Open Scholarship: The Web as the Platform for Scientific Communication

Dr Neil Jacobs
Programme Director, JISC

JISC
inspiring innovation

- The **scholarly record** is the set of information that describes the inputs and outputs of academic research and scholarship.

  - It underpins research, scholarship and innovation

- Traditionally the scholarly record has focused on research **works** (books, papers and, increasingly, data) and their **authors**.

  - Newer forms of **work**, such as software, simulations, interactive and dynamic web environments, blogs and tweets…

  - Other forms of **contribution**, including from data managers, but also by facilities and instruments used (and their calibrations), funding sources, host and associated organisations…

- Also attention / use data – this is a dynamic graph…
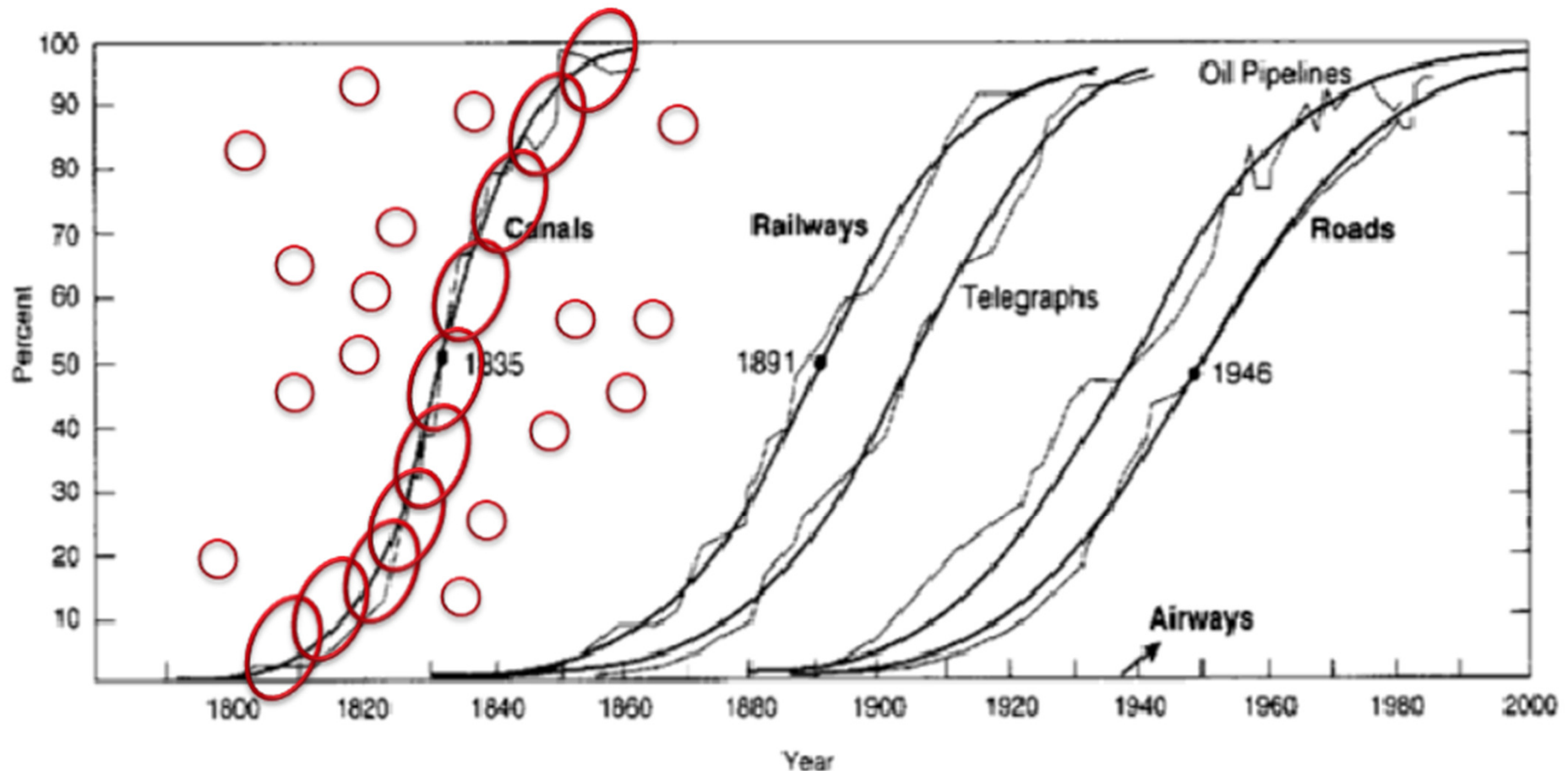
JISC

