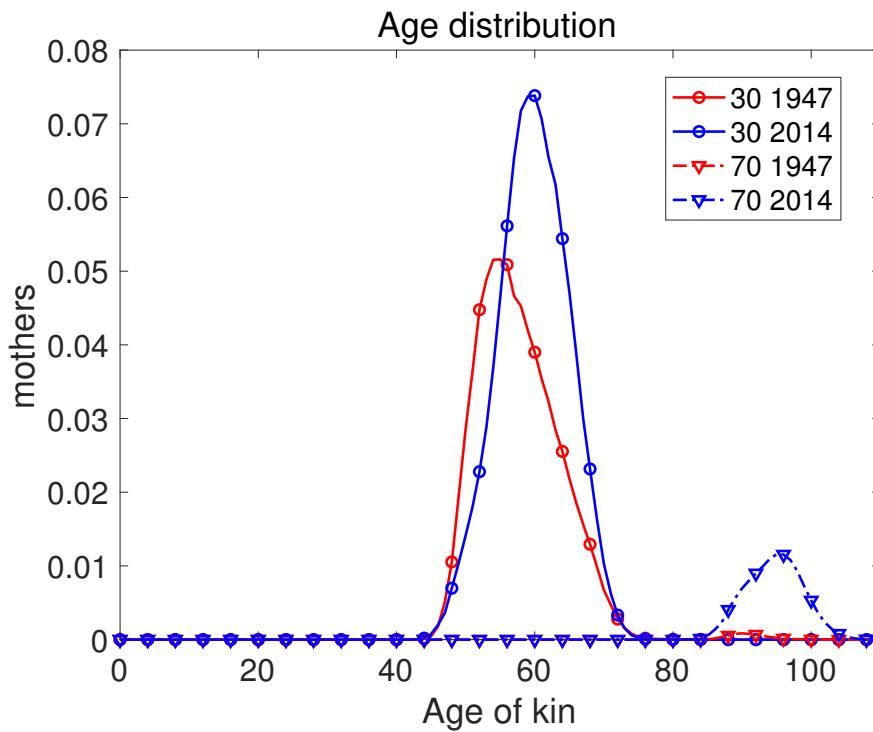
Age distribution: grand-daughters



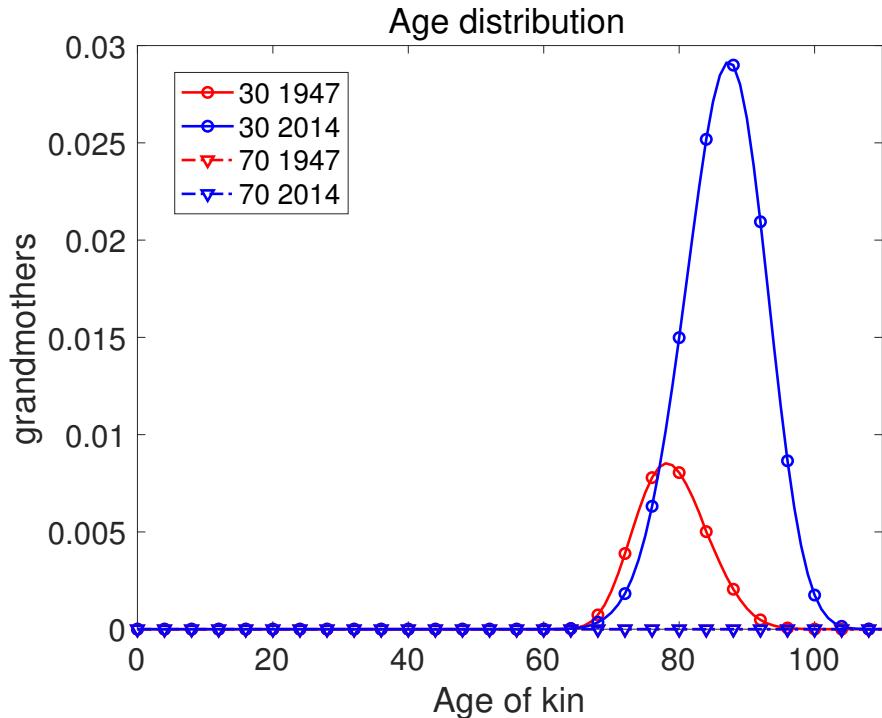
### Age distribution: great grand-daughters



