

# UNIVERSITY OF TWENTE.

## RECONCILING THE DEBATE ON PEOPLE ANALYTICS IN ACADEMIA AND PRACTICE

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DR. JOSCHKA HÜLLMANN

# STATEMENTS

„Recognise company crises and critical developments in human resources at an early stage and take appropriate action.“ (\*)

„People Analytics is evidence-based decision-making. Great potential!“

„You can improve the employee experience, recruit the right talent and reduce the fluctuation rate in a targeted manner.“ (\*)

„My job is to prevent what you are proposing.“ (Frank Bsirske, former head of ver.di)

„Scepticism about such software is still widespread in Germany at present.“ (\*\*)

(\*) von <https://www.personio.de/hr-lexikon/people-analytics/#1>

(\*\*) <https://interaktiv.br.de/ki-bewerbung/>



# ABOUT ME

**Dr. Joschka Hüllmann**

Assistant Professor at University of Twente (NL)

## **Research Topics:**

- Future of Work with new Technologies
- People Analytics and Algorithmic Management
- Analysis of Digital Traces
- Social Process Mining

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# AGENDA

1. Motivation
2. About People Analytics
3. Methods
4. Findings



# MOTIVATION

*People Analytics is a popular topic in practice with many conferences and product/service offerings.*

Driven by:

1. Technological advances,
2. Unprecedented data availability,
3. Humans as “walking data generators”.

# MOTIVATION

...but there is a **big gap** in practice versus academia.

## Promises

Optimise productivity  
Improve Hiring and Staffing  
Objective Performance Evaluation

## Perils

Bias and discrimination  
Privacy violations  
Opacity

# MOTIVATION

Research question:

How can the **diverging conceptions** of people analytics explain and reconcile the opposing viewpoints?



# ABOUT PEOPLE ANALYTICS

People Analytics is defined as:

Socio-technical systems and associated processes that enable data-driven (or algorithmic) decision-making to optimise people-related business outcomes.



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**Socio-technical systems** and associated processes that enable data-driven (or algorithmic) decision-making to optimise people-related business outcomes.

Socio-technical:

Not a simple IT artefact, but the combination of people, tasks and technology.

# ABOUT PEOPLE ANALYTICS

People Analytics is defined as:

**Socio-technical systems** and **associated processes** that enable data-driven (or algorithmic) decision-making to optimise people-related business outcomes.

Processes:

Use of the system over time, embedded in the company's activities.

# ABOUT PEOPLE ANALYTICS

People Analytics is defined as:

**Socio-technical systems** and **associated processes** that enable **data-driven** (or algorithmic) **decision-making** to optimise people-related business outcomes.

Data-driven:

The system and decisions are based on the collection and analysis of data.

# ABOUT PEOPLE ANALYTICS

People Analytics is defined as:

**Socio-technical systems** and **associated processes** that enable **data-driven** (or algorithmic) **decision-making** to optimise **people-related** business outcomes.

People-related:

→ Data refers to people's behaviours and attitudes.

# ABOUT PEOPLE ANALYTICS

## History of People Analytics

- Origin in human resources
  - Inspired by analytics in other business functions
  - From basic controlling to predictive analytics
  - From intuition toward evidence-based management HR decision-making
- Based on employees' behavioural data.

# METHODS: LITERATURE REVIEW



# METHODS: CODING



Dimension	Explanation
Information Technology	What is the role of information technology?
Data Sources	What data sources are collected and analyzed?
Methods	What are the methods being used?
Stakeholders	Who is responsible and drives the topic?
Scope	What is the scope of outcomes, goals, or purposes?
Unit of Analysis	Which unit of analysis is depicted?
Consequences	What are the consequences of applying people analytics?

# RESULTS



Filter	Academic Papers	Consultancies Papers	Total
After search	280	65	
After screening abstract	60	(n/a)	
After screening fulltext	28	14	
Included papers			<u>42</u>



