
QUESTIONABLE RESEARCH PRACTICES IN THE HUMANITIES – RESULTS FROM THE PRINT PROJECT

6TH WORLD CONFERENCE ON RESEARCH INTEGRITY,
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AARHUS UNIVERSITY
DANISH CENTRE FOR STUDIES IN RESEARCH AND RESEARCH
POLICY

MAY 2019

The PRINT project

- PRINT = Practices, Perceptions, and Patterns of Research Integrity
- Funded by the Danish Agency for Science and Higher Education (Ministry of Higher Education and Science). PI Jesper W. Schneider
- Project period: 2017-2019
- Main objectives
 - To examine perceptions and prevalence of QRPs within and across main fields of research
 - To examine the causes behind QRPs
- Literature review/desk study, **Focus-group study**, Comprehensive Survey Study ...

22 focus group interviews in the PRINT project

- Objective: To gain an in-depth understanding of the perceptions, practices and potential causes related to QRPs among researchers across main fields.
- Five main scientific areas:
 - Natural science
 - Technical science
 - Medicine
 - Social science
 - Humanities

Composition of groups: focus on research practice, 'how science is done'

- (5 groups) Humanities: focus groups were formed based on the **basic orientation in research**: language disciplines, philosophical disciplines, historical disciplines, aesthetic disciplines and communication disciplines
- (4 groups) Social sciences: focus groups are formed based on whether they have **either a qualitative (2 groups) or a quantitative (2 groups)** orientation in research
- (4 groups) Natural sciences: groups are formed as **either laboratory/experimental groups (2) or theoretical groups (2)**
- (4 groups) Medical sciences: groups are formed as **either basic research groups (2 groups) or clinical/translational (2 groups)** groups
- (4 groups) Technical Science: **no subdivision**.
- 1 interdisciplinary group at the IT-University

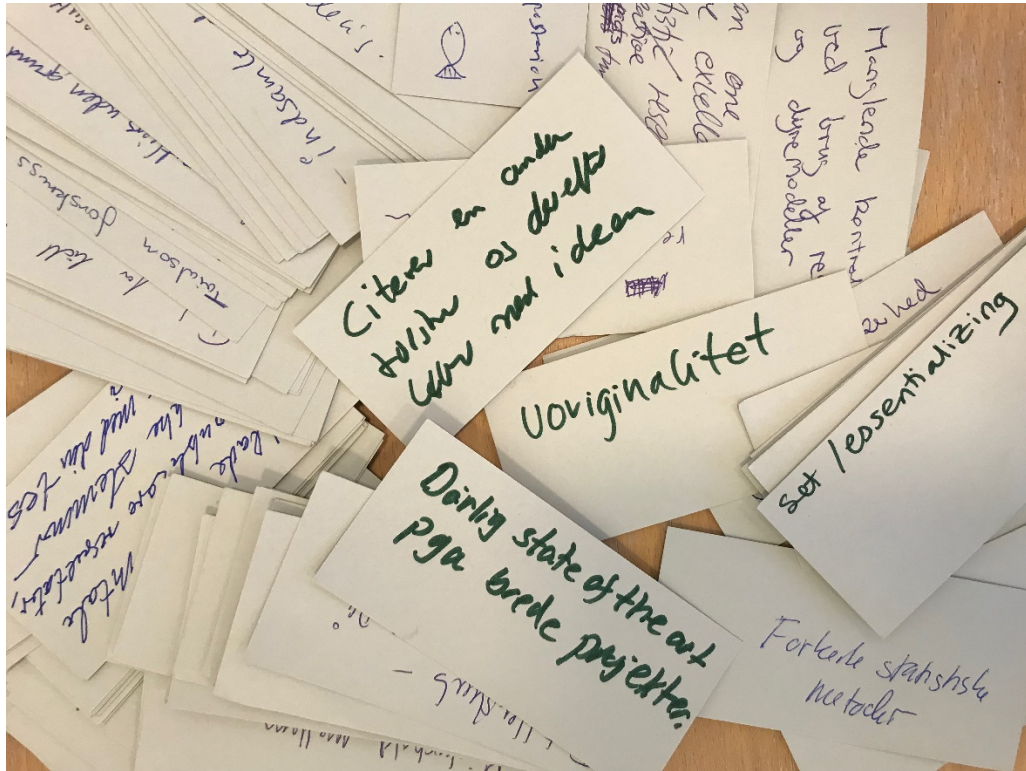
Interview themes

Introduction (10 min)

1. The good research practice (10 min)
2. Questionable research practices (10 min)
3. Exercise: 8 pre-written cards with QRPs plus “free” cards must be graduated, first in relation to severeness of the QRP, then in terms of prevalence. (15-20 min. for negotiation on severeness, 10 min. break, 10 min. for negotiation of prevalence)
4. Reasons behind QRP (15 min)
5. Generic questions (15 min)

Rounding off (5 min)

Card exercise: free cards + pre-defined cards



Pre-defined cards used in all groups across main scientific areas

1. Lack of transparency in the use of methods and empirical data
2. Selective reporting of research findings
3. "Salami slicing"
4. P-hacking and/or HARKing
5. Selective citing
6. Unfair assignment of authorships
7. Unfair reviewing
8. Inadequate data management and data storage

Årlorlighed

"Salami slicing"

Unfair tildeling af forfatterskaber

Mangelfuld datahåndtering og dataopbevaring

Selektiv citering

Manglende transparens ift. brug af metoder og data

Selektiv afrapportering af forskningsresultater

Unfair reviewing

Phishing og/eller misvisning

"PIETER-VARE-FORSKUDT"
(DYREST SET VIDERESKANT
PAPER)