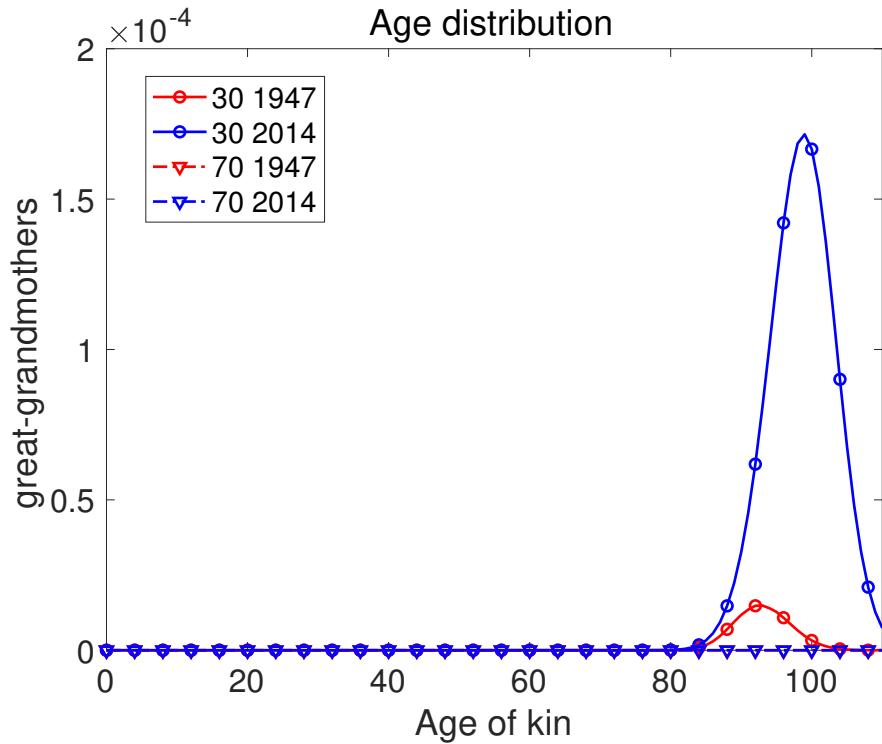
### Age distribution: mothers



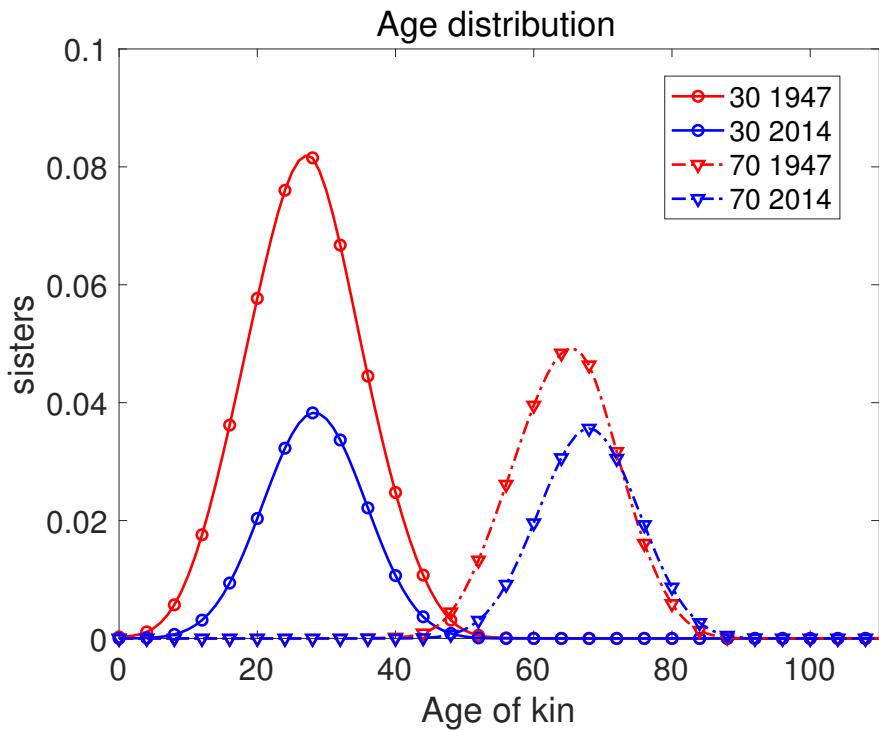
Age distribution: grandmothers



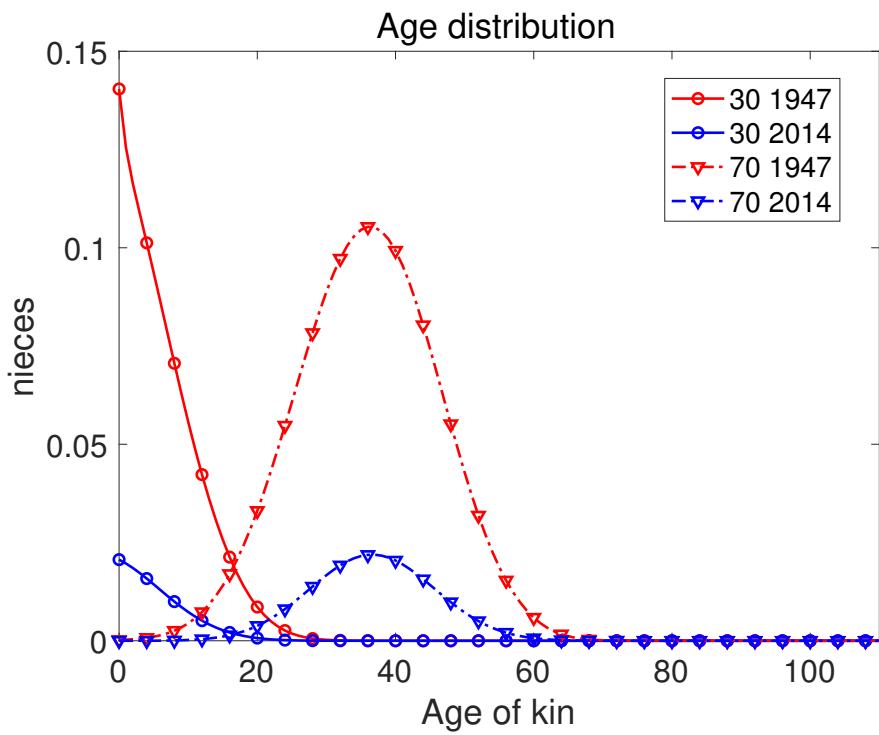
Age distribution: great-grandmothers



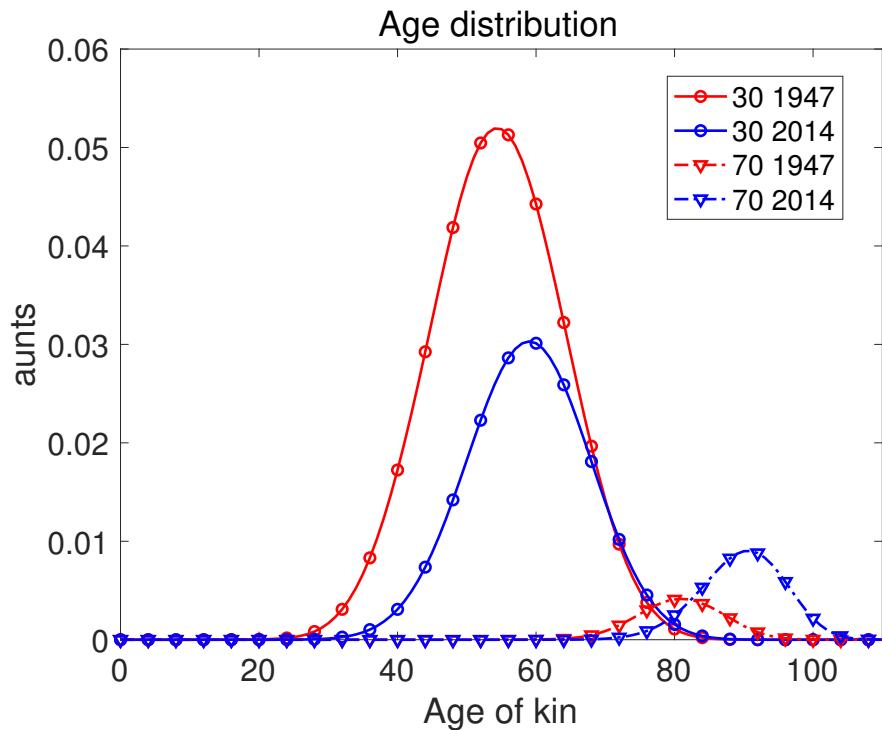
### Age distribution: sisters



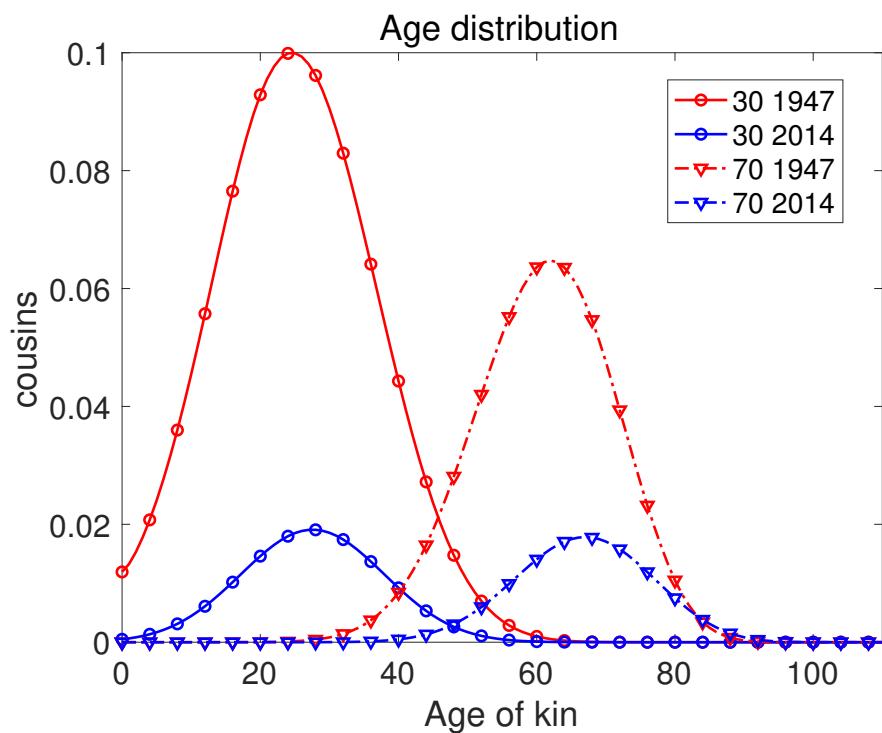
### Age distribution: nieces



### Age distribution: aunts

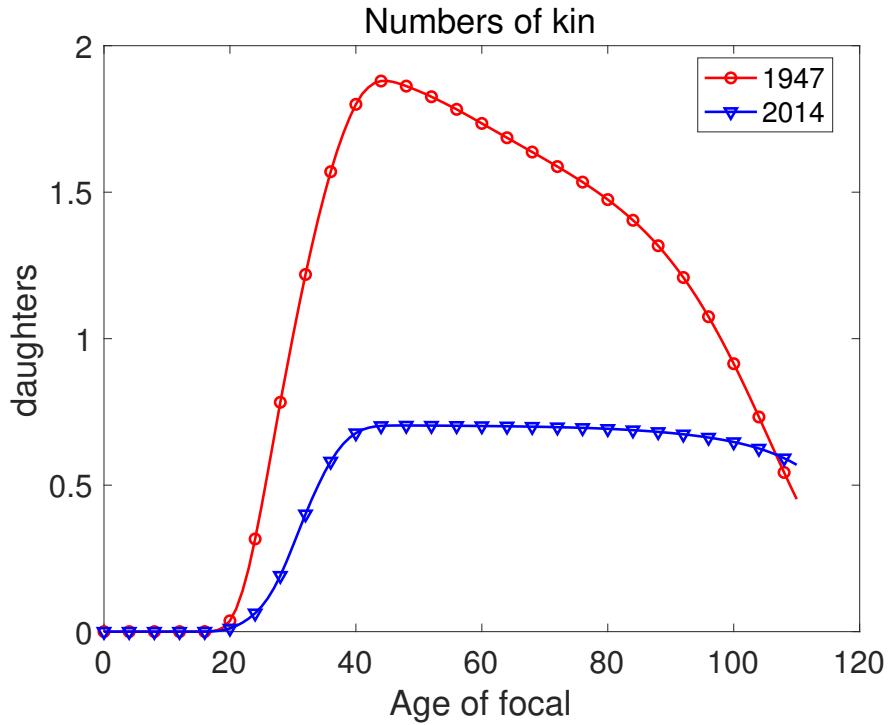


### Age distribution: cousins

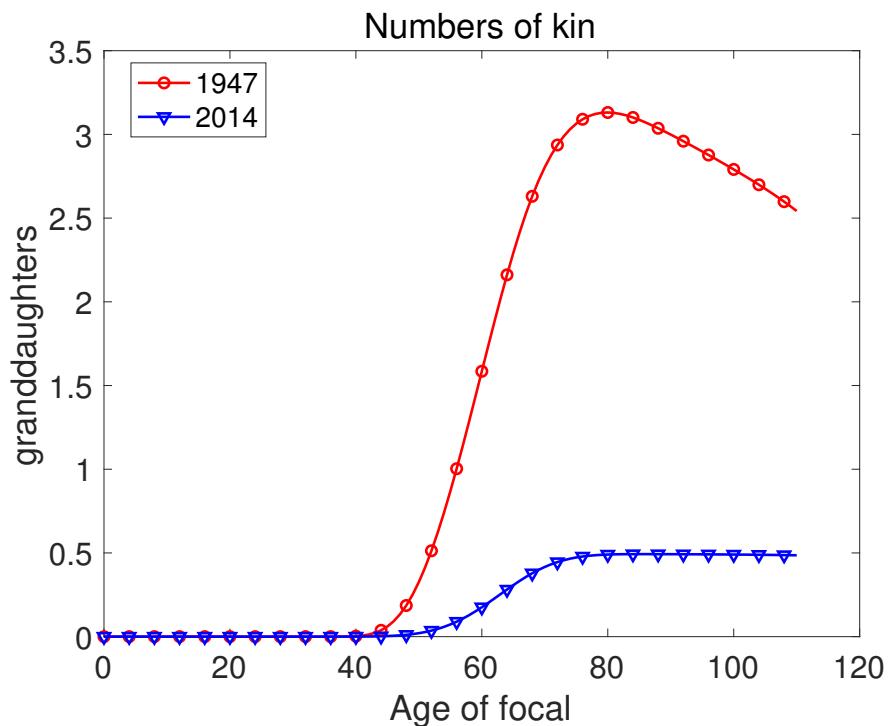


## 2 Numbers of kin

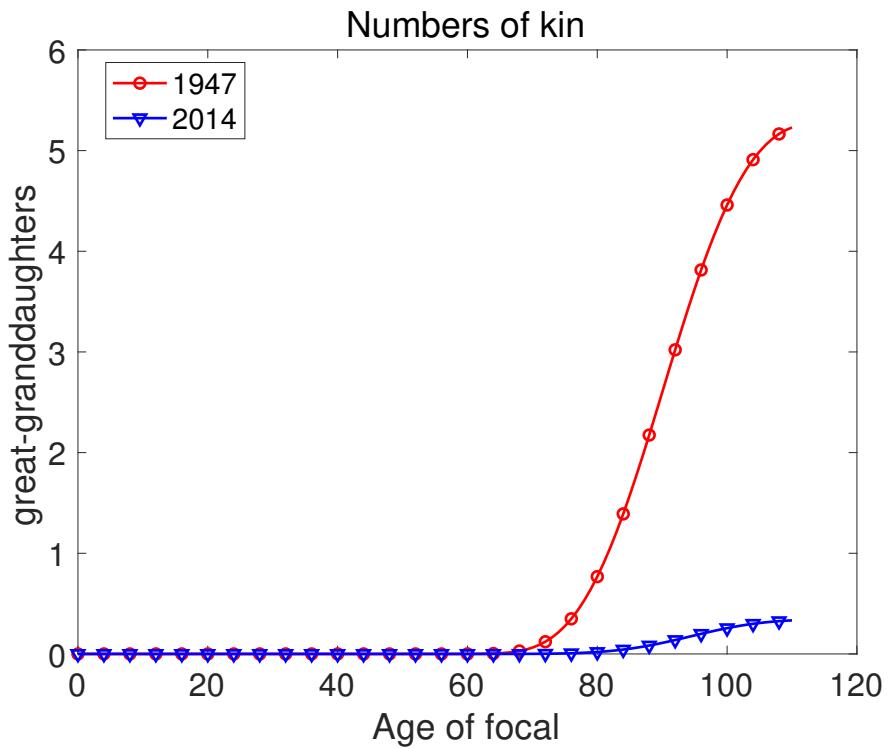
Numbers of kin: daughters



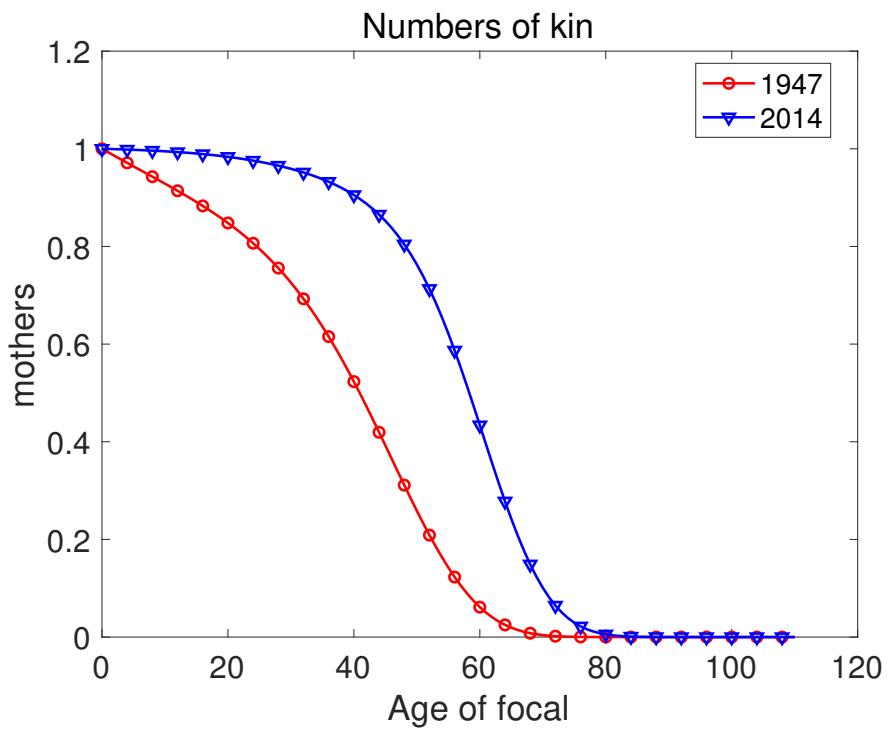
Numbers of kin: grand-daughters



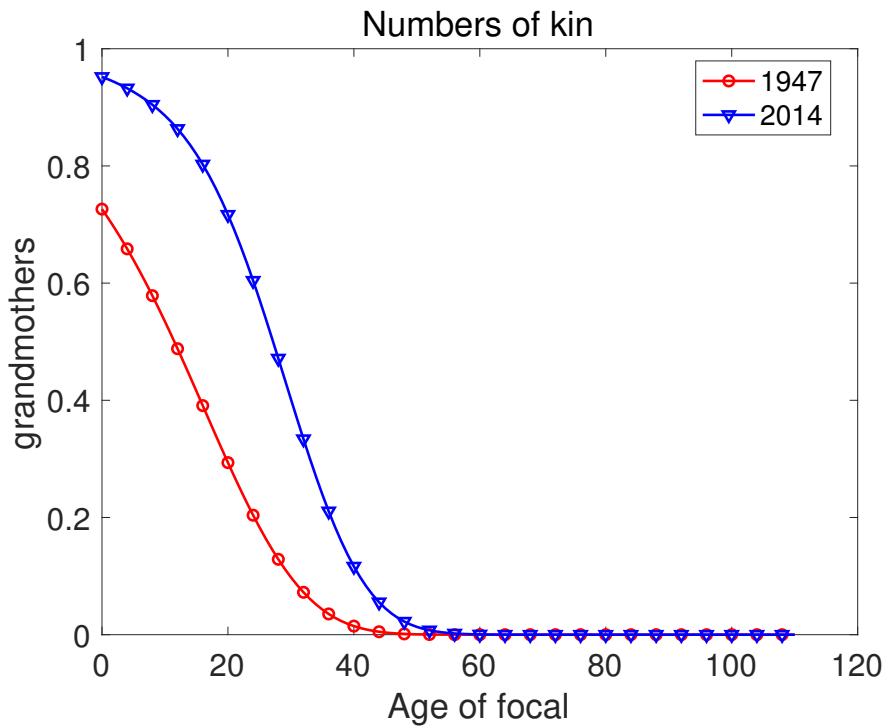
Numbers of kin: great grand-daughters



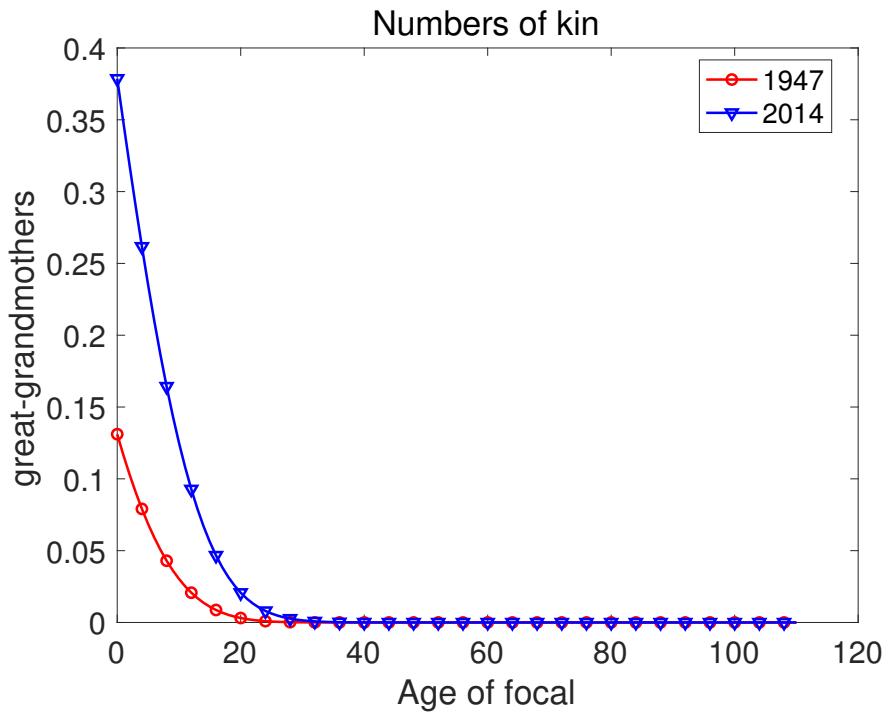
Numbers of kin: mothers



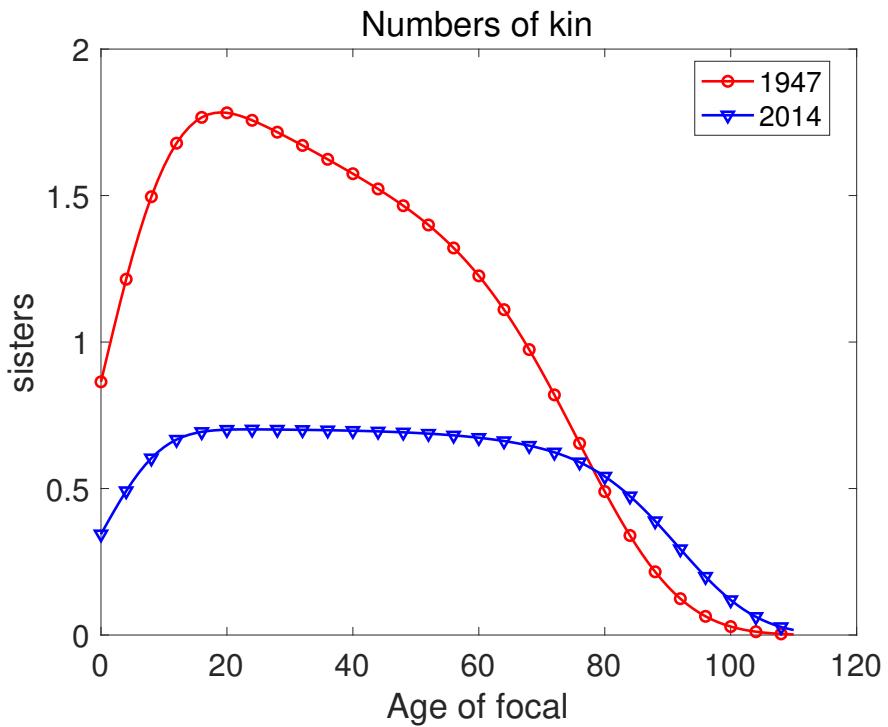
Numbers of kin: grand-mothers



