

Forecasting Mortality by Cause of Death

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Outline

- 1 Multiple Decrement Life Tables
- 2 Compositional Arithmetic
- 3 CoDa SVD
- 4 Model Estimates
- 5 Forecast
- 6 Cause of Death Correlations

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Multiple Decrement Life Tables

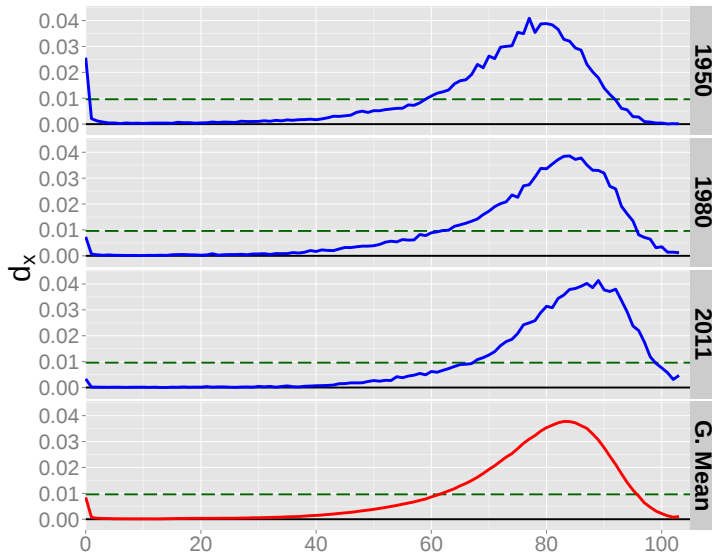
- 'Are mortality projections always more pessimistic when disaggregated by cause of death?'

Wilmoth, J. R. (1995)
Math. Popn. Studies, 5(4), pp.293–319

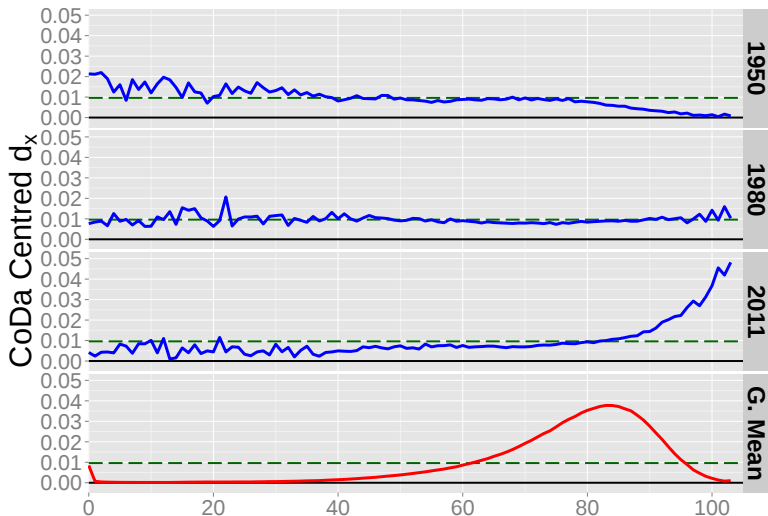
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Life Table Deaths: DNK, female; sum = 1



