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A unified framework of demographic time

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Jonas Schöley

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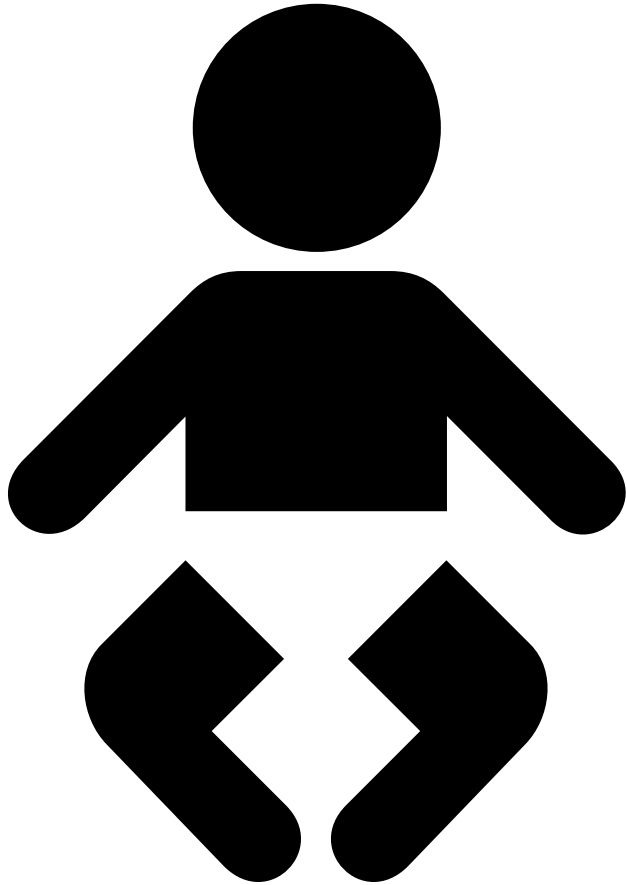


Demographic time





Demographic time





Demographic time measures

A chronological age



T thanatological age

L complete lifespan

C birth cohort

D death cohort

P period



Demographic time measures

A	chronological age	
T	thanatological age	
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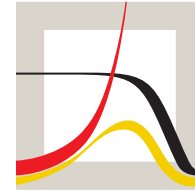
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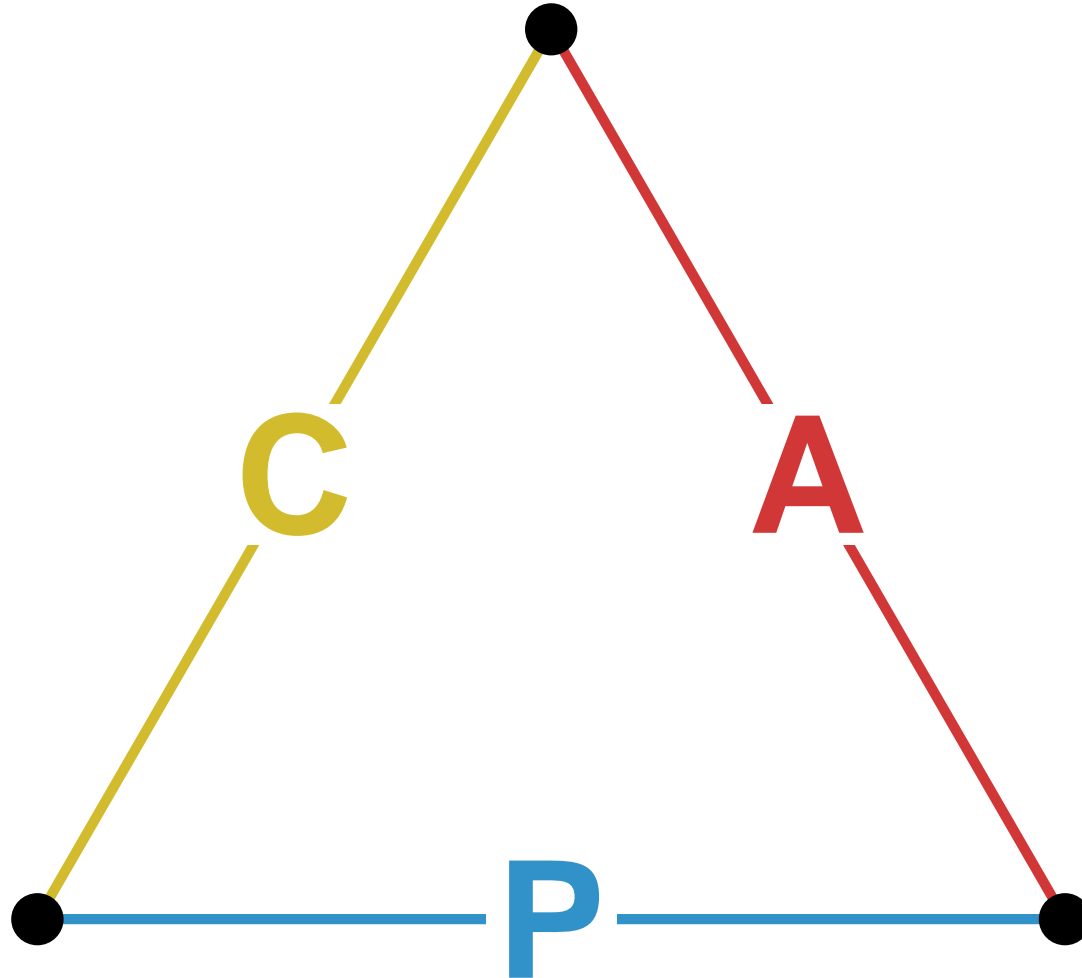
Objective

Expand the Lexis diagram to include all six time measures: APCTDL

(It turns out Lexis himself did something eerily similar, but not identical.
Happy to explain how it works too)