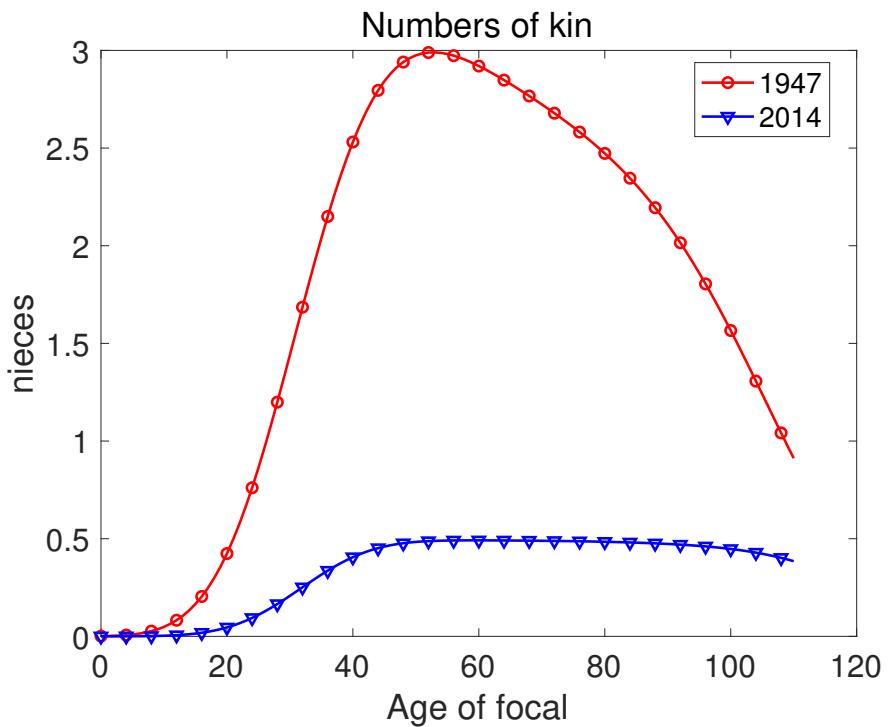
Numbers of kin: great grand-mothers



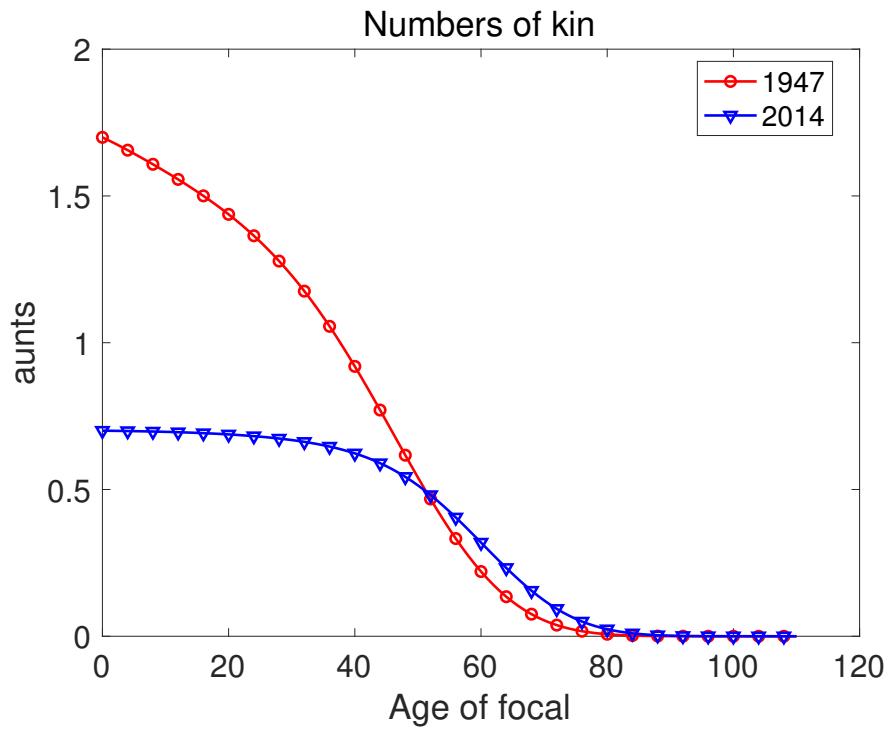
Numbers of kin: sisters



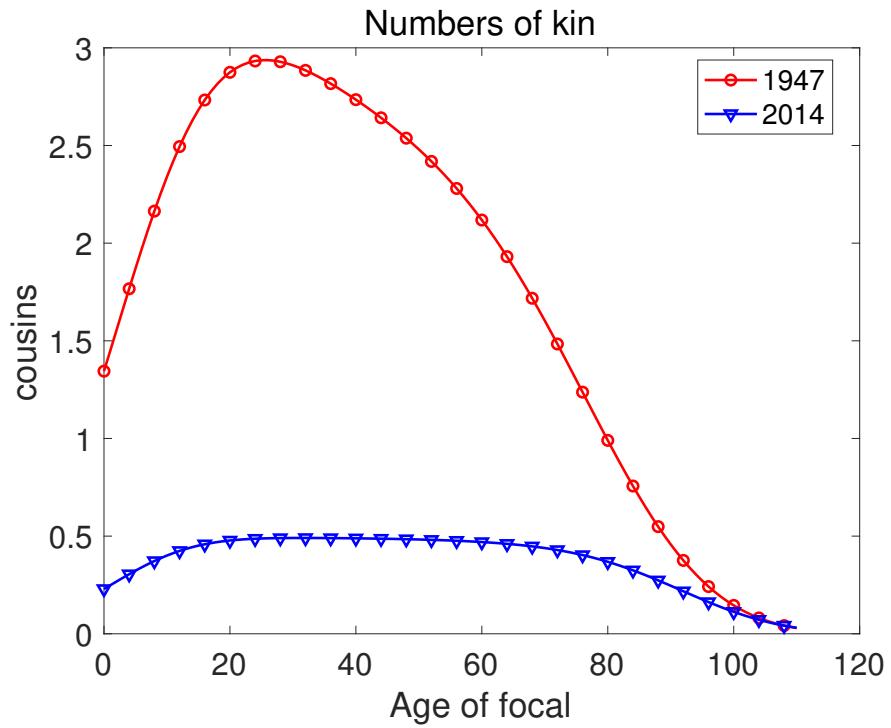
Numbers of kin: nieces



Numbers of kin: aunts

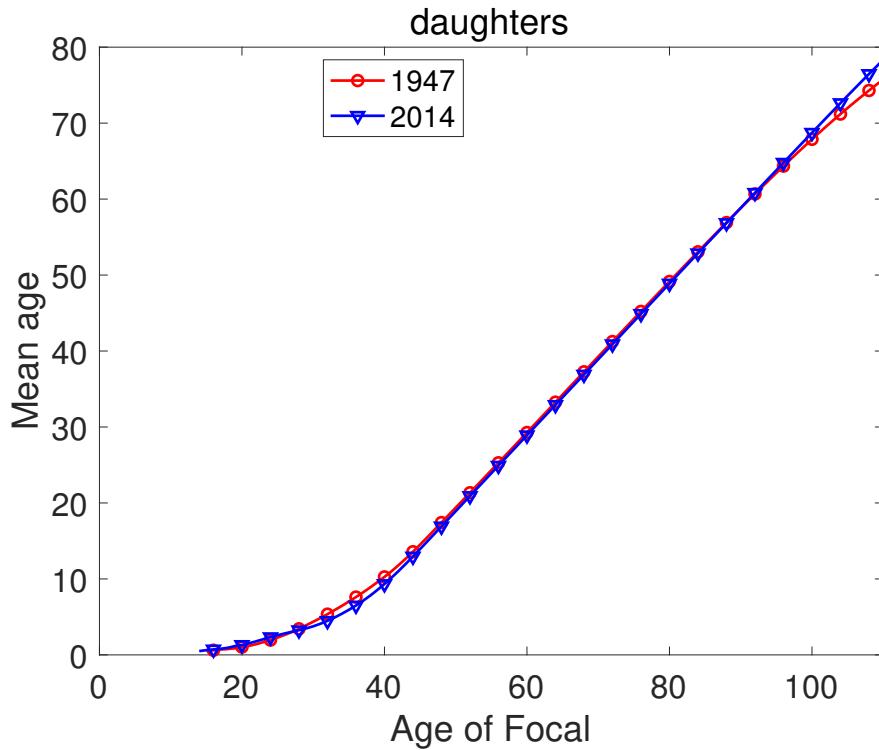


Numbers of kin: cousins

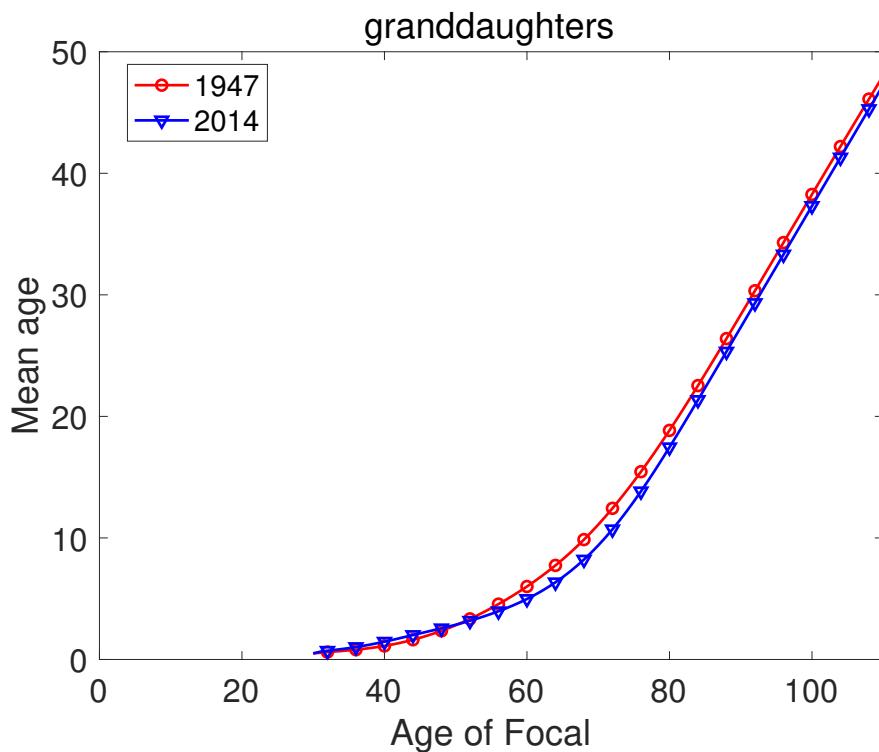


### 3 Mean age of kin

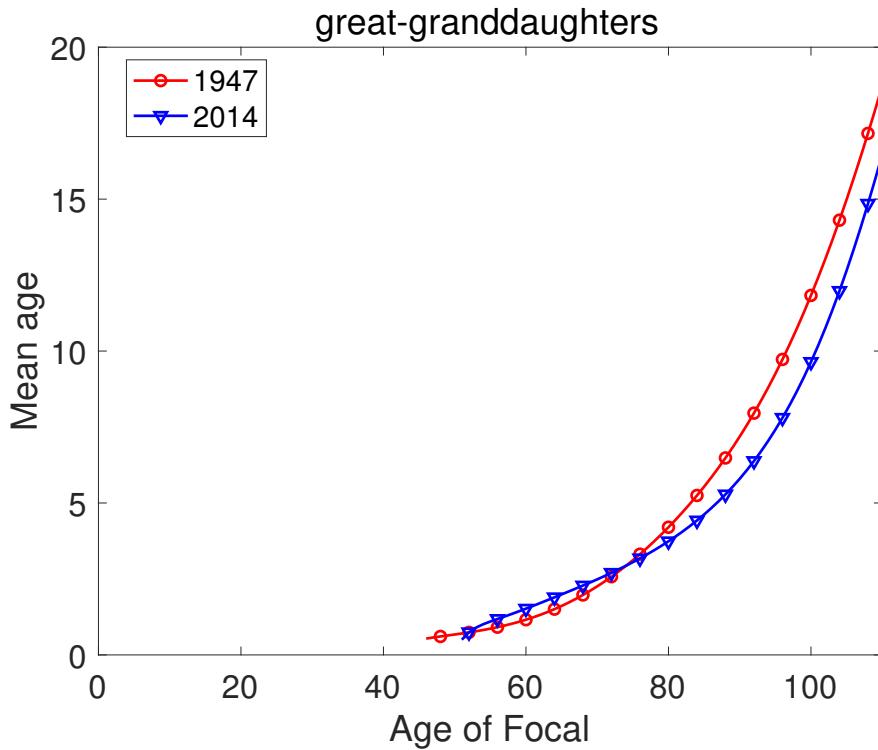
Mean age of kin: daughters



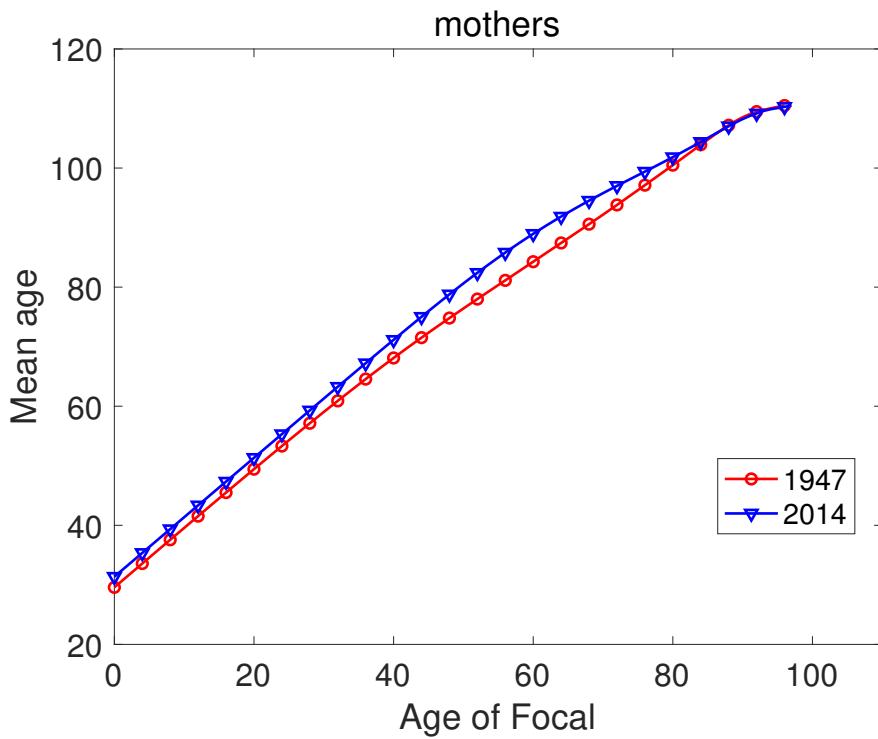
Mean age of kin: grand-daughters



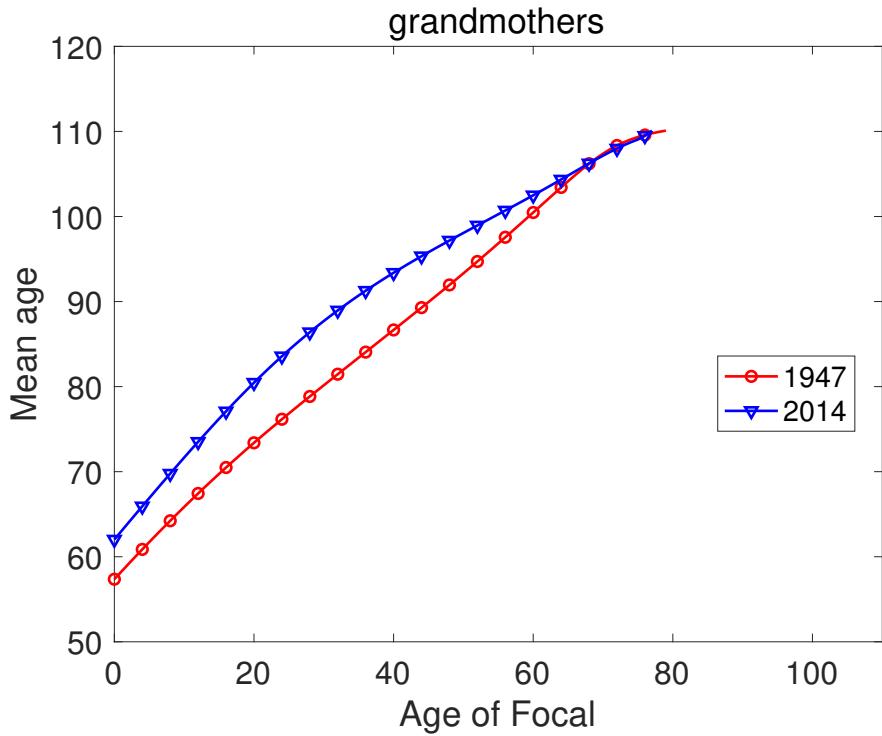
Mean age of kin: great grand-daughters



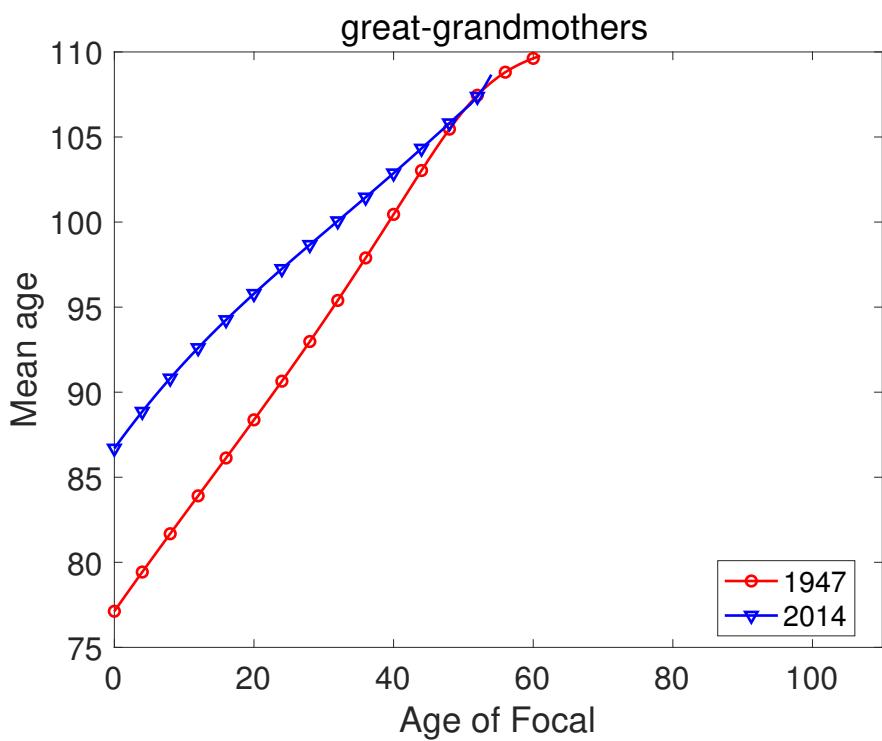
Mean age of kin: mothers



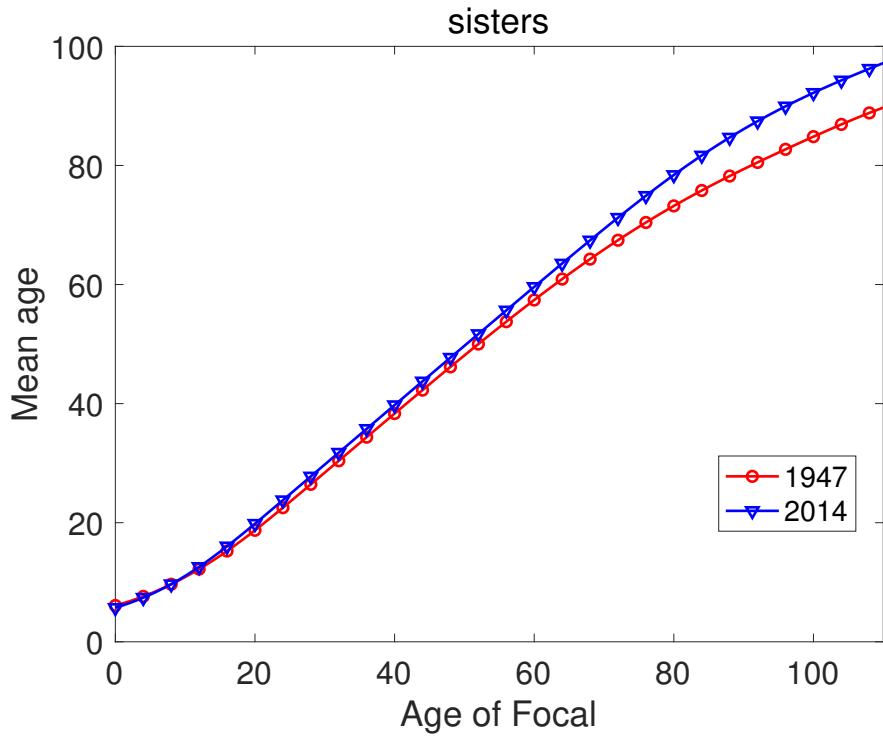
Mean age of kin: grand-mothers



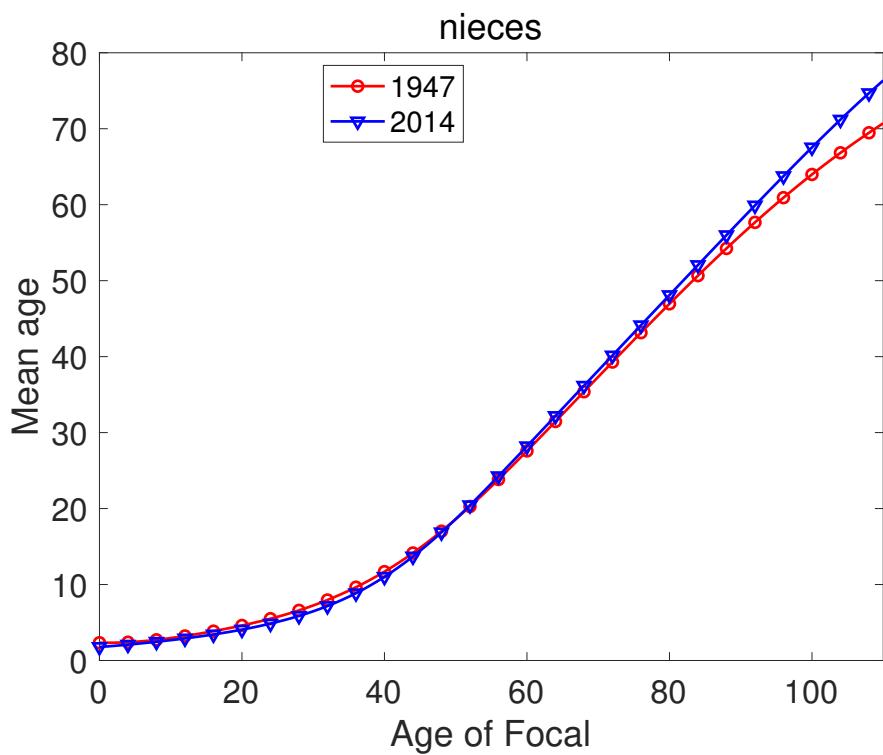
Mean age of kin: great grand-mothers



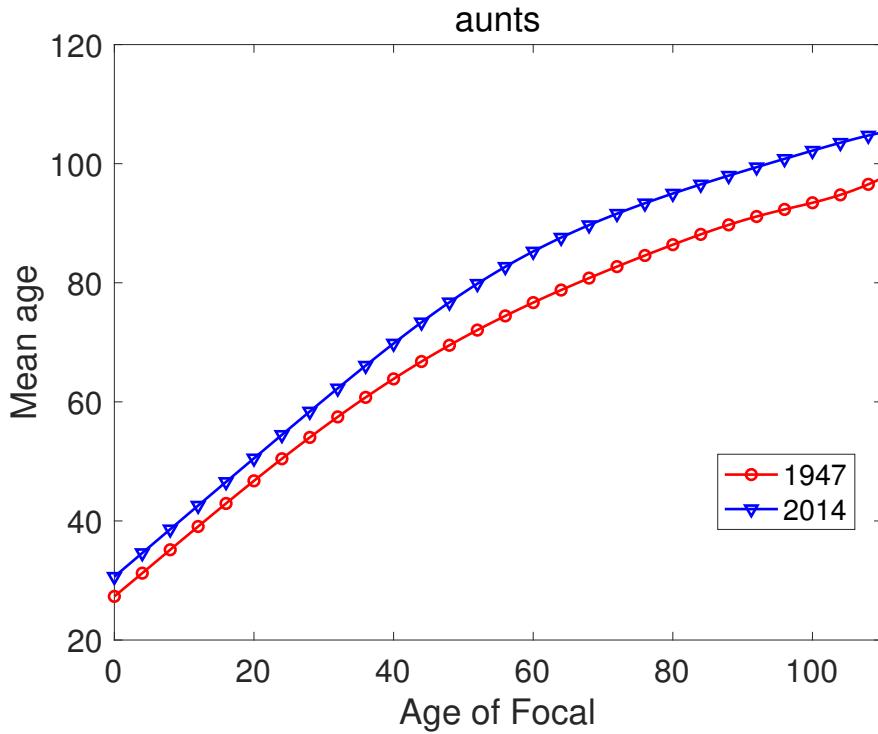
Mean age of kin: sisters



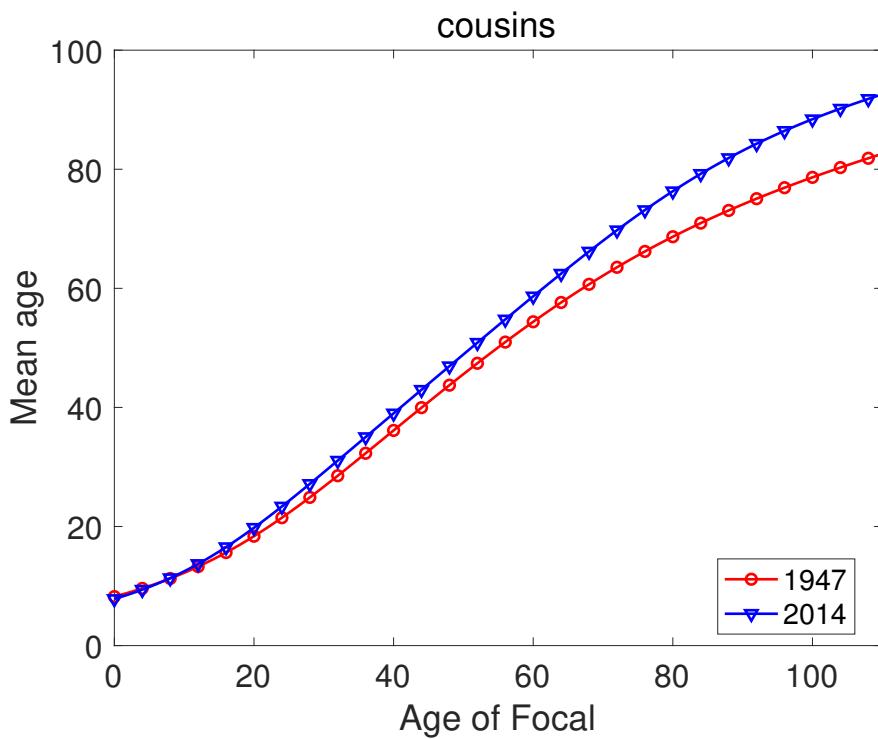