(for) mange forfatterne
på artikler

Historisk mellem
konf og empiri

AI

Cherry picking data

Regulering af data
hvor man kan
ikke gøre det

Meget alvorligt

Severeness

Scale: Not Severe – Severe – Very Severe

Udbredelse

Manglende
transparens
ift. brug af
metoder og
data

P-hacking
og/eller
HARKing

Forskerens egne peti-
hste udvælgelse
af nye forskning

Selektiv
afrapportering
af
forskningsresu-
tater

Cherry picking data

Ud
Historisk mellem-
ben og empiri

Selektiv
citering

PETER-VALE-GOLDMAN
(VIGTIGT DET HJEMMEKØB
TAKES)

(for) Højest kvalitet
og sikkerhed

Mangelfuld
datahåndtering
og
dataopbevaring

Unfair tildeling
af
forfatterskaber

"Salami slicing"

Meget
udbredt

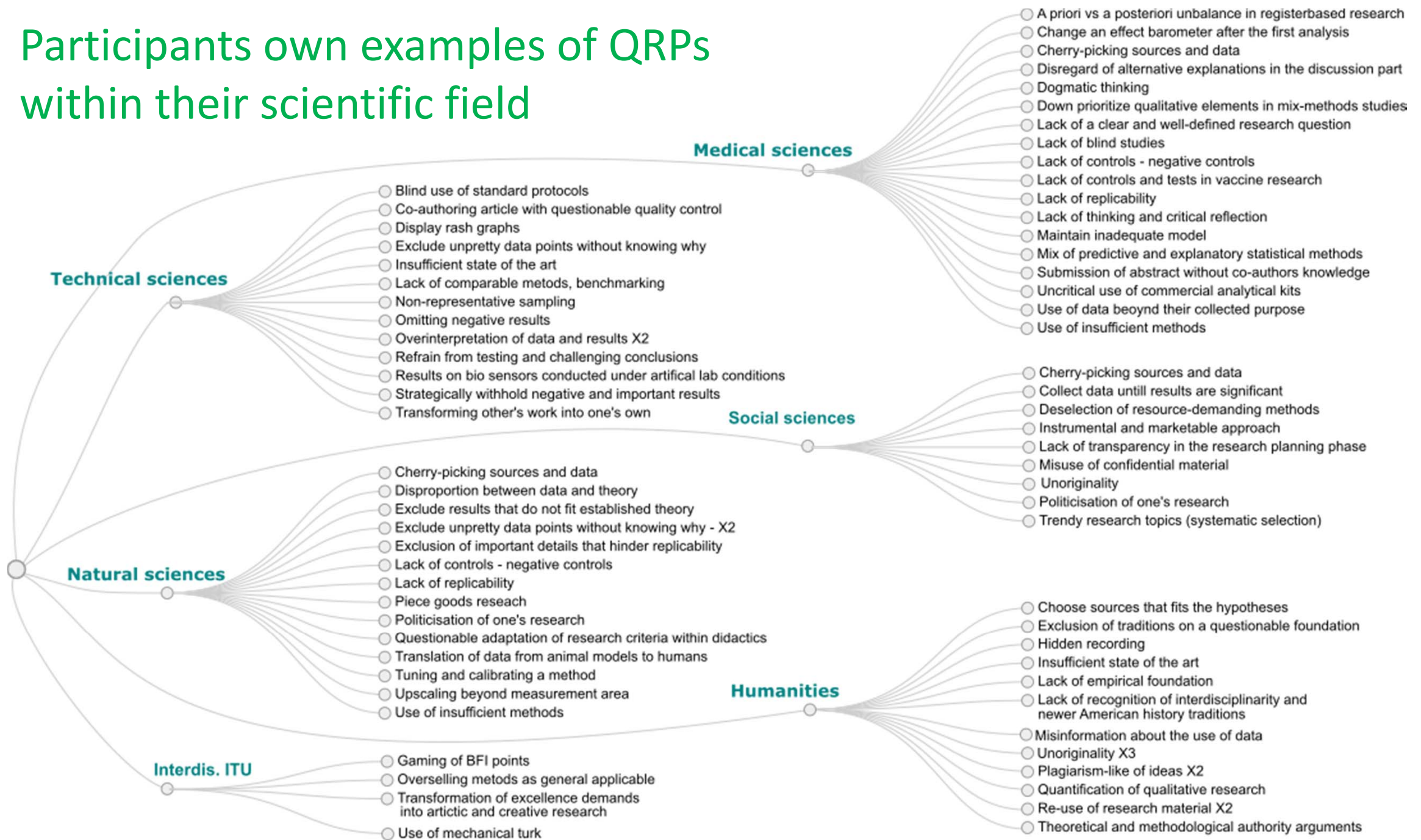
Unfair
reviewing

Prevalence
Scale: Not Prevalent – Prevalent – Very
Prevalent

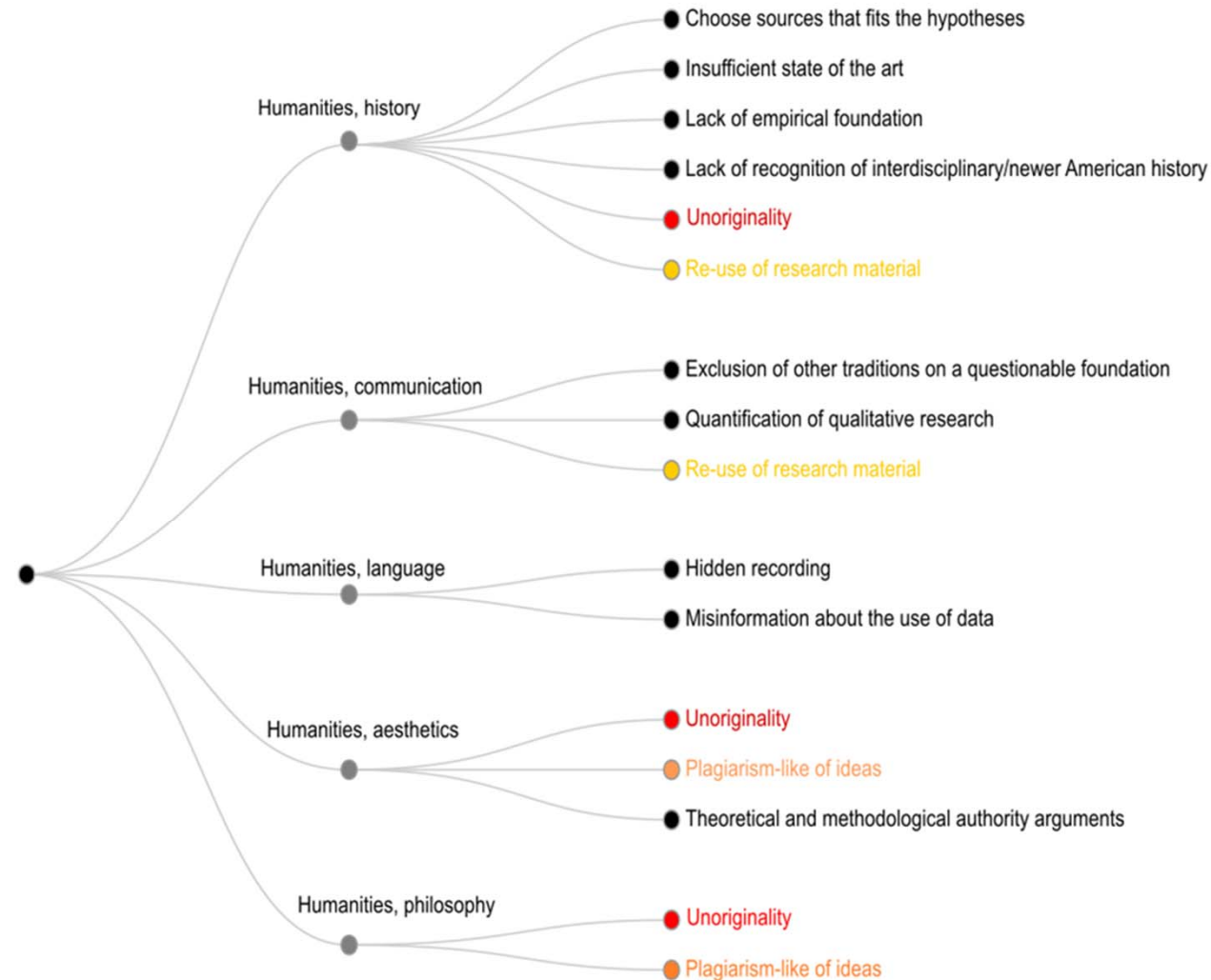
Some main results ...

- The Humanities point towards similar *and* different QRPs in comparison with other main areas of science
- When looking at QRPs, the Humanities cannot be understood as one entity: Different ways of producing knowledge within the humanities leads to different QRPs.

Participants own examples of QRPs within their scientific field



Self-defined QRPs within the Humanities



Unoriginality – how can we understand this?

- Why is originality so important within the Humanities?
- Is unoriginality a questionable research practice (i.e. non-responsible conduct of research)?
- ... or is it just bad science/a bad practice?

What do scholars within the Humanities say about unoriginal research?

- ‘Boring’, ‘uninteresting’, ‘doesn’t bring anything new’, ‘reuse of arguments’
- ‘Waste of time’ to read unoriginal work: ”... that was half an hour that you’ll never get again!”
- Leads to ‘repetitiveness’ and to research output that ‘sounds like a broken record’, ‘same points, just wrapped in differently’
- Also reveals a ‘lack of curiosity’ and an ‘avoidance of risk taking’
- Original research: e.g. the classics, ‘inspiring for practice and thought provoking’
- Unoriginality = not very severe QRP, but very widespread (creates a lot of noise)
- Causes: Lack of time, publication pressure, competition, merit structure, culture of perfection/fear of failing

Towards an understanding of unoriginality as a QRP

