What can the pandemic teach us about open science practices?

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Three lessons

- Open access to papers
- Open data
- National dissemination

Sharing research data and findings relevant to the novel coronavirus (COVID-19) outbreak

The outbreak of the novel coronavirus (COVID-19) represents a significant and urgent threat to global health.

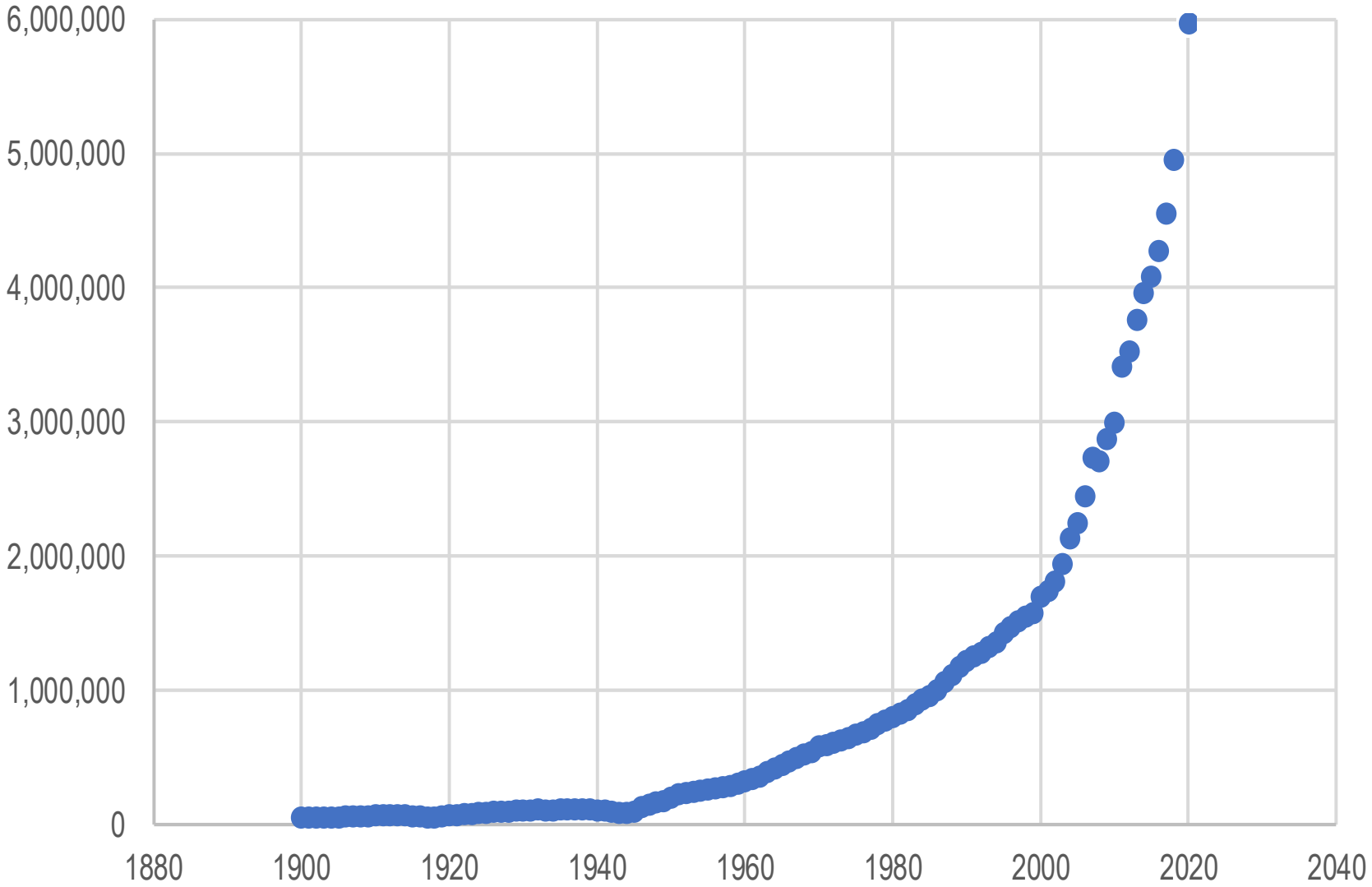
We call on researchers, journals and funders to ensure that research findings and data relevant to this outbreak are shared rapidly and openly to inform the public health response and help save lives.

We affirm the commitment to the principles set out in the 2016 Statement on data sharing in public health emergencies, and will seek to ensure that the World Health Organization (WHO) has rapid access to emerging findings that could aid the global response.

