Demographic Exploration and Discovery (with R): About

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Objectives

This is a course about *seeing* data, about getting comfortable with asking data questions and getting preliminary answers from it, by looking at it. Some things are taken for granted as true in demography. How do we know them anyway? Visualization happens in different ways at each stage of the research process. Let's talk about it in a deliberate way. And let curiosity drive our questions.

This is *not* a course about modeling, but we might do some. This is *not* a course on formal demography, but we might do some. This is *not* a research colloquium, but there may be times where it feels like one. This is *not* a course about `R`, but it will be a good intro to `R` anyway. If you're doing these things in other courses, then this course will be a major booster. Of skills and attitude.

I hope that this course may serve to support other aspects of your master program and beyond. If you take the tools from this course to heart, then you'll keep them with you forever.

About me

I do demography. Here some key words that might help: Mortality, health, mortality and health inequalities, decomposition, visualization, formal demography, `R` development of tools for demography. I love this stuff, like for real. I didn't always do this stuff. My undergrad was in philosophy. All the programming and math came later in life, rather at random. I jsut got over it, learned by experimenting, making mistakes, over and over. And I still do.

Meetings

You can find me at the MPIDR. During this course you should feel somewhat entitled to ask for meetings, but always email enough in advance so that it's logistically possible. German or English are both OK for in-person meetings. Don't feel ashamed if you don't understand something, ask for help.

Email: `riffe@demogr.mpg.de`

Communication and materials

By the way, you should **send me an email** as soon as you decide you're going to take this class to declare so. I'll use email, to communicate with you. That includes cancellations, etc. I'll update a github site after each session, with prettified and annotated code. That's here: https://github.com/timriffe/DemoED

I'll explain how to use that page effectively as the need arises, but otherwise you can think of it as a stash of downloadable files. It's pretty bare-bones at the moment, but you just wait.

I speak and type faster when I'm excited, so you all need to raise a hand or speak up if you want me to slow down or re-explain something.

We will refer heavily to a particular book: K Healy (2019) *Data Visualization A practical introduction*, which gives both theory and code, and is well written. You can find the free online version here: https://socviz.co/ You can also just buy it if you want. Wouldn't be a bad use of money. For at least the first several sessions, we'll follow the book closely.

There are other resources out there. Another book that supplements ours is: C. Wilke (2019) *Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures*, which you could buy, but which also has a free online version: https://serialmentor.com/dataviz/. This book was also composed in R markdown, just like we're using in class. You can see the guts here: https://github.com/clauswilke/dataviz

I may refer to particular sections of the Wilke book, but we won't be using it per se as far as I can foresee.

Sessions

We have a regularly scheduled meeting time of 9:00-11:00, Wednesdays, which you've already figured out, *but* some of these sessions need to be moved because I have business trips, sorry.

Cancelled sessions (5!) 1. 10.04 2. 15.05 3. 29.05 4. 12.06 5. 03.07

These will be replaced by the following sessions, to be held at MPIDR, room 100 Thursday 9:00-11:00: 06.06, 20.06, 27.06, 11.07