inspiring innovation

- The **scholarly record** is the set of information that describes the inputs and outputs of academic research and scholarship.

  - It underpins research, scholarship and innovation

- Traditionally the scholarly record has focused on research **works** (books, papers and, increasingly, data) and their **authors**.

  - Newer forms of **work**, such as software, simulations, interactive and dynamic web environments, blogs and tweets…

  - Other forms of **contribution**, including from data managers, but also by facilities and instruments used (and their calibrations), funding sources, host and associated organisations…

- Also attention / use data – this is a dynamic graph…

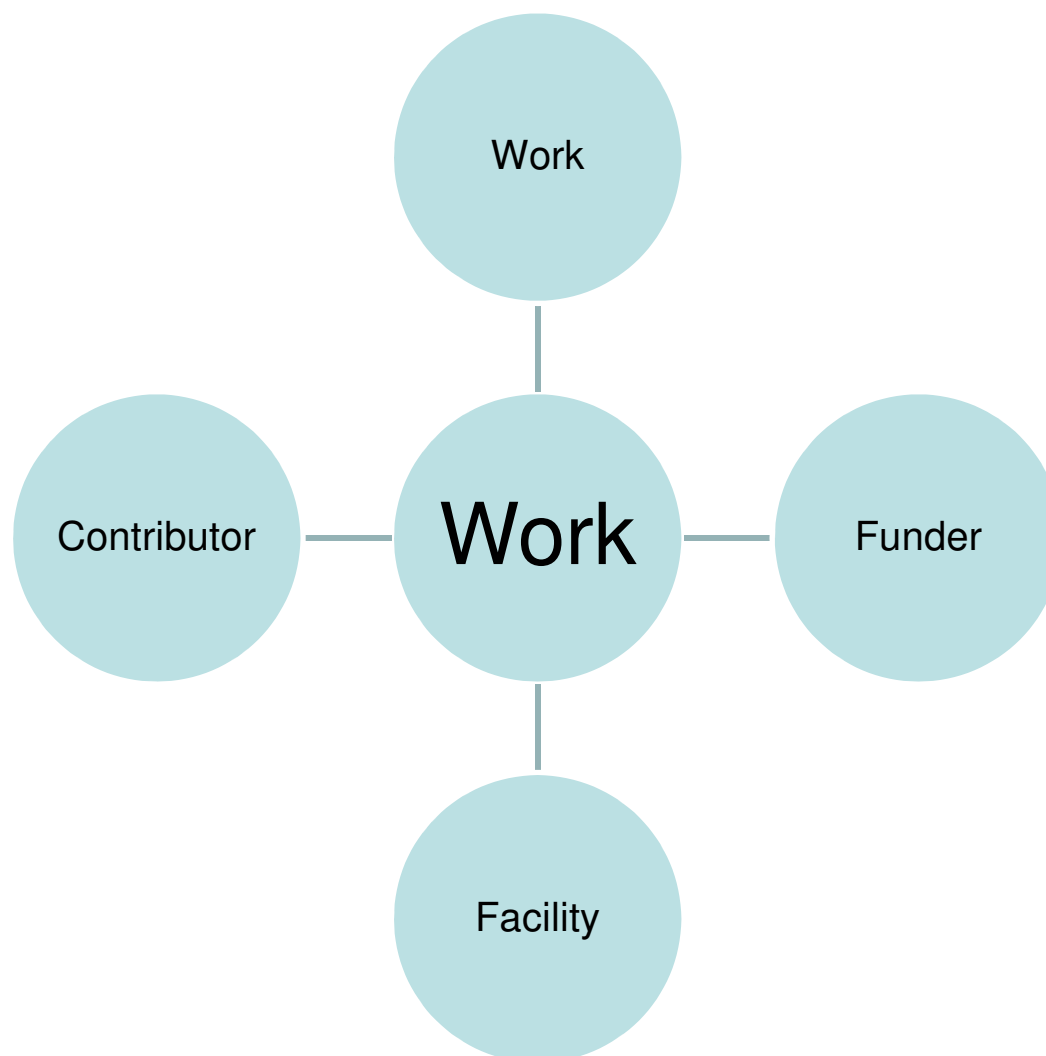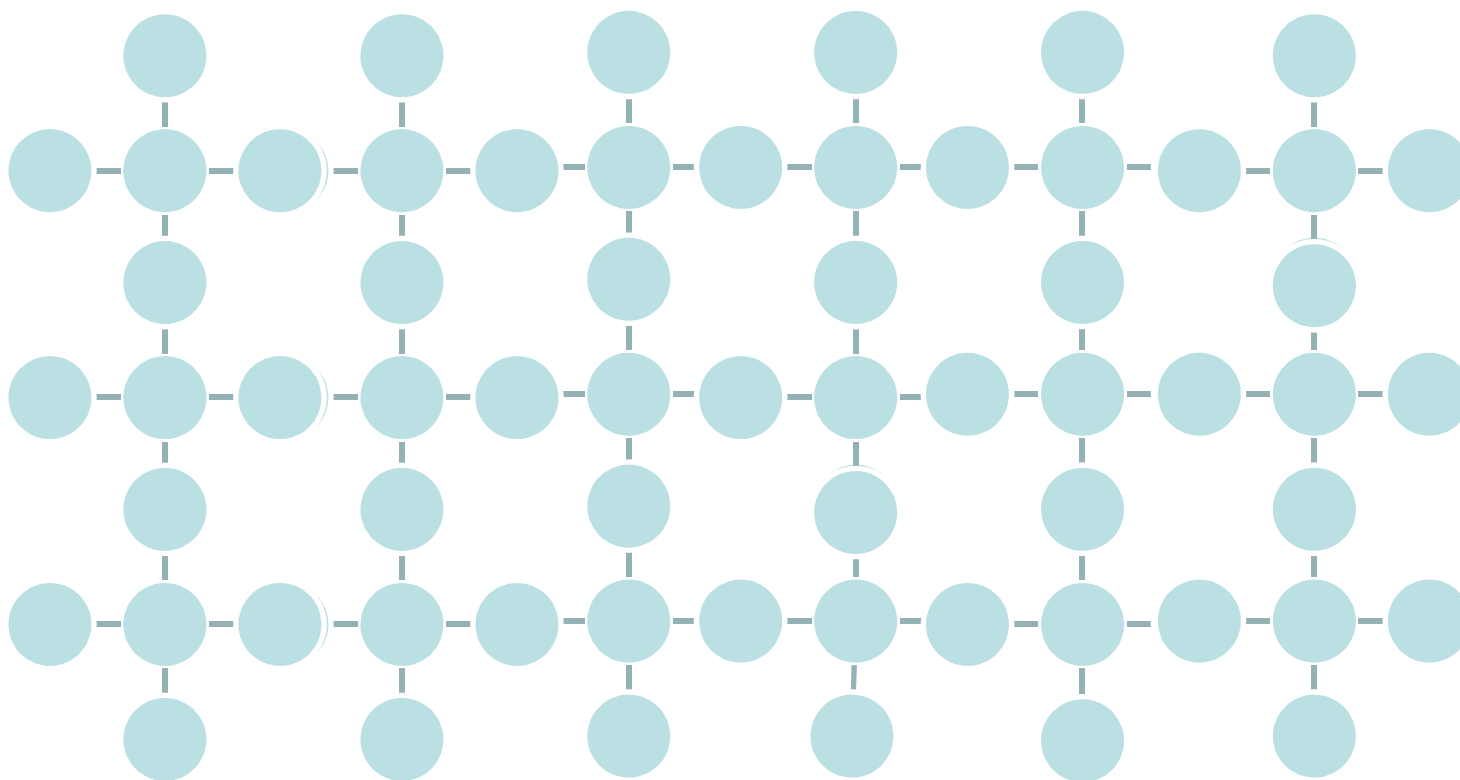1. The scholarly record is data
2. For science, data is infrastructure

This is a long game...

