

A decorative background at the top of the slide features a network diagram with red and black nodes connected by thin lines, set against a light red gradient.

Impact of Social Sciences & Humanities

4-5 October 2018, Copenhagen

Lumbye Hall, 13.45-15.00

Indicators of SSH Impact

Paul Wouters (chair)

Rolf Hvidtfeldt

Steven Hill



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Indicators of SSH Impact

Paul Wouters

*Director of the Centre for Science and
Technology studies, Netherlands*

Towards responsible impact metrics

Paul Wouters

AESIS SSH IMPACT

Copenhagen 4-5 October 2018



Universiteit
Leiden

Specific characteristics of SSH research

- SSH studies *and* shapes society and culture
- Research agenda intrinsically implicated in societal problems
- Multiple paradigms strength rather than weakness
- Multiple pathways to impact, many based on portfolios of work and experts rather than on publications
- Complex interdisciplinary connections drive innovation



"Enhanced branding metrics drive robust solutions for scalable monetization of jargon."

Responsible metrics

Responsible metrics can be understood in terms of:

- **Robustness:** basing metrics on the best possible data in terms of accuracy and scope;
- **Humility:** recognizing that quantitative evaluation should support – but not supplant – qualitative, expert assessment;
- **Transparency:** keeping data collection and analytical processes open and transparent, so that those being evaluated can test and verify the results;
- **Diversity:** accounting for variation by field, using a variety of indicators to reflect and support a plurality of research & researcher career paths;
- **Reflexivity:** recognizing the potential & systemic effects of indicators and updating them in response.



The Leiden Manifesto

- Quantitative evaluation should support expert assessment.
- Measure performance in accordance with the research mission.
- Protect excellence in locally relevant research
- Keep data collection and analytical processes open, transparent and simple.
- Allow for data verification
- Account for variation by field in publication and citation practices
- Data should be interpreted taking into account the difficulty of credit assignment in the case of multi-authored publications.
- Base assessment of individual researchers on *qualitative* judgment.
- False precision should be avoided (eg. the JIF).
- Systemic effects of the assessment and the indicators should be taken into account and indicators should be updated regularly

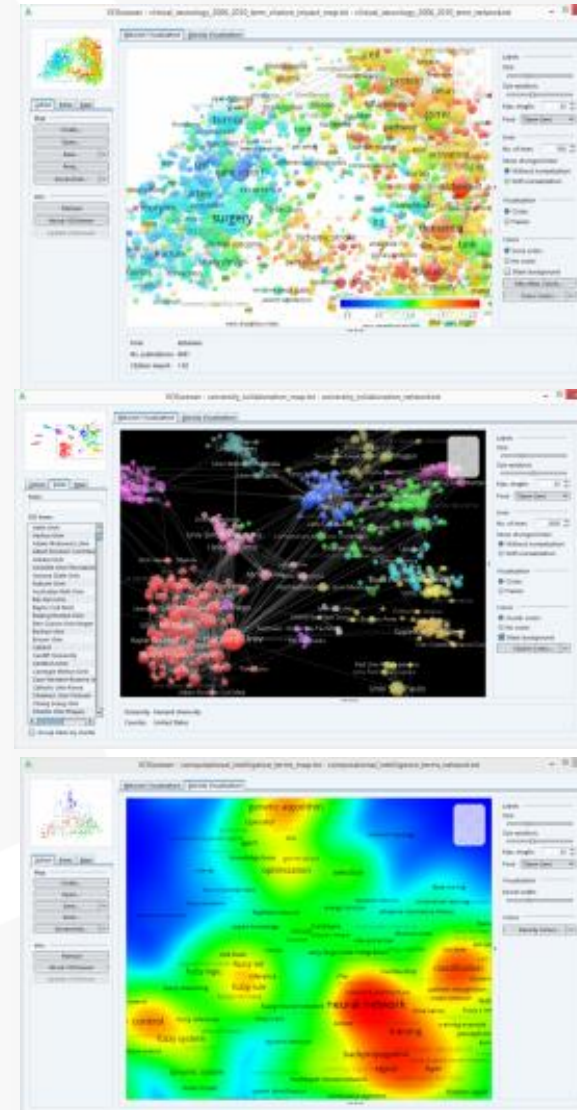
Diana Hicks (Georgia Tech), Paul Wouters (CWTS), Ismael Rafols (SPRU/Ingenio), Sarah de Rijcke and Ludo Waltman (CWTS) (2015) *Nature* 520: 429–31. doi:10.1038/520429a