Specifically, we commit to work together to help ensure:

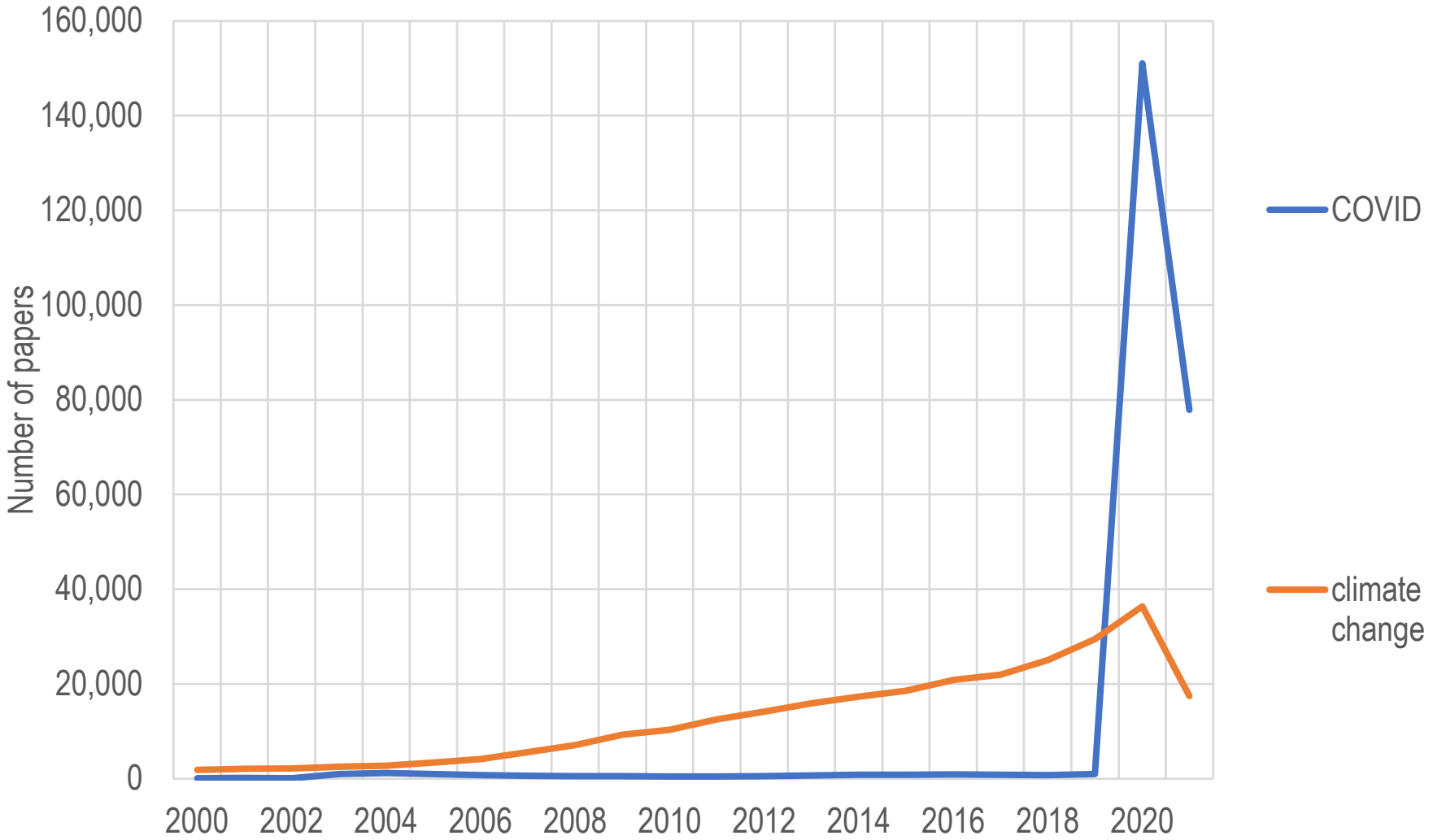
- all peer-reviewed research publications relevant to the outbreak are made immediately open access, or freely available at least for the duration of the outbreak
- research findings relevant to the outbreak are shared immediately with the WHO upon journal submission, by the journal and with author knowledge
- research findings are made available via preprint servers before journal publication, or via platforms that make papers openly accessible before peer review, with clear statements regarding the availability of underlying data
- researchers share interim and final research data relating to the outbreak, together with protocols and standards used to collect the data, as rapidly and widely as possible - including with public health and research communities and the WHO
- authors are clear that data or preprints shared ahead of submission will not pre-empt its publication in these journals