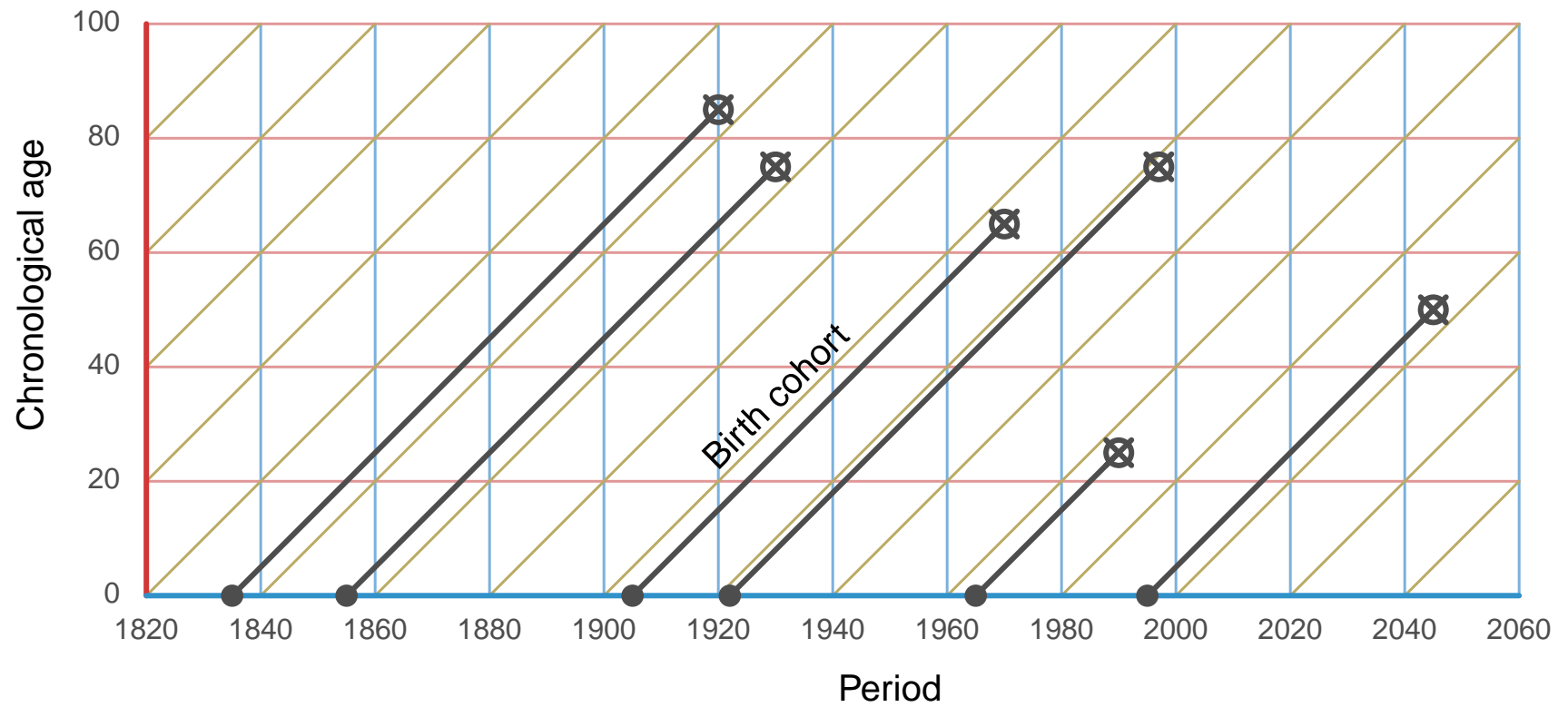


The APC demographic time identity



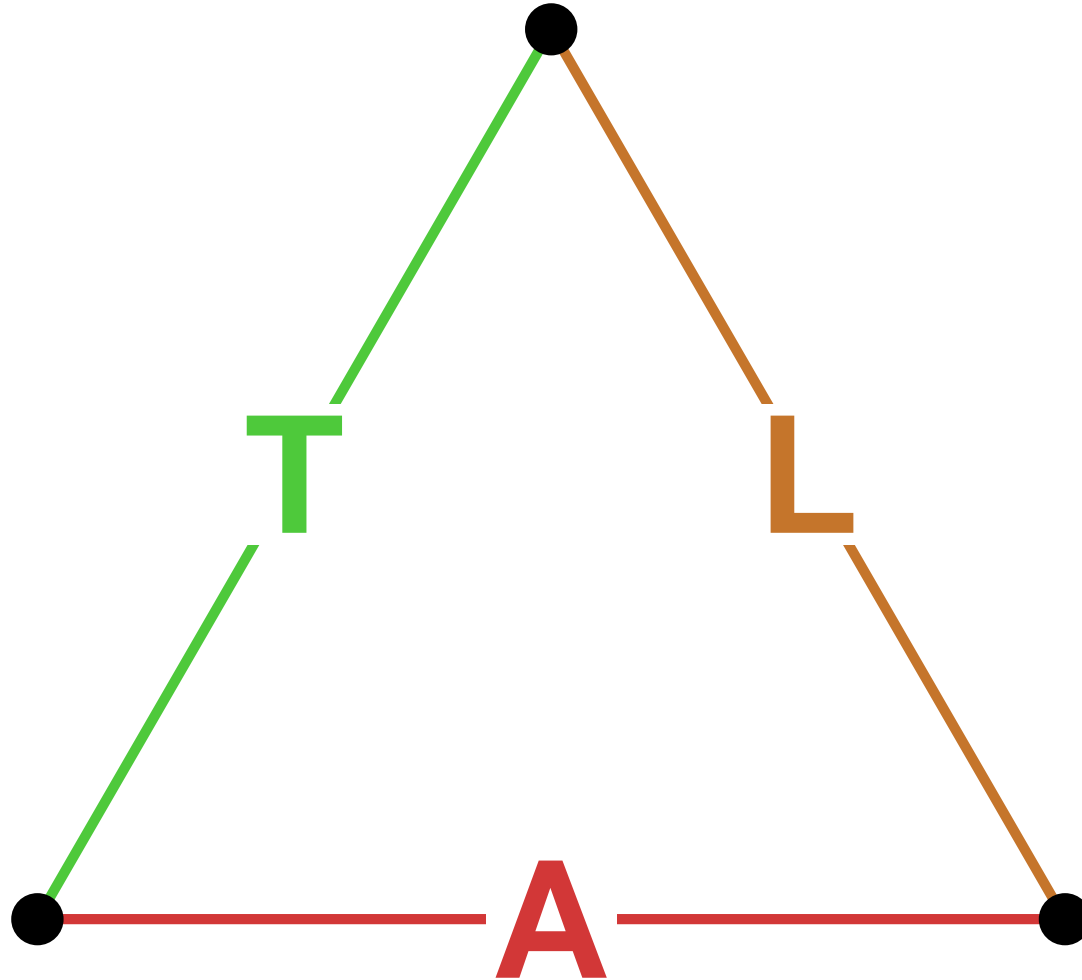


APC diagram (Lexis diagram)