Mean age of kin: nieces



Mean age of kin: aunts

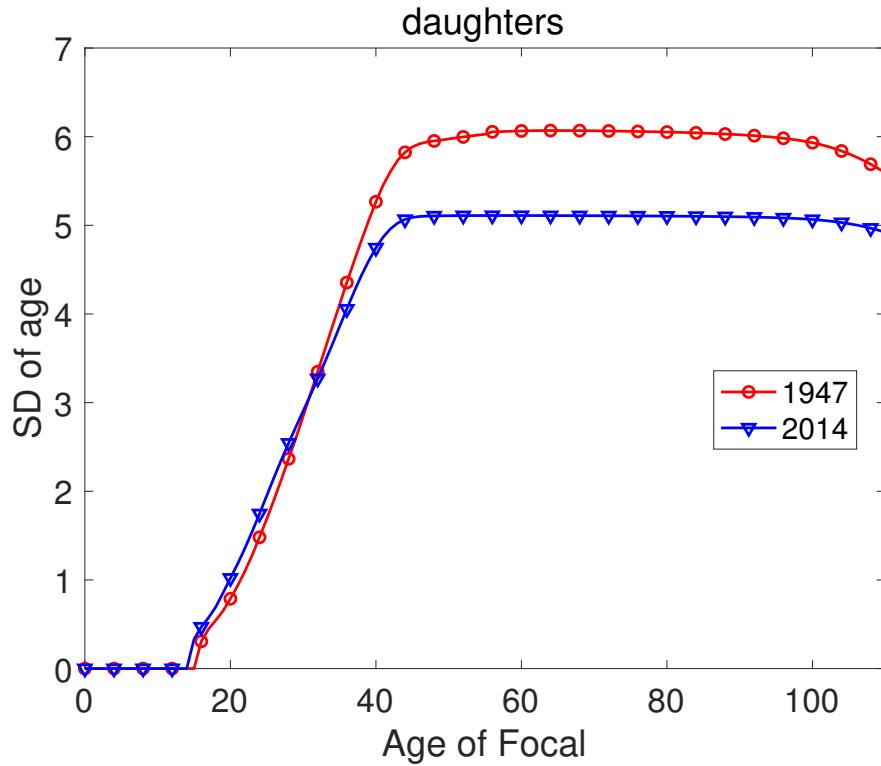


Mean age of kin: cousins

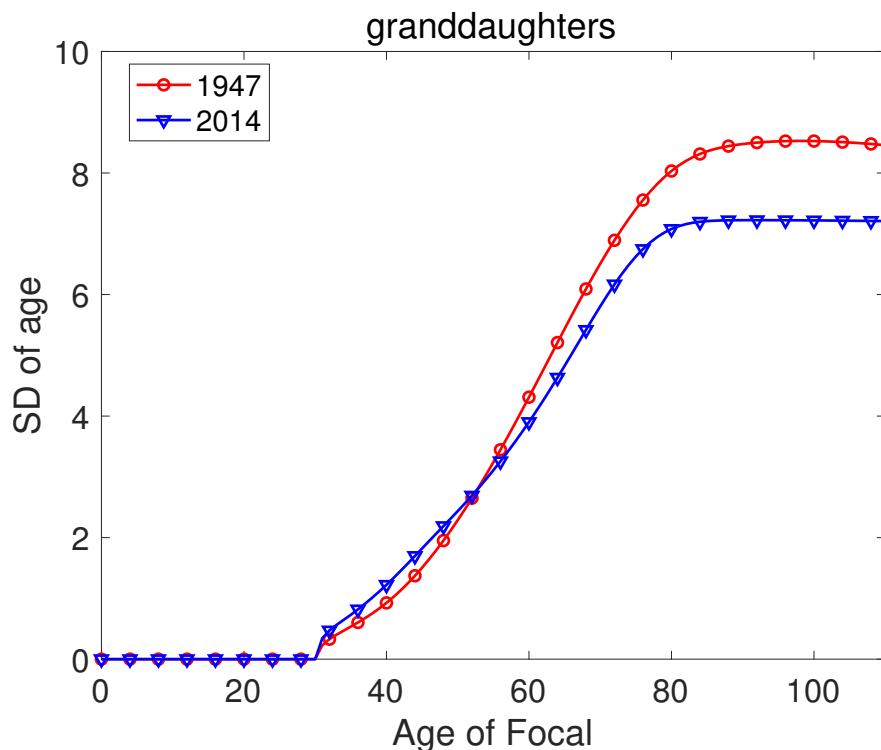


## 4 Standard deviation of age of kin

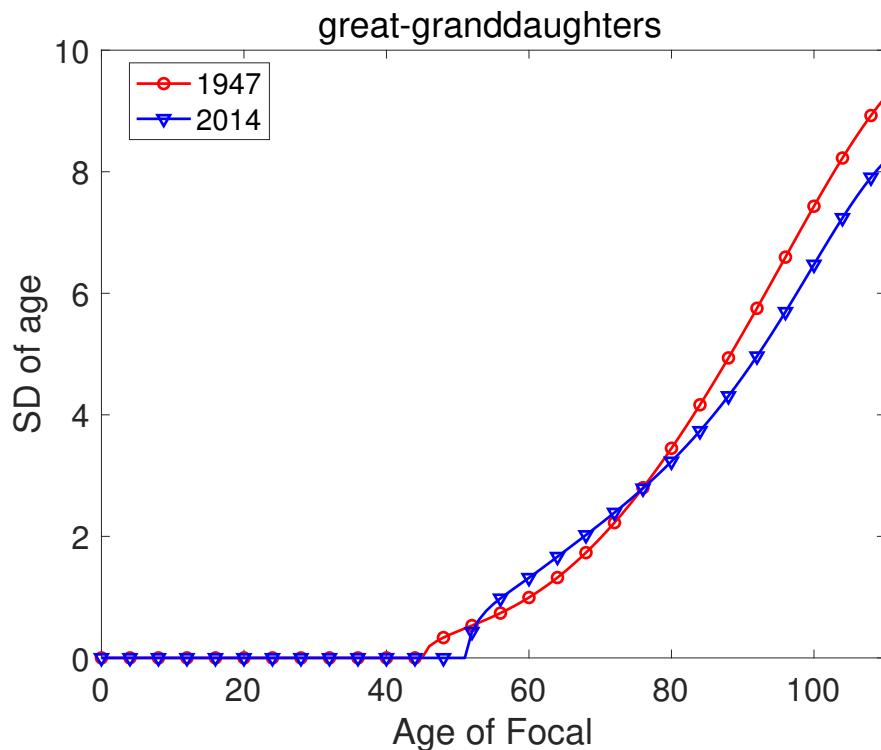
Standard deviation of age of kin: daughters



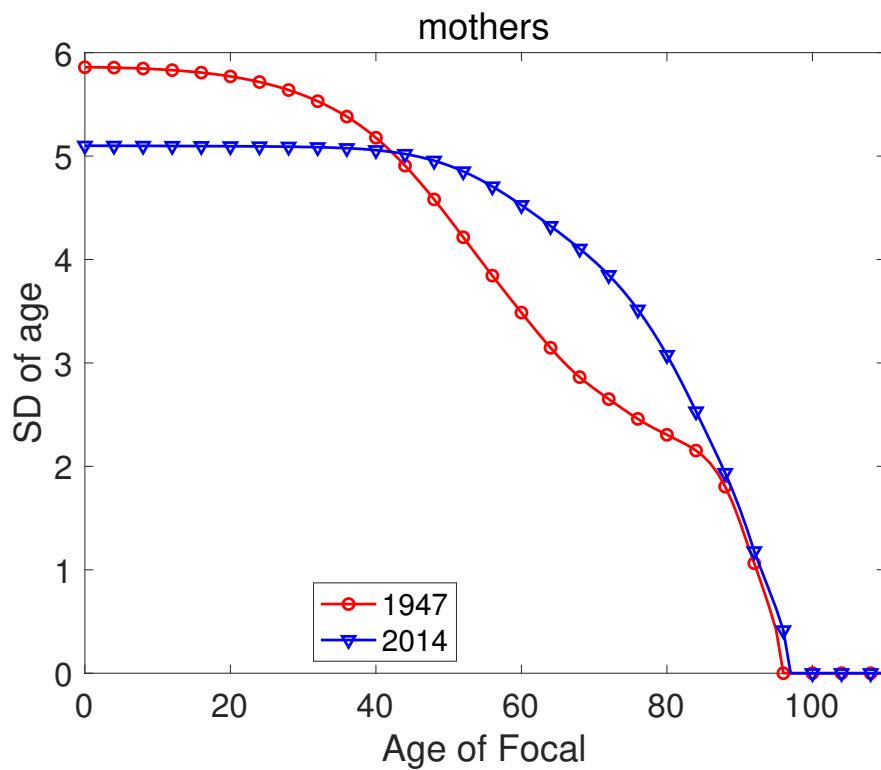
Standard deviation of age of kin: grand-daughters



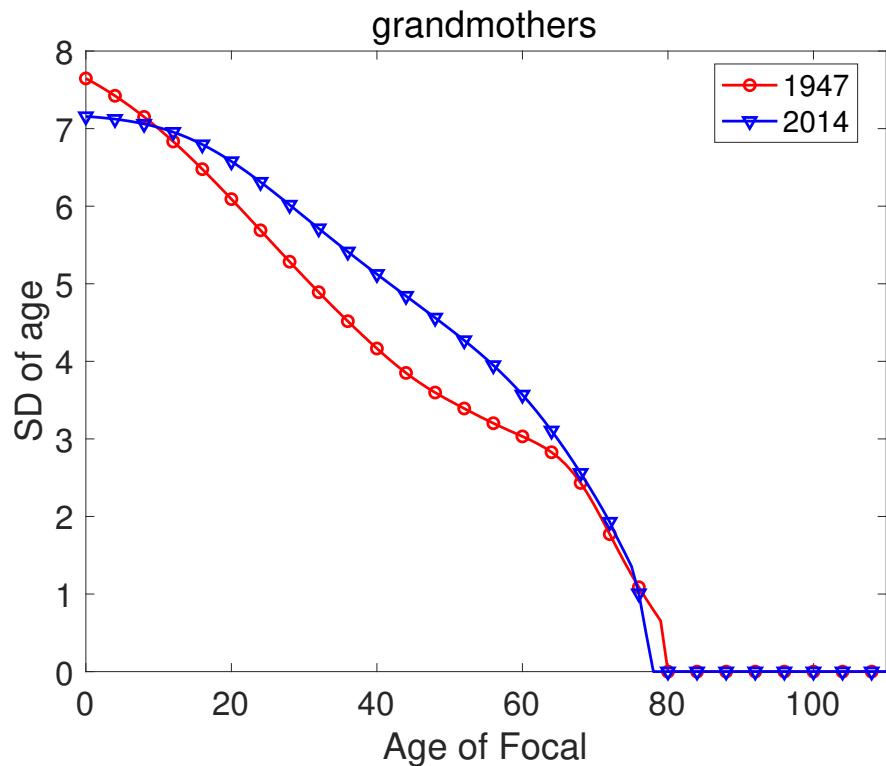
Standard deviation of age of kin: great grand-daughters



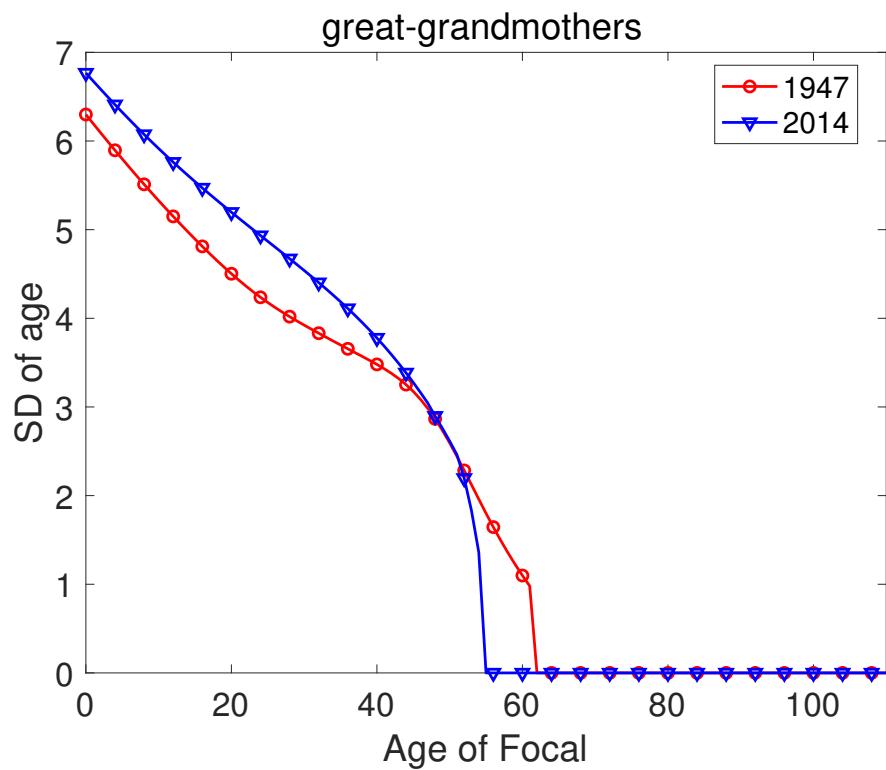
Standard deviation of age of kin: mothers



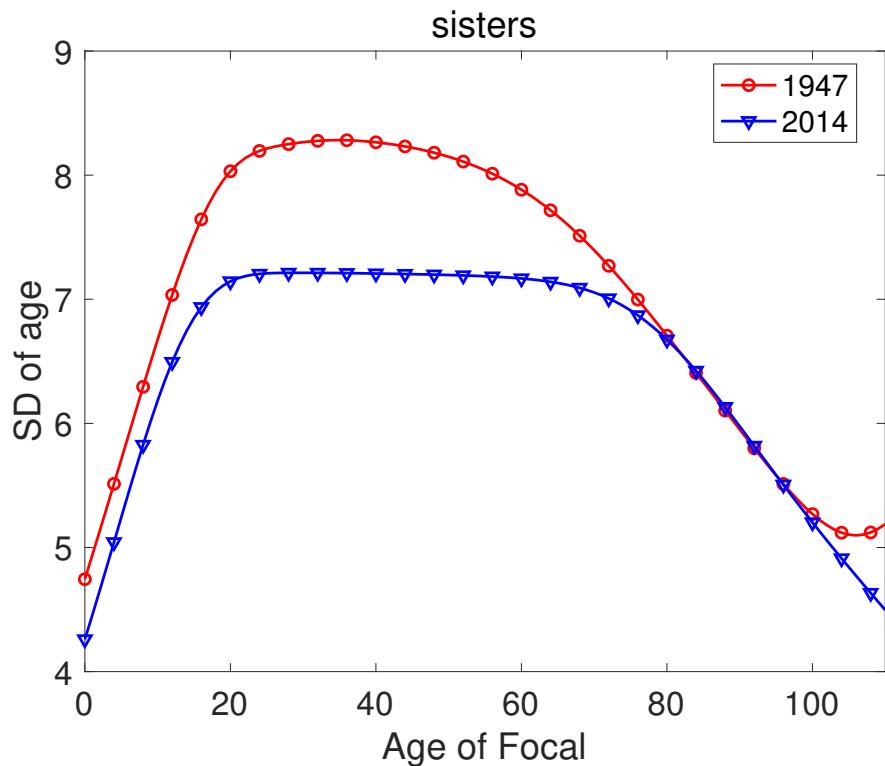
Standard deviation of age of kin: grand-mothers



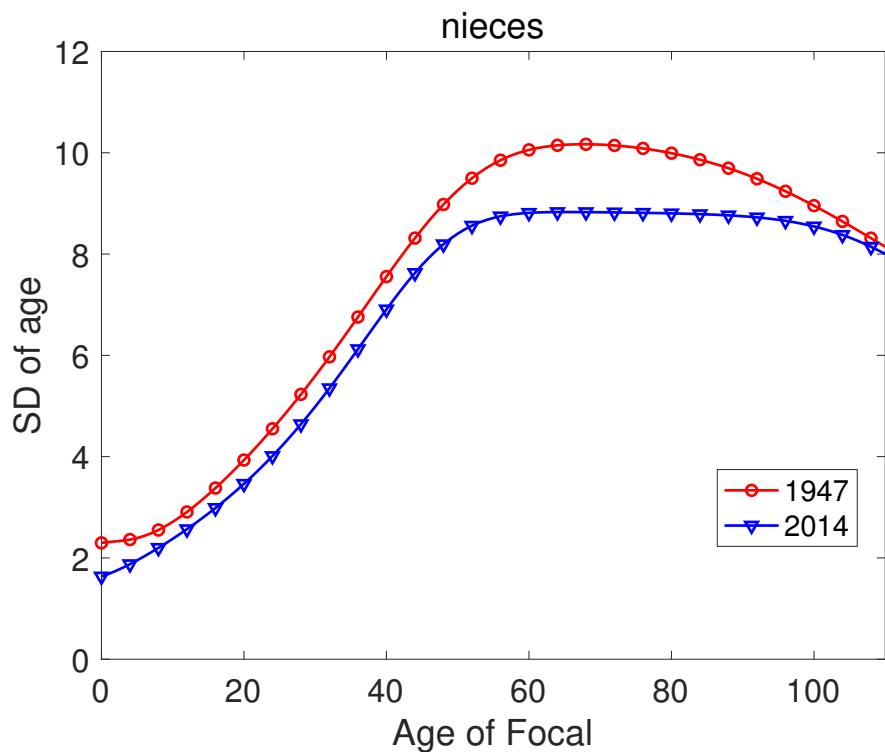
Standard deviation of age of kin: great grand-mothers



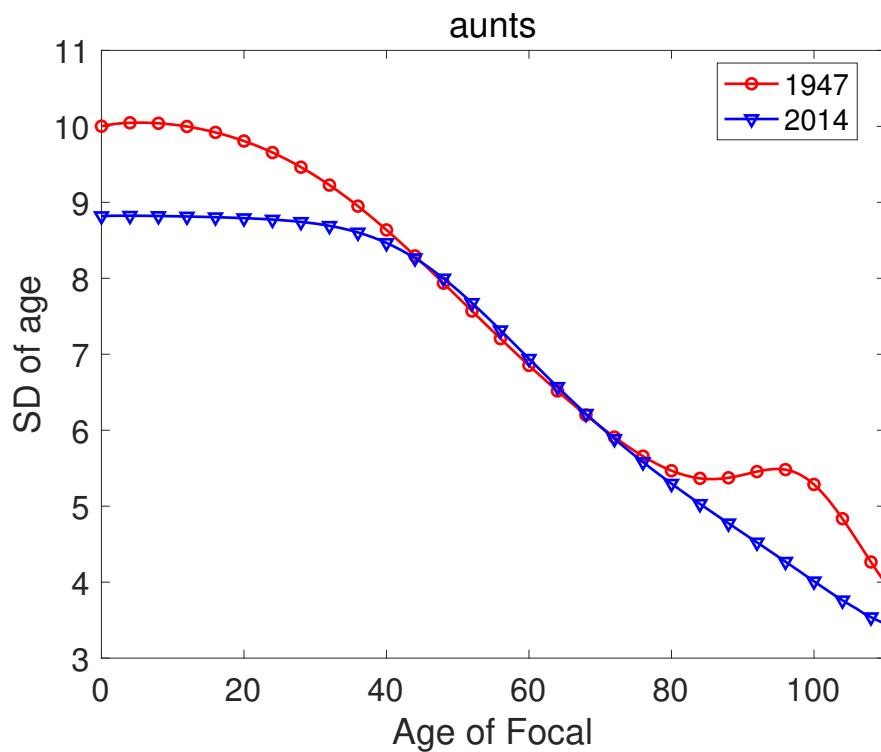
Standard deviation of age of kin: sisters



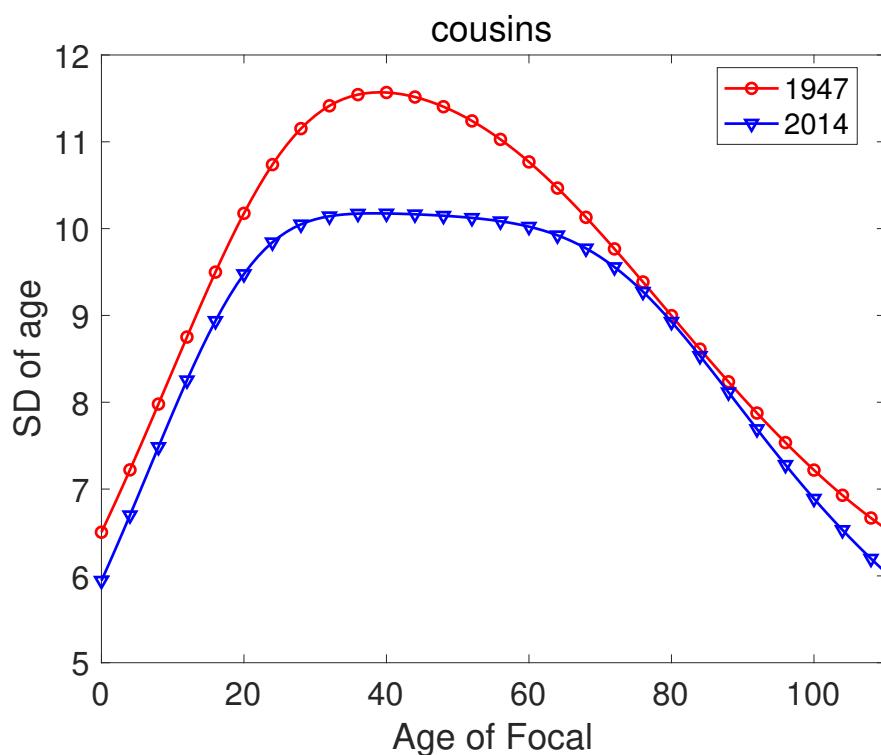
Standard deviation of age of kin: nieces



