

# Critical mass

Tracking the strongest connections between the leading countries in the Nature Index and their institutions.

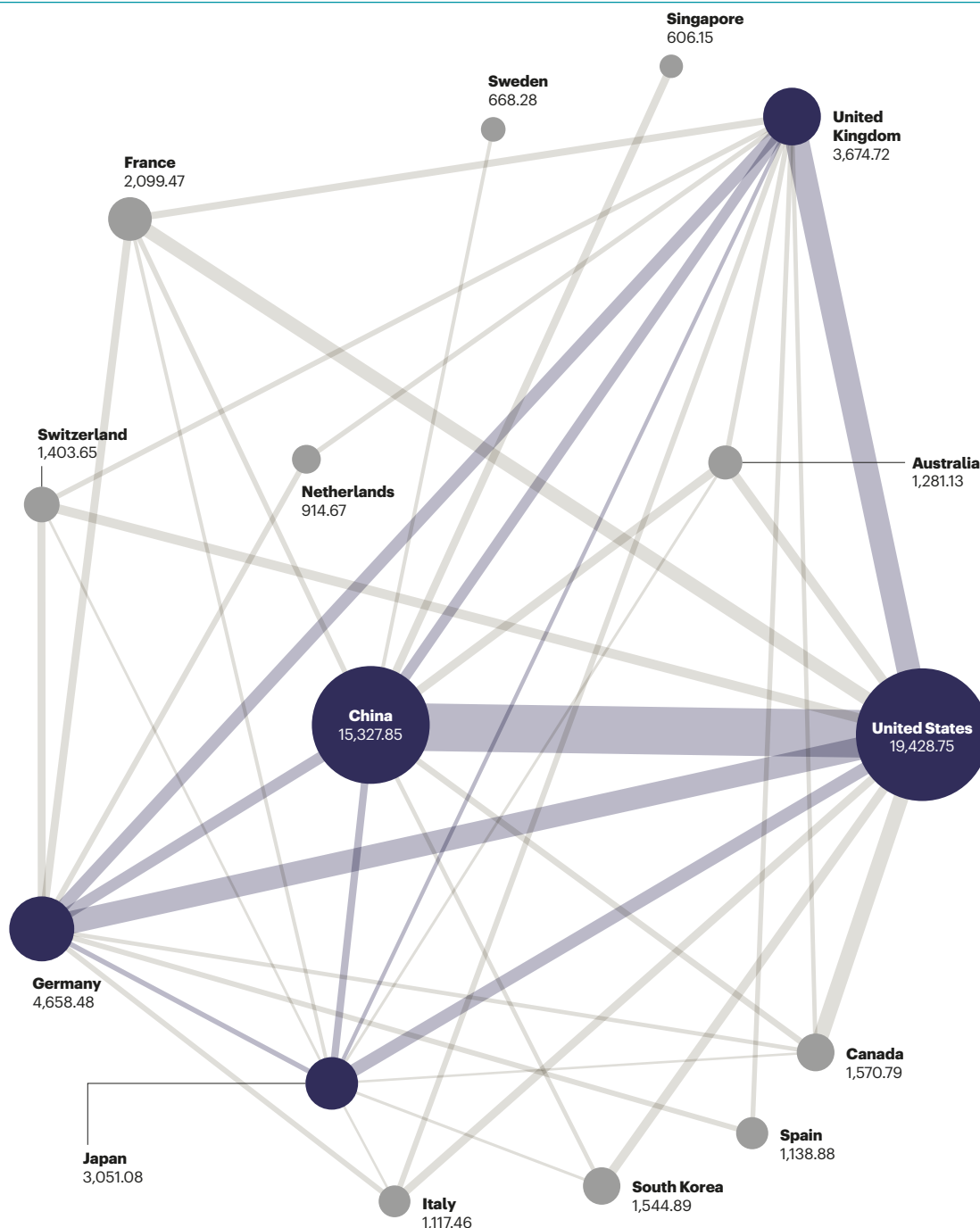
Data analysis by Catherine Cheung. Infographic by Catherine Armitage, Bec Crew and Tanner Maxwell.