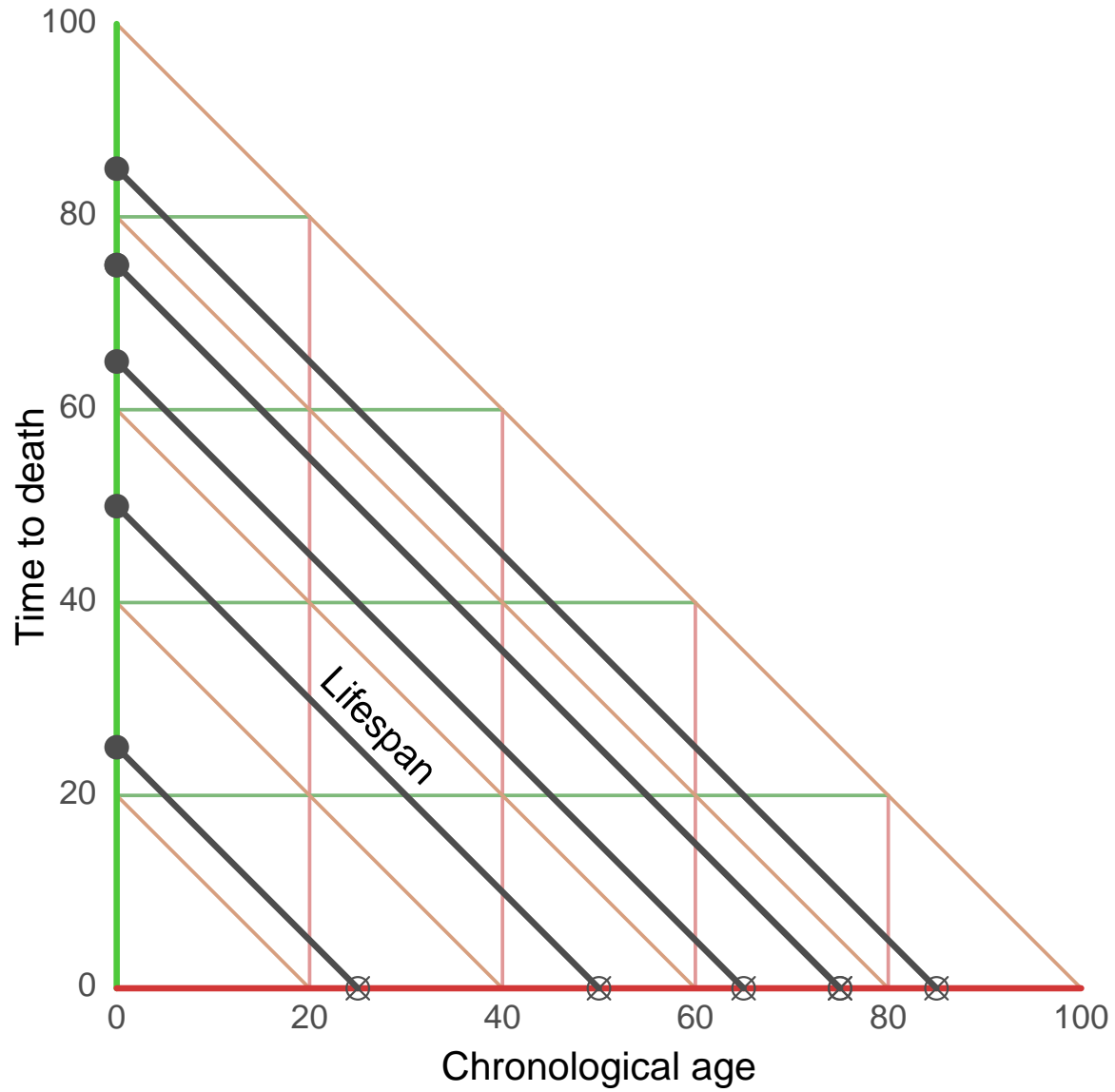


The TAL demographic time identity



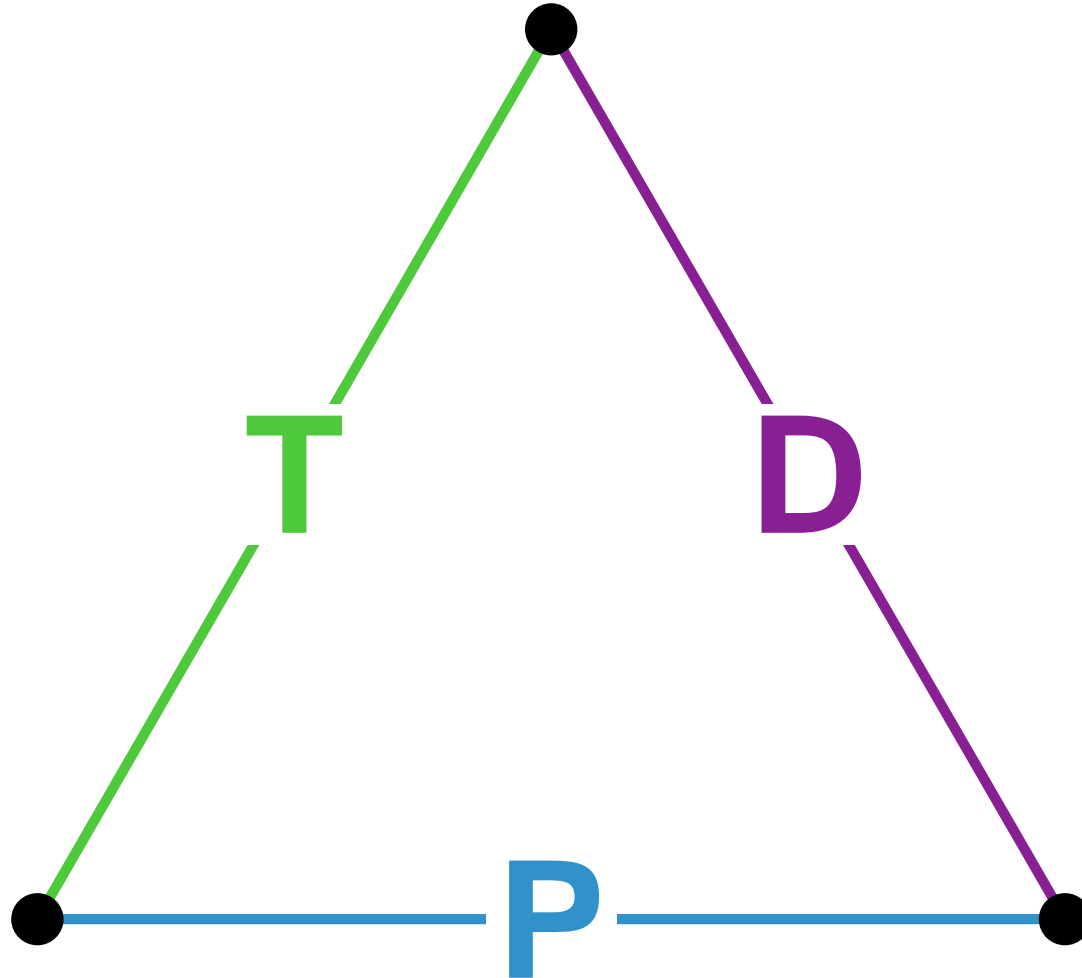


TAL diagram



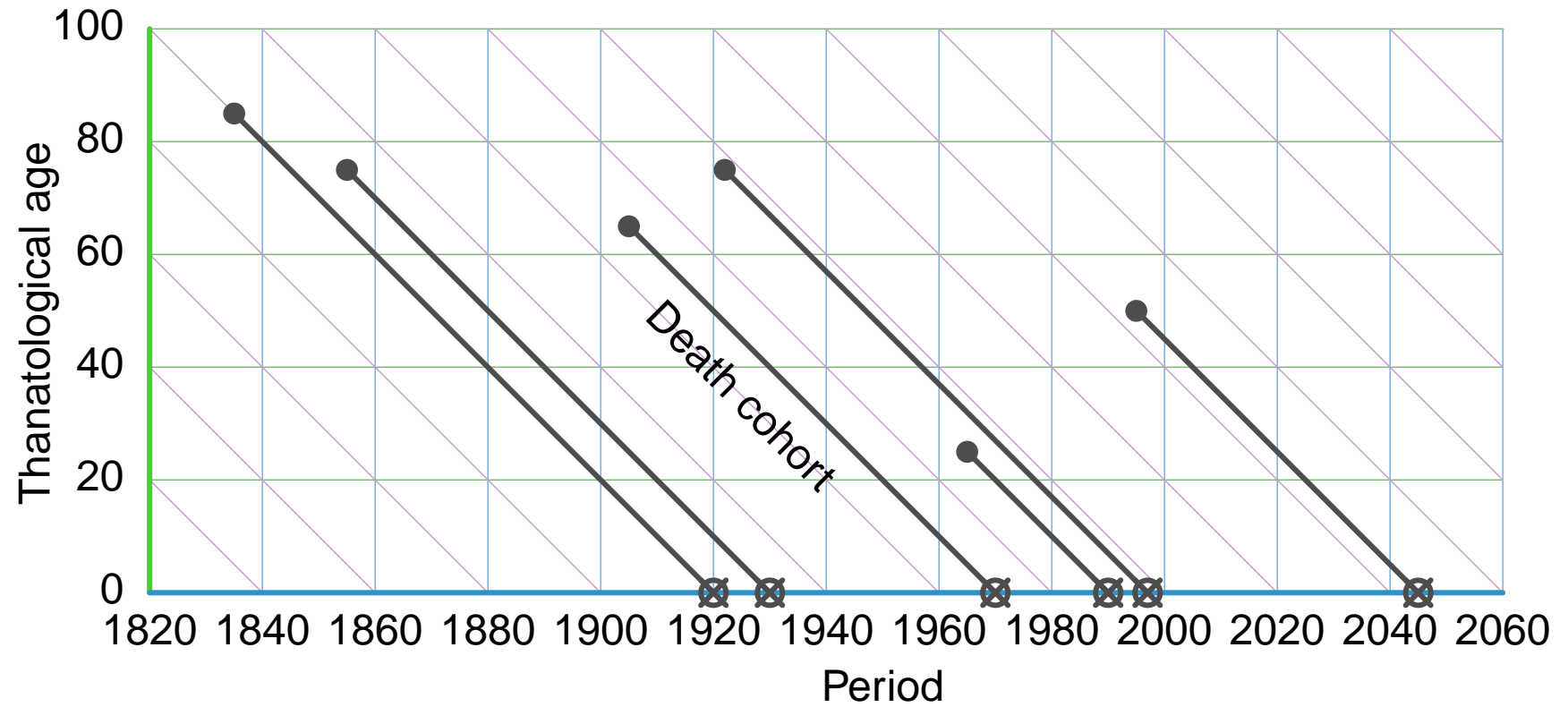


The TPD demographic time identity



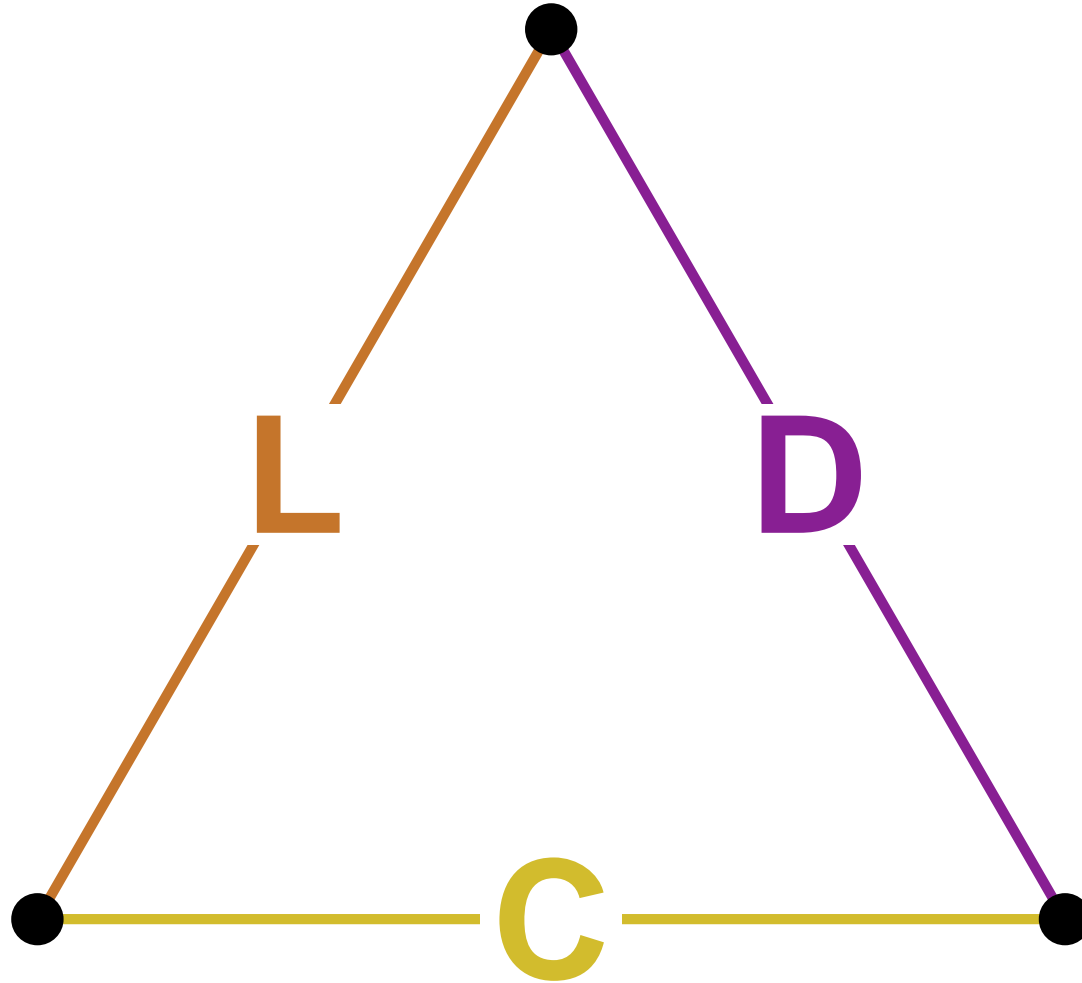