Measuring is changing

- What counts as quality is shaped by how we measure and define “quality”
- What counts as impact is shaped by how we measure and define “impact”
- *Qualities* and *interactions* are the foundation for “excellence” and “impact” so we should understand those more fundamental processes first
- We need different indicators at different levels in the scientific system to inform wise management that strikes the right balance between trust and control
- Context is crucial for effective data standardization

Mapping interactions

- Innovation interactions take place in heterogeneous networks of actors
- Science is “applied” in translation processes: science is not immediately useful
- Mapping impact means mapping these interaction processes rather than isolated impact results



Next steps

- Remove performance indicators that hinder societal interactions
- Do not artificially isolate “impact” from “quality”
- Embrace variety rather than give in to policy push for “one approach”
- Develop experiments with interactive evaluation exercises with researchers and stakeholders
- Map interactions rather than measure impact



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Indicators of SSH Impact

Rolf Hvidtfeldt

Postdoc, Humanomics Research Centre, Aalborg University, Denmark



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Indicators of SSH Impact

Steven Hill

*Director of Research at
Research England, UK*

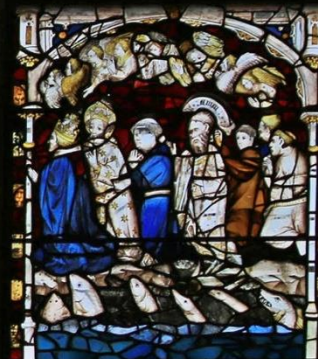
Indicators of SSH impact?



**Research
England**

Steven Hill
Director of Research

4 October 2018
AESIS conference on SSH impact







Impact case study (REF3b)

Institution: University of York

Unit of Assessment: 34, Art and Design: History, Practice and Theory

Title of case study: Stained Glass Apocalypse: The Conservation of the Great East Window, York Minster


1. Summary of the impact (indicative maximum 100 words)

The Great East Window of York Minster, featuring the Apocalypse in 77 scenes designed by John Thornton of Coventry, 1405-8, is the largest expanse of medieval glass in Britain and one of the world's great masterpieces of monumental painting. Uniquely for any conservation project of the kind, research by four art historians at the University of York has underpinned, shaped and enabled both its conservation and its interpretation. Their research guided the conservation method statement, central to the success of the £10.5 million Heritage Lottery Fund grant that is paying for the conservation work as part of the *York Minster Revealed* project. The research also continues to inform daily work on every panel through the East Window Advisory Group, of which the York art historians are members. Unprecedented in stained glass conservation, this partnership between scholars and conservators has established a new benchmark for best practice, recognized by national institutions. The York art historians' research has also enabled the display and interpretation of the window to the public, as a central feature of the tourist experience and economy in York, and in other media, including newspapers, television and the worldwide web.

2. Underpinning research (indicative maximum 500 words)

The conservation of York Minster's Great East Window is underpinned by the world-leading

- Major contribution to the conservation and restoration of the East Window; impact on cultural heritage, visitor experience etc.
- Significant and long-term concentration of research expertise at York University
- Research informed method statement for successful £10.5 HLF bid
- Interdisciplinary collaborations (art history, stained glass history, glass composition, architectural history, 3D modelling)
- Joint appointment: Lecturer, York University and CEO of York Glaziers Trust



“The most important impact has been the protection and preservation of one of the largest and most significant works of medieval art in Britain.”

“The success of this project is also now transforming conservation practice nationally and beyond the UK”

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Summary

- Key questions:
 - What types of impact result from research in the arts, humanities and social sciences (AHSS)?
 - (How) can these impacts be captured by indicators?
- Analysis based on impact case studies from the 2014 Research Excellence Framework
- The potential of altmetrics?

Impact case studies from the Research Excellence Framework (REF)

The screenshot shows the REF2014 Impact Case Studies website. The header includes the logo 'REF2014 impact case studies' and navigation links: 'About', 'How to search', 'FAQs', 'API', 'REF2014 Home', and 'Hello, [user]'. The main heading is 'Search REF Impact Case Studies'. Below it, there is a search bar with the placeholder text 'Search all Case Studies...', a 'Search' button, and a 'See all case studies' button. A link 'Learn about advanced search options [here](#).' is also present. The 'Browse the index' section features tabs for 'Submitting Institution', 'Unit of Assessment', 'Summary Impact Type', 'Research Subject Area', 'Impact UK Location', and 'Impact Global Location'. The 'Unit of Assessment' tab is active, showing a search input field and a table of categories.

