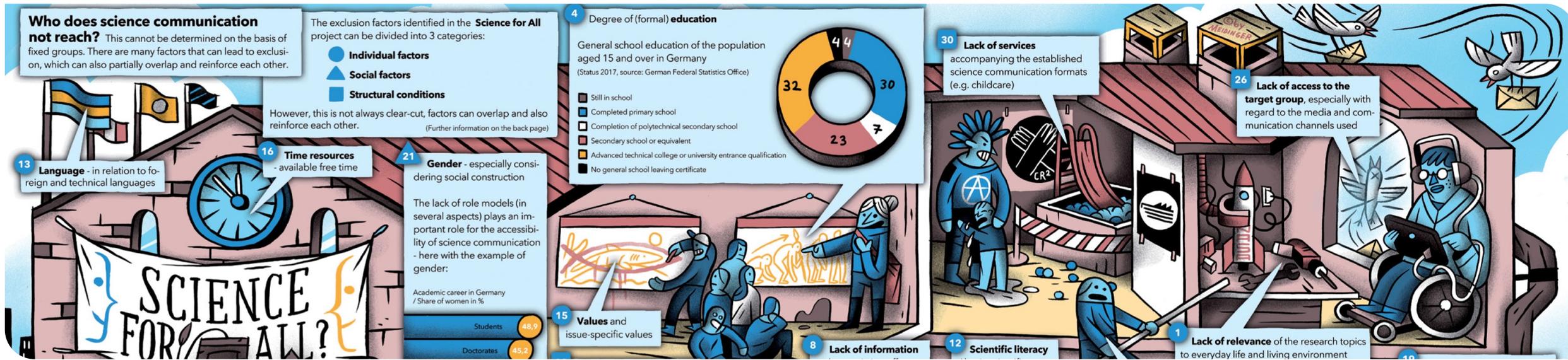


# Preaching to the choir?

## Science communication and the audiences not reached

Christian Humm – Karlsruhe Institute of Technology – Department of Science Communication



# Exclusion in Science Communication

- Growing number of studies in recent years
- Lack of systematic approach regarding exclusion causes
- → Typology of exclusion factors
  - Literature review in scicomm research and other fields
  - 31 factors in three dimensions (individual, social, structural)

# Typology of Exclusion factors

Individual Factors	Social Factors	Structural Factors
<ul style="list-style-type: none"> <li>• Relation to daily life</li> <li>• Age</li> <li>• Fears</li> <li>• Education</li> <li>• Lack of Interest</li> <li>• Limited Mobility</li> <li>• Frustrations / bad experiences</li> <li>• Lack of Information</li> <li>• Financial Resources / Income</li> <li>• Diseases</li> <li>• Literacy</li> <li>• „Science Literacy“</li> <li>• Language</li> <li>• Trust</li> <li>• Value Systems</li> <li>• Temporal Resources</li> </ul>	<ul style="list-style-type: none"> <li>• Disabilities</li> <li>• Ethnicity</li> <li>• Lack of Familiarity / <i>Habitus</i> / <i>Science Capital</i></li> <li>• Low Number or Density of Population</li> <li>• Gender</li> <li>• Cultural Barriers</li> <li>• Regional Affiliation (Urban / Rural Area)</li> <li>• <i>Socio-economic Status</i></li> </ul>	<ul style="list-style-type: none"> <li>• Lack of Interest or Appreciation by the Communicator</li> <li>• Lack of Access to the Target Audience</li> <li>• Complexity</li> <li>• Place</li> <li>• Resources for Specific Offers</li> <li>• Service Offers</li> <li>• Scheduling</li> </ul>

# Quantitative: Survey Analysis

- Statistical analysis of a survey
  - Survey: Wissenschaftsbarometer (2017, 2018 and 2019)
  - Representative for the German population
- Connection between:
  - Exclusion factors found in survey (e.g. age)
  - Different indicators (e.g. visits to public lectures or interest in science)

# Quantitative: Results

- Statistical analysis (regressions) show...
  - **Proximity to Science:** strong explanatory factor
  - **Education, Age, Gender and Income:** significant for some indicators
  - **Migration background and religiousness:** only seldom significant
  - Exclusion factors together especially influential for conative indicators

# Qualitative: Case studies

- 3 case studies with underrepresented audiences:
  - Residents of a marginalized city quarter
  - Vocational students in a craft
  - Young Muslims with a migration background
- Interviews and focus groups

# Qualitative: Results

- All groups interested in science but hardly consumed science communication
- Reasons:
  - Material factors
    - Lack of (local) offerings and infrastructure
    - Financial resources
    - Time resources
    - Language barriers
  - Emotional factors
    - Fear, frustration and insecurity
    - Emotional and habitual distance
    - Self and external perception
- Humm, C., Schrögel, P., & Leßmöllmann. (2020). Feeling left out: Underserved audiences in science communication. *Media and Communication*, 8(1), 164–176.  
<https://doi.org/10.17645/mac.v8i1.2480>

# Conclusion

- Typology a work in progress – open for discussion
  - Empirical tests are promising
- Potential usage:
  - Research
  - Practice

# Trying to make it useful: A Hidden object picture