TPD diagram



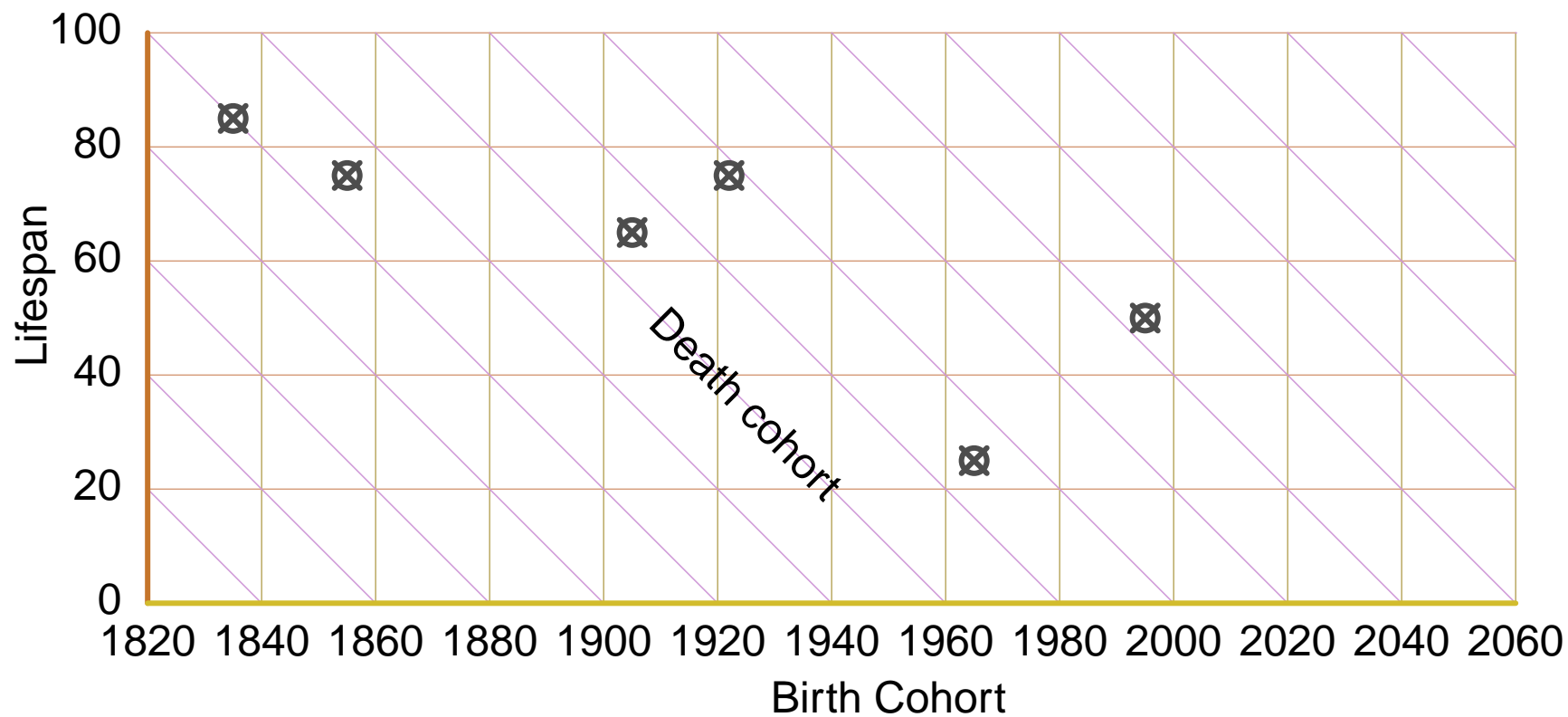


The LCD demographic time identity



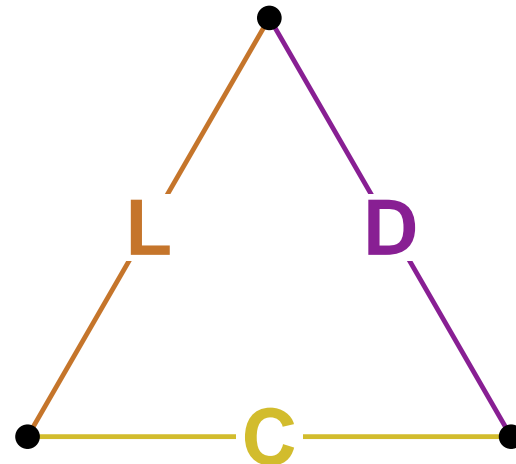
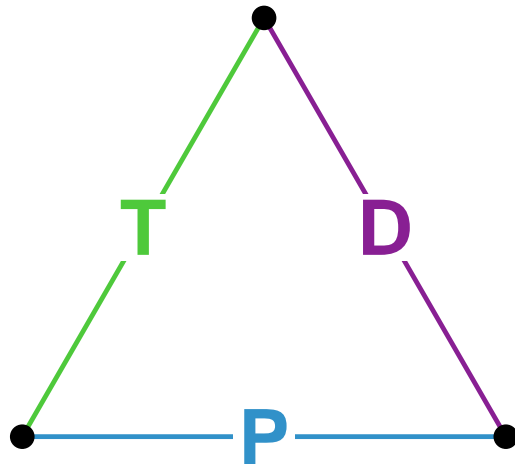
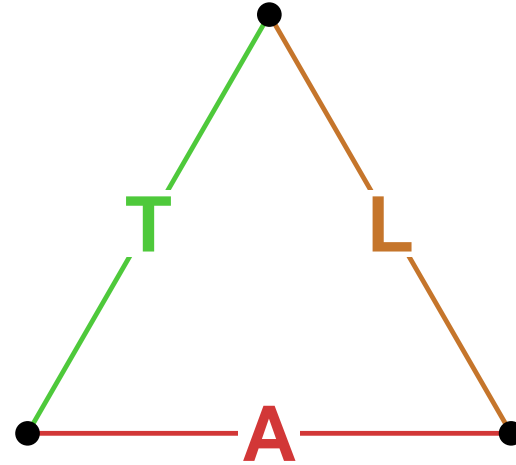
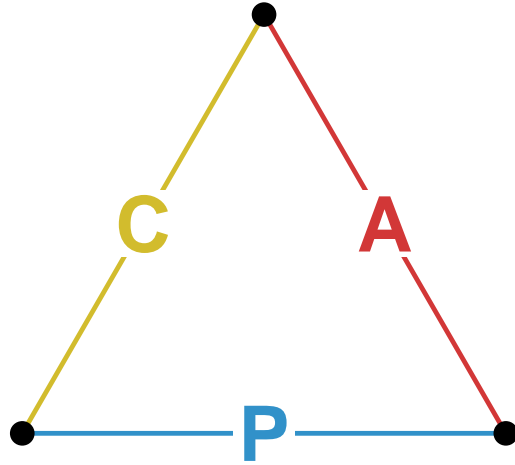