Infrastructure is evolved over decades not years...
...and it is not "built" as a linear process...
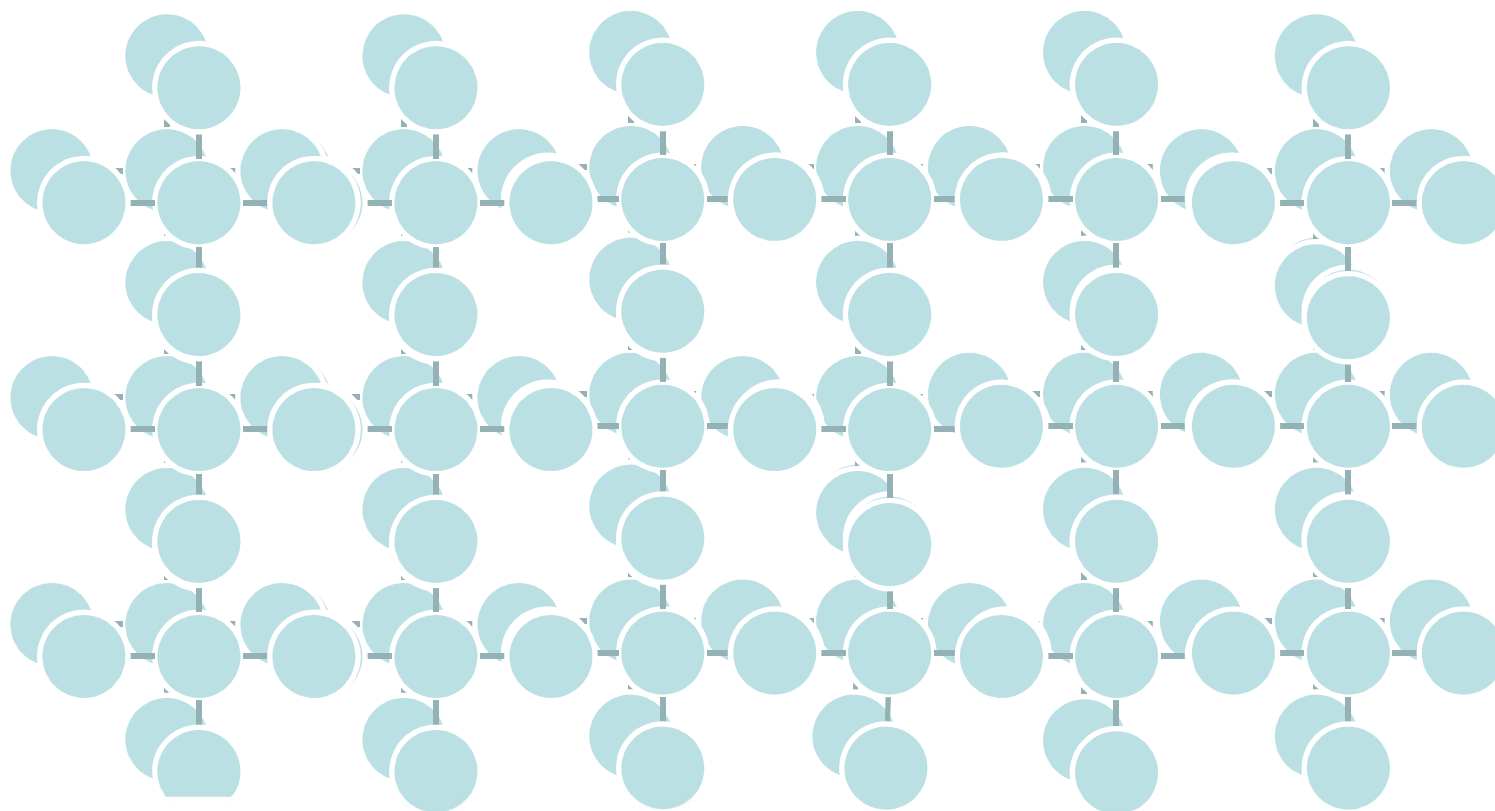
reproduced from Grübler and Nakiâcenoviâc, 1991