# RESULTS

## Operational People Analytics

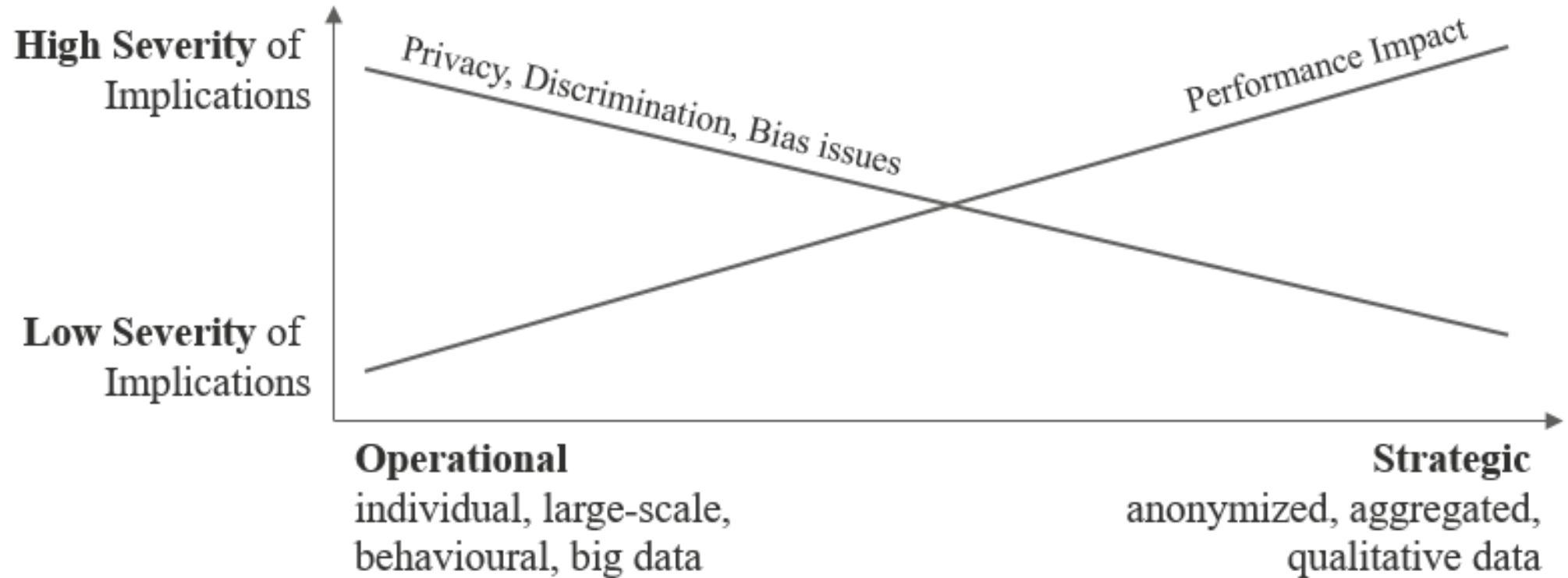
1. **Digitize** human resources through **data-driven methods** (machine learning & IT).
2. Focus on **HR's core objectives** (hiring, retention, staffing).
3. **Quantitative** approaches using **fine-grained** employee data.
4. Augments & automates single operational HR tasks.
5. Driven by academia and vendors.

# RESULTS

## Strategic People Analytics

1. Moves away from mere operations toward „**next evolution step of HR**“.
2. Focus on **strategic processes** such as workforce development and digital transformation.
3. **Qualitative** & **quantitative** approaches using **aggregated** data.
4. Manual support & semi-automation of strategic HR tasks.
5. Driven by consultancies.

# RESULTS





# DISCUSSING PROPOSITIONS OPERATIONAL PEOPLE ANALYTICS

## Proposition 1

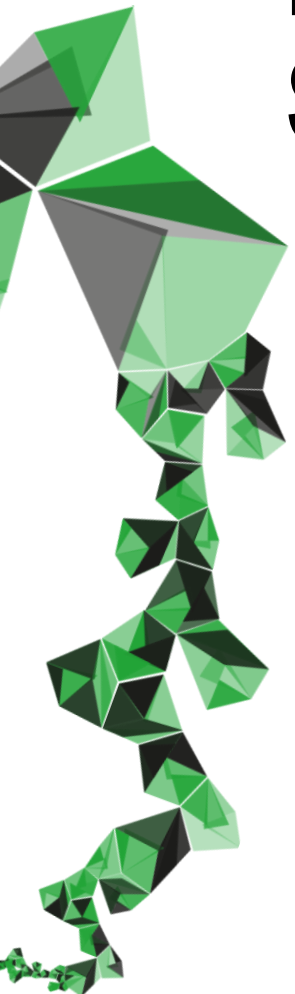
Computational advances & **fine-grained** data...

→ enable automation of structured personnel decision problems.

## Proposition 2

Computational advances & **fine-grained** data ...

→ inhibit privacy regulation behaviours.



# DISCUSSING PROPOSITIONS STRATEGIC PEOPLE ANALYTICS

## Proposition 3

Computational advances & **aggregated** data...

→ enable support of less structured decision problems.

## Proposition 4

Computational advances & **aggregated** data...

→ do not create privacy concerns (that much).

# CONCLUSION & NEXT STEPS

Next steps regarding the **materials**:

1. Rapidly changing topic.
2. Empirical evaluation needed.

Next steps regarding **the paper**:

1. Better description explanation how conceptions and propositions are grounded in the literature.
2. Revise propositions.
3. Currently embedded in HRIS discourse, but other literature might be interesting as well.