- Descriptions vs. representations
 - Differences in 'epistemic cultures' (Knorr-Cetina)
 - Within Humanities: new knowledge = new ways to see the world, new ways of understanding a phenomenon, new way of understanding a piece of art
 - Re-descriptions vs. representation (cf. Richard Rorty)
- The hermeneutical tradition/the interpretative tradition
 - More interested in understanding than in explaining (cf. Dilthey: Understanding vs. Explanation)
- Science and Technology Studies
 - But does this division reflect the practice within the sciences?

Thank you for your attention!

More on the PRINT project: print-cfa.dk/about/

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More on the PRINT study/survey at the 6th WCRI

This afternoon, 15:45 – 17:15, CPD-3.04, Attitudes 2 (CC7), Chair: Tony Mayer

1. O-030 *The relationship between questionable research practices and the perceptions of working conditions among researchers.* Nick Allum, University of Essex, Colchester
2. O-031 *Perceptions and prevalence of questionable research practices across research fields: findings from a large-scale multinational survey.* Jesper Schneider, Aarhus University, Aarhus

This afternoon, 15:45 – 17:15, LG.09, Behaviour (CC5), Chair: Elizabeth Heitman

3. O-021 *A cross-national, cross-field study of researcher personality and questionable research Practices.* Michael Bang Petersen, Aarhus University, Aarhus

June 5, 11:00 – 12:30, CPD-3.04, Interventions (CC20), Chair: Lida Anestidou

4. O-095 *Using the “List Experiment” to identify bias in surveys on questionable research Practices.* Michael Bang Petersen, Aarhus University, Aarhus

Further selection criteria

- Each of the focus groups should consist of minimum four and maximum six participants
- The gender composition of the focus groups should be balanced
- The interview sample of each focus group should be stratified, covering researchers at all levels: postdoc/assistant professor, associate professor and full professor (ideally two participants from each career stage)
- All Danish universities should be included in the study.
- Two-three disciplines within each of the five main areas should be represented in each focus group.
- The selected disciplines should cover all major fields of the five main areas.

Where are we now?