Standard deviation of age of kin: aunts

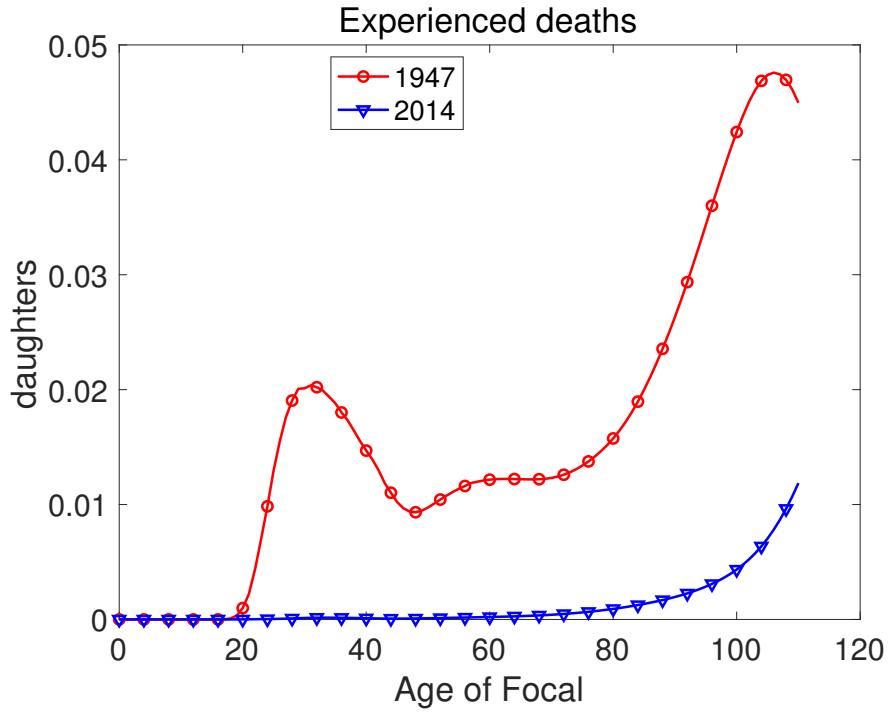


Standard deviation of age of kin: cousins

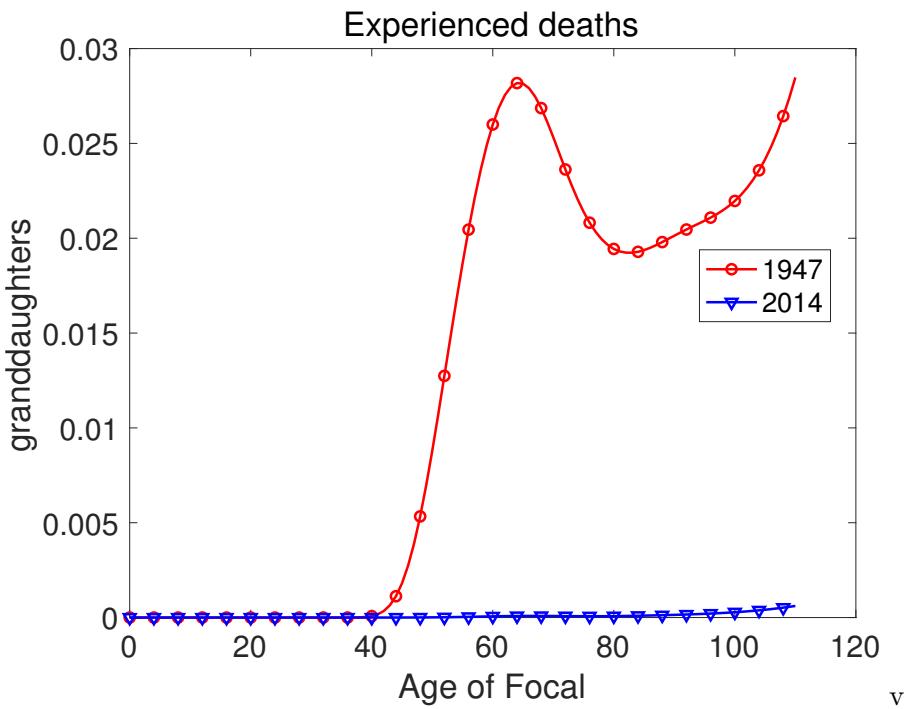


## 5 Experienced deaths of kin

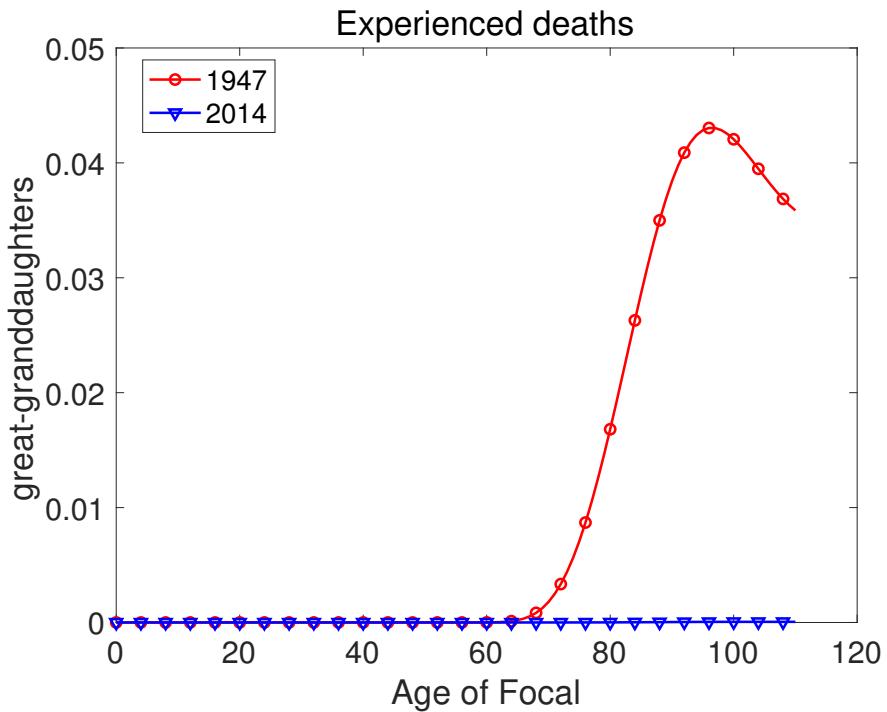
Experienced deaths of kin: daughters



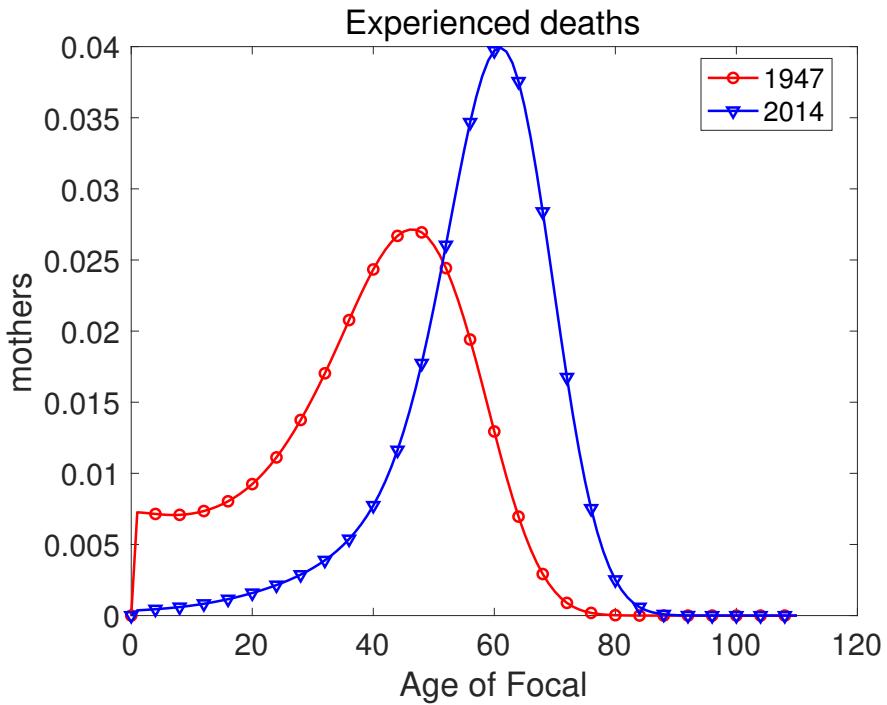
Experienced deaths of kin: grand-daughters



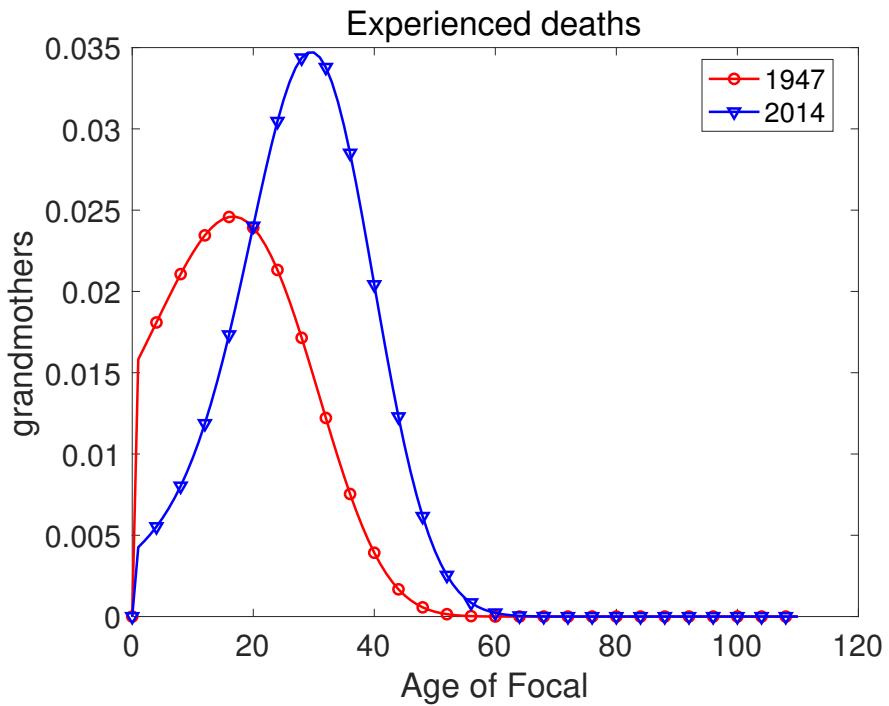
### Experienced deaths of kin: great grand-daughters



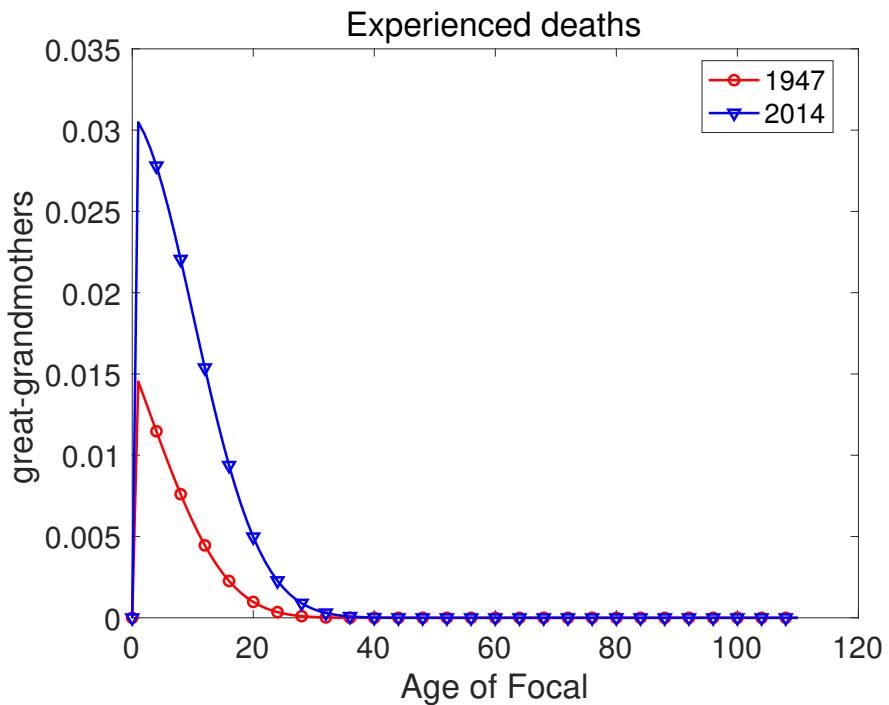
### Experienced deaths of kin: mothers



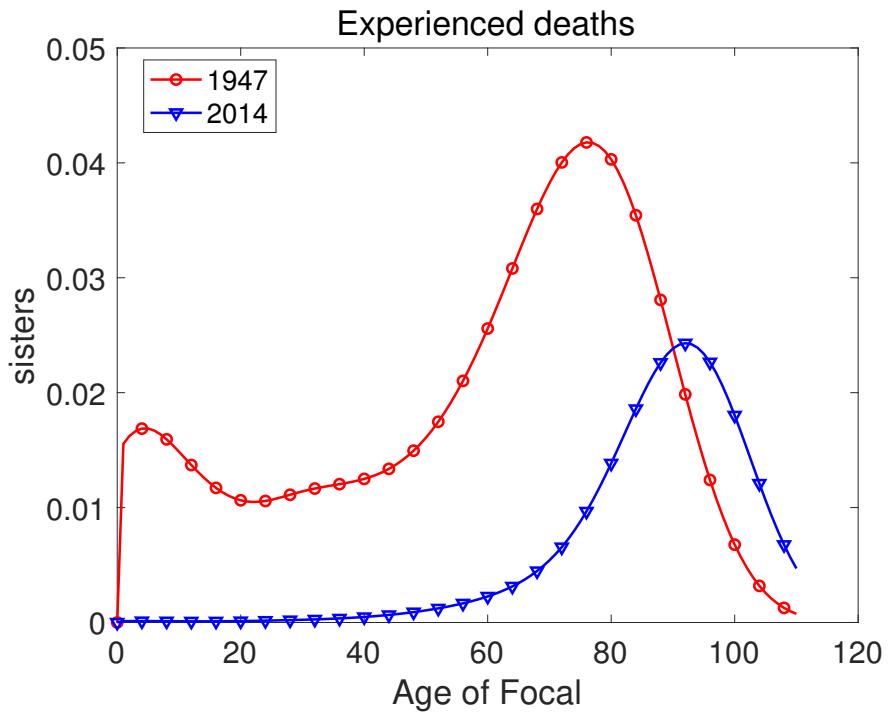
### Experienced deaths of kin: grand-mothers



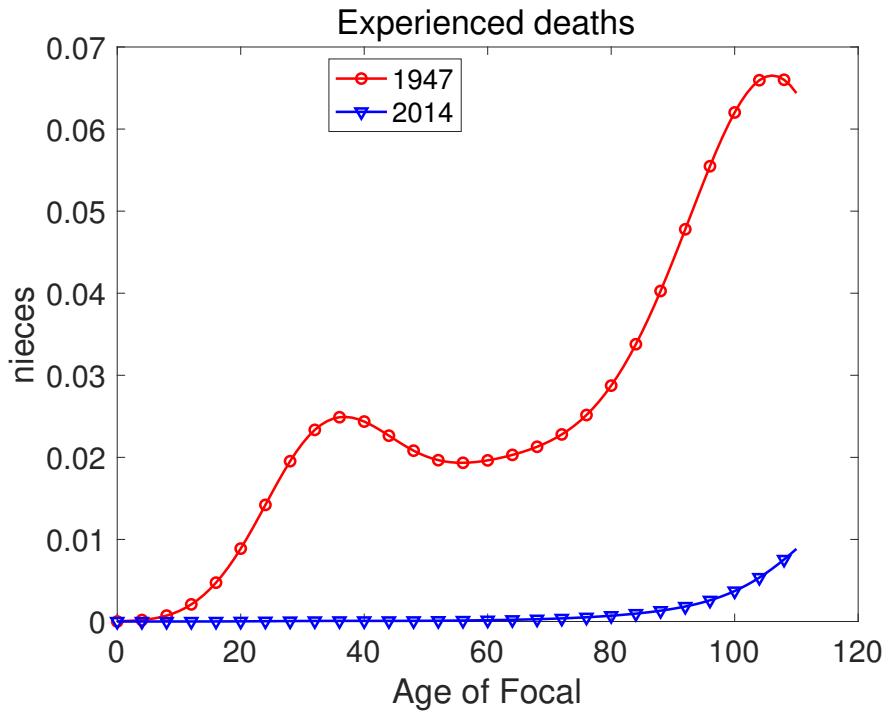
### Experienced deaths of kin: great grand-mothers