- The aim is to have a **scholarly record** that is more

  - **Complete**

    - An adequate basis for research, operational and statistical purposes

  - **Authoritative**

    - Data has provenance, claims are authored, identity is trusted, bad science is excluded

  - **Available**

    - ...to those who need it, when they need it, with the right permissions and cost/benefits

  - **Sustainable**

    - For components and for the system as a whole, includes adequate business models, planned resilience, balance between innovation and stability, cost-effectiveness at all levels, etc

JISC

inspiring innovation

- The aim is to have a **scholarly record** that is more

  - **Complete**

    - An adequate basis for research, educational and statistical purposes

  - **Authoritative**

    - Data has provenance, claims are authored, quality is trusted, bad science is excluded

  - Available

    - ...to those who need it when they need it, with the right permissions and cost/benefits

  - Sustainable

    - For components and for the system as a whole, includes adequate business models, planned resilience, balance between innovation and stability, cost-effectiveness at all levels, etc

Given these desirable attributes... how much of the scholarly record should be surfaced on the open web?

1. Institutional benchmarking

   – Closed: financial information, citation data, some publication data

   – Open: some publication data, researchers' names, some research assessment outcomes, some grant information

1. Institutional benchmarking

   – Closed: financial information, citation data, some publication data

   – Open: some publication data, researchers' names, some research assessment outcomes, some grant information

Some information is closed because of certain business models, but is this sustainable in the wider sense, and does it compromise other desirable attributes of the scholarly record?

1. Institutional benchmarking

   – Closed: financial information, citation data, some publication data

   – Open: some publication data, researchers' names, some research assessment outcomes, some grant information

   Some information is closed because of certain business models, but is this sustainable in the wider sense, and does it compromise other desirable attributes of the scholarly record?

2. Peer review (PLoS-One model)

   – Closed: assessment of scientific integrity

   – Open: assessment of importance and relevance

JISC

inspiring innovation

1. Institutional benchmarking

   – Closed: financial information, citation data, some publication data

   – Open: some publication data, researchers' names, some research assessment outcomes, some grant information

   Some information is closed because of certain business models, but is this sustainable in the wider sense, and does it compromise other desirable attributes of the scholarly record?

2. Peer review (PLoS-One model)

   – Closed: assessment of scientific integrity

   – Open: assessment of importance and relevance

   Information closed to ensure the scholarly record is authoritative, but open to ensure it is complete and available.

Putting the scholarly record on the web:

- A – Open Access

- B – Open Bibliography

- C – Open Citation

- D – Open Data

Implies shifting boundaries, responsibilities, rights, etc across the scholarly record and associated value chains.

Dr Leslie Carr
Senior Lecturer in
Intelligence, Agents,
Multimedia
University of
Southampton

Open Access Vision:
More entwined
international scholarly
teams working together.

JISC work:

– SWORD

– "Deposit" projects

– Repositories and Curation shared services

– Policy work through Open Access Implementation Group

Future?

– continue to build and interoperate in the repository ecology: SWORD, OAI-ORE, etc..

– Work with new publishing models (PLoS, overlay journals, etc)

Dr Peter Murray Rust
Department of Chemistry
University of Cambridge

Vision for Open Bibliography: A comprehensive map of the scholarly world.

JISC
inspiring innovation

Dr David Shotton
University Reader in Image
Bioinformatics,
University of Oxford

Vision for Open Citation:
Quality assurance and
awareness of key ideas.

