

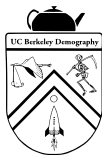
# Life lost, lifesaving, and causes of death — Ghost demography —

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Universitat  
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# Mortality measurement

Years Lost

Riffe & Solé

All-cause

Causes

Comparisons

Rates

Conclusions

**lifetable:** purged of structure

**counts:** structure  $\times$  intensity

**combo:** Person Years of Life Lost (PYLL), \_\_\_\_\_, ...

# PYLL

Years Lost

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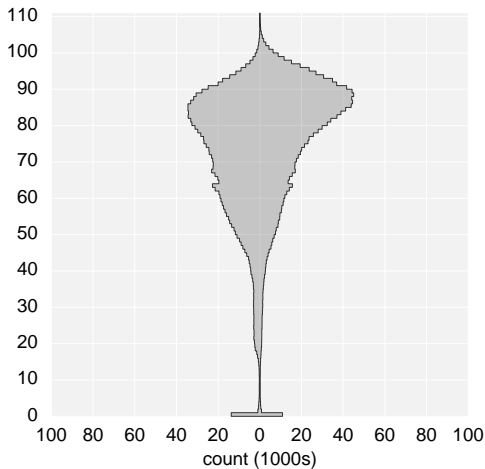
Person years of life lost

$$\text{PYLL} = \int_0^{\omega} D(a) \cdot e(a) \, da \quad (1)$$

$$\text{PYLL}^c = \int_0^{\omega} D^c(a) \cdot e(a) \, da \quad (2)$$

# PYLL & friends

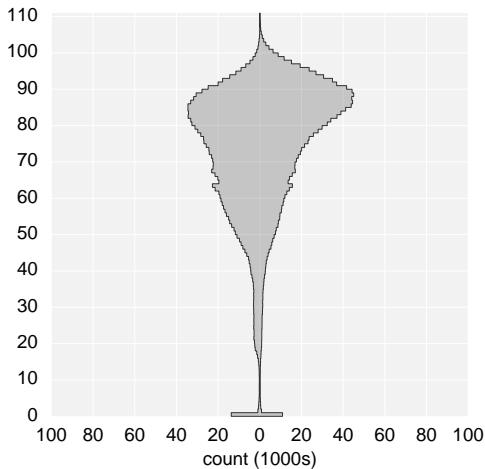
Chrono Age



$D(a)$  (USA, 2010)

# PYLL & friends

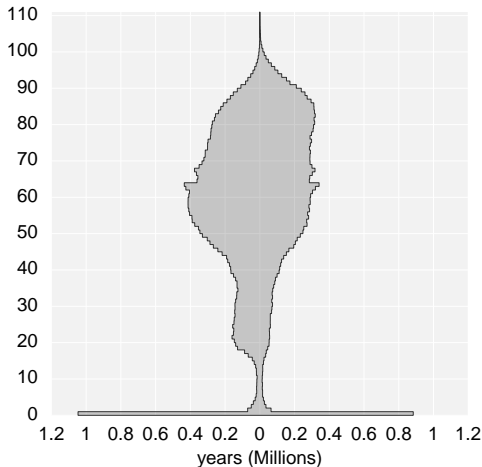
Chrono Age



$D(a)$  (USA, 2010)

# PYLL & friends

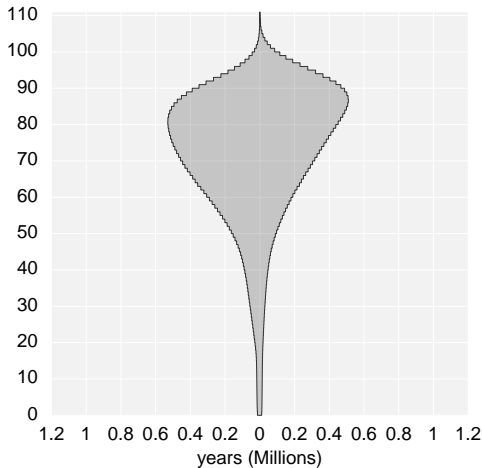
Chrono Age



$PYLL(a)$  (USA, 2010)

# PYLL & friends

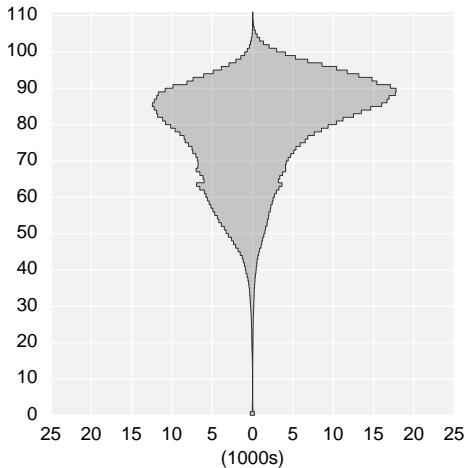
Chrono Age



$G(a)$  (USA, 2010)

# PYLL & friends, causes of death

Chrono Age

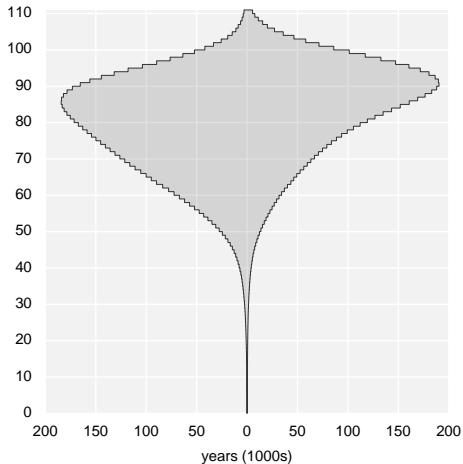


$D(a)$  Cardio (USA, 2010)