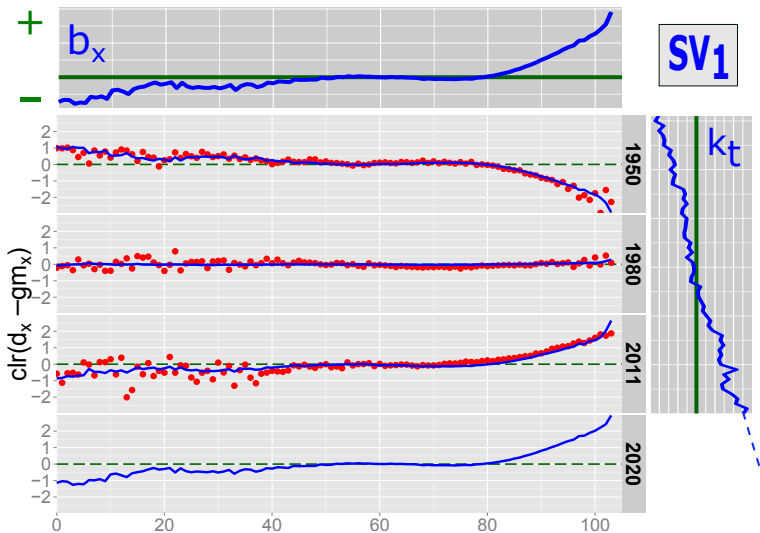
Perturbations: DNK, female; sum = 1



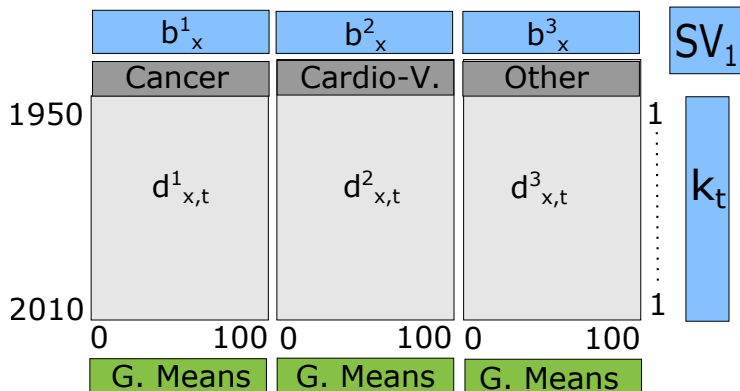
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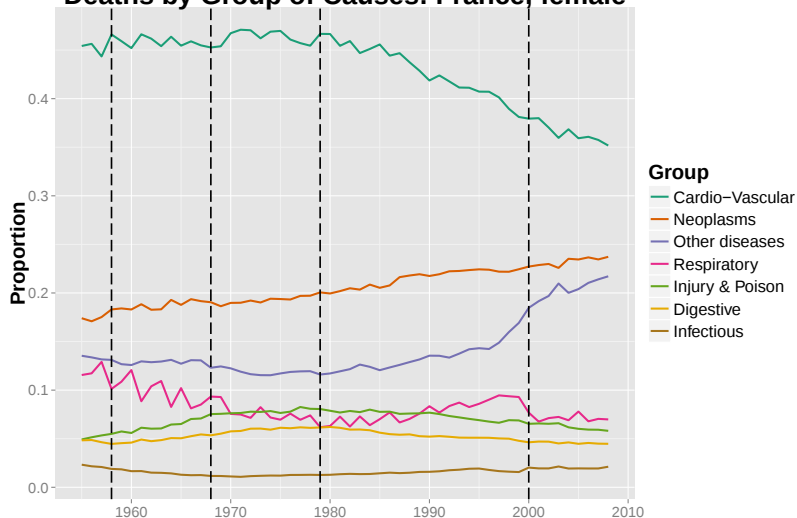
Singular Value Decomposition: DNK, female