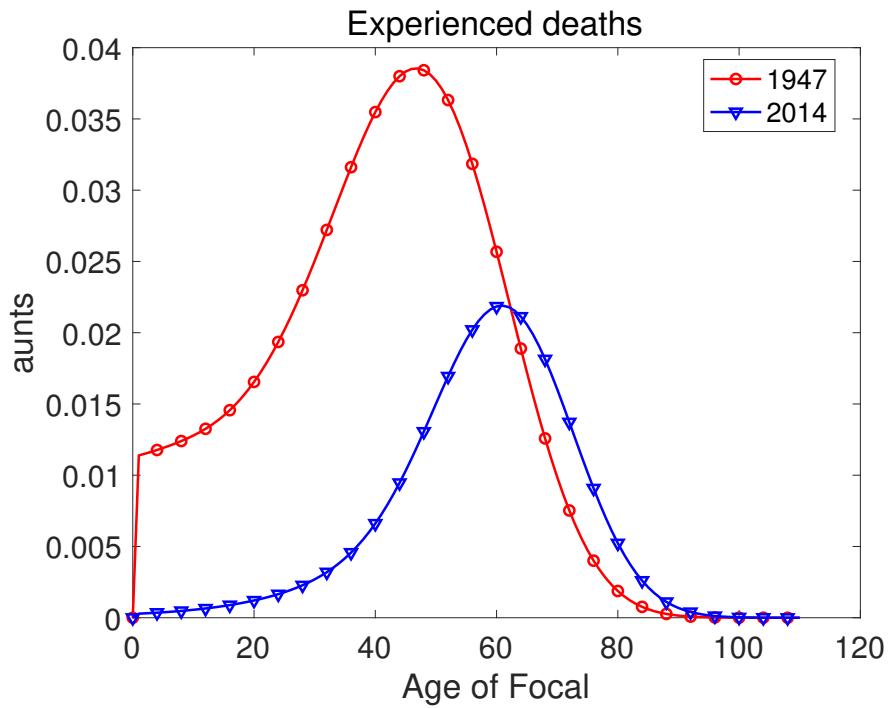
### Experienced deaths of kin: sisters



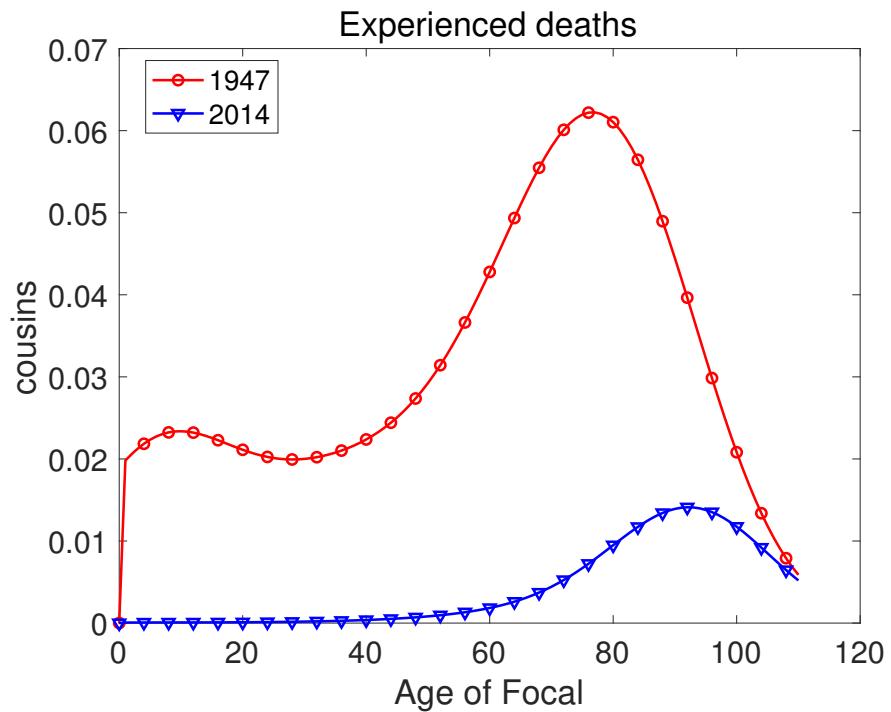
### Experienced deaths of kin: nieces



### Experienced deaths of kin: aunts

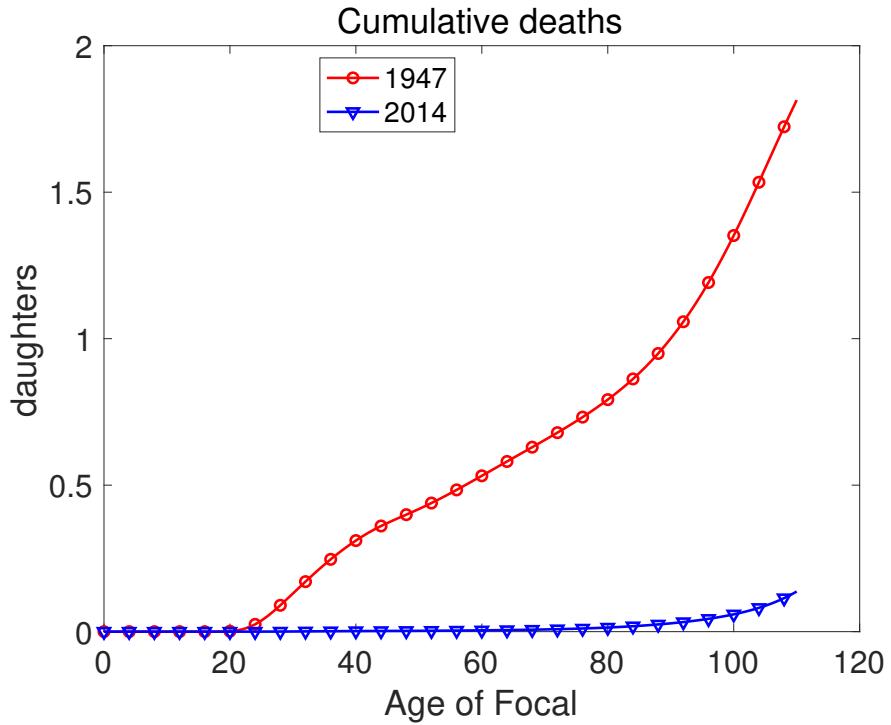


### Experienced deaths of kin: cousins

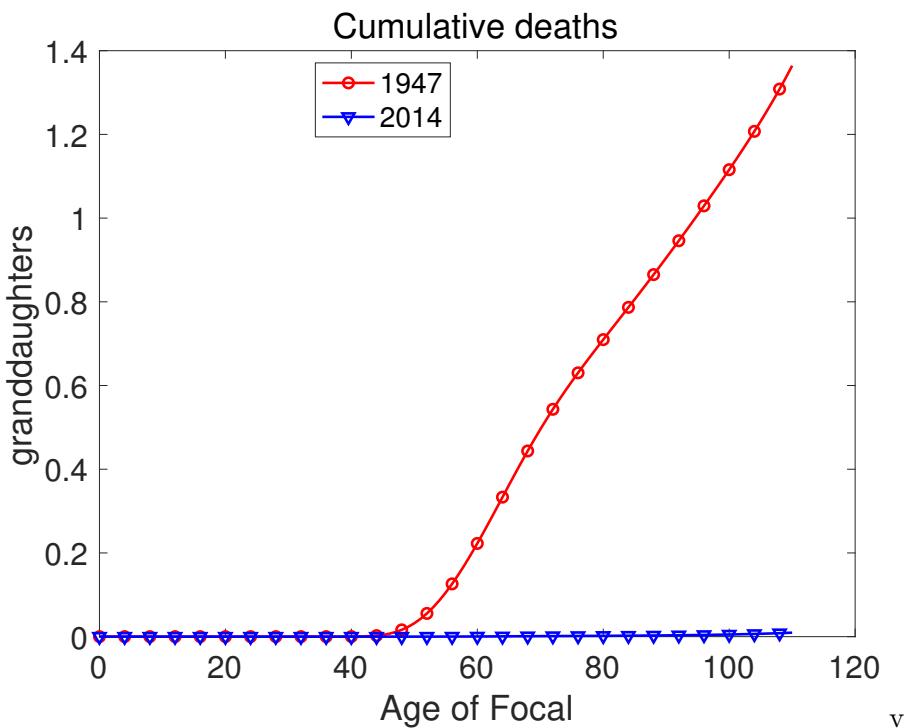


## 6 Cumulative deaths of kin

Cumulative deaths of kin: daughters

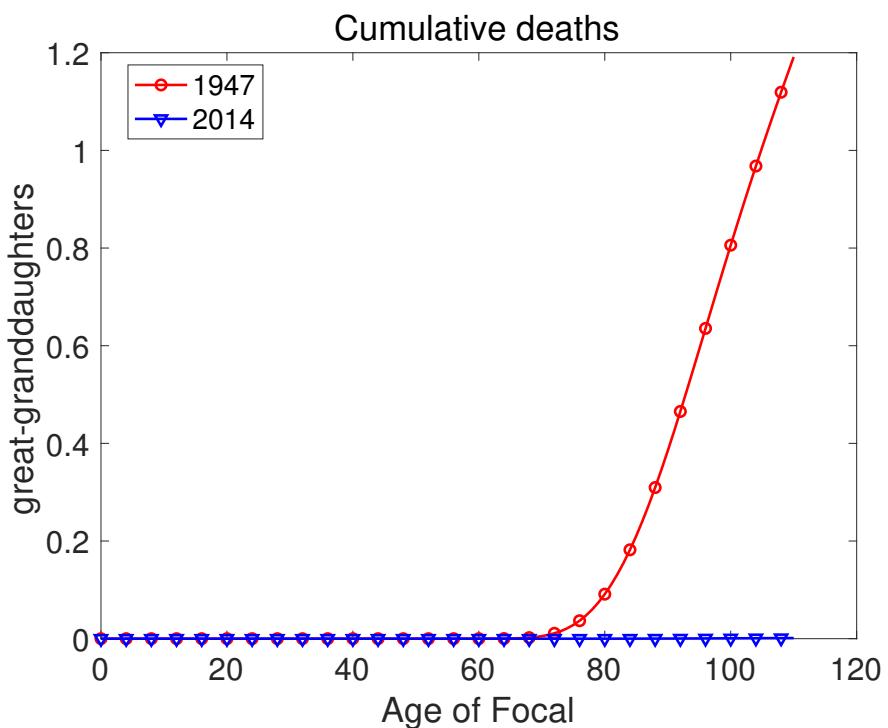


Cumulative deaths of kin: grand-daughters

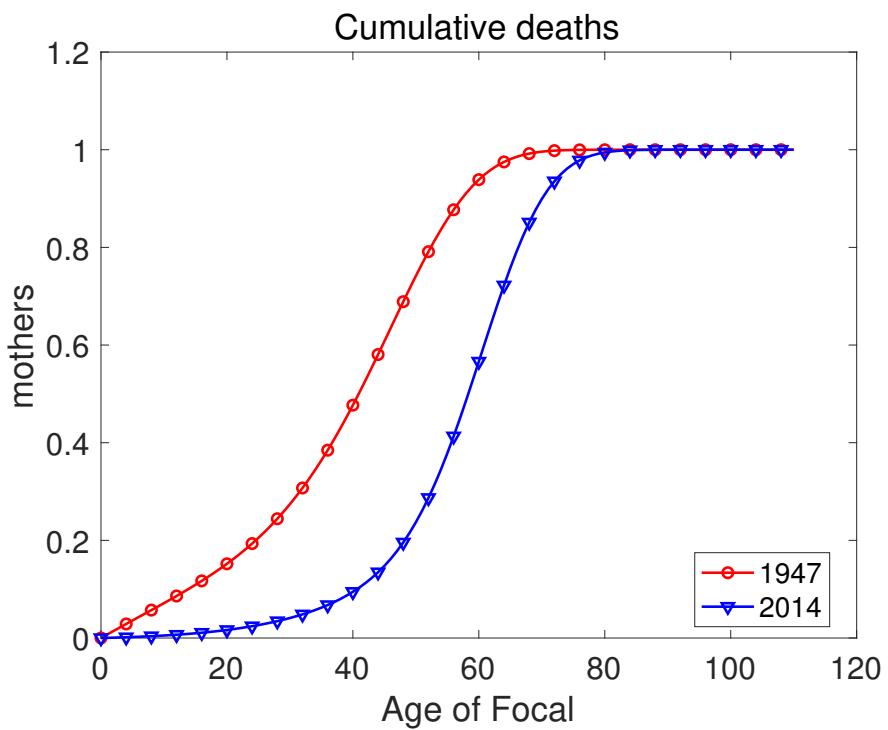


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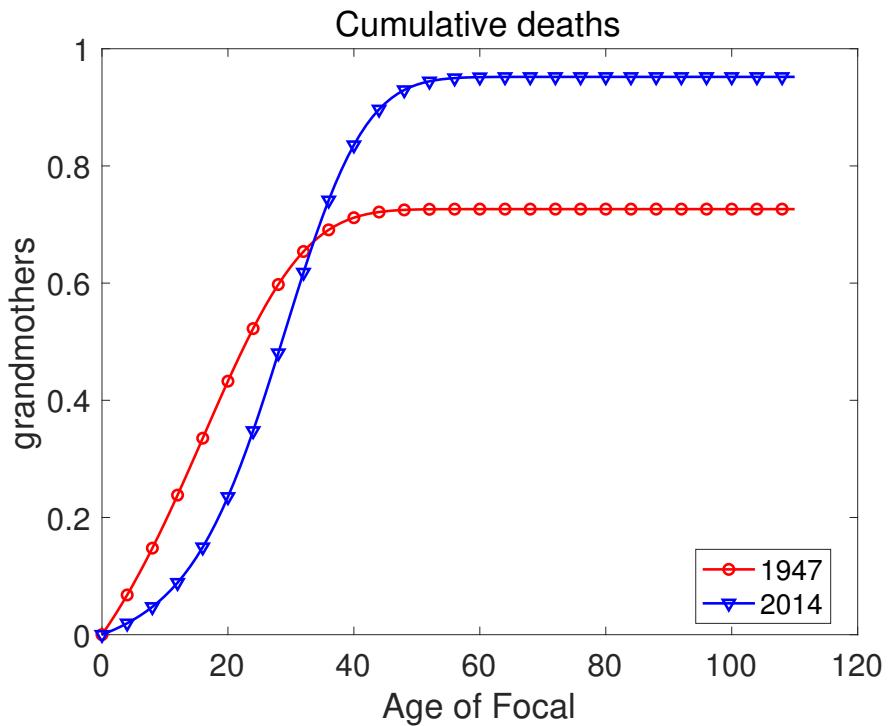
Cumulative deaths of kin: great grand-daughters



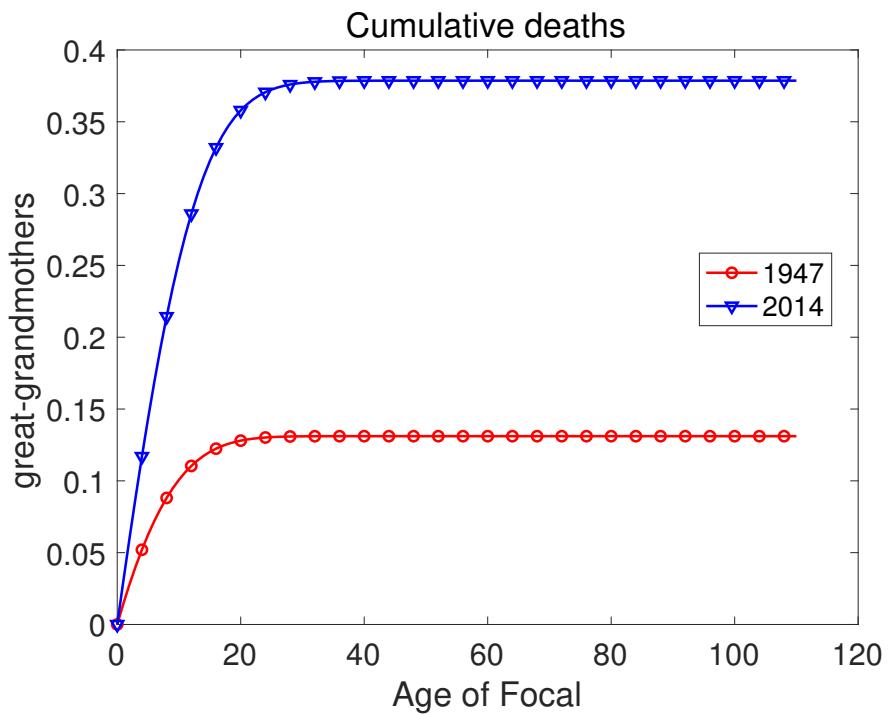
Cumulative deaths of kin: mothers



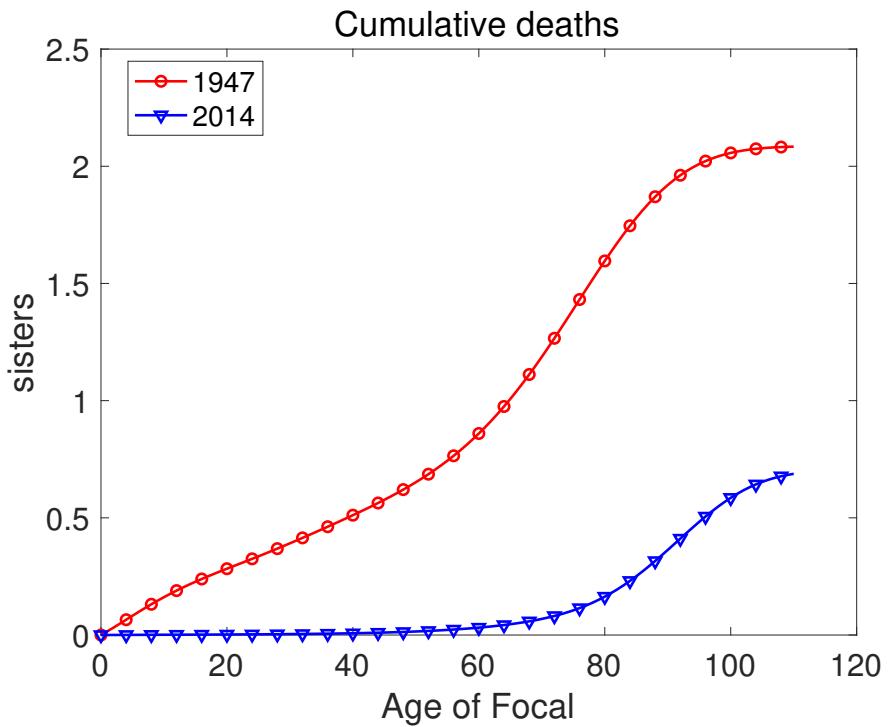
Cumulative deaths of kin: grand-mothers



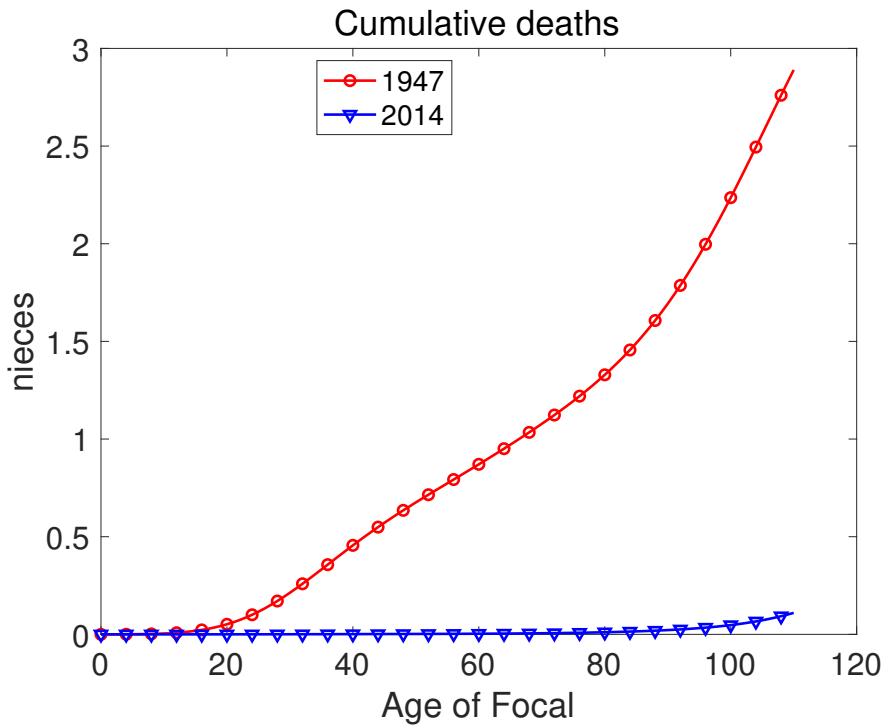
Cumulative deaths of kin: great grand-mothers



