

*Berlin, Harnack Haus, 13-14 May 2019*



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RESEARCH



# **Recent Trends and Future Uncertainties in Longevity**

## **The 5th Human Mortality Database Symposium**

*The 5<sup>th</sup> HMD Symposium  
Berlin, Harnack Haus, 13 May 2019*

# **The Human Mortality Database: an introductory word**

*Vladimir M. Shkolnikov  
Magali Barbieri  
Dmitri Jdanov*

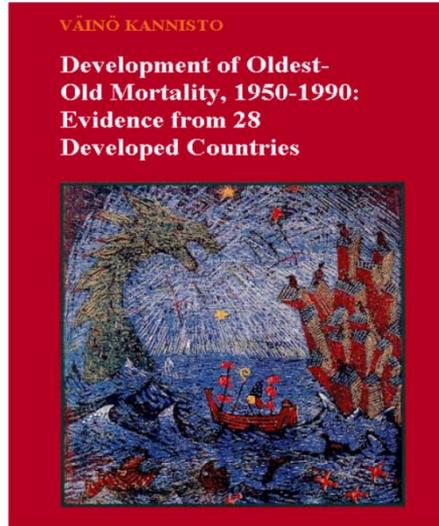


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# Fathers of the HMD



*Development of oldest-old mortality, 1950-1990:  
Evidence from 28 Developed Countries*

© Väinö Kannisto and Odense University Press, 1994

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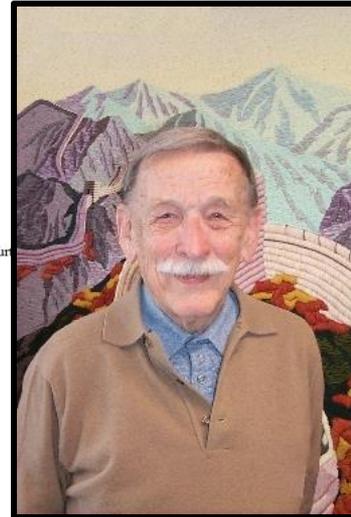
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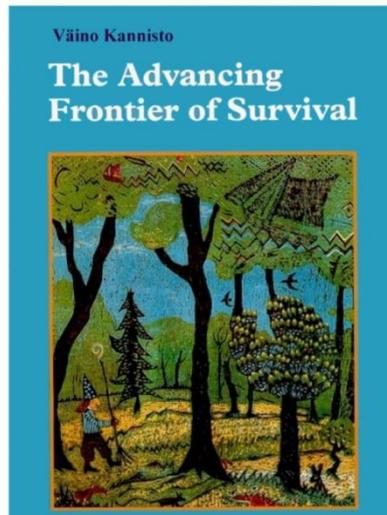
*Väinö Kannisto*



*Roger Thatcher*



*James W. Vaupel*



*The Advancing Frontier of Survival*

© Väinö Kannisto and Odense University Press, 1996

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In 1994-96 Väinö Kannisto published two books documenting advances in survival and longevity on the basis of data from 28 developed countries.

The books contained numerous and detailed data tables. In 1988-2001 Thatcher, Vaupel and Kannisto published important works on old-age survival, assessment of data quality, and re-estimation of populations aged 80+.



*John R. Wilmoth  
Founding Director,  
UCB in 2000, now UN*



*Vladimir M. Shkolnikov  
Director, MPIDR*



*Magali Barbieri  
Associate Director,  
Head of the UCB  
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*Dmitri Jdanov  
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**Others who have worked for this project in the past, or for one its immediate predecessors, include:**

**core HMD team:** Evgeny Andreev (MPIDR), Kirill Andreev(MPDR/UCB), Mila Andreeva (UCB), Vladimir Canudas-Romo (UCB), Rembrandt Scholz (MPIDR), Sebastian Klusener (MPIDR), Tim Riffe (UCB)

**HMD team members and collaborators:** Mary Anderson (UCB), Michael Bubenheim (MPIDR), Shiro Horiuchi (UCB), Eva Kibele (MPIDR), Angela Chau (UCB), Barbara Chiang (UCB), Leo Deegan (UCB), Carolyn Hart (UCB), Marguerite Higa (UCB), Romano Lasker (UCB), Guiping Liu (MPIDR), Hawkin Lui (UCB), Anjali Menon (UCB), Delicia Nahman (UCB), Dimiter Philipov (MPIDR), Marian Rigney-Hawksworth (UCB), Long Wang (UCB), Lijing Yan (UCB), Ellen Guan (UCB), Lindsay Bergstrom (UCB), Sibao Zhao (UCB), Amanda Tanimasa (UCB), Josie Zamudio (UCB), Evgeny Soroko(MPIDR), Sigrid Gellers-Barkmann (MPIDR).