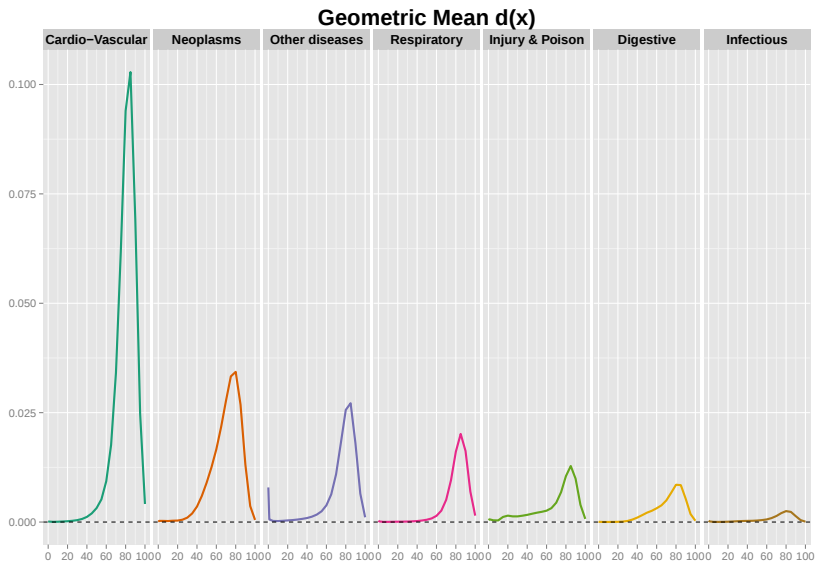


SVD: Multiple Causes of Death



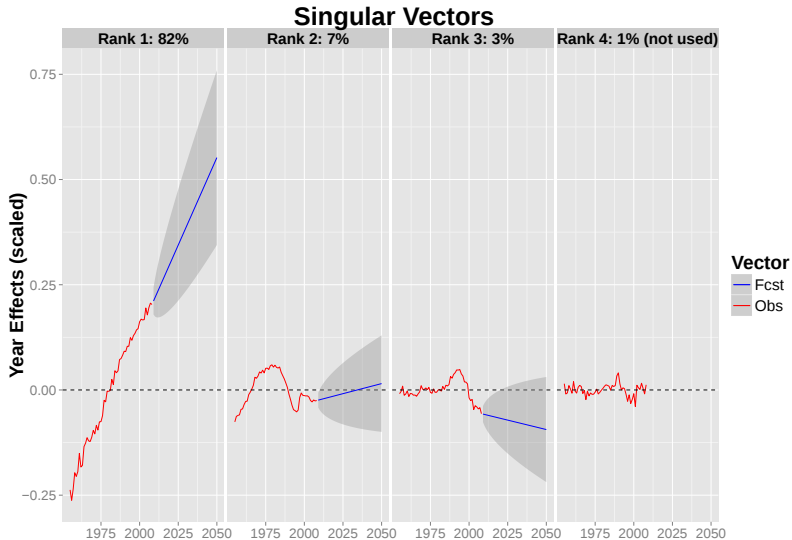
Deaths by Group of Causes: France, female



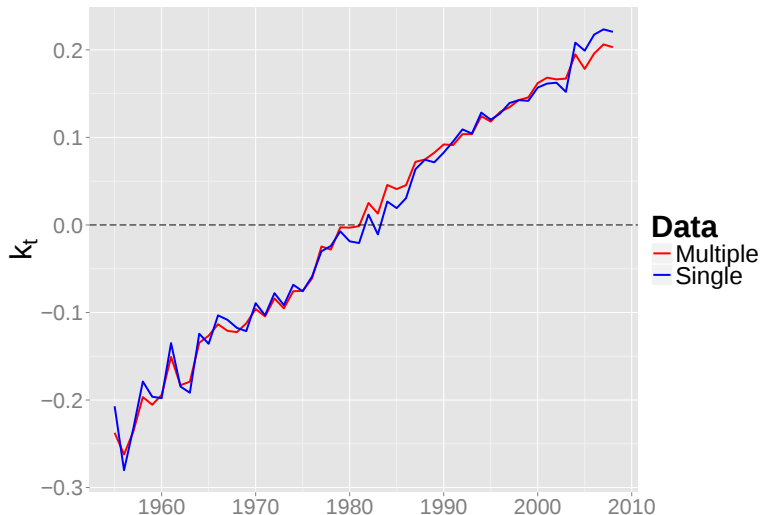


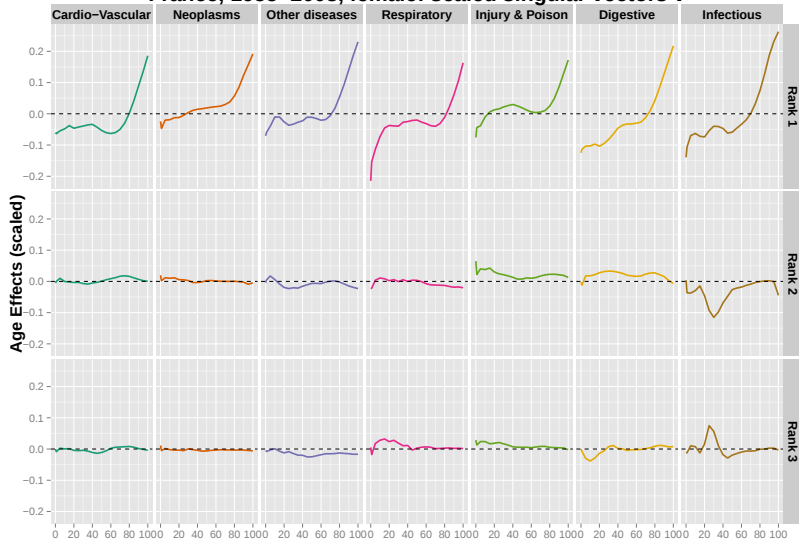
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SVD: Time Vectors

