



Wittgenstein Centre

FOR DEMOGRAPHY AND
GLOBAL HUMAN CAPITAL

Due to the COVID-19 pandemic, the
seminar will be held online via Zoom.

WIC Online Colloquium

Born Once, Die Once: Lifetable Relationships for Fertility

Tuesday, March 9th, 2021
14:00-15:00 (CEST)

Please click [here](#) to register online.
Login information will be sent to registered
participants the day before the presentation.

Annette Baudisch & Jesús-Adrián Alvarez

Interdisciplinary Centre on Population Dynamics

Everyone dies, once. This basic truth empowers formal mortality research. Similarly, everyone is born, once. This truth has not been fully exploited to benefit formal fertility research. Baudisch and Stott (2019) recently advanced the idea of an offspring population - yet unborn - awaiting the event of birth, introducing a novel survivorship concept for birth.

Formalizing the idea of 'birth survival', here we define the underlying random variable and derive the central 'triplet' of survival analysis functions - the hazard, density, and survival. We derive a straightforward framework to capture age-specific patterns of birth, analogous to classical life table functions. Based on age-specific birth counts, we construct a 'birth table' and meaningful summary measures such as 'birth expectancy' and associated measures of spread.

We advance a new framework to compare birth schedules across populations and to reveal macrolevel patterns and constraints. Our approach enables method transfer from mortality to fertility research, which can create an integrated framework to study birth and death for the same focal individual. Thereby, insights into the intertwined relationships between birth and death become possible. This, we envision, will open an entirely unexplored line of research.

About the presenter

Professor Annette Baudisch is Vice Director at the Danish Centre for Demographic Research | CDem within the Interdisciplinary Centre on Population Dynamics | CPop. As mathematician and demographer by training, her research advances concepts, theories and methods to study age-patterns of mortality and fertility. Changing the question of "why we age" to "why we age, but other species do not", and creating the pace-shape framework of aging are her award-winning contributions to science.

The Wittgenstein Centre is a collaboration among the Department of Demography of the University of Vienna, the World Population Program of the International Institute for Applied Systems Analysis (IIASA) and the Vienna Institute of Demography of the Austrian Academy of Sciences (VID/ÖAW).

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