Unit of Assessment	
Main Panel A (1596)	Main Panel B (1484)
1 - Clinical Medicine (385)	7 - Earth Systems and Environmental Sciences (171)
2 - Public Health, Health Services and Primary Care (163)	8 - Chemistry (125)

- 6637 case studies
- All disciplines, almost all universities
- Underpinning research (36,244 with DOIs)
- Search, download, api
- Impact 2008-2018; research 1993-2013
- Limitations:
 - Assessment
 - Rules

Case study metadata

- Disciplines
 - Submitted to disciplinary panels
 - Text mining of ‘underpinning research’ – ANZSRC Fields of Research

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- Categories of impact
 - PESTLE+ - 8 unique categories

Summary Impact Type

Political	(509)	Legal	(212)
Health	(857)	Cultural	(1099)
Technological	(1397)	Societal	(1723)
Economic	(381)	Environmental	(459)

Case study metadata

- Disciplines
 - Submitted to disciplinary panels
 - Text mining of ‘underpinning research’ – ANZSRC Fields of Research
- Categories of impact
 - PESTLE+ - 8 unique categories
 - Impact topics (from text mining of ‘details of impact’) – 60 overlapping



Source: King's College London/Digital Science (2015) The nature, scale and beneficiaries of research impact

Case study metadata

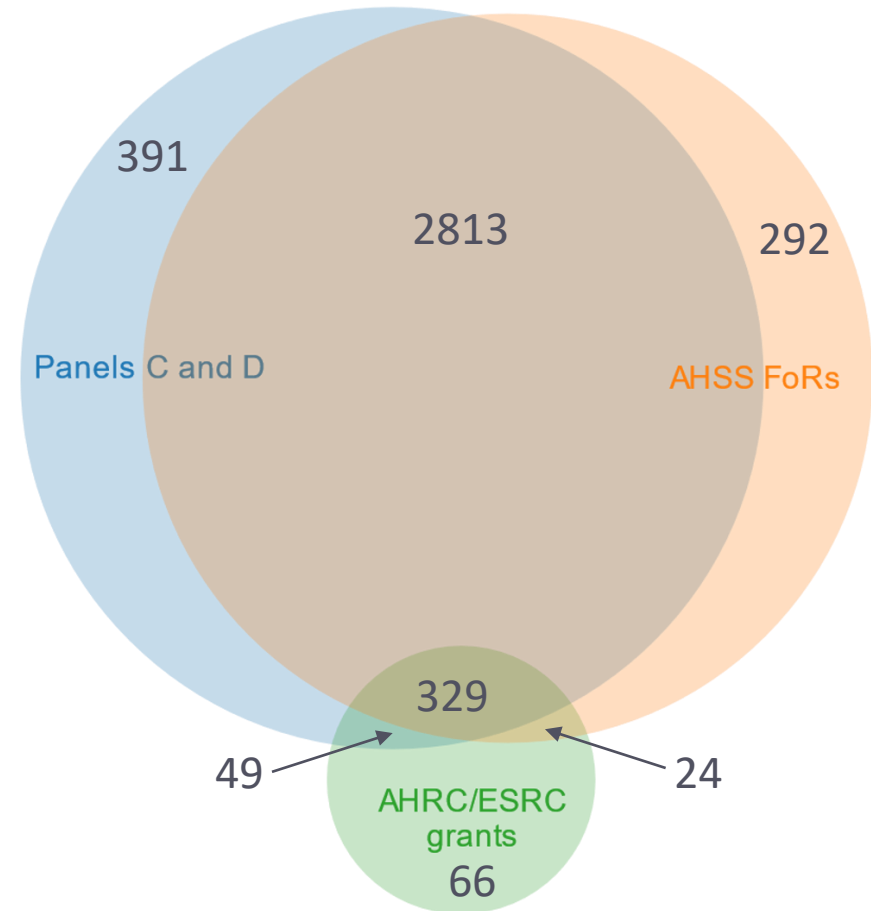
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 - Impact topics (from text mining of ‘details of impact’) – 60 overlapping
- Funding
 - Some case studies linked to UK grant funding

