Introduction
Welcome!

- Two days of formal presentations and one hack day for experimentation
- Those participating: 60 people from 11 countries, of whom 24 are speakers and 7 are presenting posters

- Organizers and host

- Sponsors

- Local organizing committee: Silvio Peroni and Marilena Daquino
The importance of citations

people get upset. When our project was announced through a press release, comments appeared on the website of the British National Party, a far-right British political organization that opposes immigration and favours ‘voluntary repatriation’. One contributor described our project as: ‘Another government-funded (sic) justification for immigration which will say there is no such thing as indigenous British’, and our research group as ‘a bunch of Marxist parasites who have never done a proper day’s work’. Well, proper or not, there is much work to do, and we Marxist parasites have high hopes that it will produce new insights.

My work is supported by a Wellcome Trust Senior Fellowship in Basic Biomedical Science (grant no. 087576).

REFERENCES
Creating citations is an essential scholarly activity

- A citation is created by an author’s **performative act of citing** a published work that is relevant to the current work, typically made by including a **bibliographic reference** in the reference list of the current work.

- While the act of creation may for the author be the work of a moment, once created, a citation becomes a **permanent directional conceptual link** from the citing bibliographic work to a cited work.
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- Citations also integrate our independent acts of scholarship into a global knowledge network.

- Bibliometric analysis of the flow of information and ideas through the citation network, and its changes over time, can reveal patterns of communication between scholars and the development and demise of academic disciplines.
Two of my heroes

Max Perutz

John Sulston
The four phases of Open Scholarship

- **Open source software**, now ubiquitous – think Linux, Open Office, Firefox
- **Open access papers**
  - Many funders, including NIH and NSF, the European Commission, the Wellcome Trust, and the Gates Foundation, now make Open Access mandatory for grantees
- **Open datasets** on which scholarly articles are based
  - Much current effort to encourage deposit of research datasets
  - Historically, bioinformatics researchers have always been open, while others, notably chemists, have always been tight-fisted with their data
- **Open metadata** - machine-readable descriptions of scholarly works
  - **Metadata 2020** is a collaboration launched last autumn to promote open reusable metadata describing all research outputs, and several of its members are present at this meeting
  - At this workshop, we will concentrate on bibliographic and citation metadata
Requirements for Open Scholarship

- **FAIR principles** ([https://www.force11.org/group/fairgroup/fairprinciples](https://www.force11.org/group/fairgroup/fairprinciples))
  - To facilitate humans and machines in their discovery of, access to, integration and analysis of scholarly material, stuff should be
    - Findable
    - Accessible
    - Interoperable
    - Re-usable
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- The Initiative for Open Citations goals (https://i4oc.org/#goals)
  - To facilitate reuse, stuff (citations) should be
    - Structured (accessible in common, machine-readable formats)
    - Separable (metadata available without access to source publications)
    - Open (freely accessible and re-usable)

- The problem is that at present most stuff is not free to access, is subject to inconsistent, hard-to-parse licenses, and is not machine-readable
For citations, how is the present situation imperfect?

- The present scholarly citation system inadequately exposes the knowledge networks that exist within the scholarly literature, linking papers, authors, funders, research projects and datasets.

- Citation data are hidden behind subscription firewalls of commercial companies.

- Academics are not free to use their own citation data as they please.
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- Academics are not free to use their own citation data as they please.

- In this Open Access age, it is a scandal that reference lists from journal articles, the core elements of the academic data cycle, are not (yet) freely available for use by the scholars who created them.

- Citation data now need to be recognized as a part of the Commons – those works that are freely and legally available for sharing.
Working towards open citations

- We are **late** entering the fight for open citations, which has been dominated by commercial citation indexes charging very high subscriptions: WoS and Scopus.
- While other indexes - Google Scholar and Microsoft Academic – are free to search, all these commercial indexes impose severe restrictions on machine access and data download for reuse.
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- The Initiative for Open Citations (https://i4oc.org), launched on 6th April 2017, has had remarkable success in persuading almost all the major scholarly publishers to open the reference lists they submit to Crossref.
  - Crossref now hosts more than half a billion open journal article references!

- I have recently called for research funders to mandate that their grant-holders publish in journals which make their citations open.
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This is the first Workshop on Open Citations, and we are here to work . . .

- Enjoy!