Preaching to the choir?

Science communication and the audiences not reached

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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

<table>
<thead>
<tr>
<th>Individual Factors</th>
<th>Social Factors</th>
<th>Structural Factors</th>
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<tbody>
<tr>
<td>Relation to daily life</td>
<td>Disabilities</td>
<td>Lack of Interest or Appreciation by the Communicator</td>
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<tr>
<td>Age</td>
<td>Ethnicity</td>
<td>Lack of Access to the Target Audience</td>
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<tr>
<td>Fears</td>
<td>Lack of Familiarity / Habitus / Science Capital</td>
<td>Complexity</td>
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<tr>
<td>Education</td>
<td>Low Number or Density of Population</td>
<td>Place</td>
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<tr>
<td>Lack of Interest</td>
<td>Gender</td>
<td>Resources for Specific Offers</td>
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<td>Limited Mobility</td>
<td>Cultural Barriers</td>
<td>Service Offers</td>
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<tr>
<td>Frustrations / bad experiences</td>
<td>Regional Affiliation (Urban / Rural Area)</td>
<td>Scheduling</td>
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<tr>
<td>Lack of Information</td>
<td>Socio-economic Status</td>
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<td>Financial Resources / Income</td>
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<td>Diseases</td>
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<td>Literacy</td>
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<td>„Science Literacy“</td>
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<td>Language</td>
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<td>Trust</td>
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<td>Value Systems</td>
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<td>Temporal Resources</td>
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</table>

- Lack of Interest or Appreciation by the Communicator
- Lack of Access to the Target Audience
- Complexity
- Place
- Resources for Specific Offers
- Service Offers
- Scheduling
Quantitative: Survey Analysis

- Statistical analysis of a survey
  - 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


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

- Free download: https://doi.org/10.5281/zenodo.4173029
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