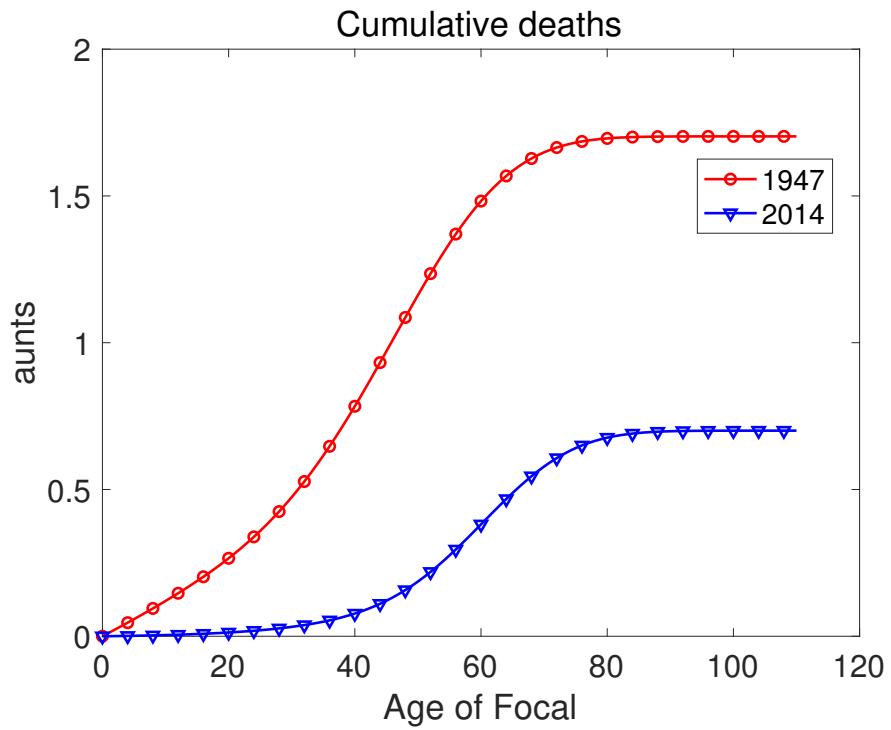
Cumulative deaths of kin: sisters



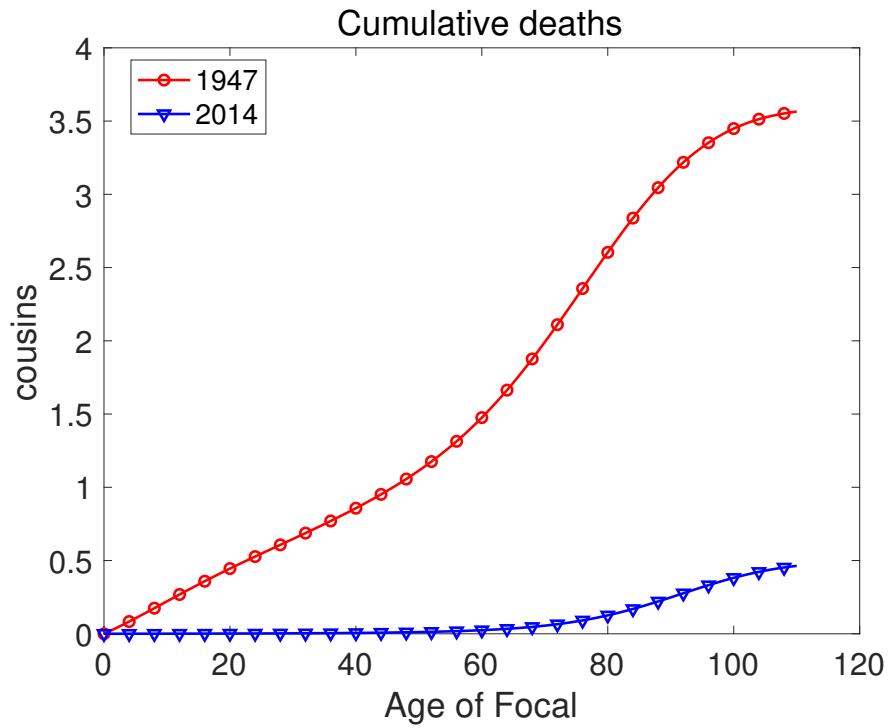
Cumulative deaths of kin: nieces



Cumulative deaths of kin: aunts

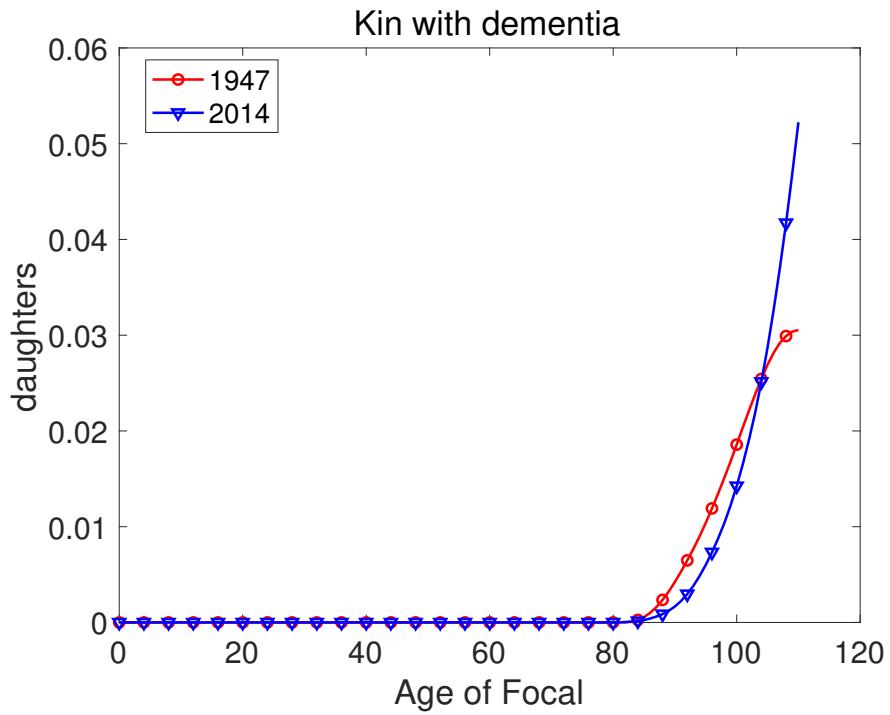


Cumulative deaths of kin: cousins

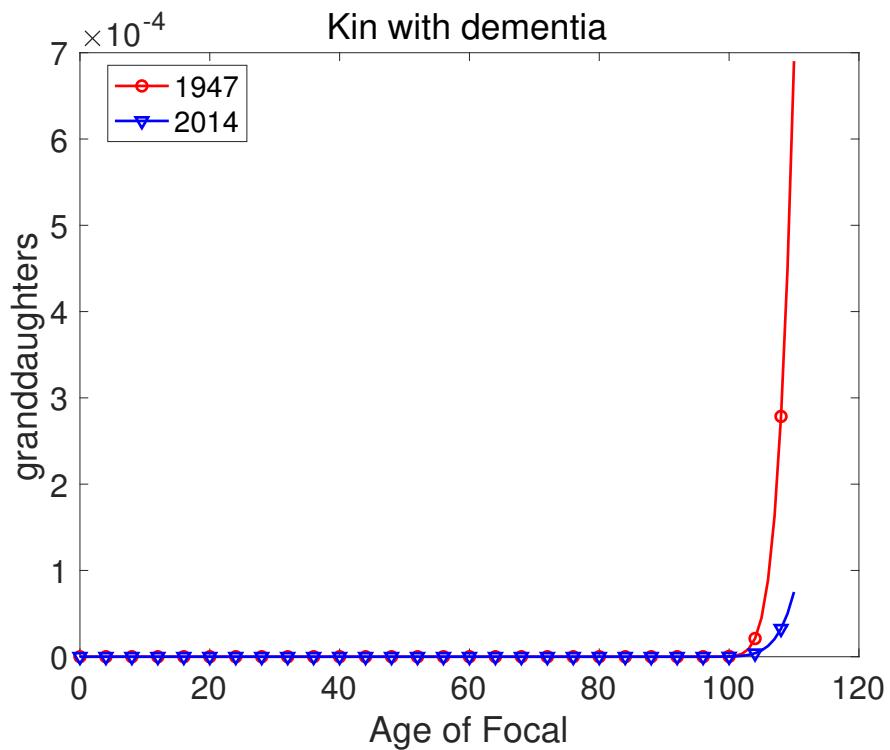


## 7 Kin with dementia

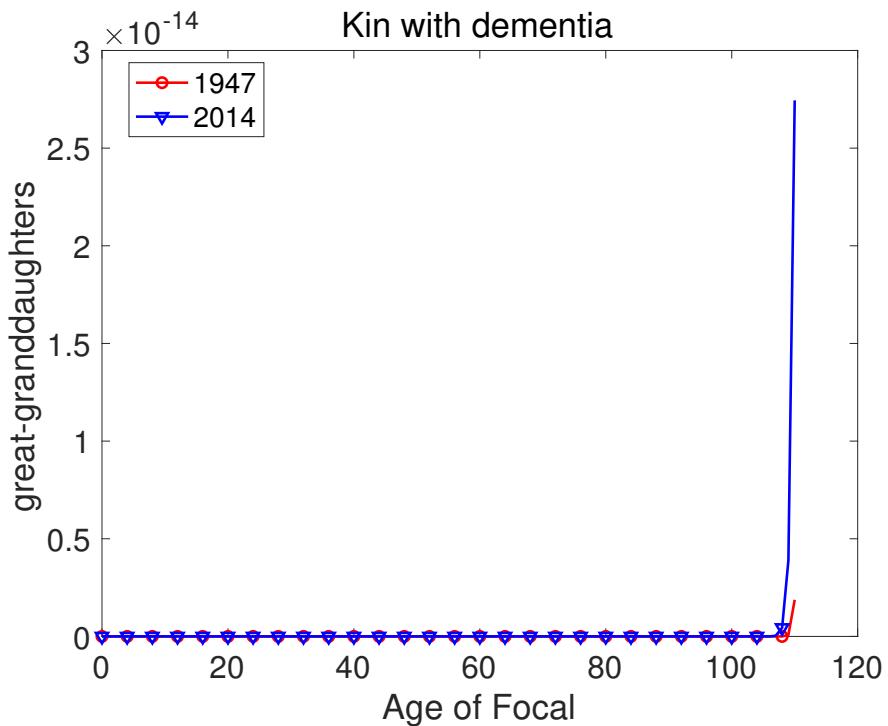
Kin with dementia: daughters



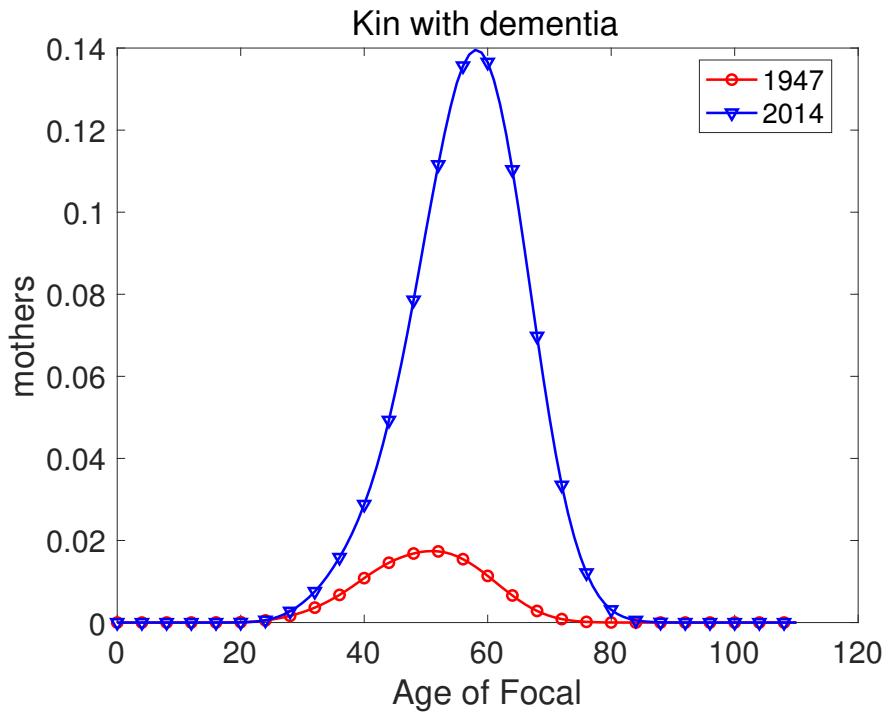
Kin with dementia: grand-daughters



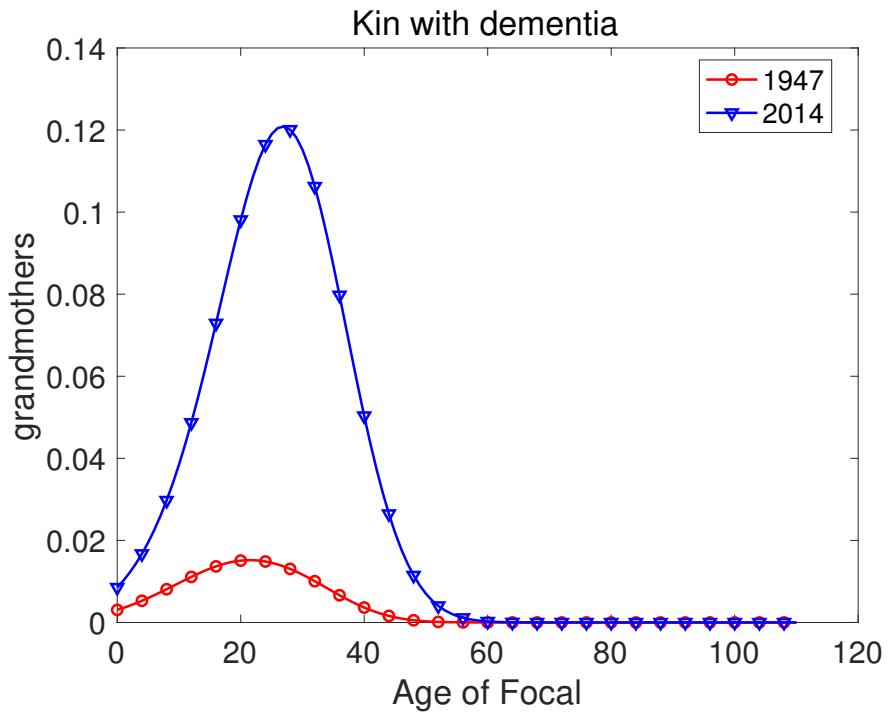
Kin with dementia: great grand-daughters



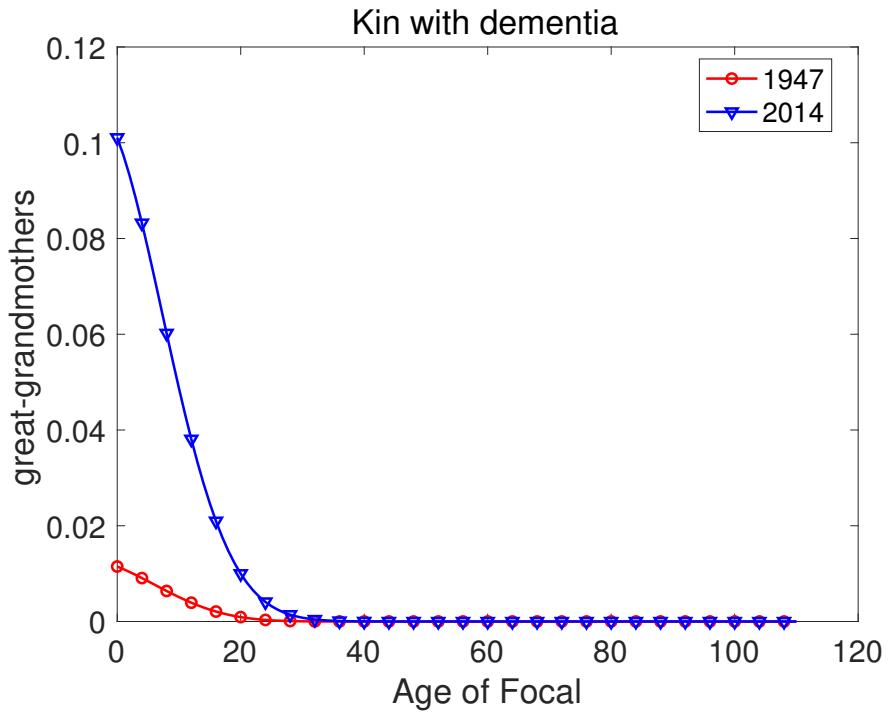
Kin with dementia: mothers



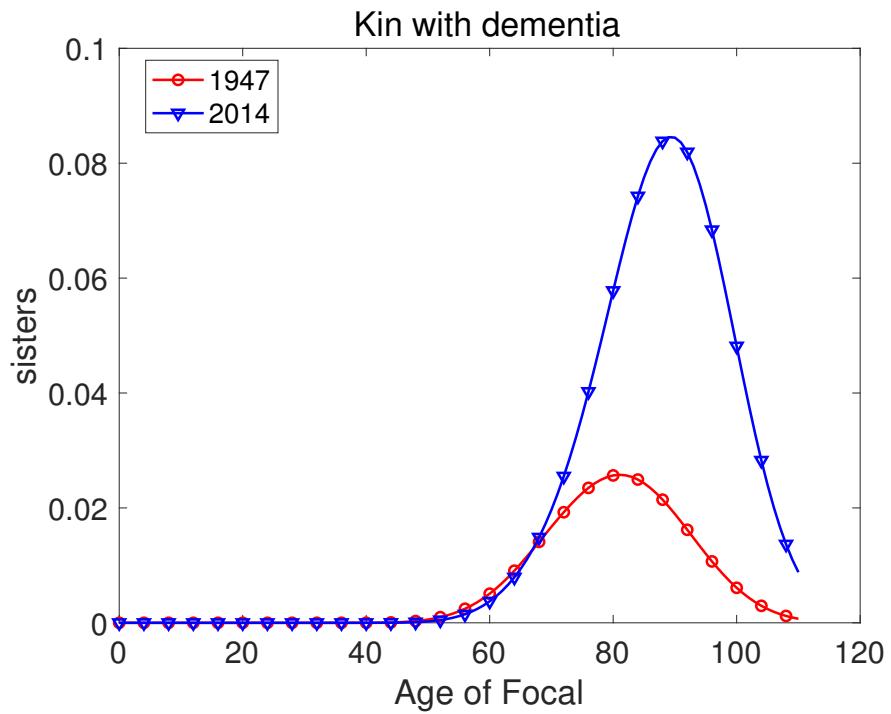
### Kin with dementia: grand-mothers



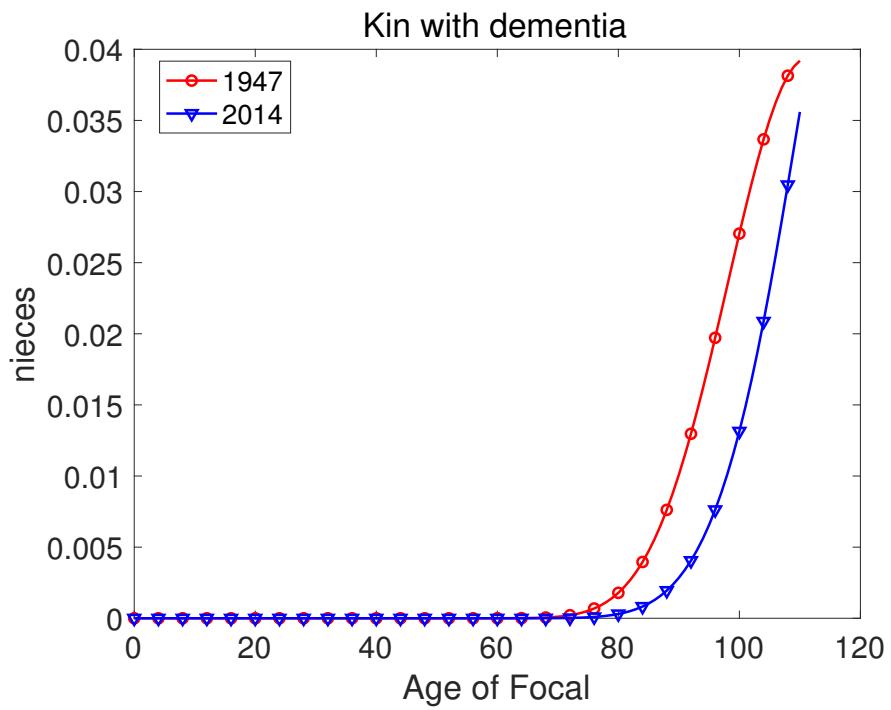
### Kin with dementia: great grand-mothers