Total papers published, 1900-2020



Source: dimensions.ai database

Total papers published, COVID and climate change



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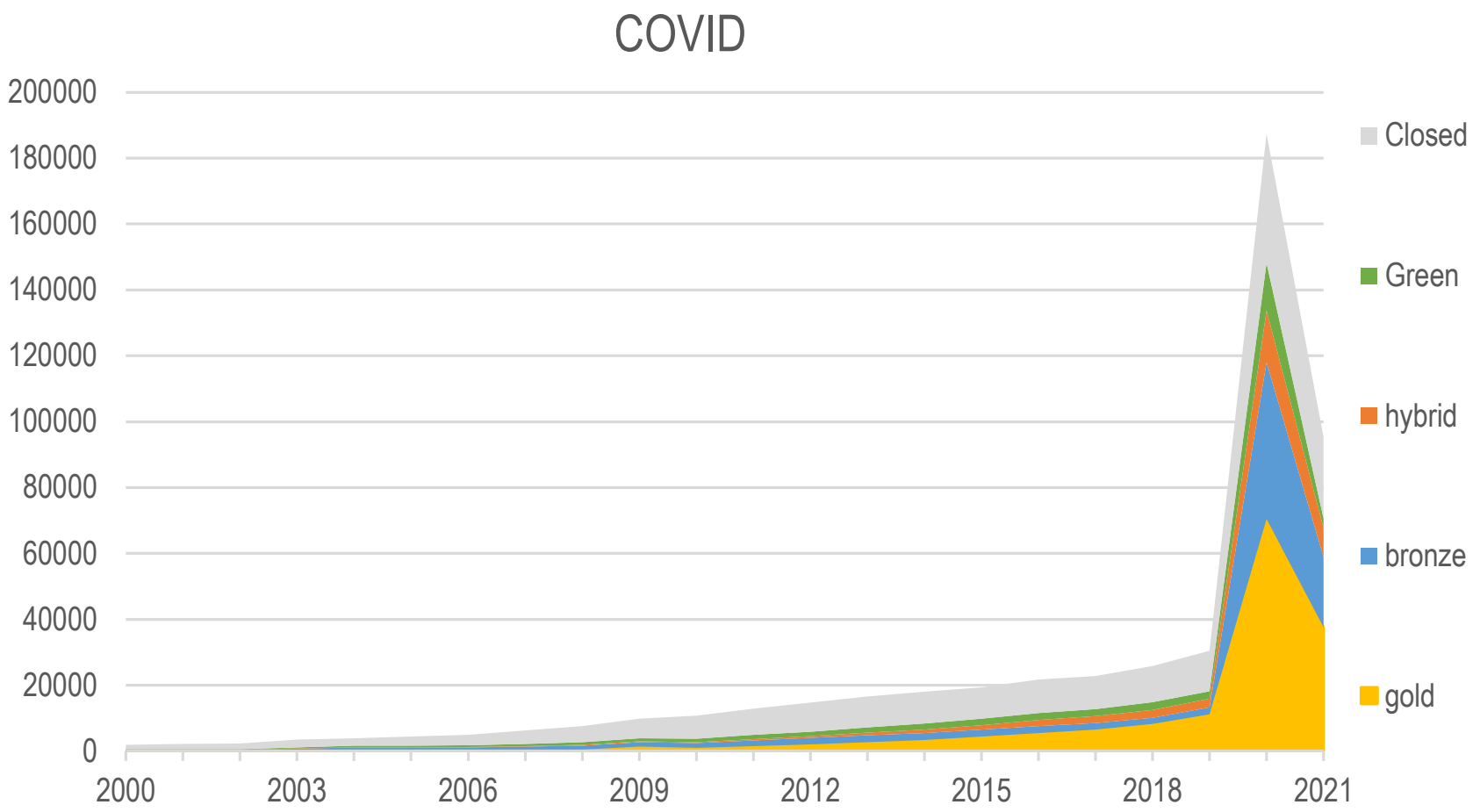
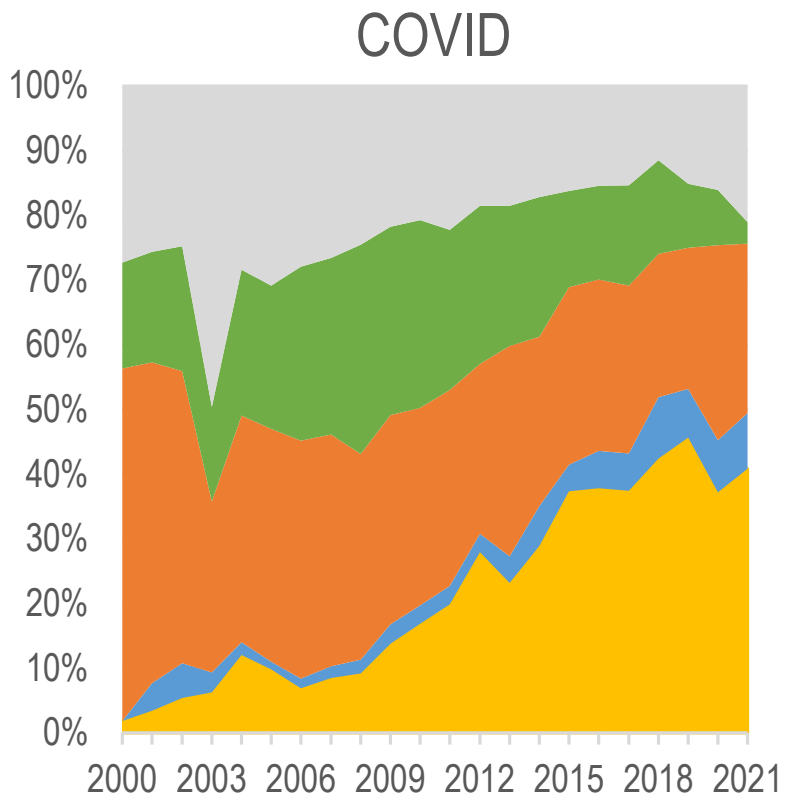
Total papers published, COVID and climate change



