

# What do people do online?

## Using data donation to understand digital behavior.

a workshop at the SPP Junior Researcher Meeting

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Frieder Rodewald 

University of Mannheim & Institute for Employment Research

Sebastian Prechsl 

Institute for Employment Research & LMU Munich

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# Our Agenda

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**[frodeu.github.io/workshop\\_spp\\_annual\\_meeting/](https://frodeu.github.io/workshop_spp_annual_meeting/)**

- 1** What is digital trace data?
- 2** What is data donation? – The participant's perspective.
- 3** What is data donation? – The researcher's perspective.

# Who are you?

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Please raise your hand 🙋 if you ...

- are familiar with the term digital trace data
- have worked with APIs
- have worked with data donation
- have worked with automated content analysis
- regularly use programming languages (e.g., R, Python)

# About me: Frieder Rodewald

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🎓 PhD, University of Mannheim & Institute for Employment Research

🤔 Research interests: "I study what people do online."

More info: [github.com/frodew](https://github.com/frodew) & [frieder-rodewald.de](https://frieder-rodewald.de)

# About me: Sebastian Prechsl

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🎓 Postdoc at Institute for Employment Research & LMU

🧐 Research interests: Social inequalities (in the labor market), potentials of digital trace data for labor market research

# 👉 part of the SPP project Integrating Data Donations in Survey Infrastructure



Dr. Valerie Hase

PI, LMU Munich



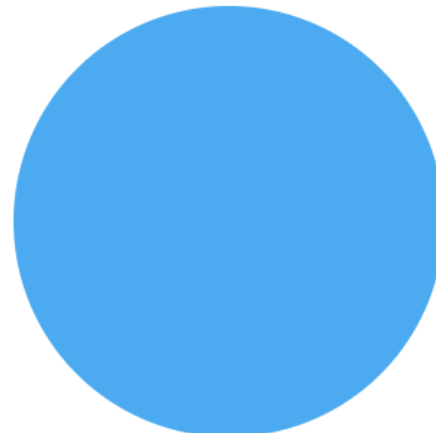
Prof. Dr. Florian Keusch

PI, University of Mannheim



Prof. Dr. Frauke Kreuter

PI, LMU Munich



Prof. Dr. Mark Trappmann

PI, IAB/University of Bamberg



Dr. Sebastian Prechsl

Postdoctoral Scholar, IAB/LMU Munich



Frieder Rodewald

PhD student, University of Mannheim








Our Team

A huge thanks to Valerie Hase, for contributing to the conceptualization of a previous data donation workshop at CompText in Vienna.

# What is the goal of this workshop?

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-  Understanding digital data traces as a *type* of data
-  Understanding data donation as a *method* of data access
-  Working through key steps of data donation methods (participant & researcher view)
-  Discussing when (not) to use data donation studies
-  Detailed implementation (e.g., server set-up, coding data extraction scripts)



# What is digital trace data?

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🤔 Which examples for digital trace data you know?

# What is digital trace data?

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💡 **Definition:** *The recording and storing of activities on digital platforms to draw conclusions about digital and analog phenomena.*

This might include:

- Tweets, likes, shares on social media
- Geo data (locations, movements)
- Digital payments
- Spotify playlists

# Where can we find/collect digital trace data?

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- Apps (e.g., running apps)
- Social media platforms (e.g., Instagram)
- Payment systems (e.g., Paypal)
- Wearable devices (e.g., smart watch)

# Which (latent) constructs can we measure?

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- **Internet use** ([Parry et al. 2021](#)) related to ...
  - Well-being ([Ohme et al. 2024](#)) or voting ([Bach et al. 2021](#))
- **News engagement** ([Reiss 2023](#)) related to ...
  - News diversity ([Jürgens and Stark 2022](#)) or public opinion formation  
([Yan, Schroeder, and Stier 2022](#))
- **Movements** related to ...
  - Mobility during pandemics ([Li et al. 2021](#)) or social networks  
([Sepulvado et al. 2022](#))

# Why are digital traces becoming more popular?






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- **Problems with self-reported data** (e.g., via survey)
  - Self-reported data subject to specific bias ([Scharkow 2016](#); [Parry et al. 2021](#))
  - Response rates in surveys are declining ([Luiten, Hox, and de Leeuw 2020](#))
- **Availability**
  - Cheap (e.g., via APIs)
  - Large data sets ("big data")

⚠️ **Be careful:** These "advantages" are often claimed, but **not** empirically proven.

👉 Digital traces are neither necessarily less biased, cheaper, or larger.

# (Dis-)advantages of digital trace data

-  More fine-grained, often longitudinal measures due to timestamps
-  Partly measurement of new variables (e.g., algorithmic inference)
-  Bias due to errors in representation and measurement
-  Implementation can be expensive and cumbersome
-  More data does not mean better data!



# How can we collect digital traces?

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# Platform- and user-centric methods

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- **Platform-centric** (based on platform cooperation)
  - API ([Jünger 2021](#))
  - Cooperation with platforms ([Wagner 2023](#))
- **User-centric** (based on user cooperation and informed consent) or "follow the user" approaches ([Caliandro 2024](#))
  - Data donation ([Carrière et al. 2025](#))
  - Linkage ([Sloan et al. 2020](#))
  - Sensors ([Struminskaya et al. 2021](#))
  - Tracking ([Christner et al. 2022](#))

🤔 **Questions?**

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