# Areas of active HMD use

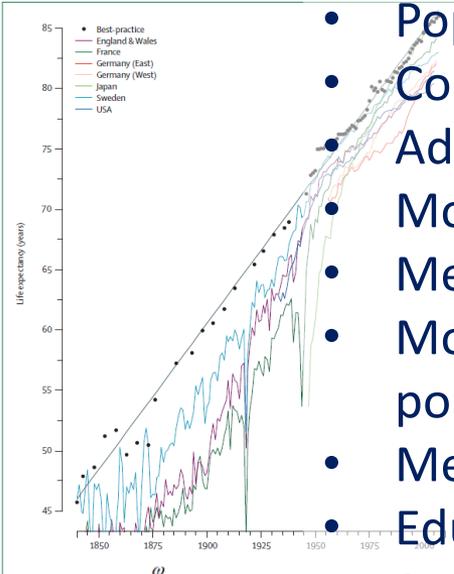
Package 'demography'

February 19, 2015

Version 1.13

Title: Forecasting mortality, fertility, migration and population data  
Description: Functions for demographic analysis including life table calculations and Leontief models. Functional data analysis of

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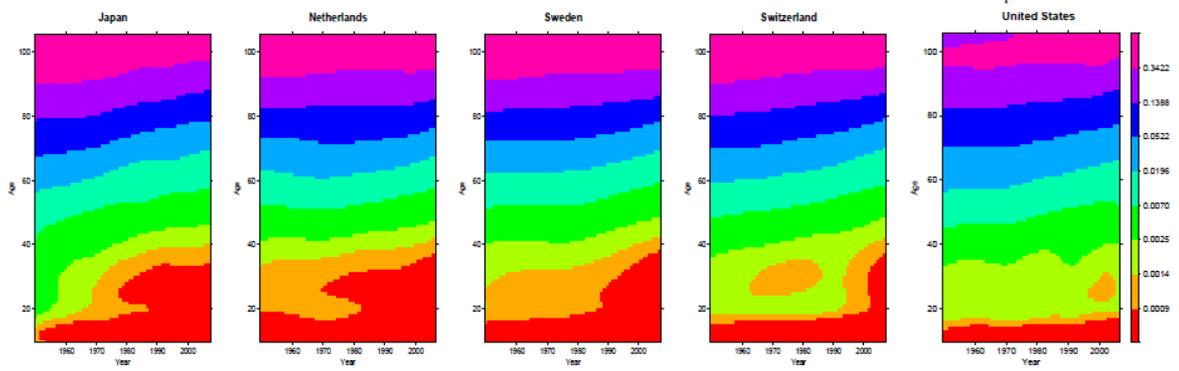
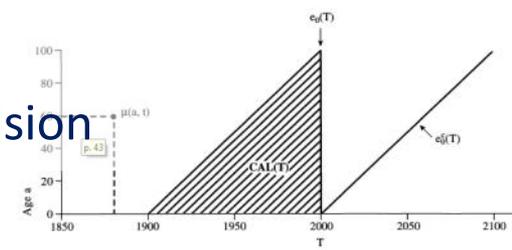
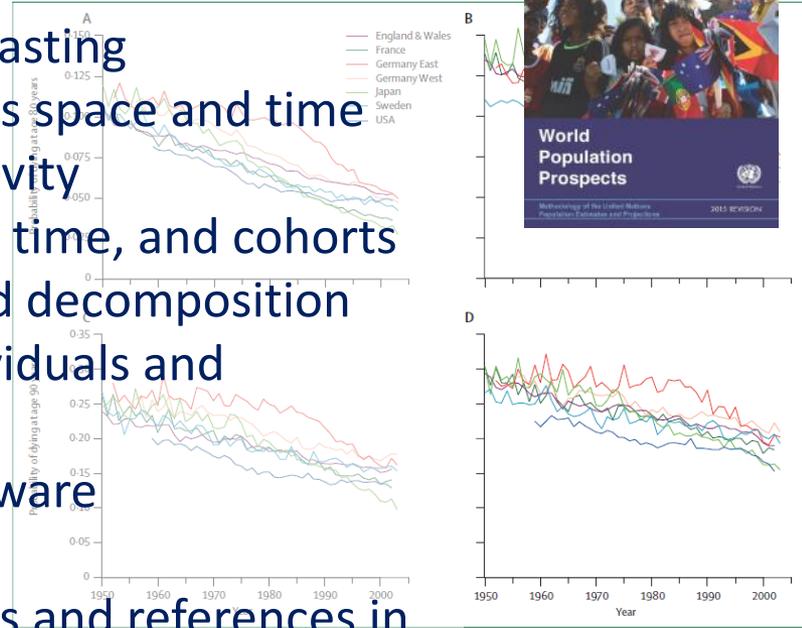
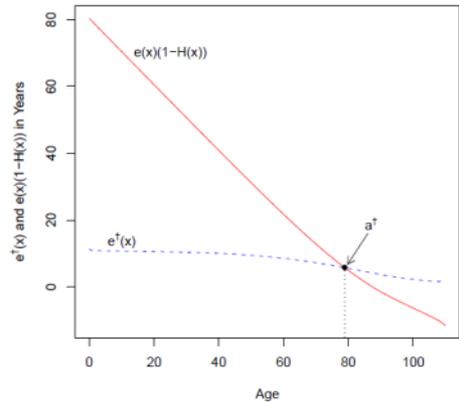
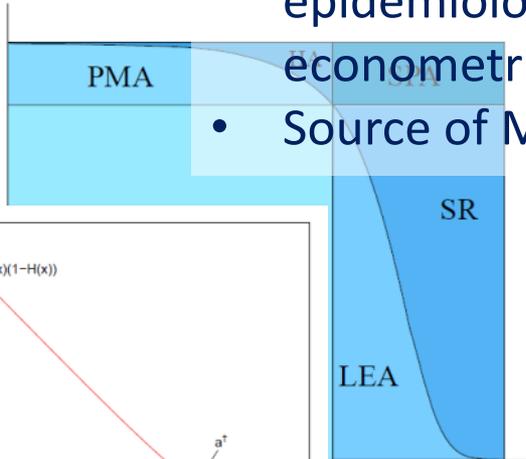