LCD diagram



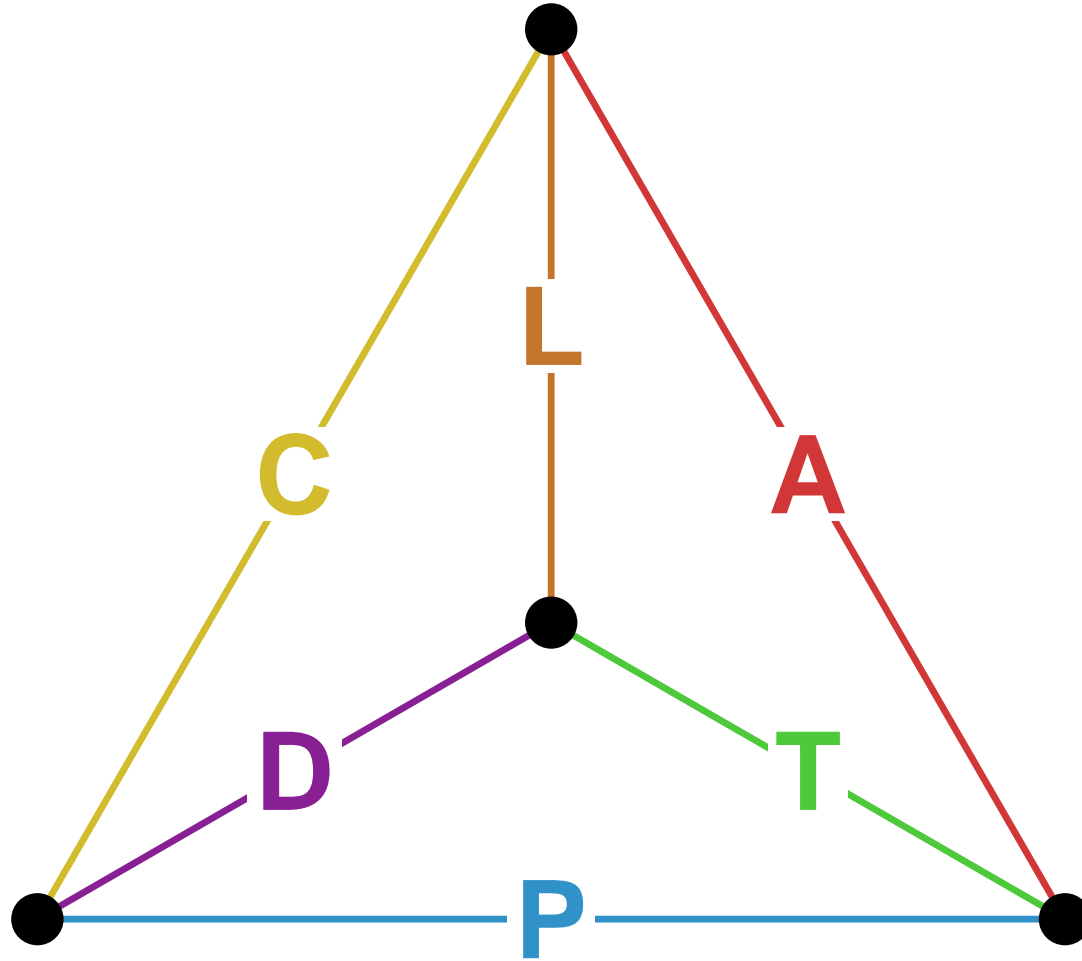


Four demographic time identities



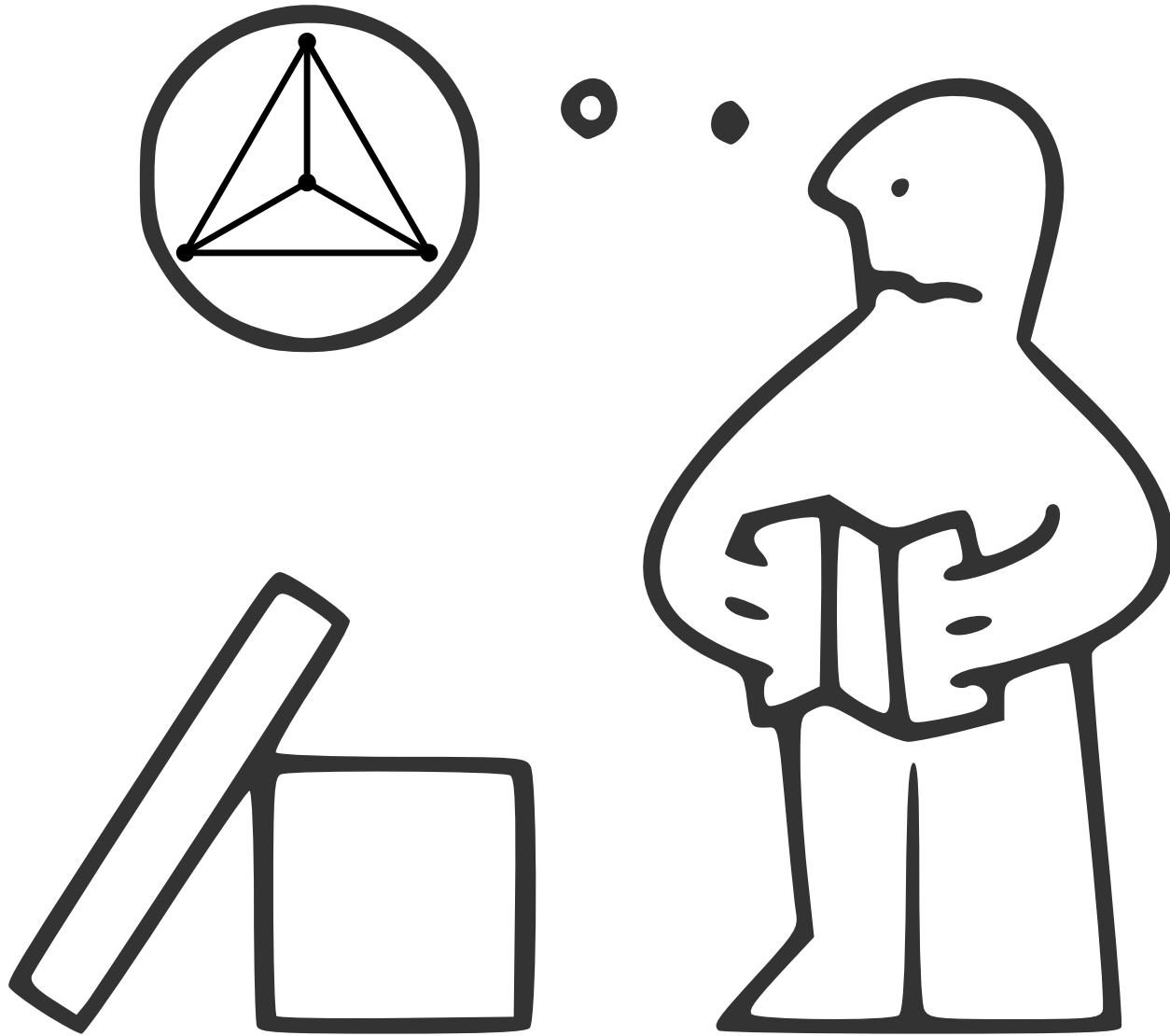


The demographic time identity



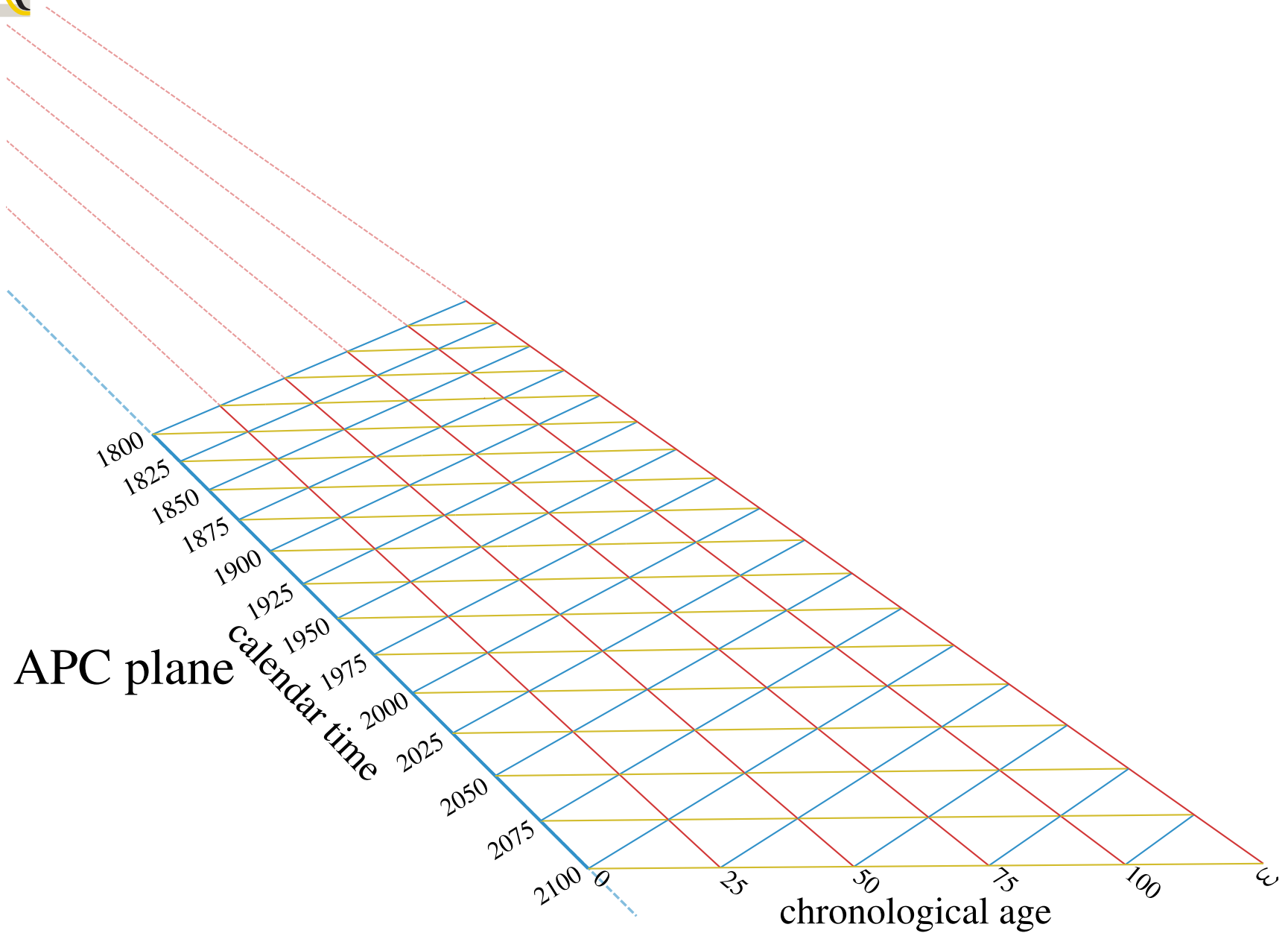


Building a demographic time diagram (1)



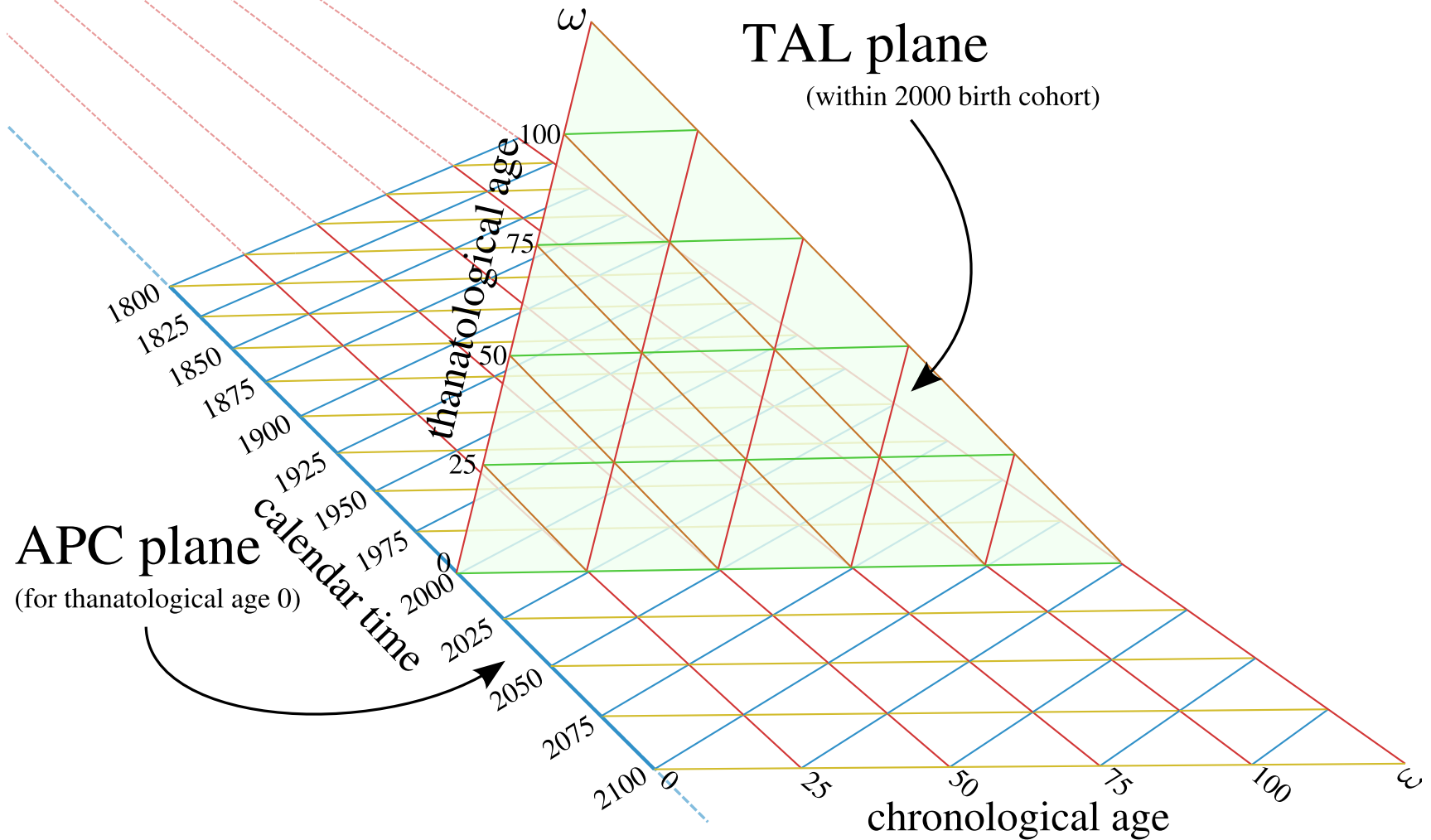


Building a demographic time diagram (2)



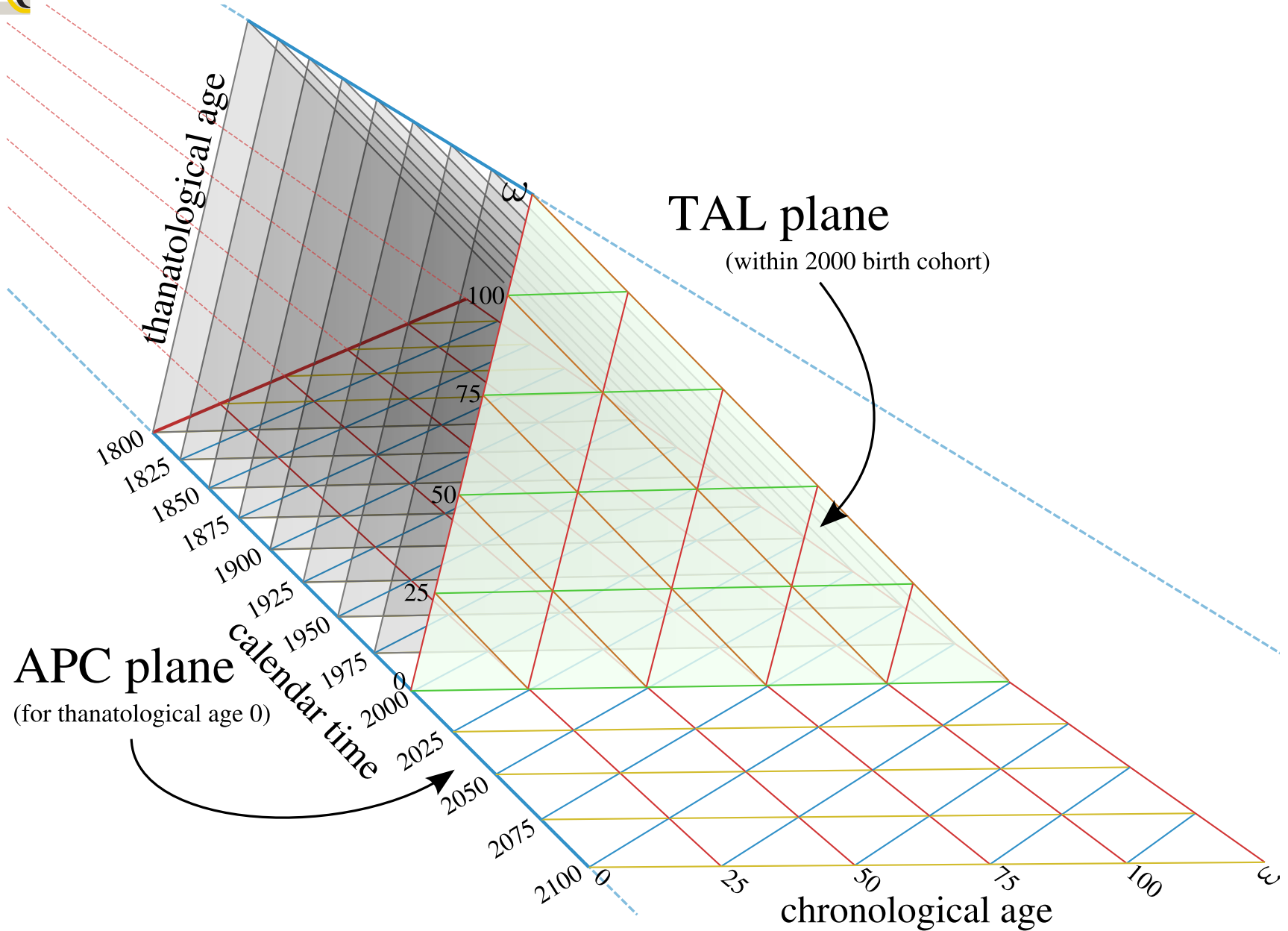


Building a demographic time diagram (3)