- All interviews were recorded and filmed
- All interviews have been transcribed (40-50 pages per interview!)
- All interviews have been coded in NVivo 12
- All interviews are now being analysed – also in relation to the survey results

Analytic coding strategy

- Inductive: primarily open and grounded coding process (alignment with the focus group design and objective) → **explorative**
 - Deductive: pre-defined categories depended on research design → **thematically oriented** (directed by the interview guide):
 - a) The good research process/knowledge production b) QRPs (mapping exercise plus new QRPs) c) potential causes (individual, institutional, system) d) generic questions
- Initial coding process



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Properties

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Memo Link

Add To Set

Create As Code

Create As Cases

Query

Visualize

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Auto Code

Range

Code

Quick Access

- Files
- Memos
- Nodes

Data

- Files
 - Interviews
 - 1. HUM, AU, Philosophical
 - 10. HUM, SDU, Historical
 - 11. NAT, SDU, Theoretical
 - 12. SOCIALS, SDU, Qualitati
 - 13. MED, SDU, Clinical
 - 14. HUM, RUC, Communicat
 - 15. NAT, RUC,
 - 16. SOCIALS, RUC, Qualitati
 - 17. TECH, DTU
 - 18. TECH, DTU
 - 19. SOCIALS, CBS, Quantitat
 - 2. HUM, KU, Aesthetic
 - 20. IINTERDIS, ITU
 - 21. NAT, AU
 - 22. SOCIALS, AU, Quantitati
 - 23. MED, AU, Basic
 - 24. TECH, AU
 - 25. MED, AAUH, Clinical
 - 26. MED, AU, Basic
 - 3. NAT, KU, Lab
 - 7. HUM, AAU, Language
 - 8-9. TECH, AAU,
- File Classifications
- Externals

Nodes

- Name
 - Mechanisms and causes for QRPs
 - Individual level
 - Institutional level
 - Main area - culture differences
 - System level
 - Questionable research practices
 - Data mining
 - Premeditation
 - QRPs - emerging in focus groups
 - QRPs - pre-defined
 - QRPs what to check for in a research publication
 - Research vis-a-vis dissemination
 - Replicability
 - RI developments
 - Differences in terms of gender
 - Differences in terms of positions
 - Differences in terms of various types of research and research fi
 - Progress or decline in research integrity
 - Time of unrest and upheaval - brydningstid
 - The good research practice - knowledge production



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Codes

- Nodes
- Relationships
- Relationship Types

Cases

- Cases
- Case Classifications

Notes

- Memos
- Framework Matrices

Nodes

- Name
 - Mechanisms and causes for QRPs
 - Individual level
 - Institutional level
 - Main area - culture differences
 - System level
 - Questionable research practices
 - Data mining
 - Premeditation
 - QRPs - emerging in focus groups
 - (Mis)use of confidential material
 - A priori vs a posteriori - registerbased research
 - Prevalence
 - Severity
 - Blind use of standard protocols
 - Change an effect barometer after the first analysis
 - Cherry-picking sources, data
 - Choose sources that fits the hypotheses
 - Co-authoring an article with questionable quality control
 - Collect data until results are significant
 - Deselection of resource-demanding methods
 - Disproportion between data and theory
 - Disregard of alternative explanations in the discussion part
 - Dogmatic thinking
 - Establishing the empirical foundation - lack of
 - Exclude important details - hinder replicability
 - Exclude results that do not fit established theory
 - Exclude unpretty data points without knowing why
 - Exclusion of other traditions on a questionable foundation
 - Fashionable research topics
 - Gaming of BFI points
 - Hidden recording
 - Instrumental approach
 - Insufficient state of the art
 - Interdisciplinarity - lack of recognition (American history)
 - Lack of a clear and well-defined research question
 - Lack of blind studies
 - Lack of comparable metods, benchmarking
 - Lack of controls - negative controls
 - Lack of controls and tests in vaccine research

Next steps

Nvivo a tool to help reduce and organise data + support cross-case analysis, locate patterns (e.g. QRPs across main areas), charts to explore dominant themes, coding for a case etc. – different type of visualizations

Focused coding → identify and relate categories and sub-categories more hierarchically to synthesise and conceptualize data further

- focus group level the main unit of analysis (despite focus on main areas) → grouping of the interviews in sets for comparison
- Classifications: main area, sub-discipline/methodological approach, university, gender composition, position structure)

Thematic focus areas (interconnections):

- Specific QRPs (pre-defined + grounded in data)
- Dominating QRPs across scientific fields – severity vis-à-vis prevalence
- Dominating causes (individual, institutional, system level) (type of pressure)
- Dominating perceptions (perceptions vs practices)

(Ir)responsible research practices

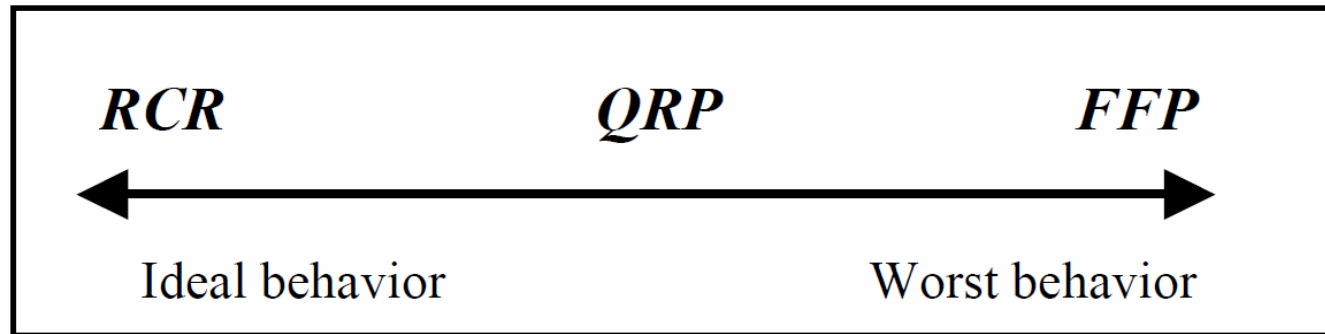


Fig. 1. Current framework for Defining Research Behaviors

(Source: Steneck 2006, 54)