JISC

inspiring innovation

- JISC activities:

  - Repositories citation sharing...

  - JISC "OpenCit" – open, semantic citation

  - Webtracks – InterCom protocol, dynamic, forward/back citation

  - ...part of wide range of work on **data citation**
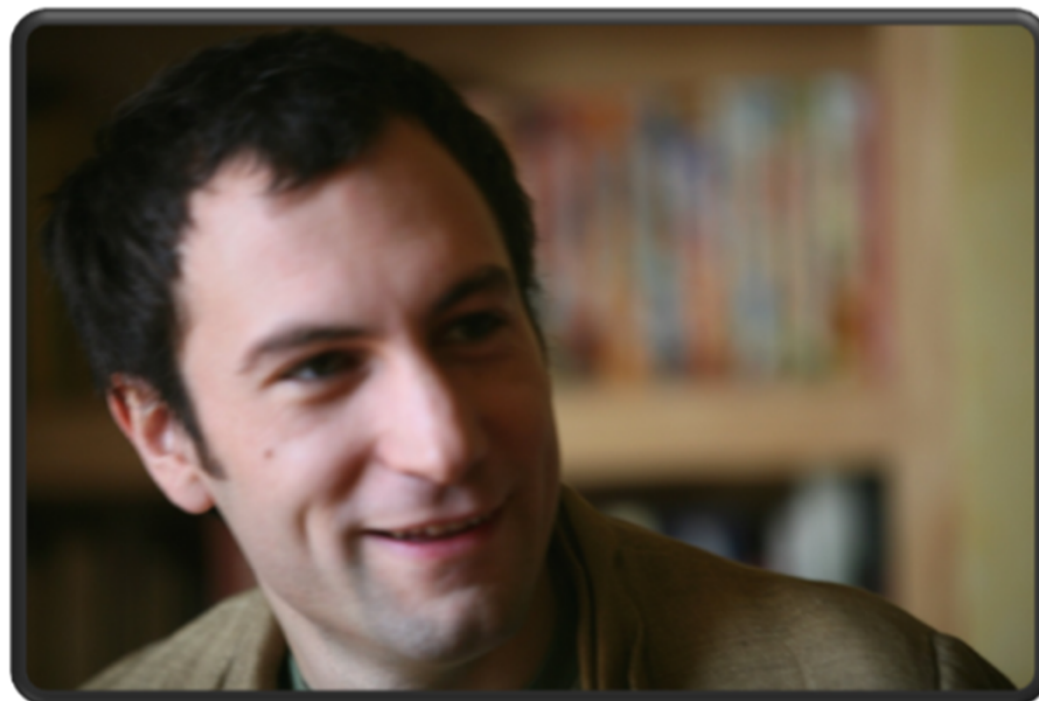
- Future

  - MIT CAPret – building on CC "open attribution", in eLearning but for web content generally

  - Data citation workshops at Harvard and National Academies in US

  - "Beyond Impact" workshop – alt-metrics...

JISC
inspiring innovation

[Dr Rufus Pollock](#)
Fellowship for the
Shuttleworth Foundation,
Open Knowledge Foundation

Vision for Open Datasets:
Reduce tedium to allow for
more time spent on analysis
and hypothesis.

JISC work:

– Data infrastructure for universities (technical and organisational)

– National data infrastructure

– Shared services (Data Management Planning tool, registry, perhaps "RoMEO for data"?...)

– Data citation projects, data publication projects (Dryad-UK, Datacite..)

Future:

– Sim4RDM – Sharing lessons across Europe

– See what comes from EC consultation, and communication to member states Autumn 2011 (also on OA and preservation)

– More...

And...

- Open source software (to read the data)

- Open educational resources (to enable students to benefit)

- Open innovation (to enable the economy and society to benefit)

JISC
inspiring innovation

And...

- Open source software (to read the data)

- Open educational resources (to enable students to benefit)

- Open innovation (to enable the economy and society to benefit)

But...

Evolution, not revolution