Source: dimensions.ai database

Percentage of OA papers, COVID and climate change



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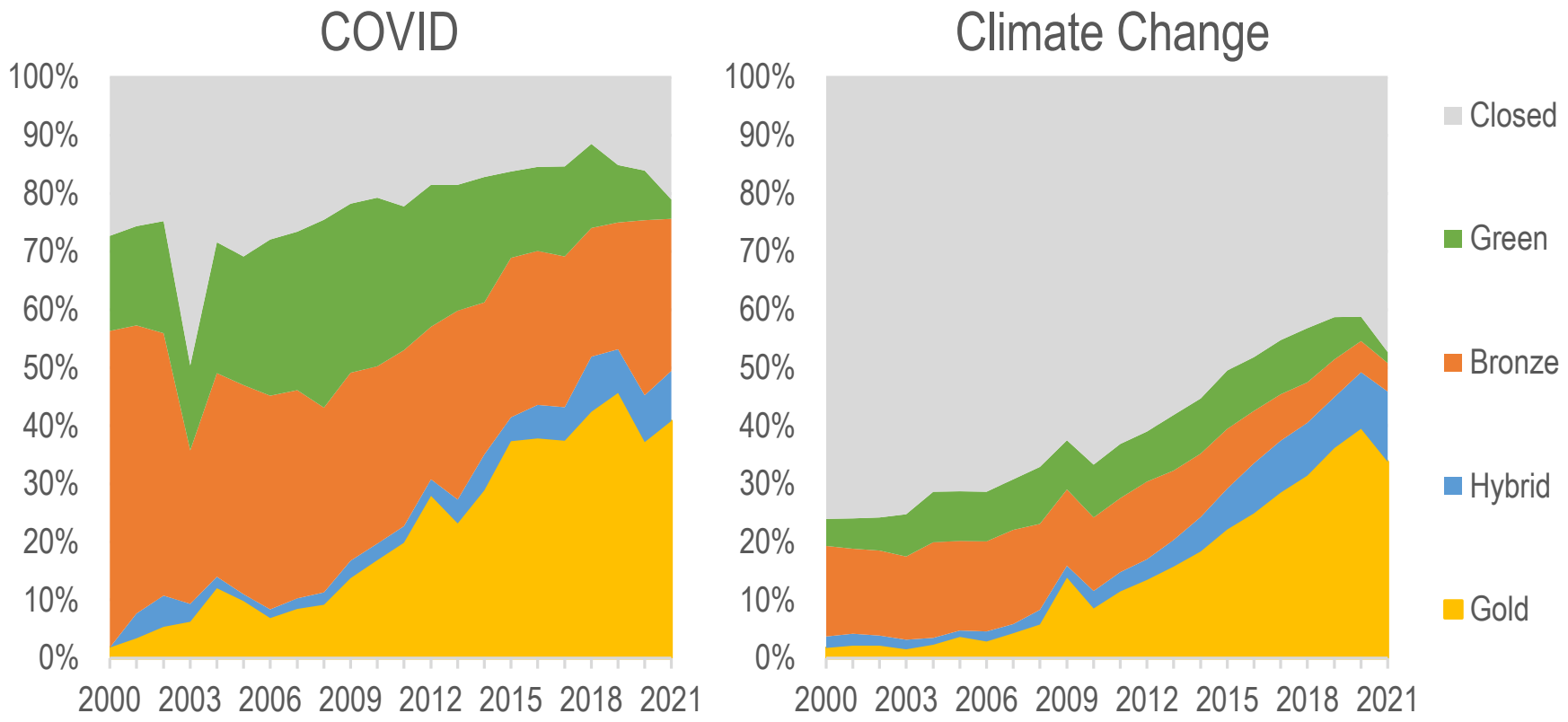

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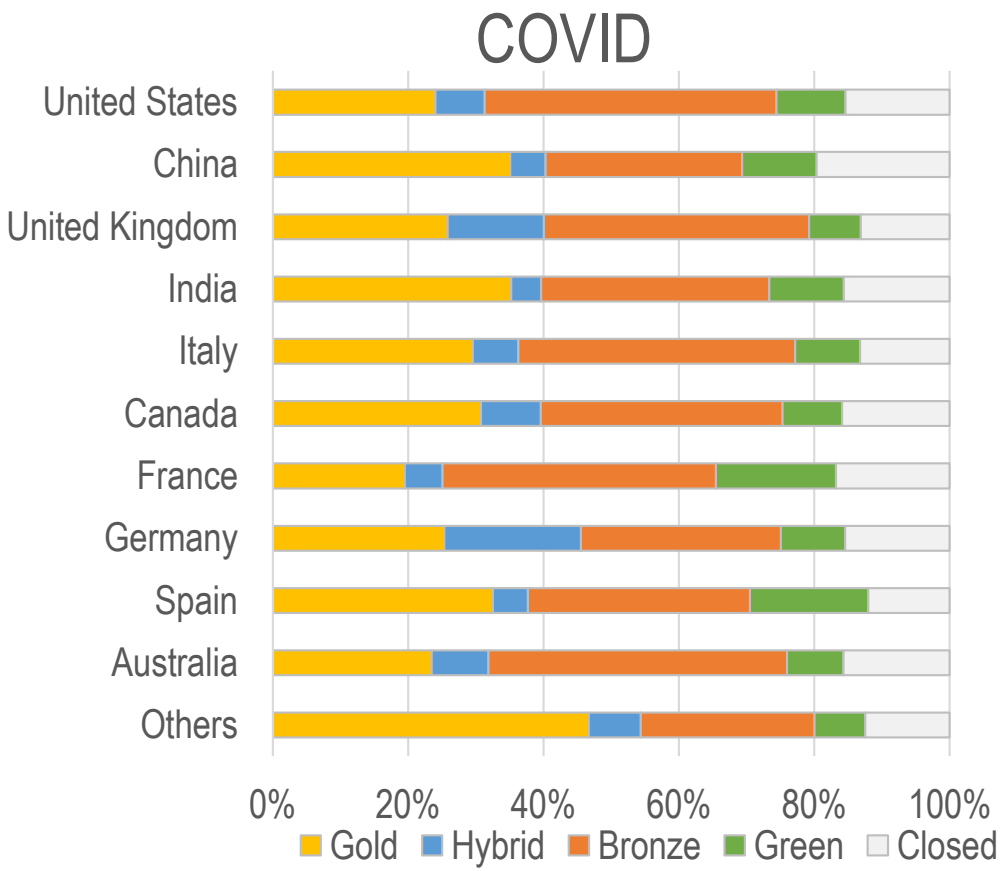