Similarities and Differences in the perception of QRPs – ARTS/Humanities vs. other scientific main areas

Similar views

- "Salami slicing"
- P-hacking
- Unfair reviewing
- Inadequate data management and data storage

Similar *and* different views

- Selective citing
- Unfair assignment of authorships
- Lack of transparency in the use of methods and empirical data
- Selective reporting of research findings

Examples of similarities and differences in the perception of QRPs

Lack of transparency in the use of methods and empirical data

- Hum. and others agree that:
 - That it is crucial to explain how an analysis has been made
 - That transparency is part of a good research practise
- Hope the peer review process will catch it/correct it
- Some scholars within the humanities see problems in 'low method consciousness'
 - More theory oriented than method oriented
 - Maybe related to the interpretative/hermeneutical practice of many scholars within the humanities?

... There are also places where there is a lack of clarity in the relationship between philosophical theory or theory on the one hand and methods on the other. I think there is a tendency for theory to take over the position of methods in our subject. ... [You can experience someone] defending a PhD thesis who says 'my method is Foucault or Deleuze', but that is not, it is a theoretical reflection, where method is something else. It's [...] craftsmanship, academic craftsmanship. That is, it is a little down to earth-like, slightly boring, which is about how to... methodically deal with this, [it] disappears and is substituted by high-theory [...]

1:26:53 GB It is maybe not because it is missing, it is perhaps more because it is not made explicit, so it lies between the lines somewhere. But they [PhD students] are not trained in like having to...

1:27:03 MZ But also that you apply theory on empirical data. You take some high flying theory and then you put it down over a text, and then everything fits.

1:27:12 IWH I often [... ask PhD students]: "What are you doing? Is it a motif study or a rhetorical study, is it an historical account? "What kind of... [...] Then they say, "I don't know, I use Deleuze?". (Laughter)?

- 1:27:27 LS Do you think that this is something that has increased, haven't we not always had a tricky relationship with methods within the humanities?
- 1:27:35 IWH Well, that might be ...
- 1:27:36 LS I don't know if it's something new?
- 1:27:39 MZ No. So ... There was such a long period in the days of Structuralism, when we began to see some method consciousness, but it disappeared again. Like dew from the sun.
- 1:27:52 IWH In fact you could say, no matter what else you might think about it, Materialism was back then rather method-conscious ... it may be that it stinks, but it was. One had an idea of the role that art plays in society and there was reflection. You got the method with you in the purchase, whereas much of the theory that is used today comes without a method ... It means, that this intermediate field is missing, I think.
- 1:28:16 LS I agree completely. It's more that... I don't know if it's a new situation.

Selective reporting of research findings

- This QRP is meaningless for some scholars within the Humanities
 - Research process is different – no clear division between data collection, analysis, reporting ... (at least within some disciplines within the ARTS)
- Research as a interpretative/hermeneutic process (emphasis on understanding instead of explaining)

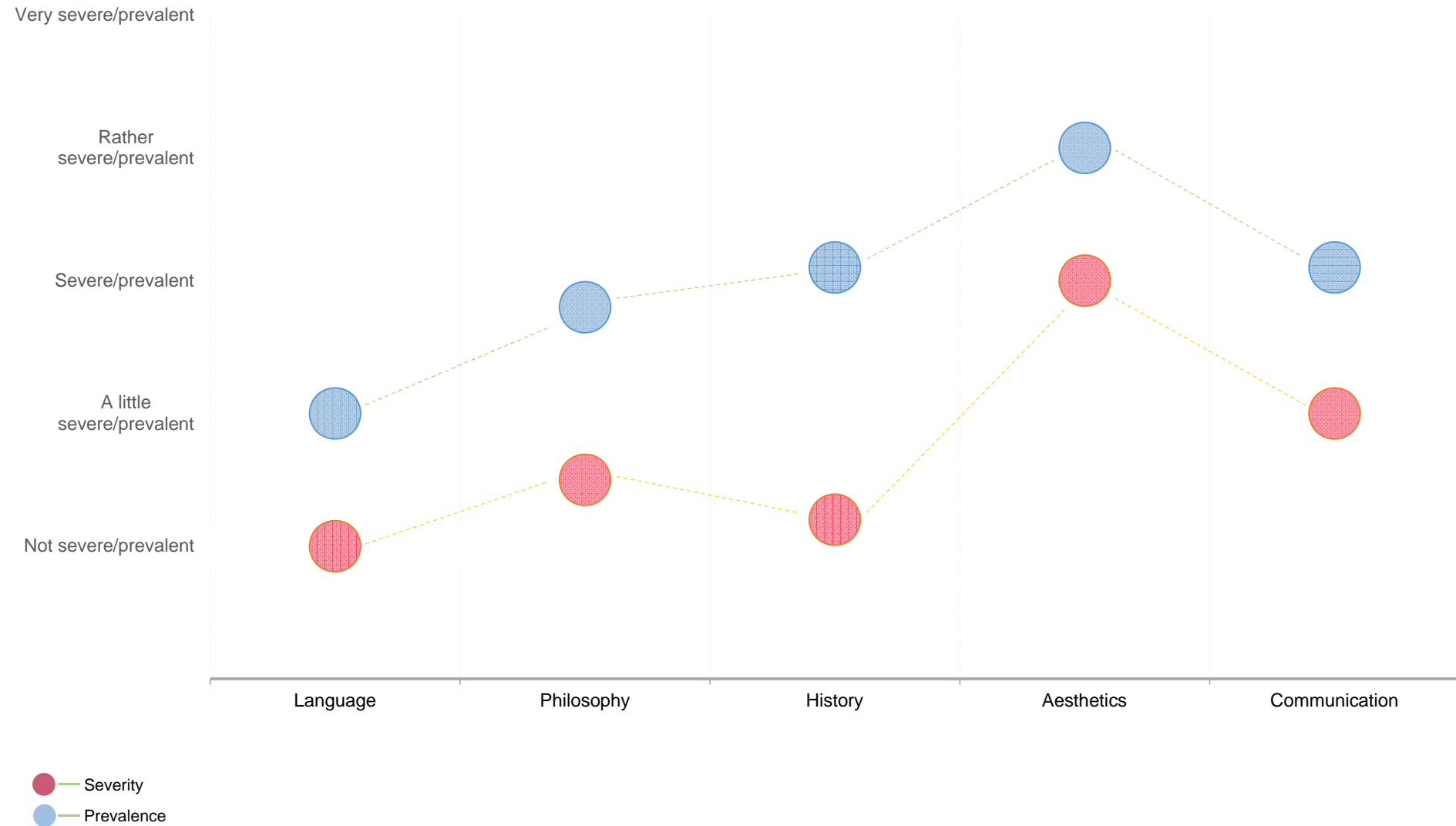
0:55:20 CA I never think about it as... I never thought about writing a conclusion or an article as a report on research results. this is not the way we think about our research output.