## GLOBAL CONNECTORS

The 10 biggest collaborating partners of each of the leading 5 nations in the Nature Index by collaboration score are shown. Although the strongest relationships are within the Big 5 group, they are not necessarily each other's biggest partners. Japan is the outlier, with Germany, the United States and the United Kingdom all collaborating more with France than they do with Japan.

### Legend

- Big 5 country
- Non-big 5 country
- Big 5 collaboration
- Big 5–non-big 5 collaboration
- 250 collaboration score, 2021\*
- 1,000 collaboration score, 2021\*
- 500 Share, 2021\*
- 1,000 Share, 2021\*
- 5,000 Share, 2021\*

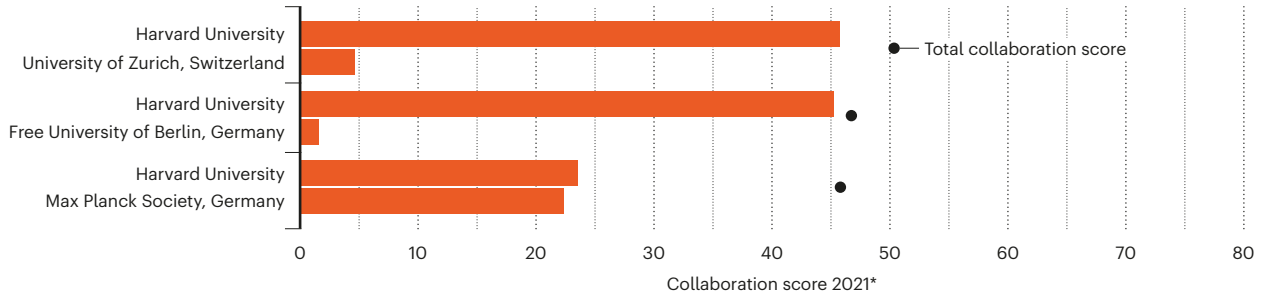


\*Data for 2021 represent the period October 2020–September 2021.

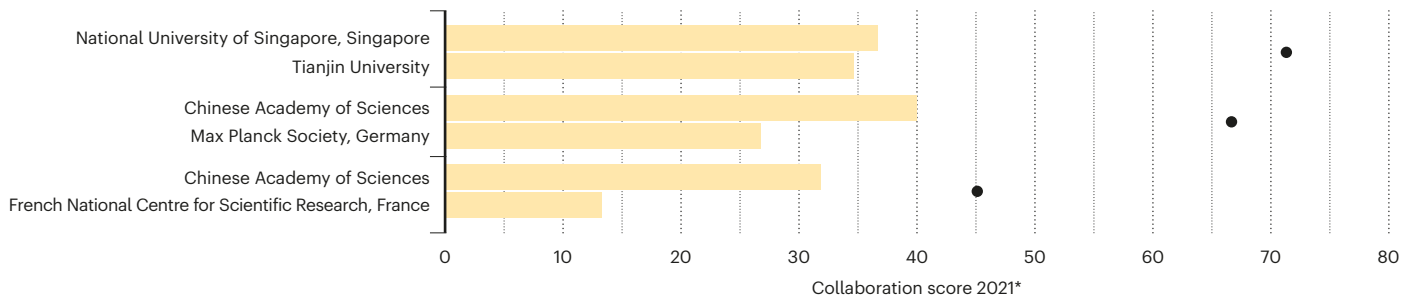
## PRIME PARTNERSHIPS

The three strongest pairings of international institutions are shown for the leading five countries in the Nature Index. Collaboration Score (CS) is calculated by adding each institutional partner's Share in their joint articles in 2021\*. The Max Planck Society in Germany, which is ranked third among the leading institutions from the Big 5 countries overall, and the French National Centre for Scientific Research are prolific collaborators, forming more leading pairs than any other institutions, in this set. Harvard University stands out for contributing the lion's share of the total CS of the United States' leading cross-border collaborations.