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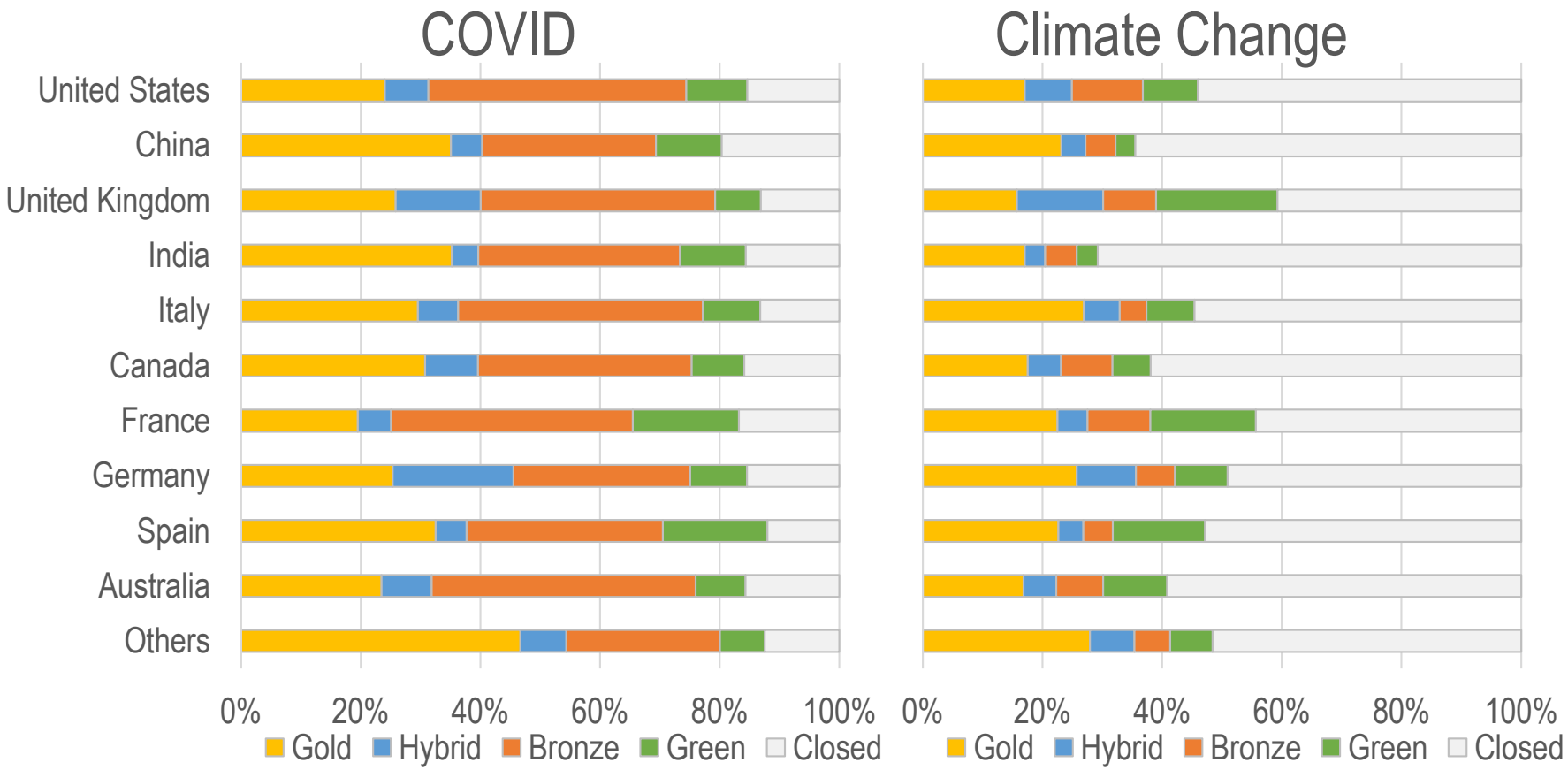