0:56:54 MT [We are] slightly different from many other places, [as we] do not start the analysis when we have a dataset or source, a material, but collect it along the way in an interpretive practice. Which is again... Is where we need to report clearly... And often... our practice is often part of... Of the final result, so to speak. [...] the material develops. Expands or narrows in along the way in the interpretation process.

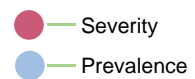
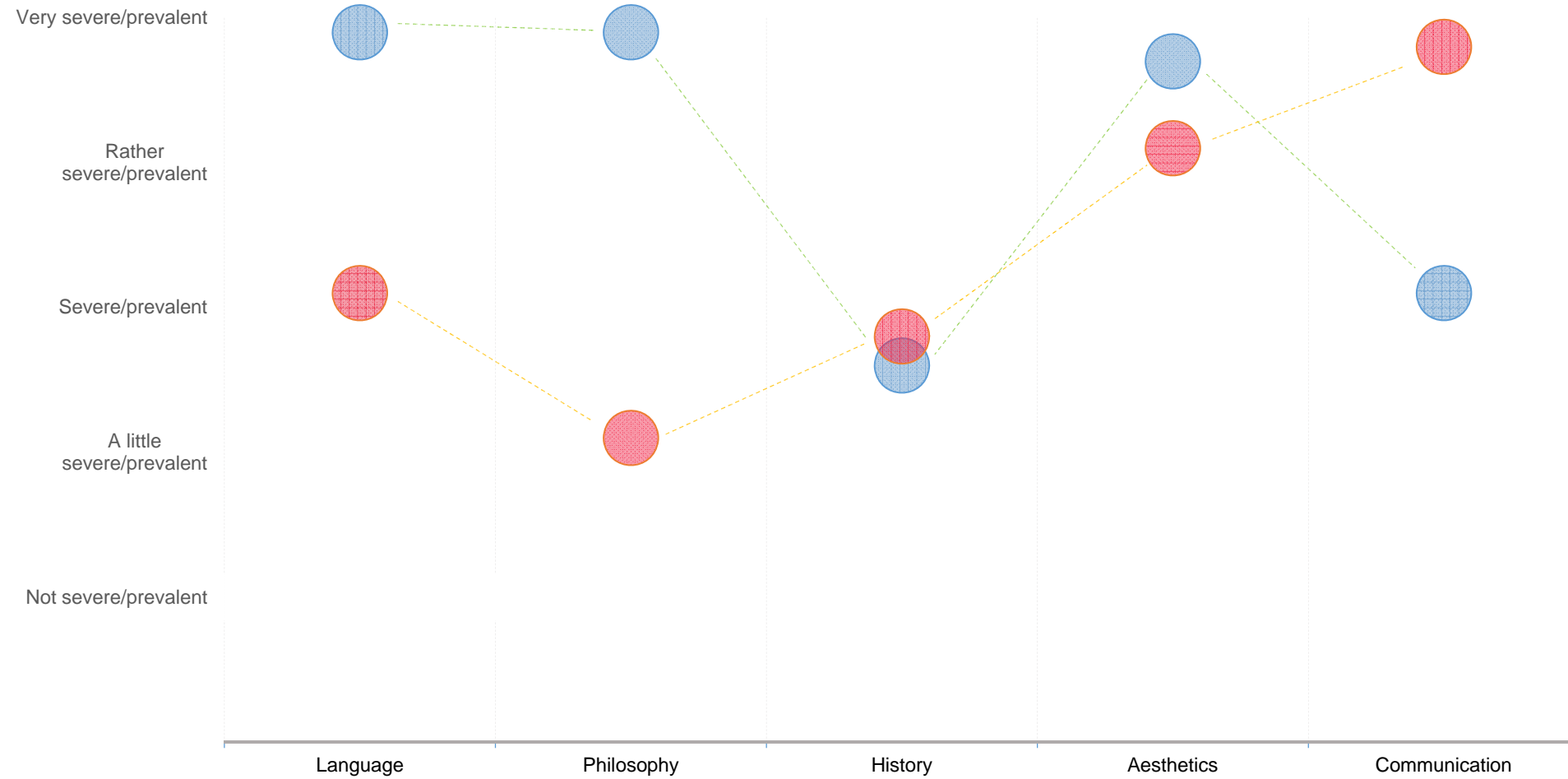
HUMANITIES: UNFAIR REVIEWING