- Population and mortality forecasting
- Convergence/divergence across space and time
- Advances of survival and longevity
- Mortality surfaces across ages, time, and cohorts
- Methods for measurement and decomposition
- Mortality disparity across individuals and populations
- Methodology toolkits and software
- Education

$$CAL(t) = \int_0^{\omega} \ell_c(a, t-a) da$$

Source of population-level facts and references in epidemiology, public health, human biology, econometrics and other disciplines

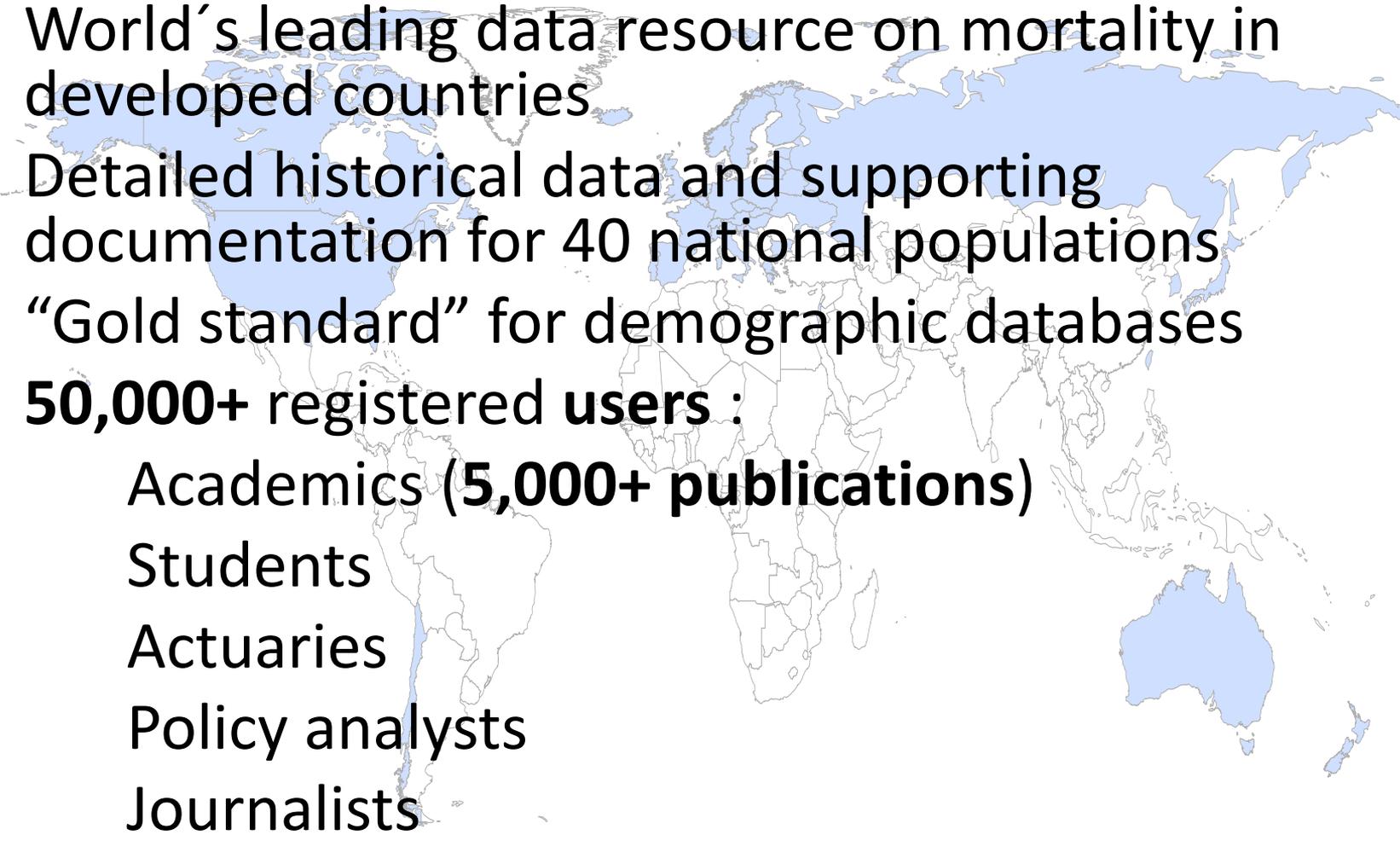
- Source of MLT data at the UN Population Division



# Background

- Goal of the HMD:  
To provide *detailed high-quality* mortality and population data free of charge to all persons interested in the history of human longevity
- Four guiding principles:
  - Comparability;
  - Flexibility;
  - Accessibility;
  - Reproducibility.

# What is the HMD today?

- World's leading data resource on mortality in developed countries
  - Detailed historical data and supporting documentation for 40 national populations
  - “Gold standard” for demographic databases
  - **50,000+** registered **users** :
    - Academics (**5,000+** publications)
    - Students
    - Actuaries
    - Policy analysts
    - Journalists
    - Other corporations (pension funds, banks, etc...)
- 