Defining impacts from AHSS research

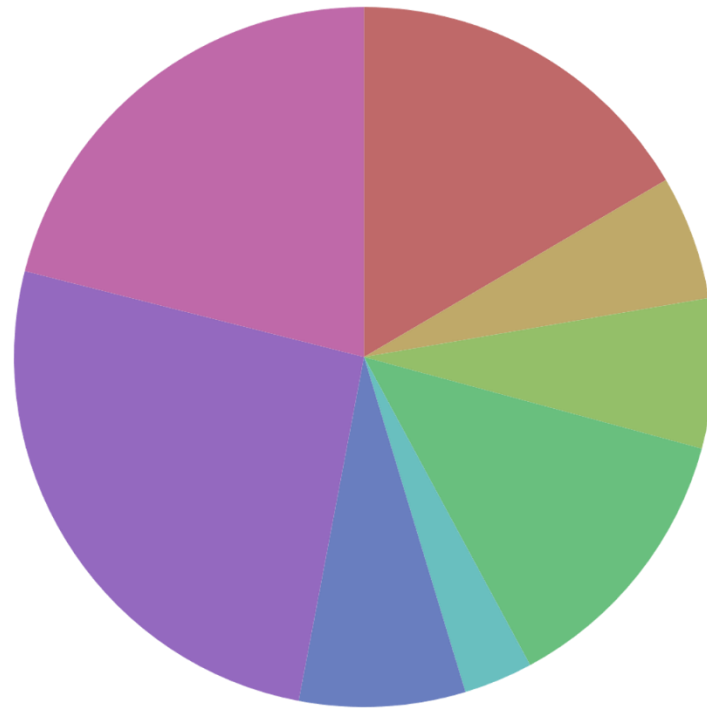
- Case studies submitted to AHSS panels (main panels C & D)
- Case studies underpinning by AHSS research (FoR codes)
- Case studies linked to AHSS funding

Three sets of case studies

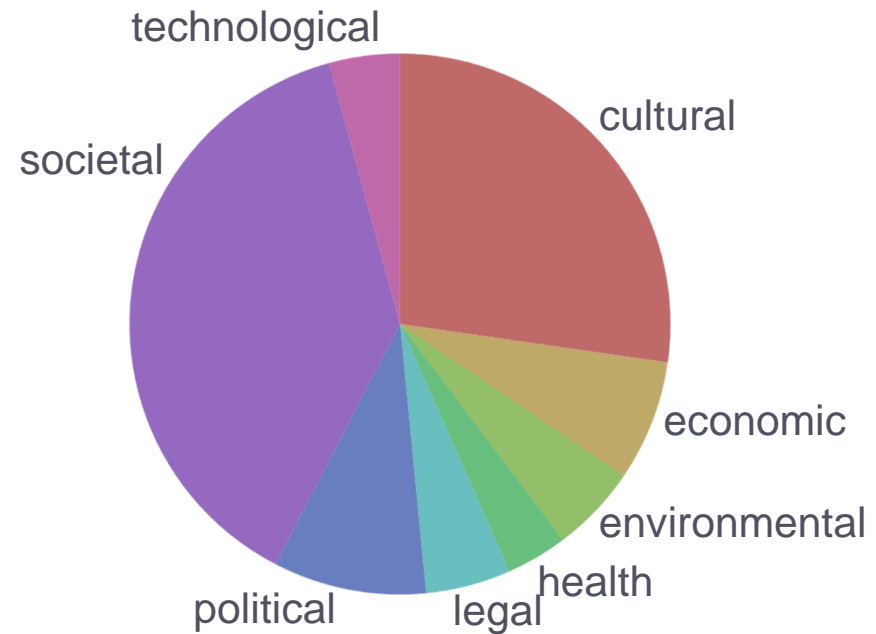
- Submitted to AHSS panels: 3582
- Underpinned by AHSS research (FoRs): 3458
- Associated with AHSS research grants: 468
- Total unique set of **3964 case studies**