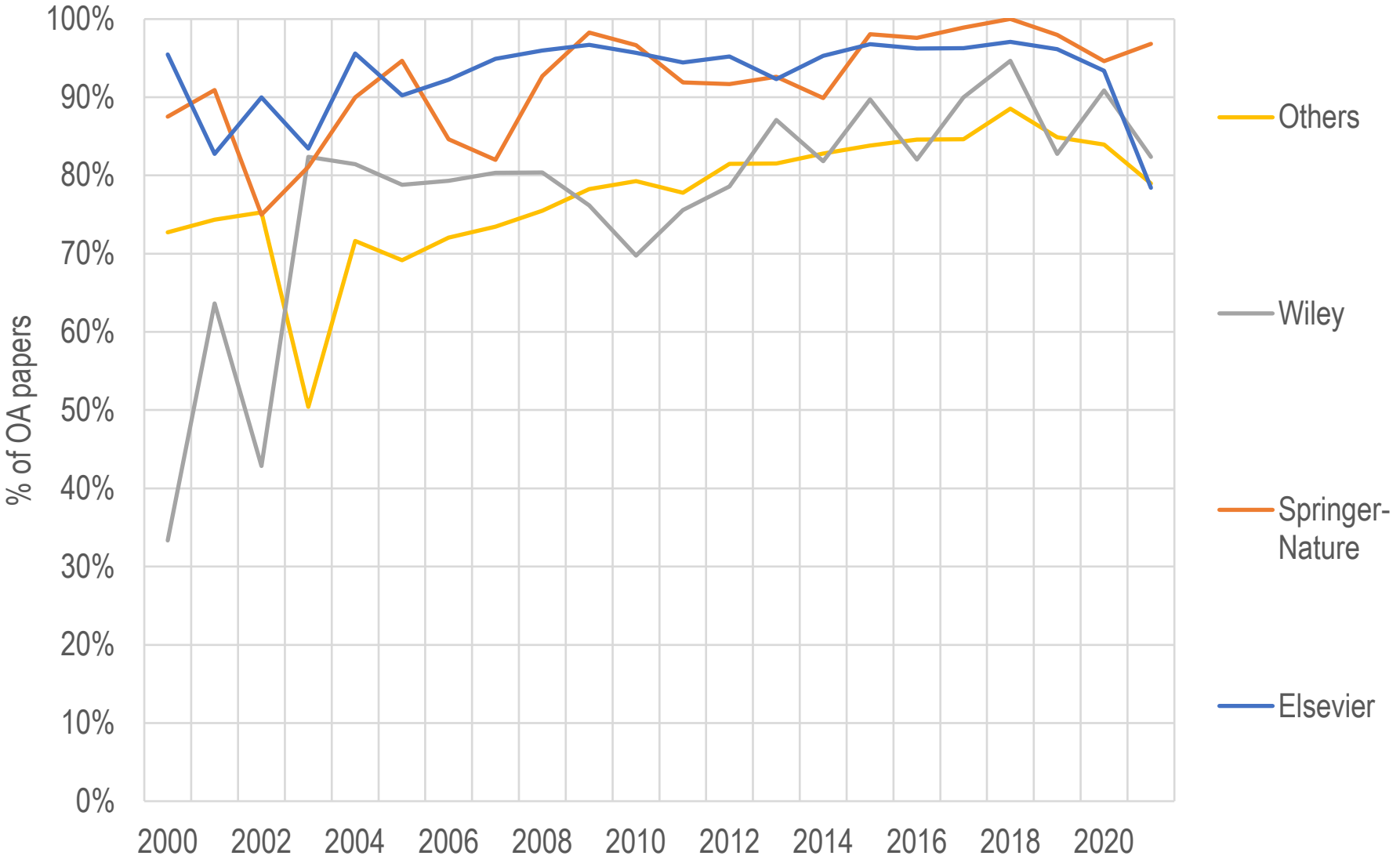
Percentage of OA papers, COVID and climate change