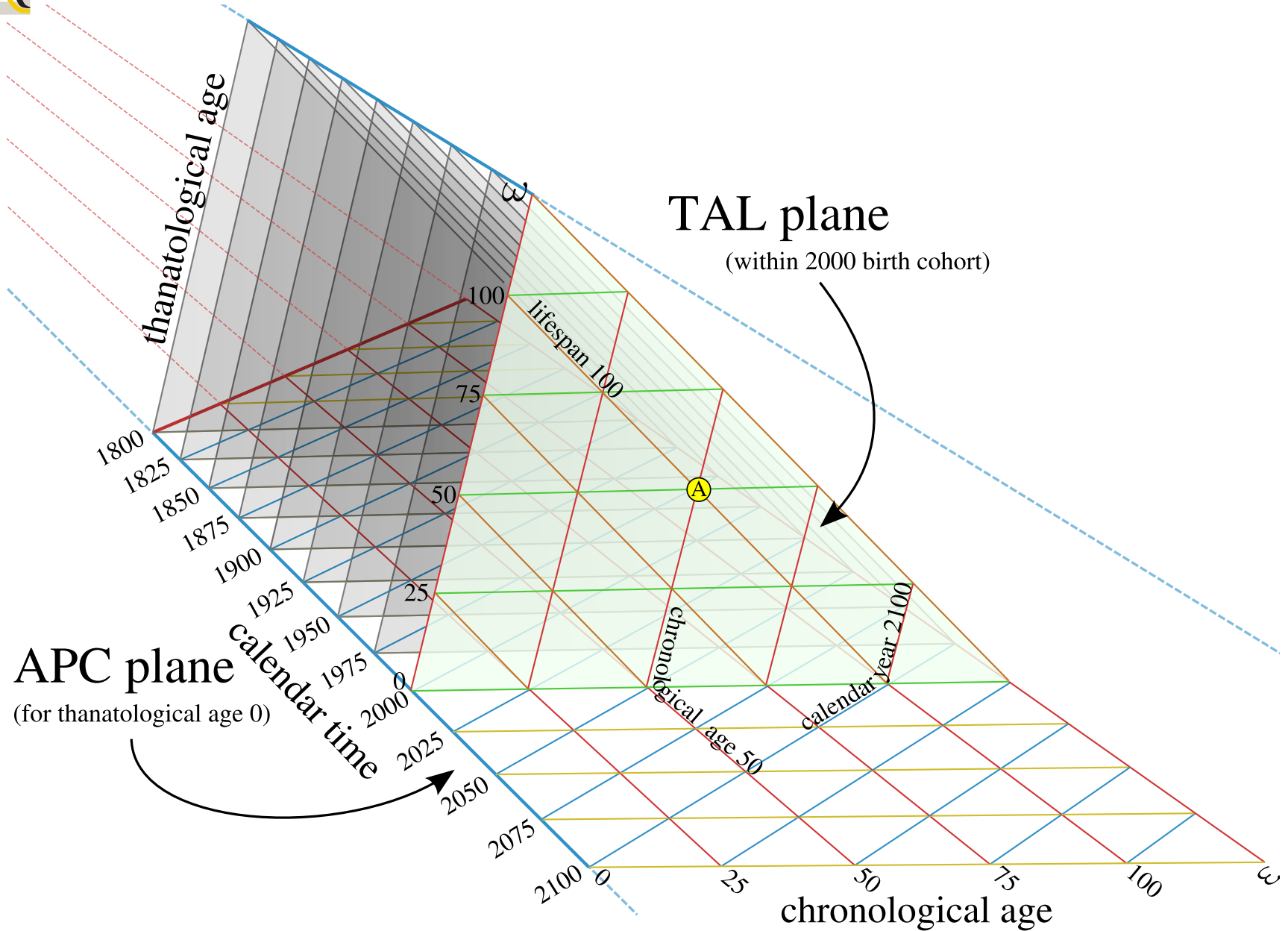


Building a demographic time diagram (4)





Building a demographic time diagram (5)



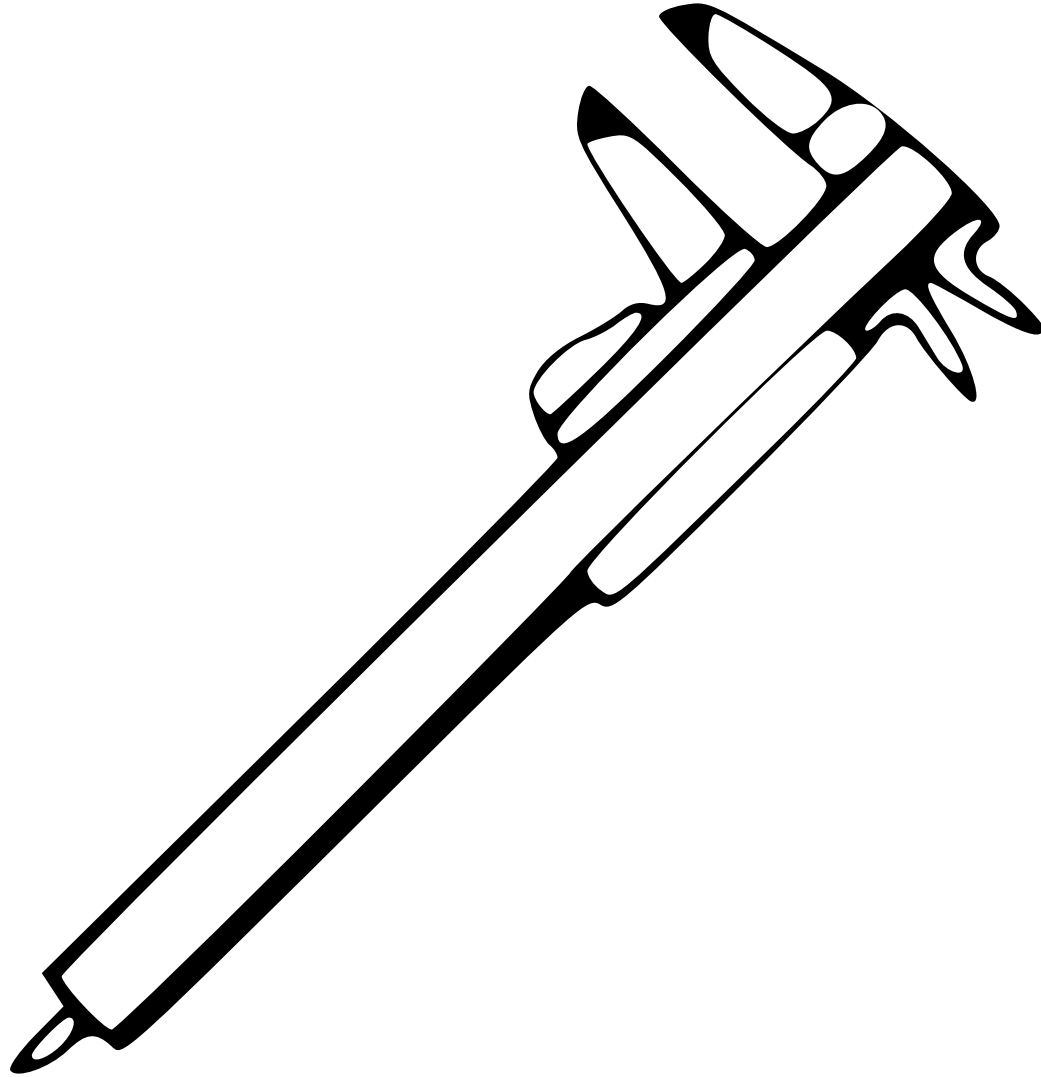


So why more planes? (1)





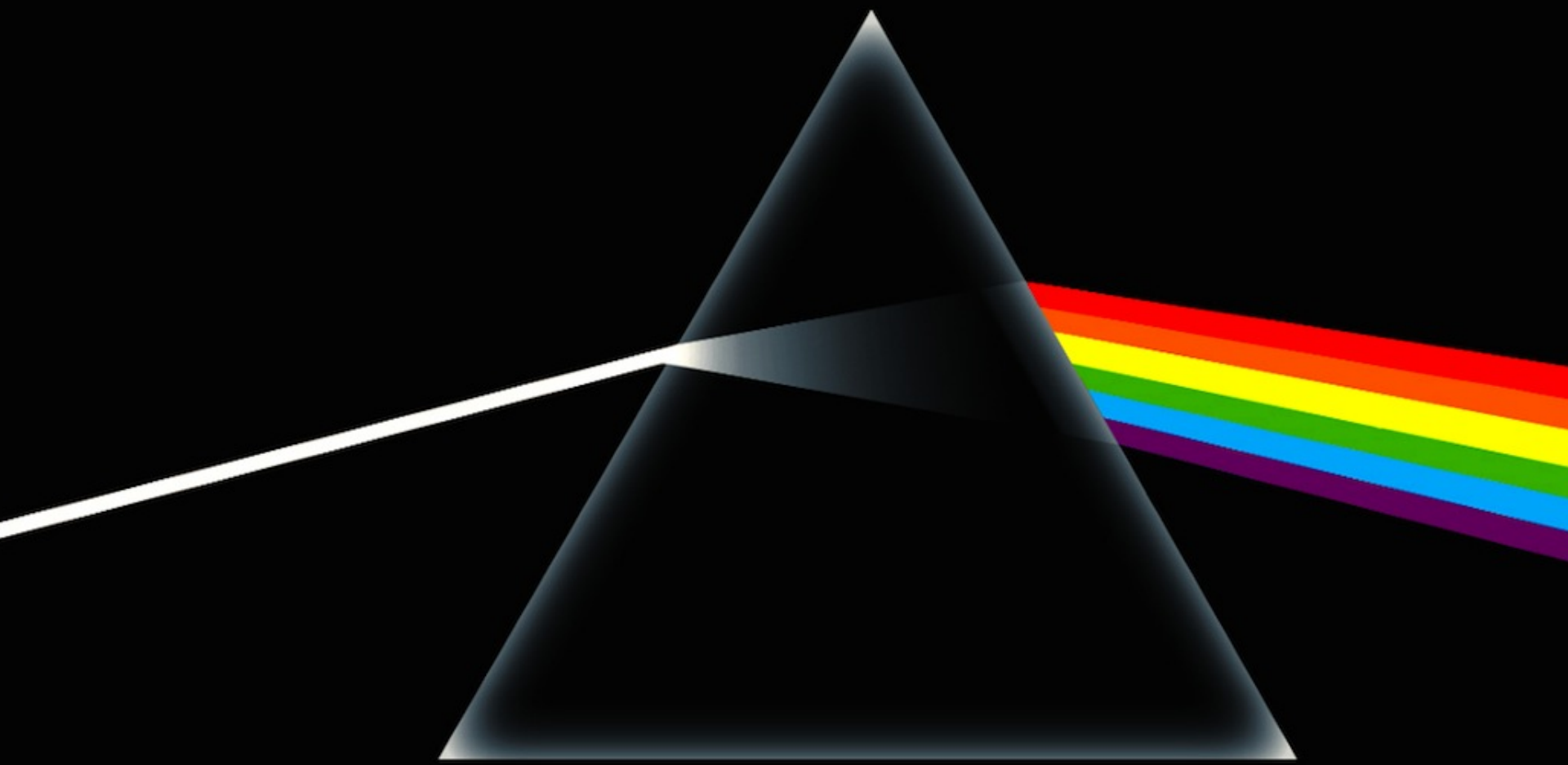
So why more planes? (2)