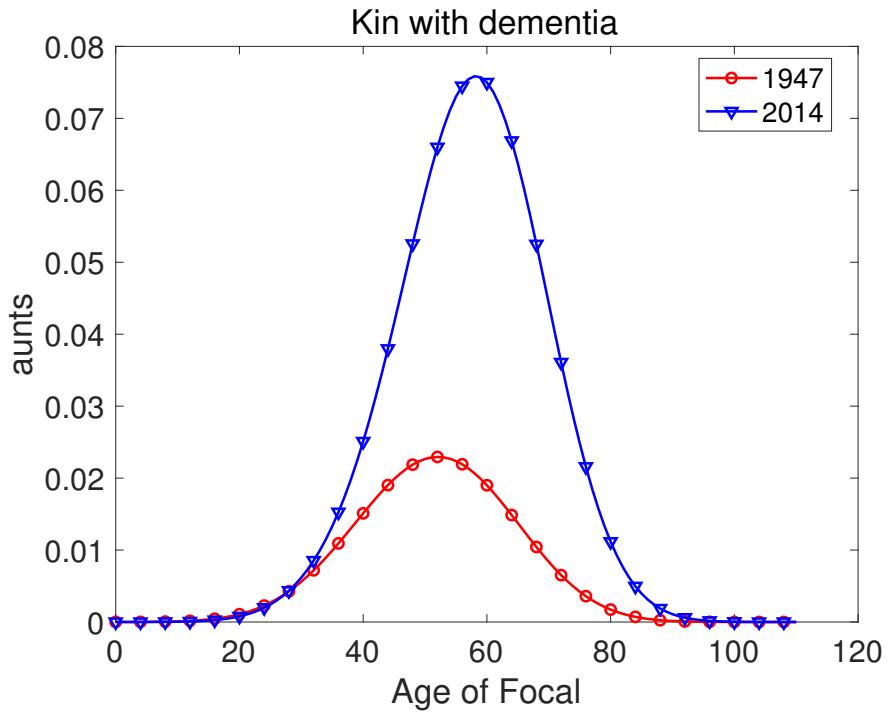
Kin with dementia: sisters



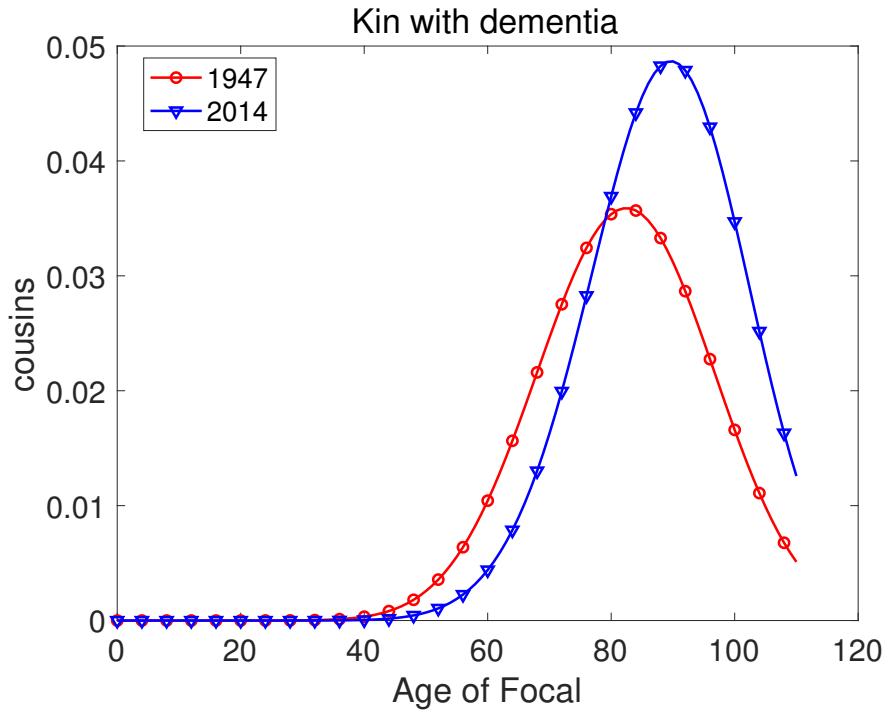
Kin with dementia: nieces



### Kin with dementia: aunts

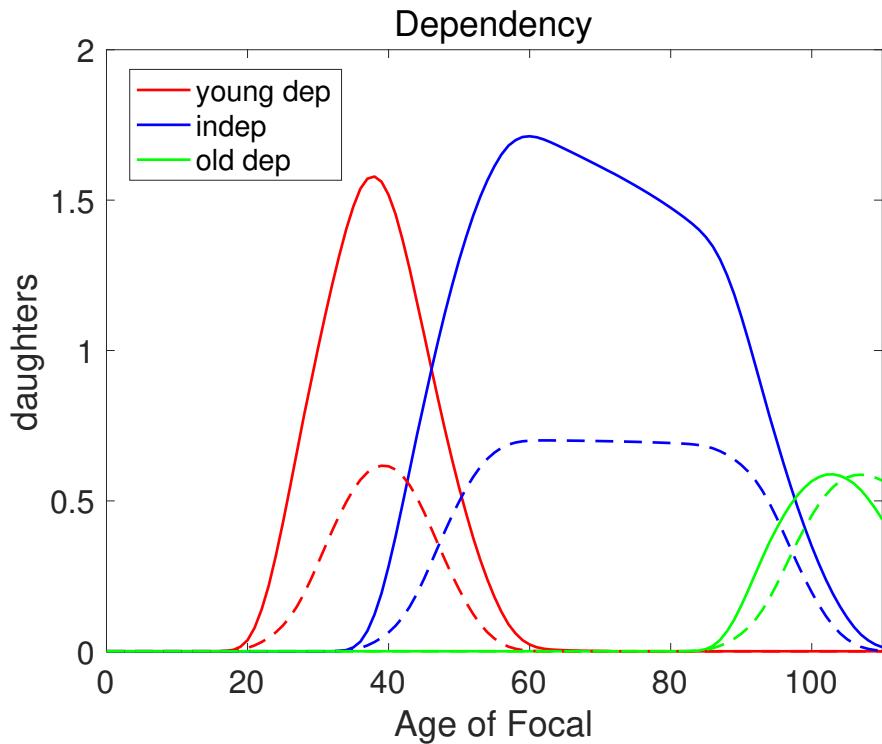


### Kin with dementia: cousins

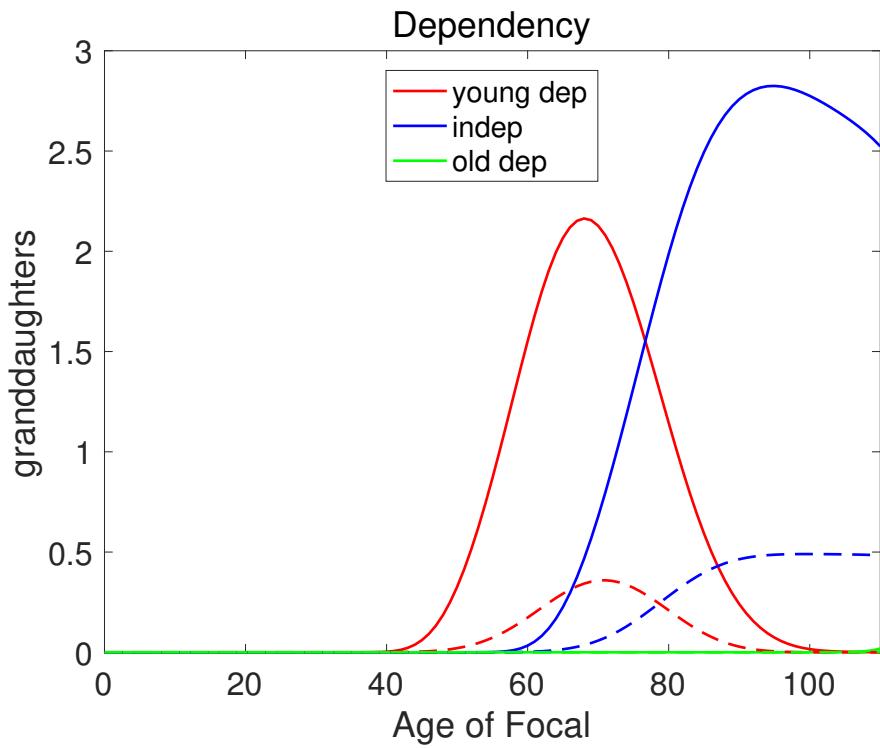


## 8 Dependent and independent kin

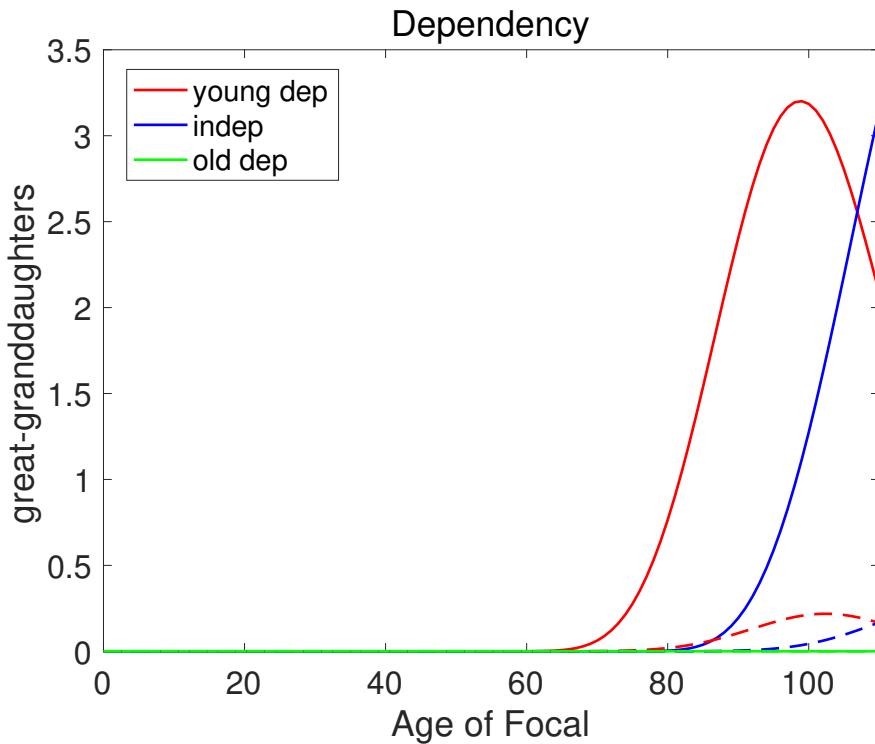
Dependent kin: daughters



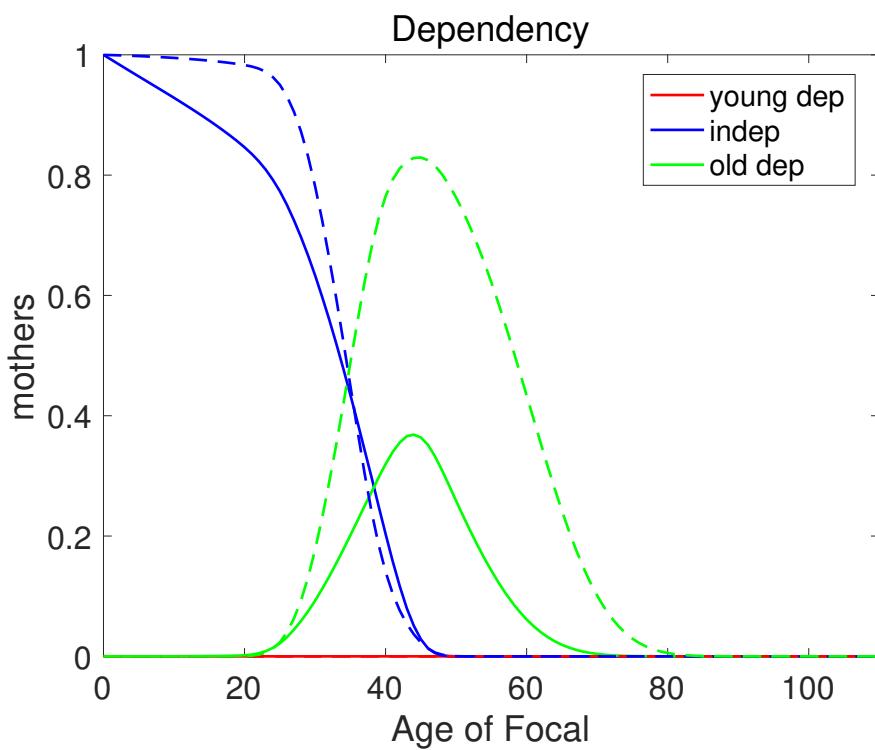
Dependent kin: grand-daughters



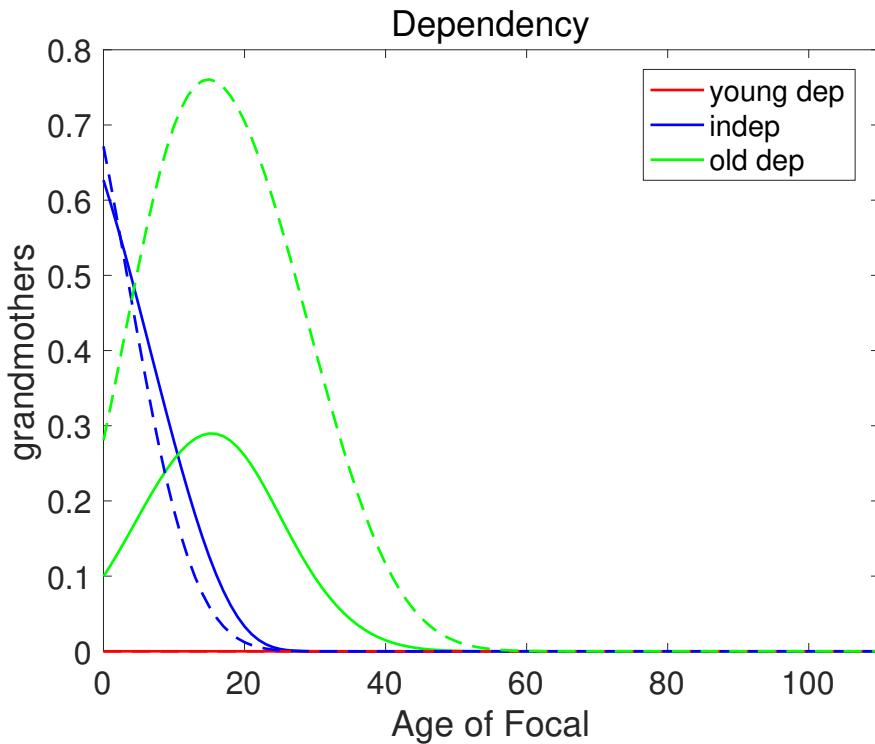
Dependent kin: great grand-daughters



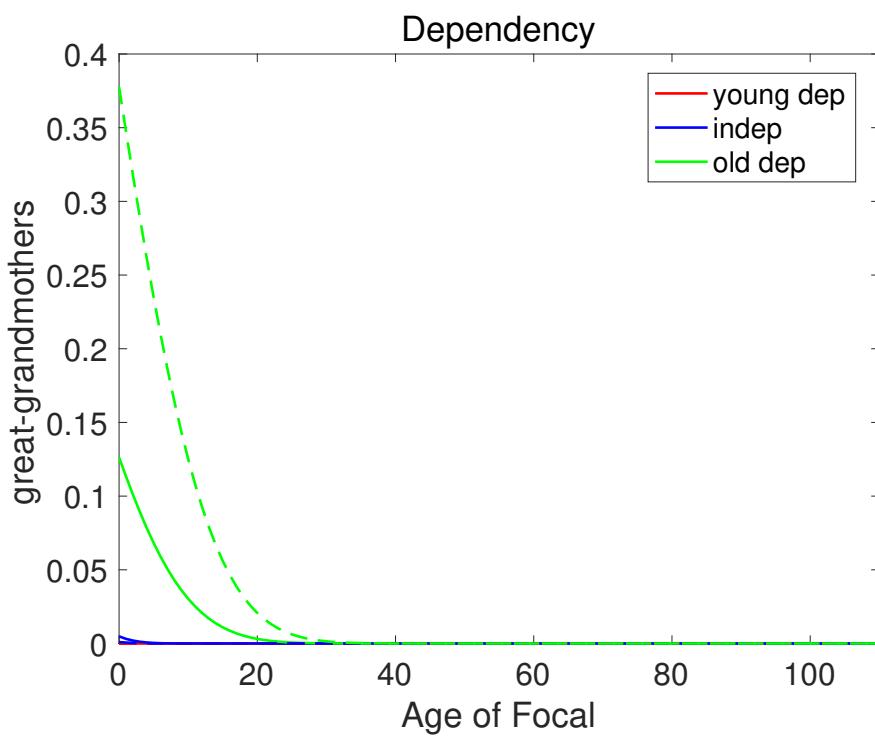
Dependent kin: mothers



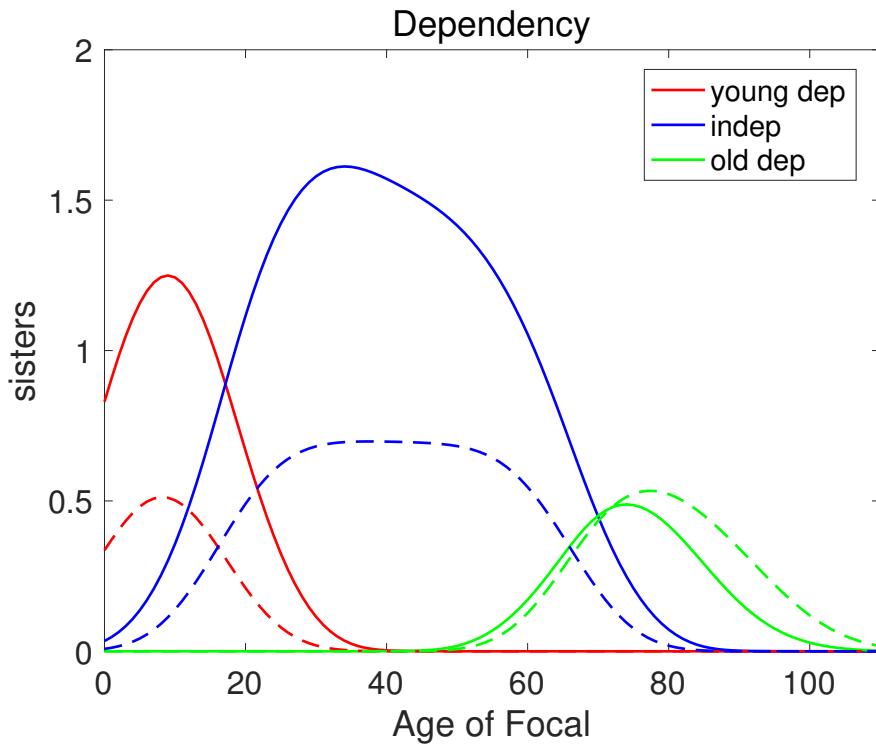
**Dependent kin: grand-mothers**



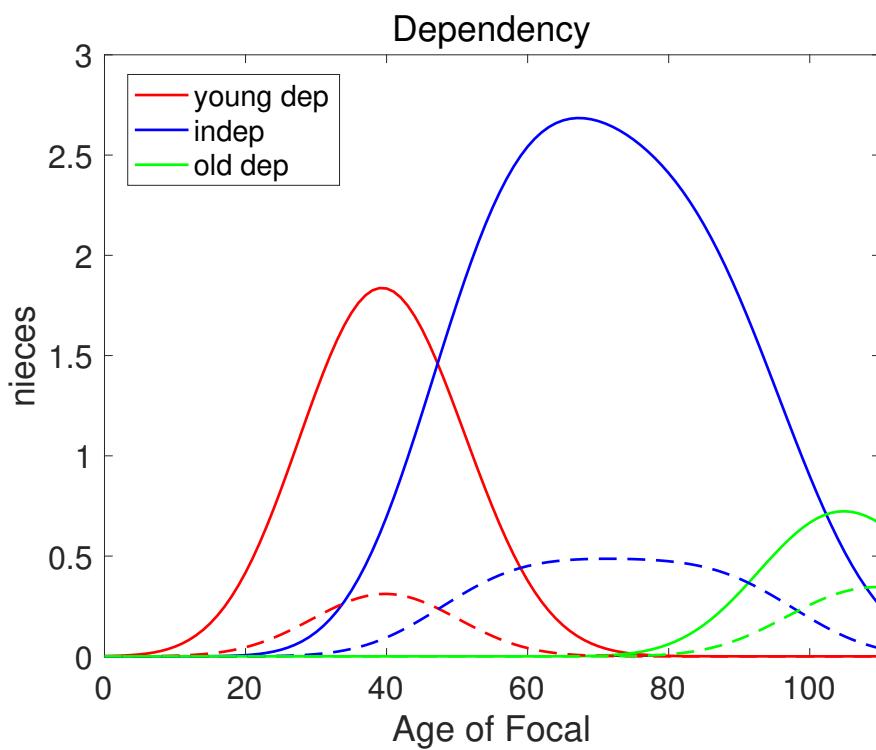
**Dependent kin: great grand-mothers**



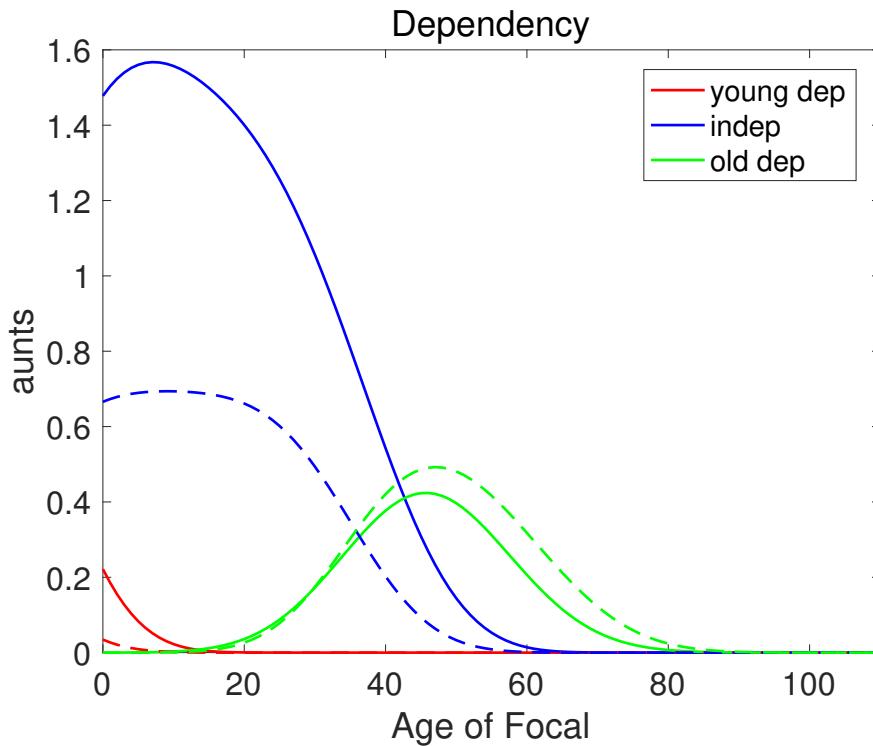
**Dependent kin: sisters**



**Dependent kin: nieces**



**Dependent kin: aunts**



**Dependent kin: cousins**