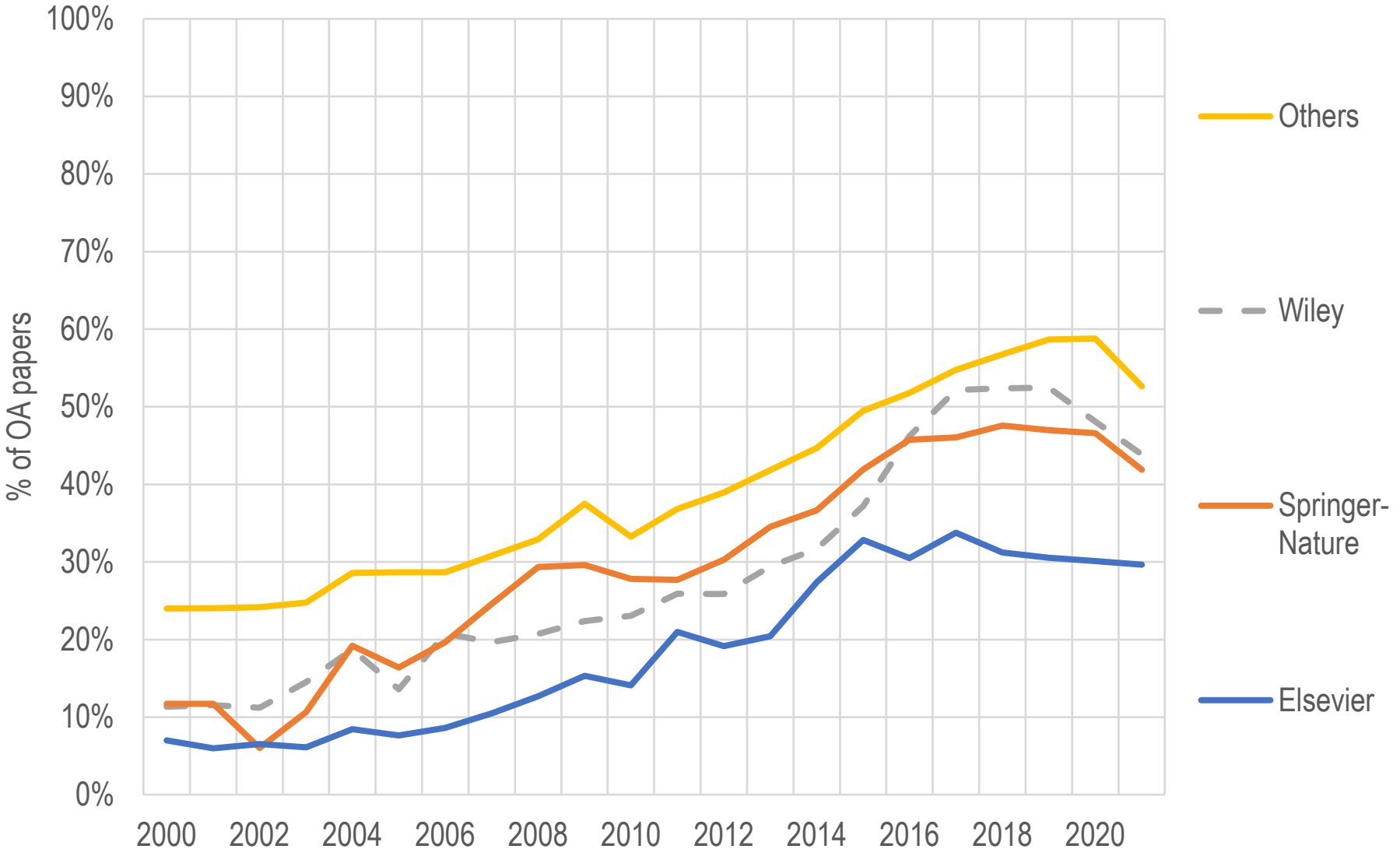
Source: dimensions.ai database

Percentage of OA papers, COVID



Source: dimensions.ai database

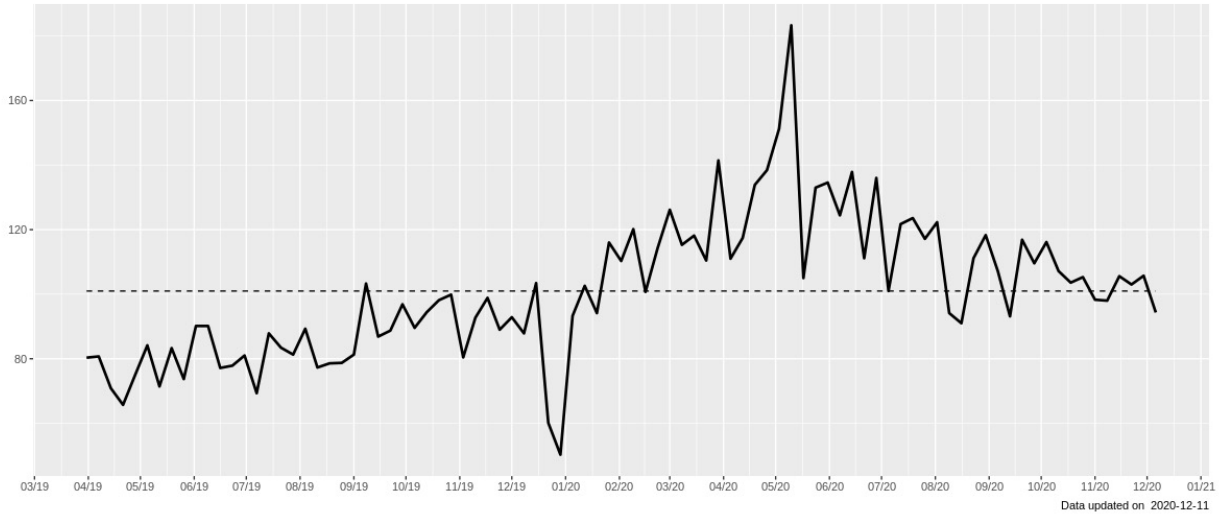
Percentage of OA papers, climate change



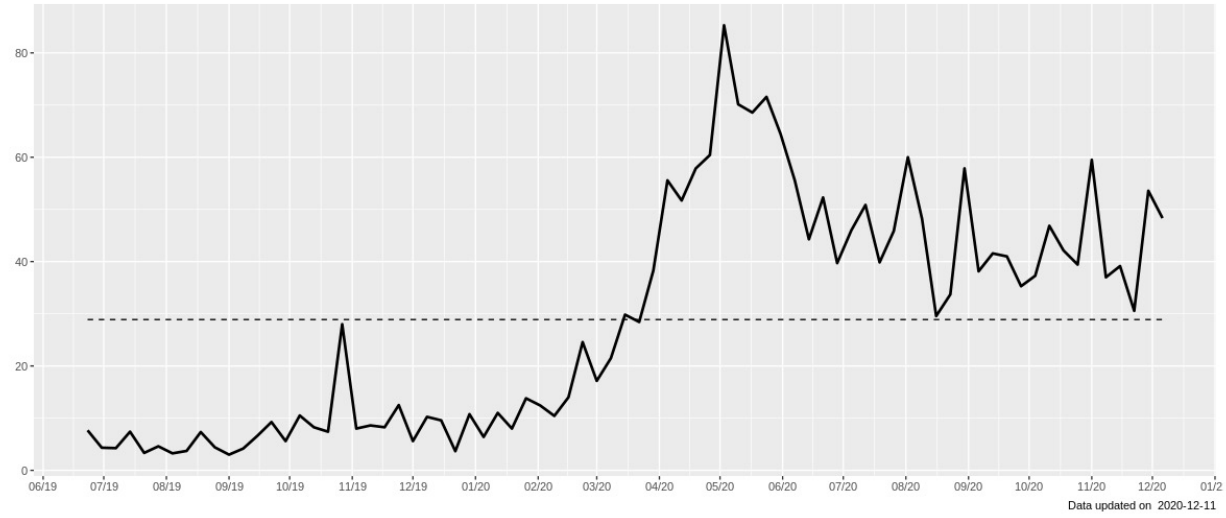
Source: dimensions.ai database

Temporary growth of preprints

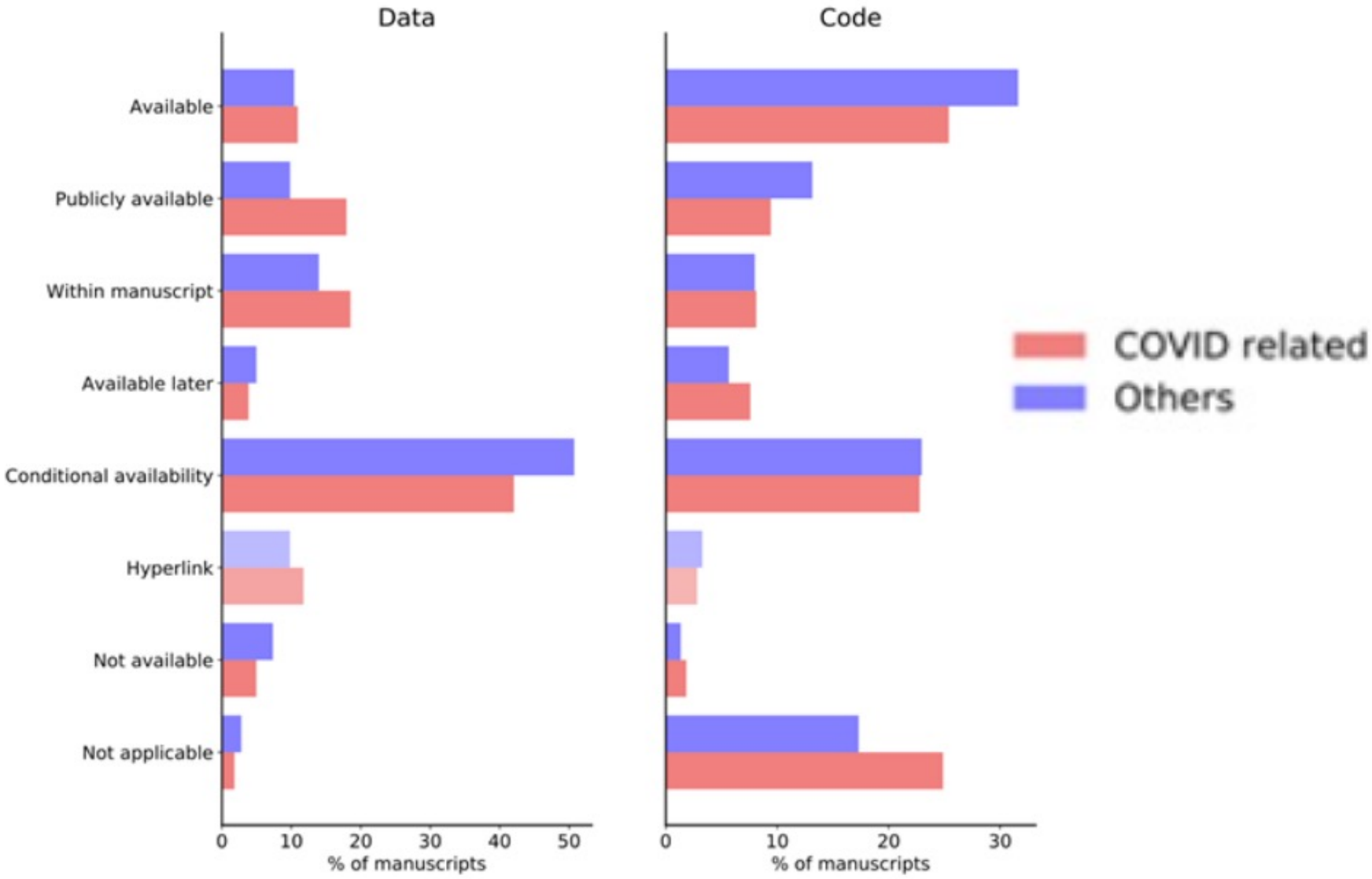
bioRxiv



medRxiv



Open data (MedRxiv)



https://blogs.lse.ac.uk/impactofsocialsciences/2020/11/30/covid-19-where-is-the-data/

National dissemination

- COVID: increased value of national research (and dissemination)
  - Availability for national communities
  - China: publishing in national journals becomes mandatory
  - Towards a new multilingualism
- Climate change is a scientific problem with a strong social component
  - General public—in all languages—needs to be able to access the literature

Steps forward

- Decoupling scholarly communication from research evaluation
- Get rid of all journal-level indicators of prestige
- Develop *new* incentives (openness, social relevance)
- Strenghten community-owned means of dissemination

Merci!

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