Categories of impact for AHSS case studies

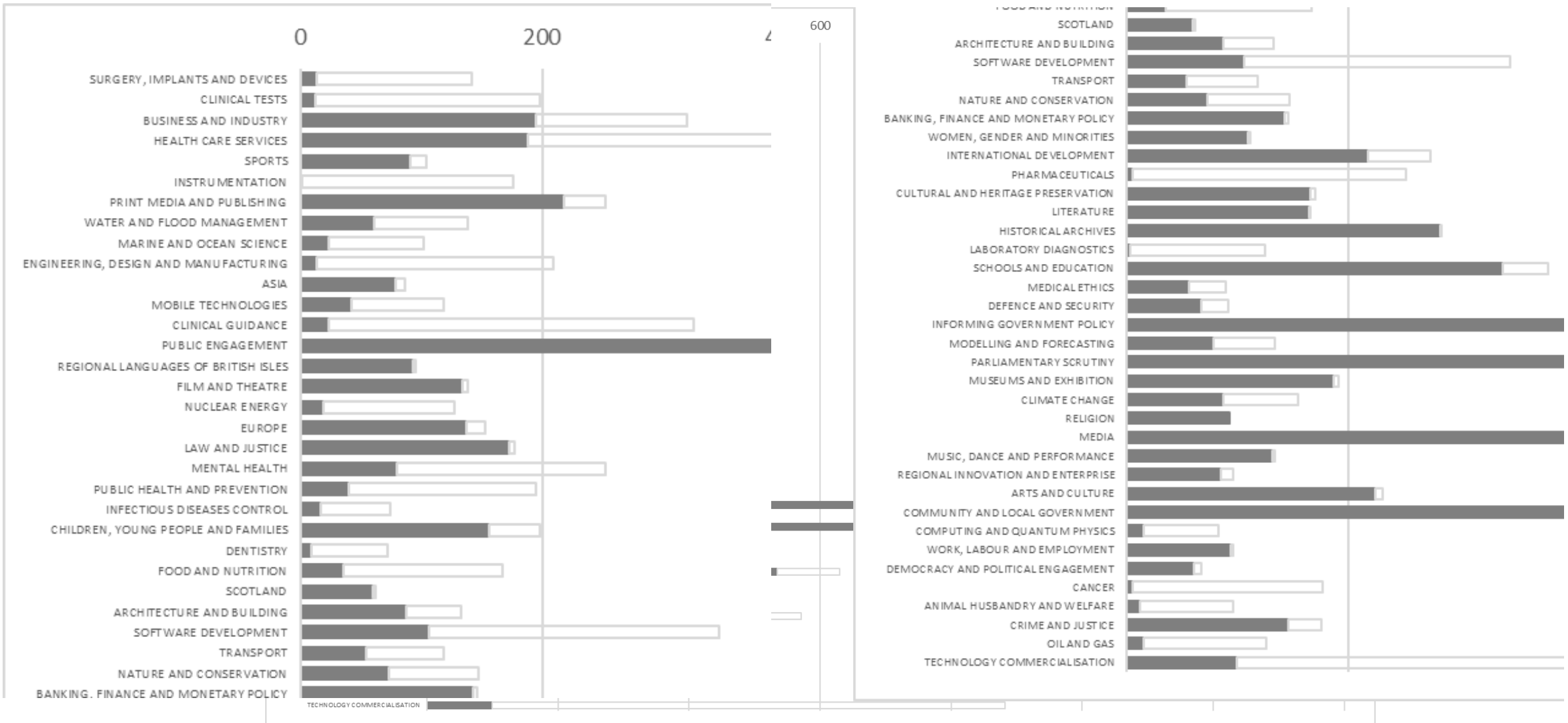


All case studies

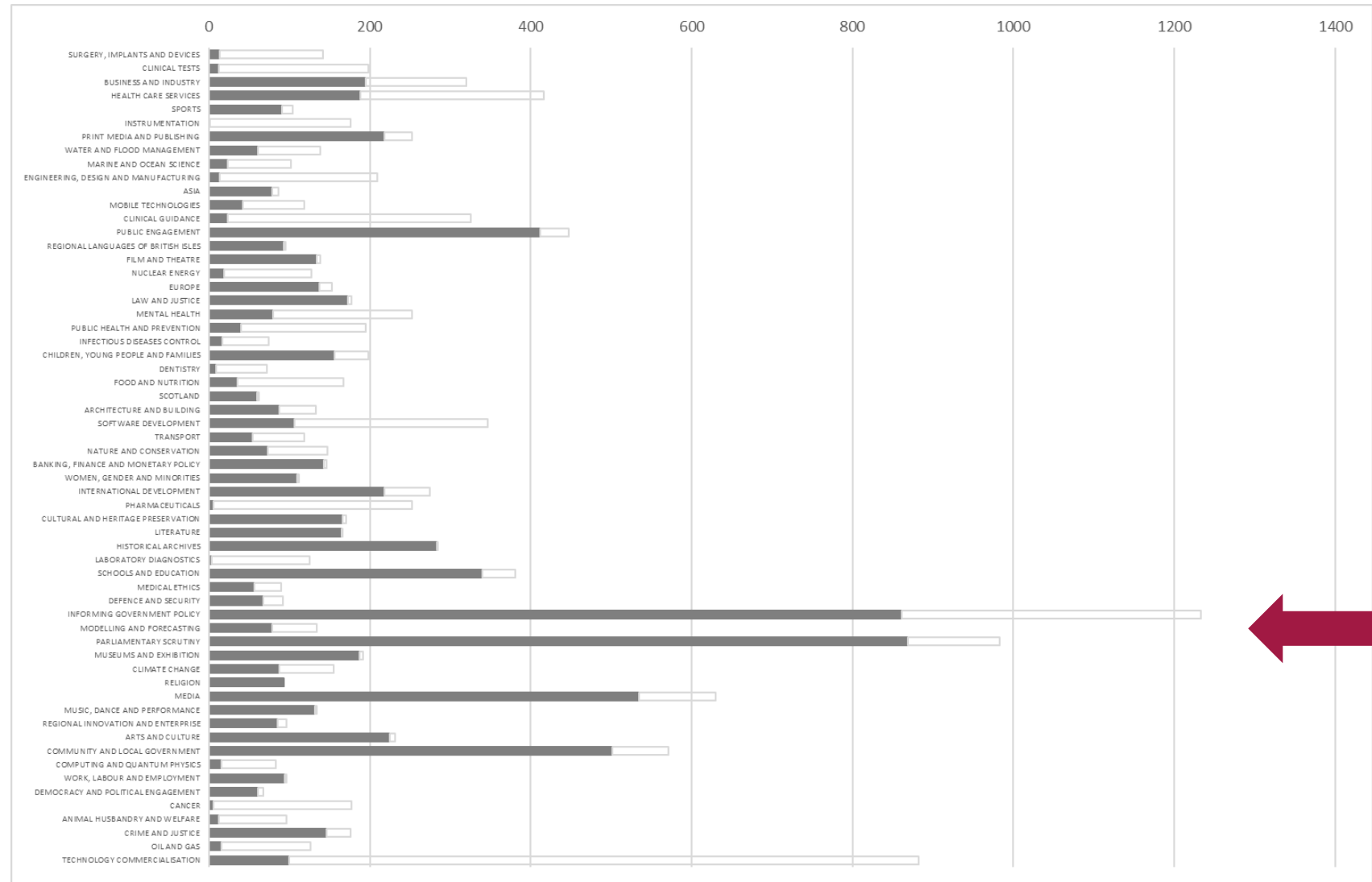


AHSS case studies

Categories of impact for AHSS case studies



Categories of impact for AHSS case studies



Conclusion

Impacts associated with Arts, Humanities and Social Science research are extremely diverse...

...so cannot be captured through small or consistent set of indicators.

Altmetrics and policy impact?