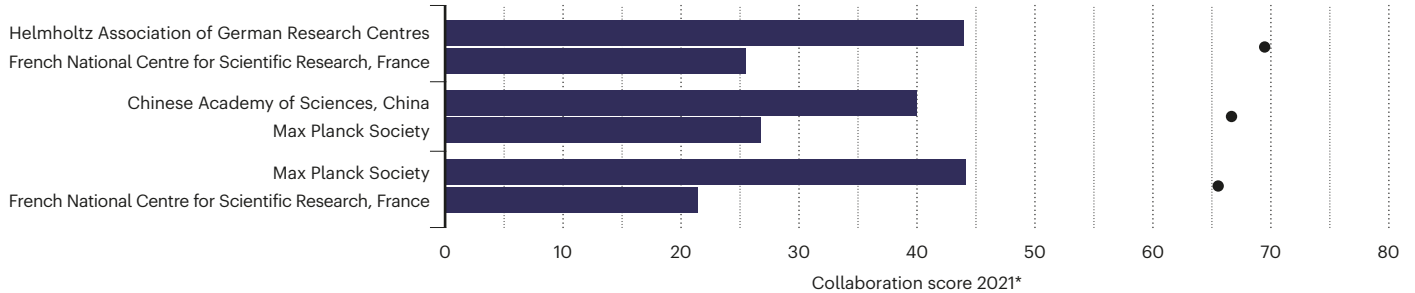
### United States



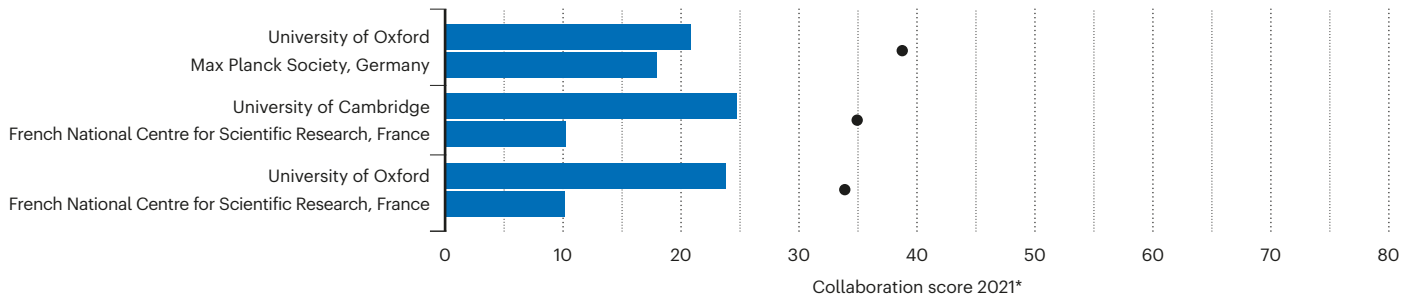
### China



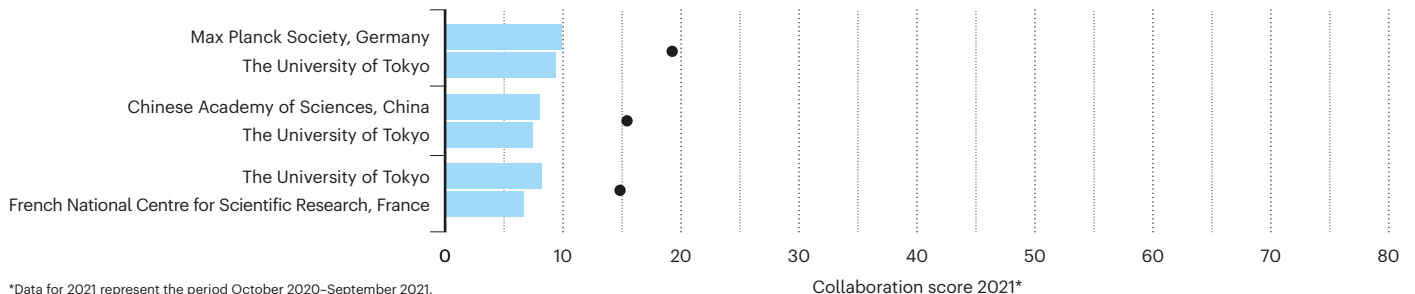
### Germany



### United Kingdom



### Japan



\*Data for 2021 represent the period October 2020–September 2021.