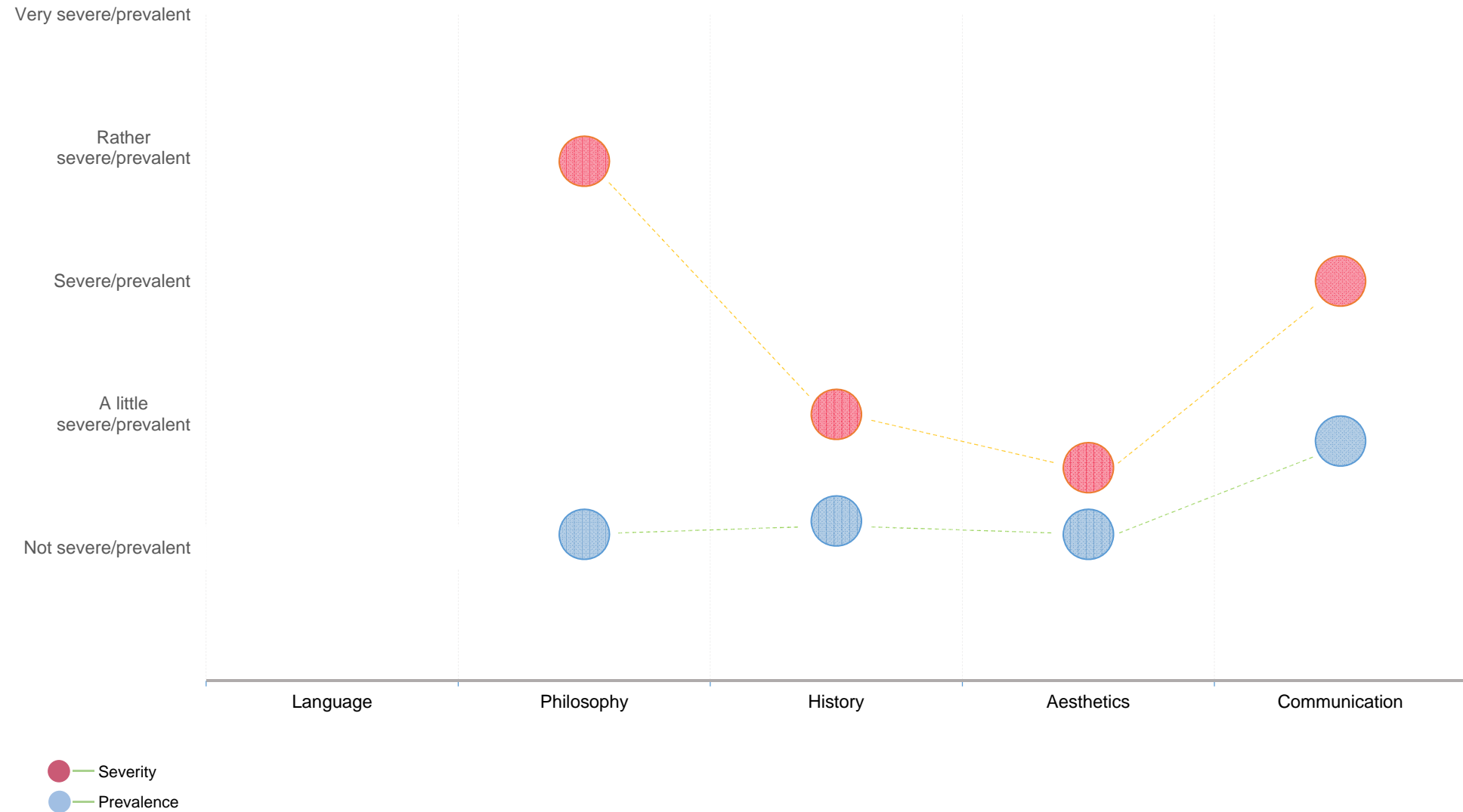
HUMANITIES: “SALAMI SLICING”