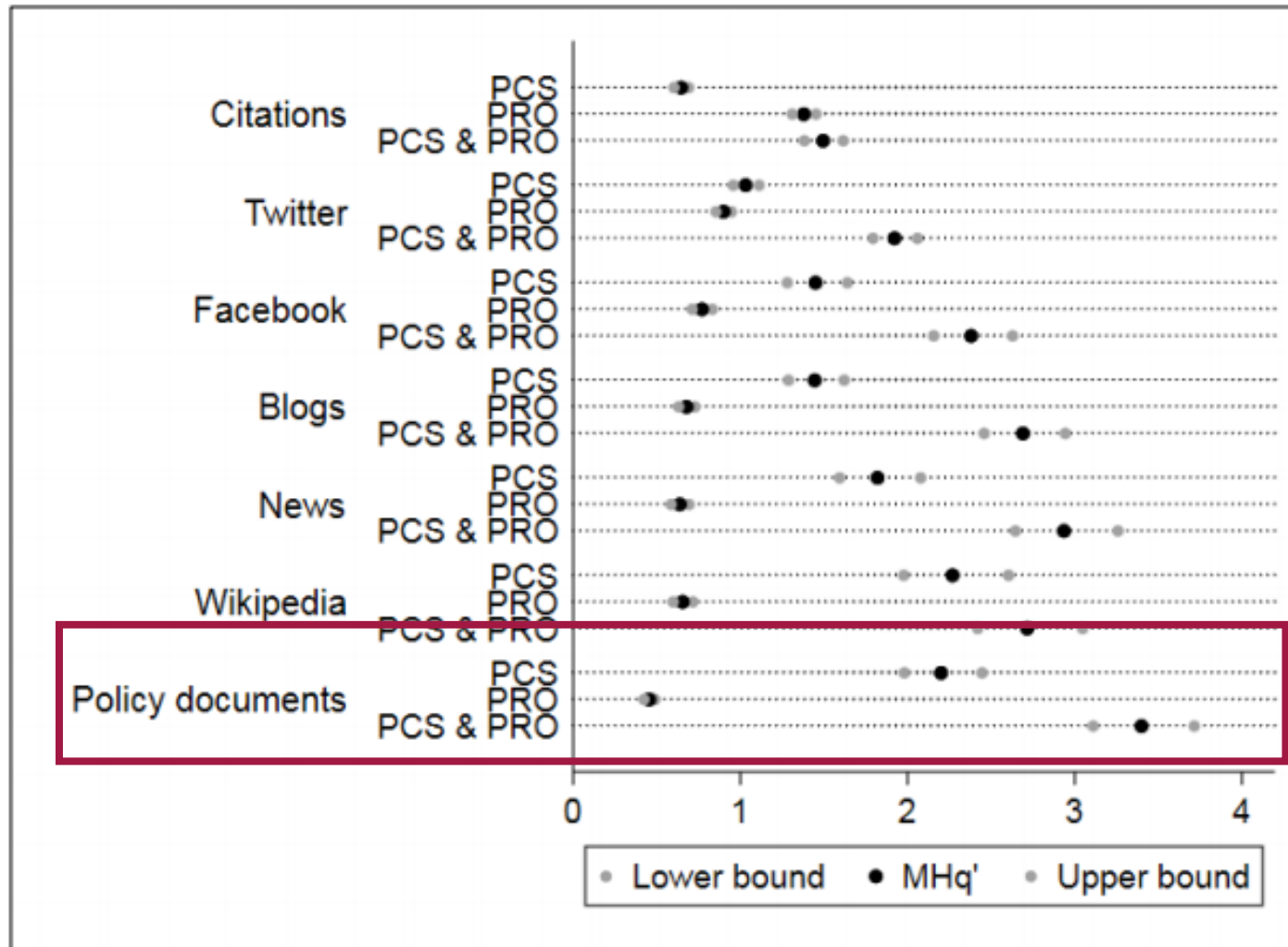
Do altmetrics assess societal impact in the same way as case studies? An empirical analysis testing the convergent validity of altmetrics based on data from the UK Research Excellence Framework (REF)

Lutz Bornmann, Robin Haunschild, Jonathan Adams

(Submitted on 11 Jul 2018)

Altmetrics have been proposed as a way to assess the societal impact of research. Although altmetrics are already in use as impact or attention metrics in different contexts, it is still not clear whether they really capture or reflect societal impact. This study is based on altmetrics, citation counts, research output and case study data from the UK Research Excellence Framework (REF), and peers' REF assessments of research output and societal impact. We investigated the convergent validity of altmetrics by using two REF datasets: publications submitted as research output (PRO) to the REF and publications referenced in case studies (PCS). Case studies, which are intended to demonstrate societal impact, should cite the most relevant research papers. We used the MHq' indicator for assessing impact - an indicator which has been introduced for count data with many zeros. The results of the first part of the analysis show that news media as well as mentions on Facebook, in blogs, in Wikipedia, and in policy-related documents have higher MHq' values for PCS than for PRO. Thus, the altmetric indicators seem to have convergent validity for these data. In the second part of the analysis, altmetrics have been correlated with REF reviewers' average scores on PCS. The negative or close to zero correlations question the convergent validity of altmetrics in that context. We suggest that they may capture a different aspect of societal impact (which can be called unknown attention) to that seen by reviewers (who are interested in the causal link between research and action in society).

Altmetrics and policy impact?



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**Research
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Panel discussion & Q&A

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Chair: Paul Wouters

*Director of the Centre for Science and
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Type your recommendation here



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Next up:

15.00-15.30 Break

15.30-17.15 Plenary Closing

Lumbye Hall