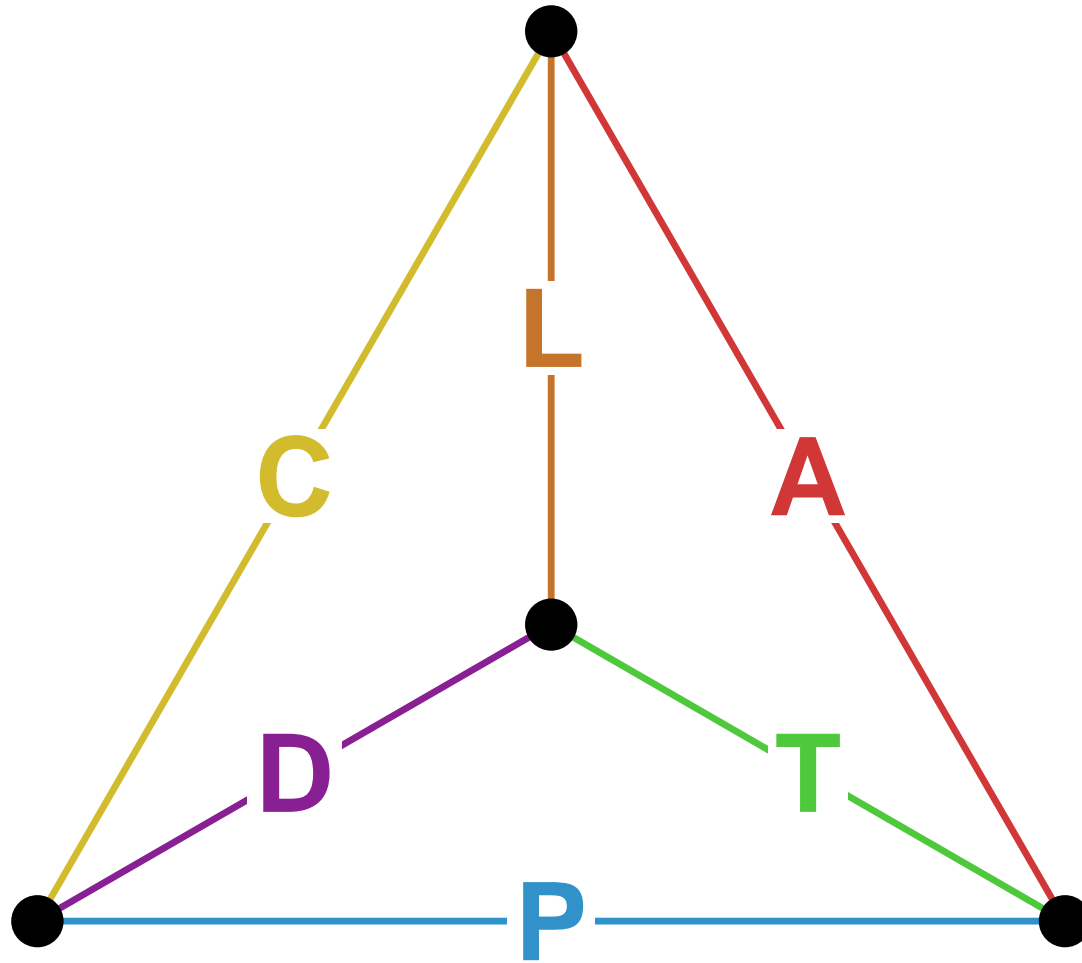
So why more planes? (3)







Thanks!





An example inquiry

- compare end-of-life trajectories for several birth cohorts (1905 - 1925)
- HRS (Rand), waves 1-11 (years 1992-2012)
- use TAL plane to uncover patterns that APC hides
- this example: prevalence of poor self-reported health



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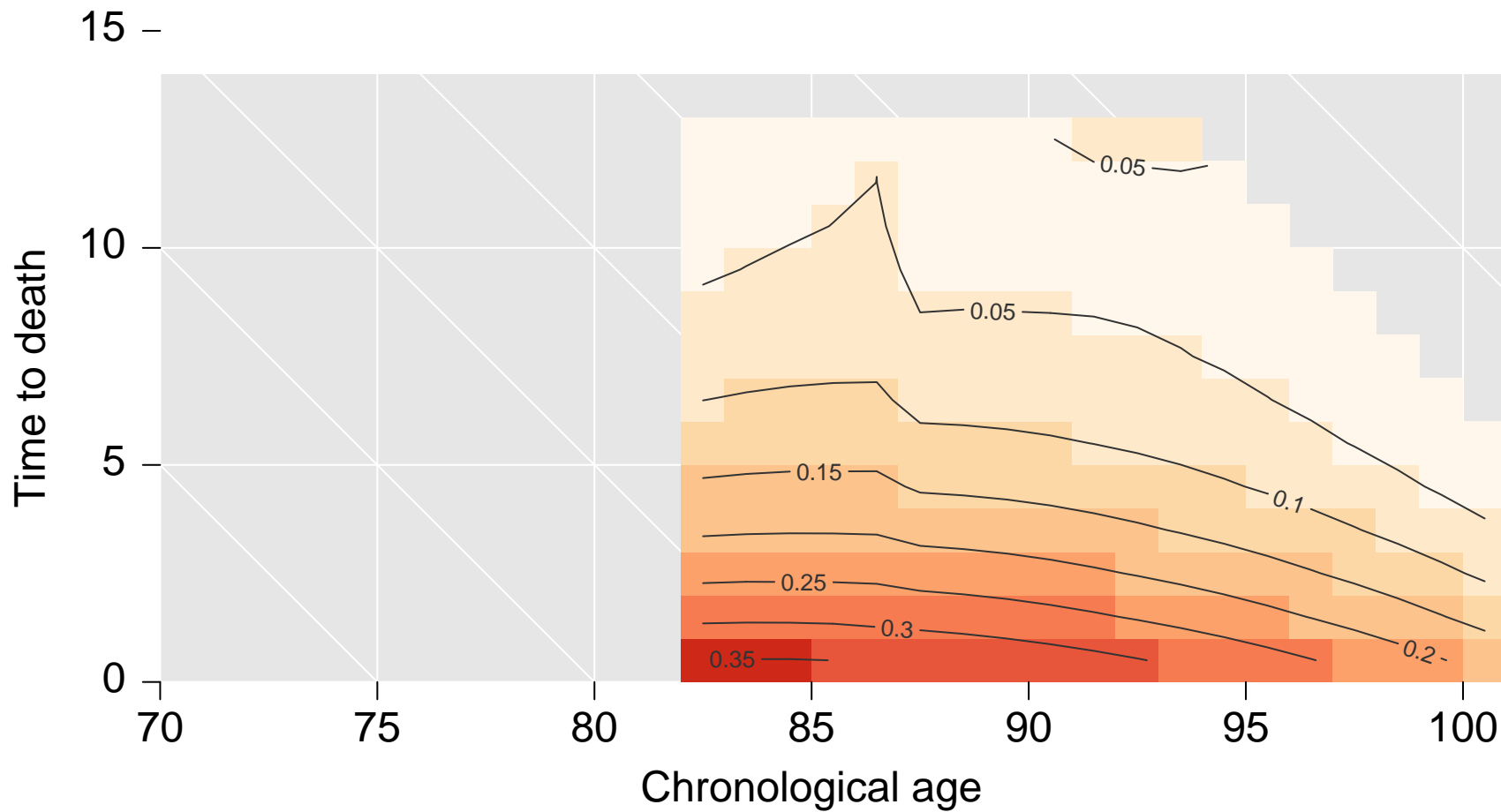


