Open Research Conversations:
Reproducibility In Practice

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What does a Research Practice Lead do?
… Sheffield is a UKRN founder member

“Ensuring the UK remains a centre for world-leading research.”

https://www.ukrn.org/
Research integrity: a forensic model?
Research Improvement Strategy
Research integrity is not researcher integrity

Honest, diligent researchers can still produce unreliable research

You get errors for free, no deliberate effort is required
Why Openness is key to quality

- audit / replication
- dissemination
- extension & integration
- collaboration
- an ethical duty
- an honest signal

Image: Puzzle Pieces, CC-BY by M Ryan, US
What this means on the ground

Code (sharing, version control)
Data (management, sharing)
Open Access publishing
Research Culture
Policies and responsible metrics
Research training
Practices: replication, pre-registration, version control, collaboration
News
Open Research Working Group @ Sheffield

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An Open Research Statement for Sheffield

**FAIR principles:** FAIR—Findable, Accessible, Interoperable, Reusable

DORA

Data security / privacy
Policies & Roadmaps

UKRN template policies

Research Transparency

Responsible Research Evaluation

Responsible Use of Metrics

Rewards and Incentives

Open Research Action Plan
Training & Support

Seeking funding to support computational literacy / data science skills

- Research England Development Fund / Wellcome Trust / UKRI Data Science centre calls

Ongoing assessment of research culture

- see Wellcome strategy on this

Open Research Resources from Library
Research lifecycle project from IT services
Research Software Engineering
Data Analytics Service?
Research on Research

RoRi

The UKRN Academy

8 PhD students,
at 5 institutions

http://researchonresearch.org/

Zuzanna Zagrodzka

Evaluating the perceptions of bias, replication and transparency in evolution and climate change science
My ambition for Sheffield
“Made in Sheffield”
My questions for you?

What is the work? What needs doing?

What is already happening? What can you share with the rest of the institution?

Who should I listen to?

What would you do in my shoes?

Questions & feedback
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Want to get involved in promoting Open Research?
ukrn@sheffield.ac.uk
END
Reserve slides follow
Is my field at risk? Ask yourself ....

Publication pressures
- speed? volume? status?

Focus on novelty / Lack of replication?

Expensive or laborious methods?

Complex/opaque analysis?

Data / materials / platforms hard to access?

Dogmatic peers?

Incomplete training?

Conflict of interest from funders?
- impact? profit?

Lack of standards / consensus on criteria by which research should be assessed?
Also?

Lack of consortia / competitions / common data

Lack of formal theory / support for theoretical work

Bias against (no funding for) exploratory and observational research

Lack of standardised reporting / measures

Lack of risk of bias / quality indicator tools

Lack of (enough) expert reviewers/reviews

Reliance on indirect / proxy measures
Common concerns about “open research”

Bad incentives in KE & impact (prioritising one’s own outputs rather than the best intervention), particularly with reference to REF impact case studies

Sharing of code limiting scope for commercialisation

Weaponisation of open data by bad actors (e.g. climategate)

Pre-prints squandering trust in research

Lack of funding model for auxiliary “research services” (e.g. statistical support)

Rising journal costs / extortion by academic publishers
Training & support gaps?

Licensing: Do we need a research code management plan, like we have research data management plans?

PGR training 1: There is no financial model to incentivise specialist DDP training.

PGR training 2: supporting "Computational literacy" is a core research practice skill

Statistics support/advisory: could be better joined up / sign posted?