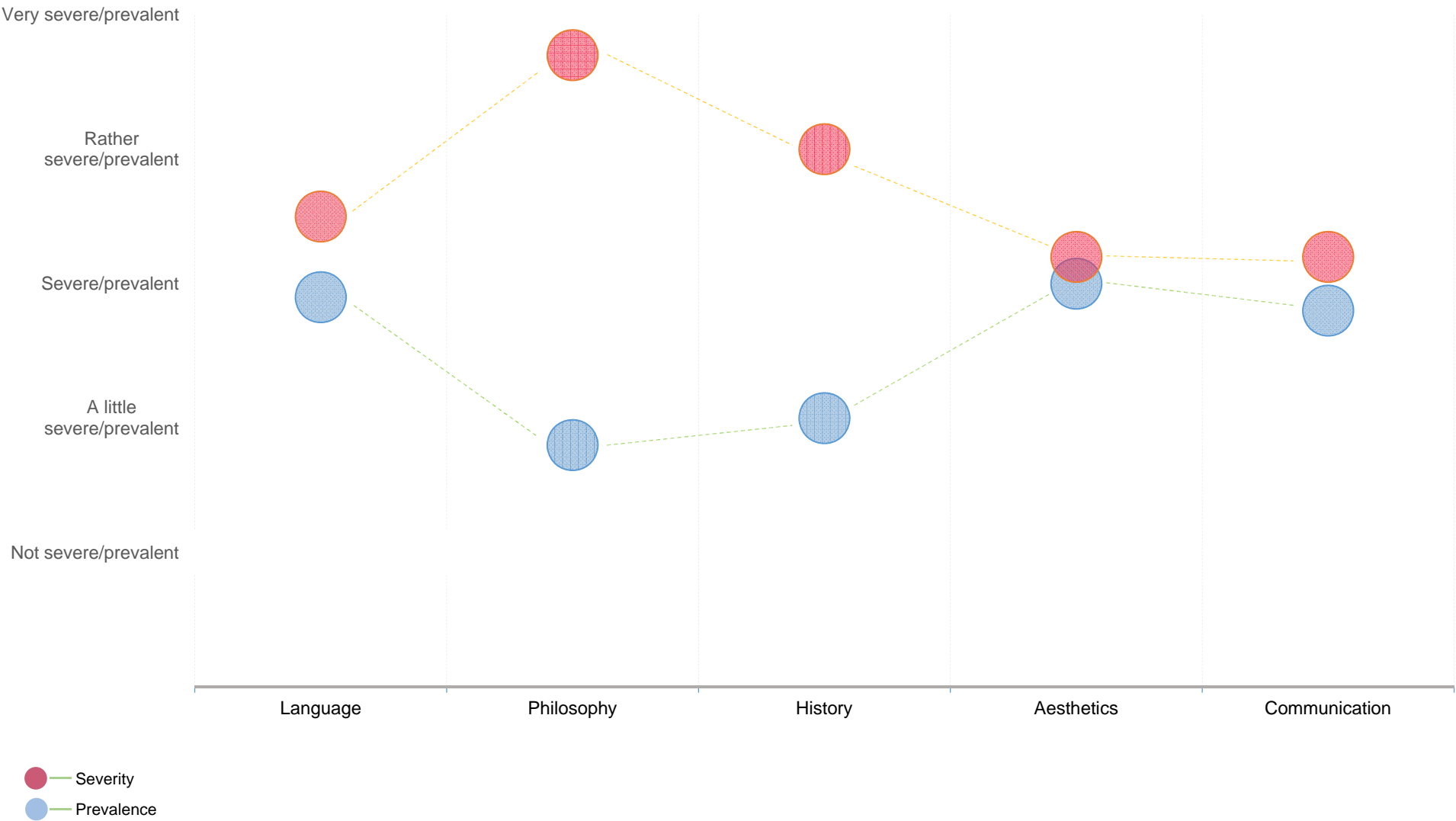
HUMANITIES: SELECTIVE CITING



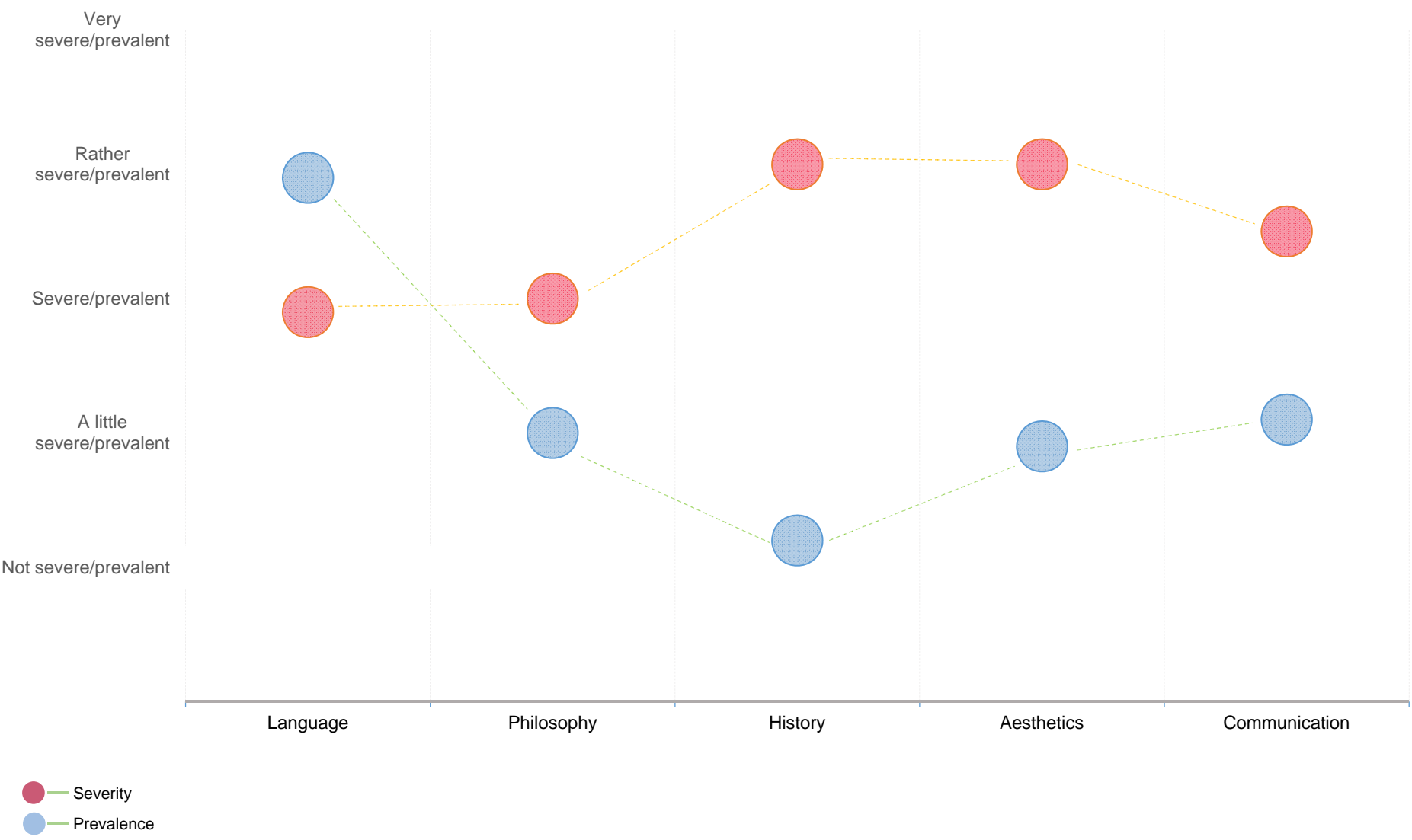
HUMANITIES: UNFAIR ASSIGNMENTS OF AUTHORSHIPS



HUMANITIES: INADEQUATE DATA MANAGEMENT/STORAGE



HUMANITIES: LACK OF TRANSPARENCY IN USE OF METHODS/EMPIRICAL DATA



HUMANITIES: SELECTIVE REPORTING OF RESEARCH FINDINGS



HUMANITIES: P-hacking and/or HARking