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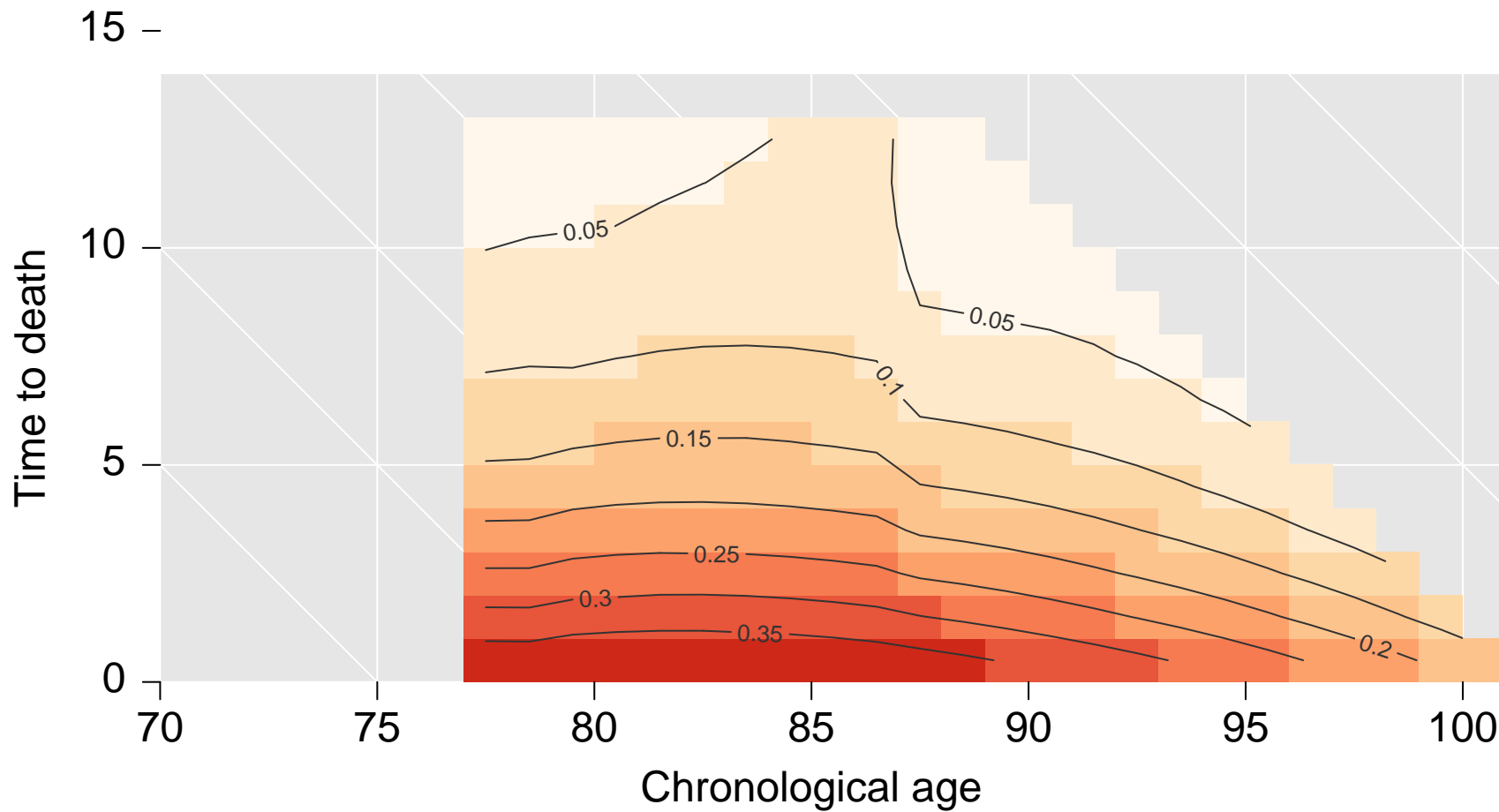


1905 cohort



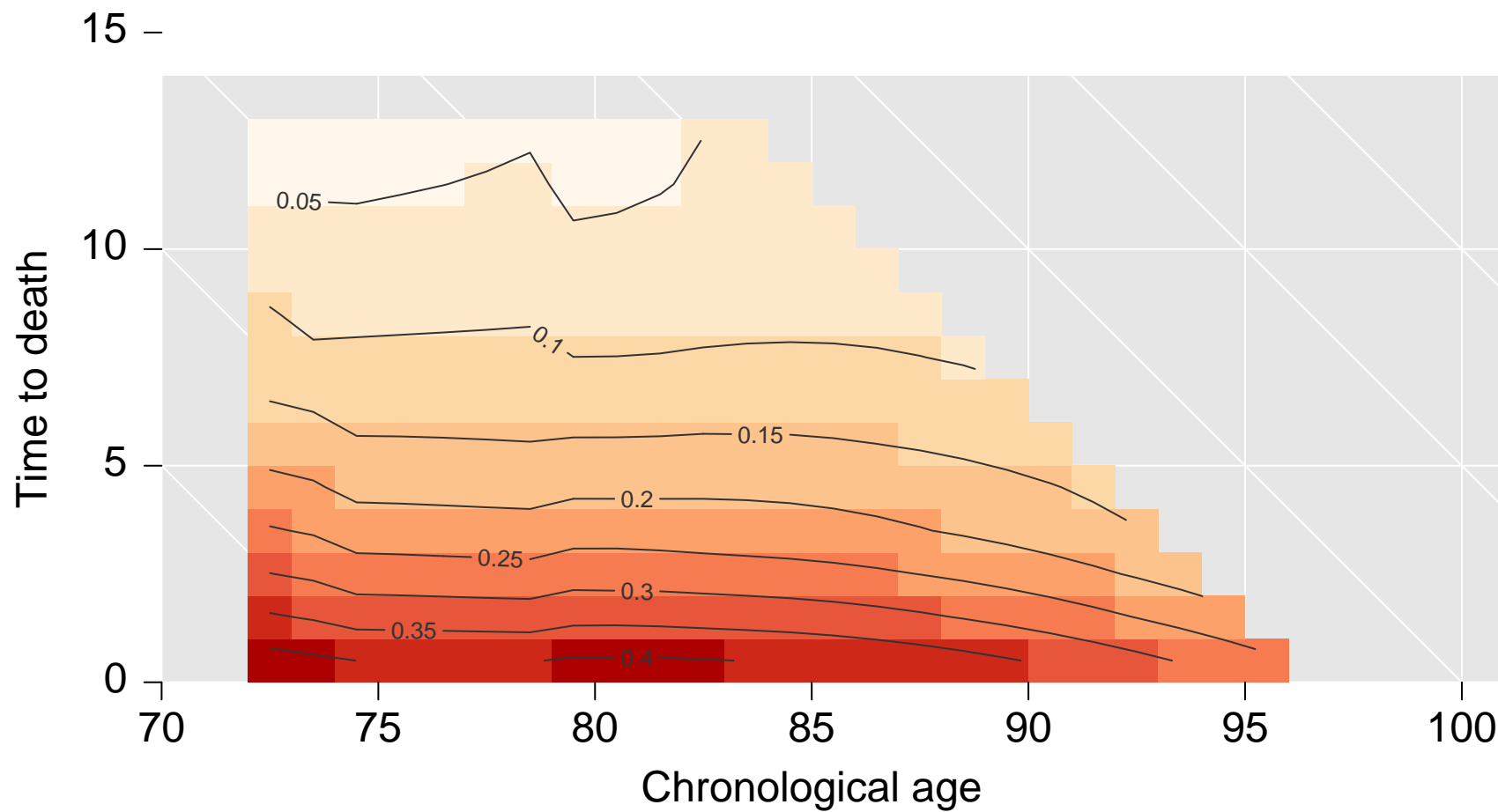


1910 cohort, looking pretty similar



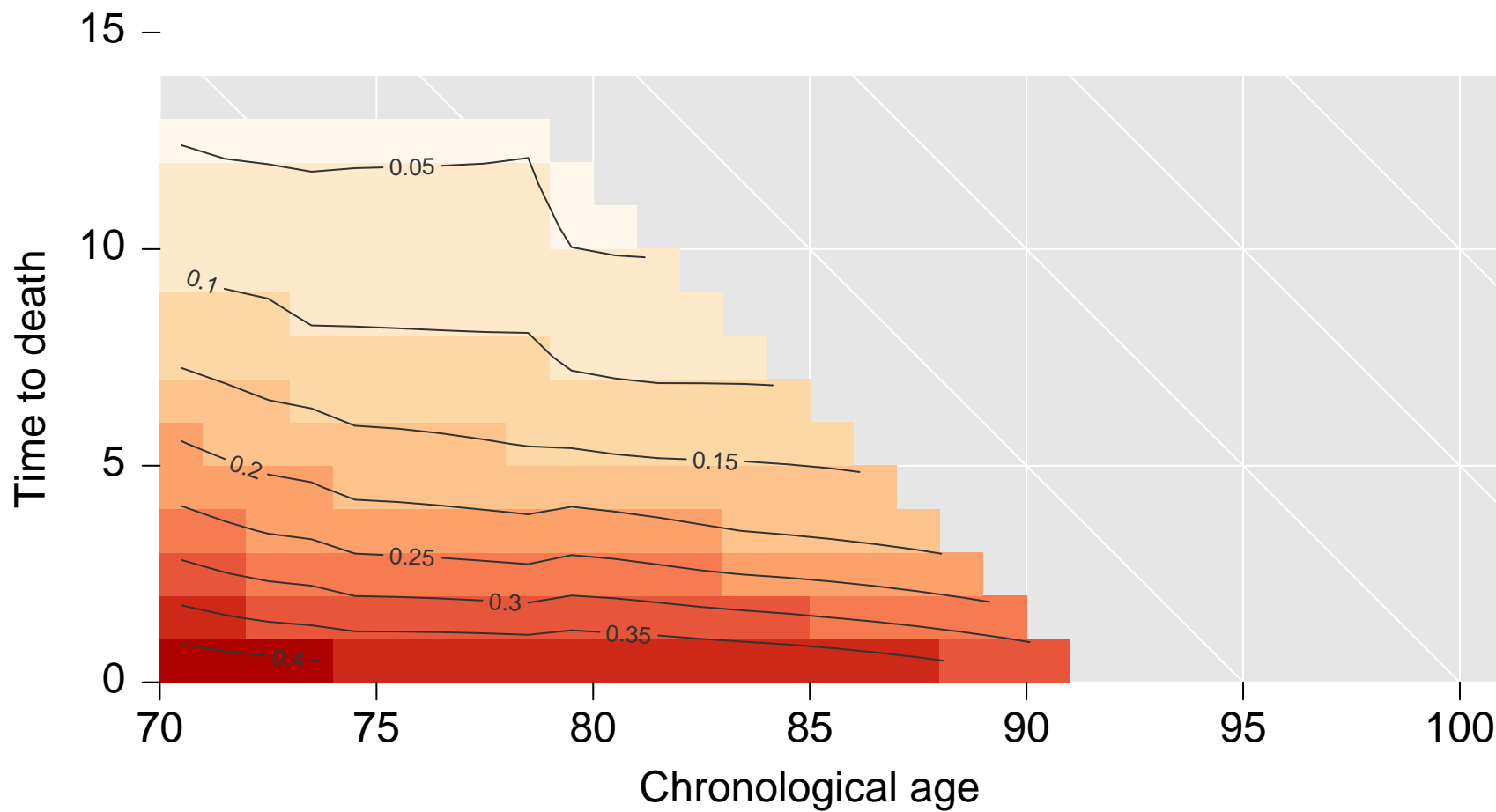


1915 cohort, looking pretty similar





1920 cohort, looking pretty similar





1925 cohort, looking pretty similar