# HMD funders and sponsors



## Grants and donations:

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**Disclaimer:** The authors is solely responsible for the content of this presentation, which does not necessarily represent the official views of the National Institutes of Health and other sponsors.

# Core activities:

## HMD country updates

- Update of all HMD countries on rotating basis
- Priority countries:
  - The US
  - The UK and components
  - Germany
  - Japan
  - France
  - Russia
  - Sweden
  - Canada

# Core activities:

## Investigate new countries

- Recently added countries:
  - Greece
  - Croatia
  - South Korea
- Other countries recently investigated
  - Costa Rica
  - Moldova
- In progress / plans
  - Hong Kong
  - Serbia
  - Romania
  - EU28

# Ongoing work and future plans

- Improving of the HMD methodology
- HMD R packages
  
- Adding cause-of-death data
- Sub-national data
- Less (statistically) developed countries
  - Latin America
  - China
  - India

## **Monday, May 13**

Keynote talks: 9:20 and 15:00

Poster session: coffee breaks at 10:00 and 14:30

Lunch: 12:00 – 13:00

Round table “The HMD today and tomorrow: challenges and opportunities”: 16:50

Dinner at the Harnack Haus: 18:00 – 20:00 (bar open until 22:00)

## **Tuesday, May 14**

Keynote talks: 9:00 and 10:40

Lunch: 12:00 – 13:00

Round table “Recent trends and future of longevity ”: 17:00 – 18:00

## **Wednesday, May 15**

Satellite meeting “Mortality data and methodological approaches in estimating mortality in developing countries”