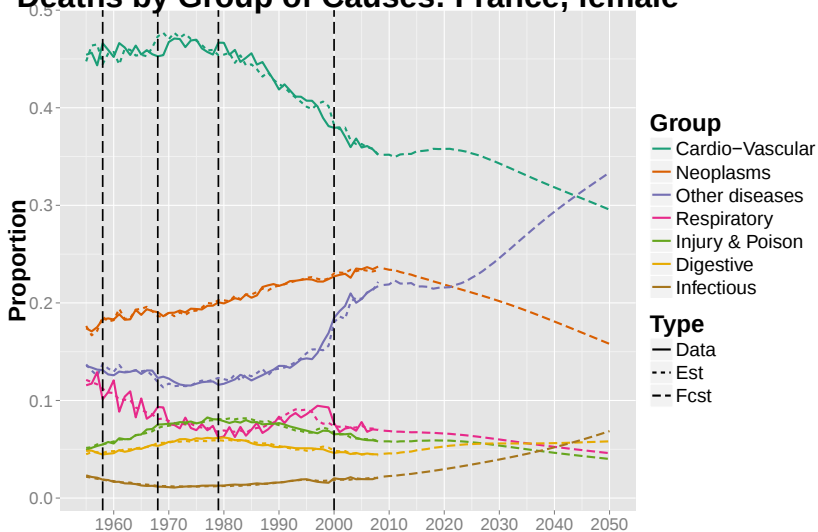


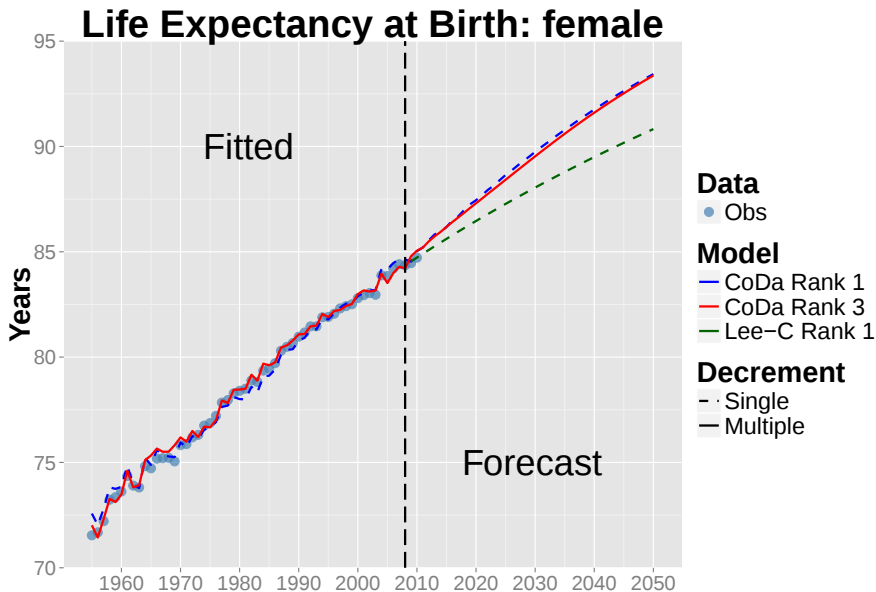
France, 1955–2008, female: scaled singular vectors v 

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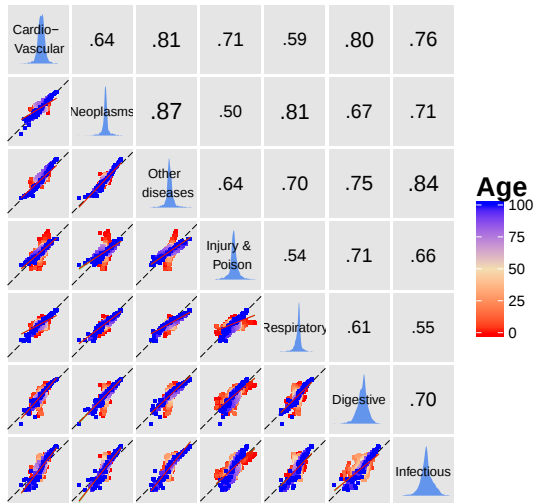




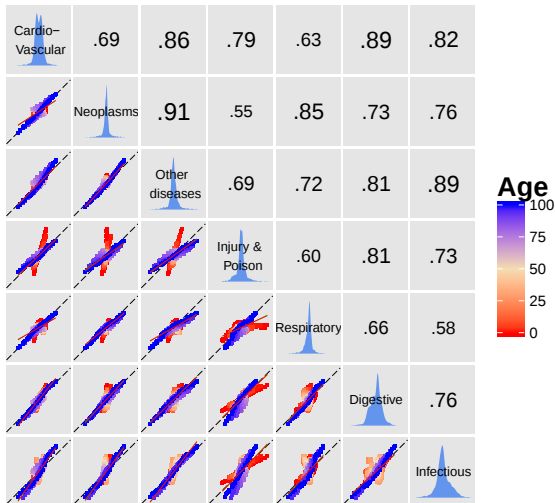
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Centred data: clr transform



Fitted Centred data: clr transform



Compositional residuals: clr transform