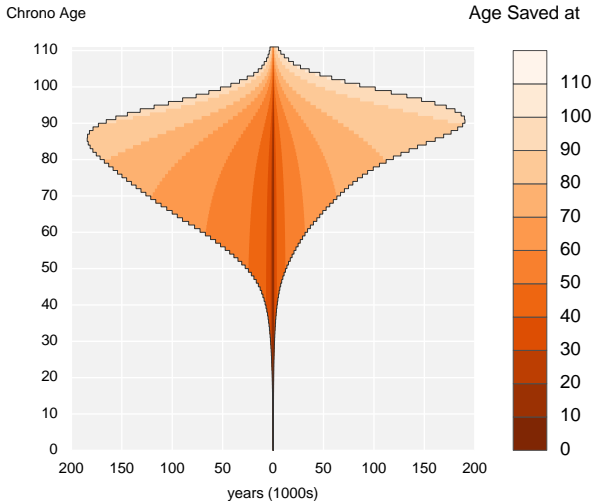
# PYLL & friends

Chrono Age



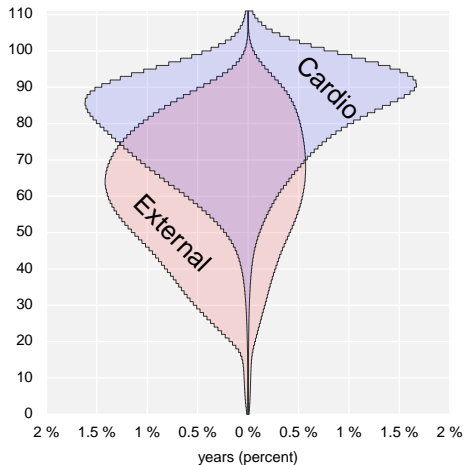
$G(a)$  Cardio (USA, 2010)

# PYLL & friends, decompose



# PYLL & friends, compare causes

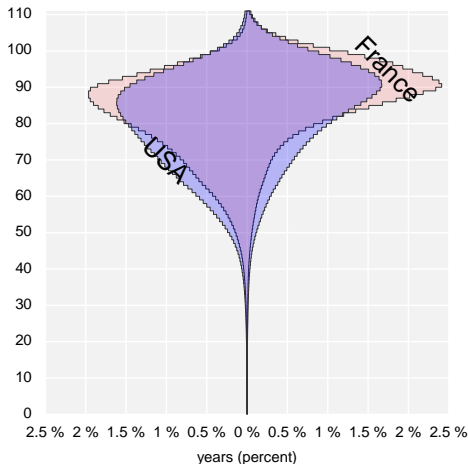
Chrono Age



$G(a)$  Cardio vs External (USA, 2010)

# PYLL & friends, compare populations

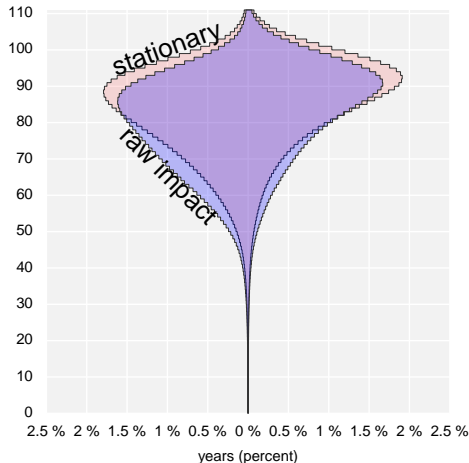
Chrono Age



$G(a)$  Cardio (USA vs France, 2010)

# PYLL & friends, compare with stationary

Chrono Age



G(a) Cardio (Raw impact versus stationary, USA, 2010)

# PYLL & friends, summaries

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$\bar{A}$  mean chrono age of  $G$

$\bar{Y}$  mean thanatological age of  $G$

# PYLL & friends, rates

Years Lost

Riffe & Solé

All-cause

Causes

Comparisons

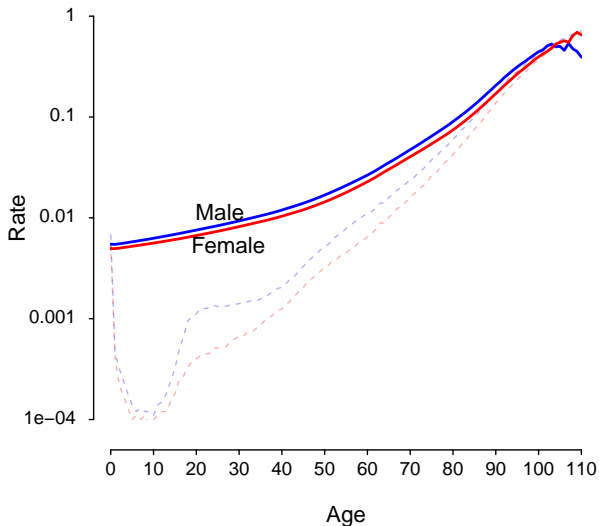
Rates

Conclusions

$$\mu^G(a) = \frac{G(a)}{PF(a)} \quad (3)$$

The lives that **would** have passed through age  $a$  divided by the lives that **will** pass through  $G(a)$ .

# PYLL & friends, rates



$G(a)$  (male and female, USA, 2010)



# PYLL & friends, new material

Years Lost

Riffe & Solé

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Comparisons

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Conclusions

Counts, years, rates, impacts

# Life lost, lifesaving, and causes of death

Tim Riffe<sup>1</sup> & Aïda Solé Auró<sup>2</sup>

Thank you!

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