

The Transition to Open Science

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The Scientific Field: How Scientists Get Credit

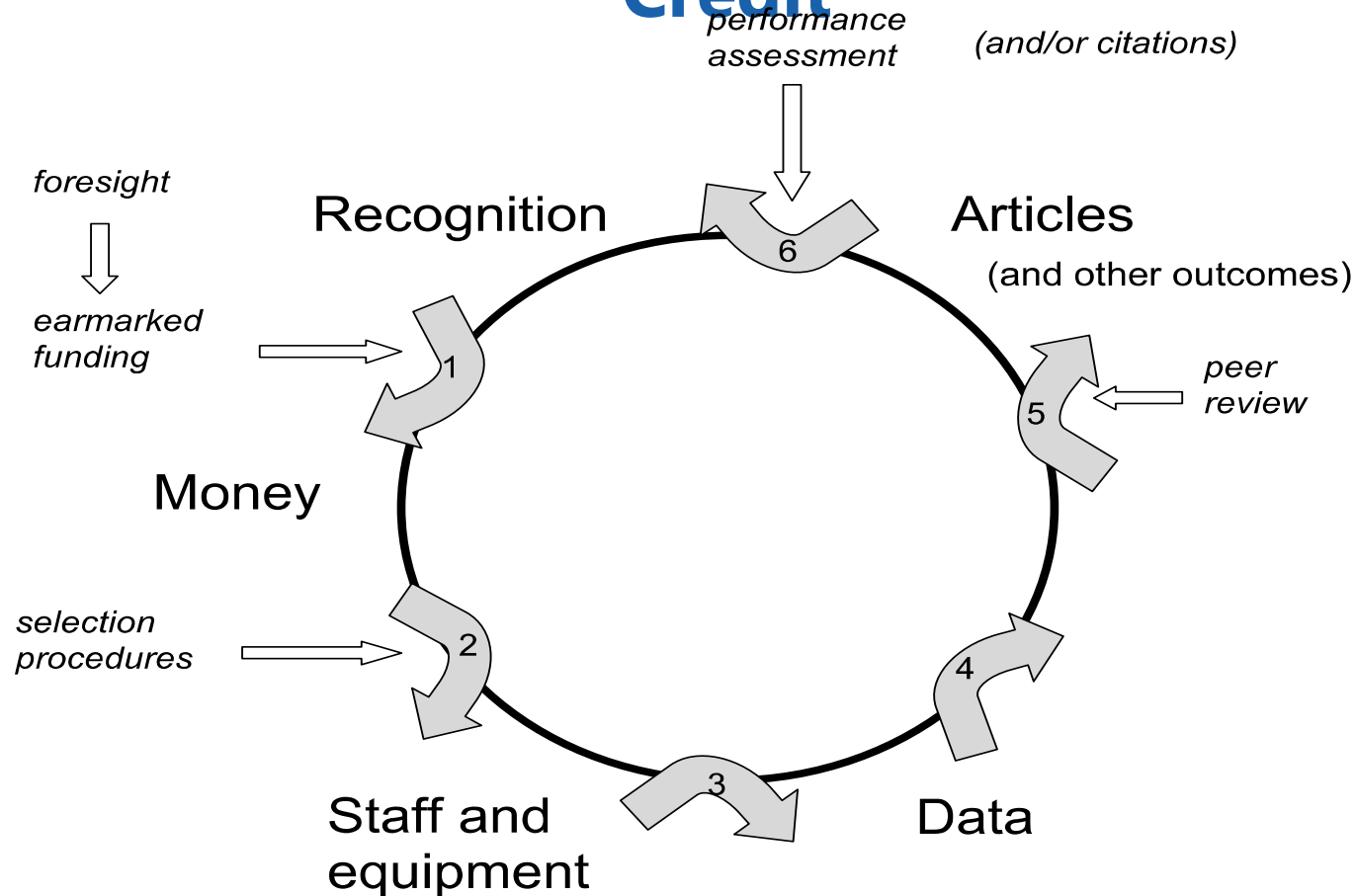


Figure 3. The credibility cycle, adapted from Latour and Woolgar (1986). Points at which organizational devices connect to the cycle are shown

Pierre Bourdieu, *Science of Science*, 2004

Hessels et al, *Science and public policy*, 2009

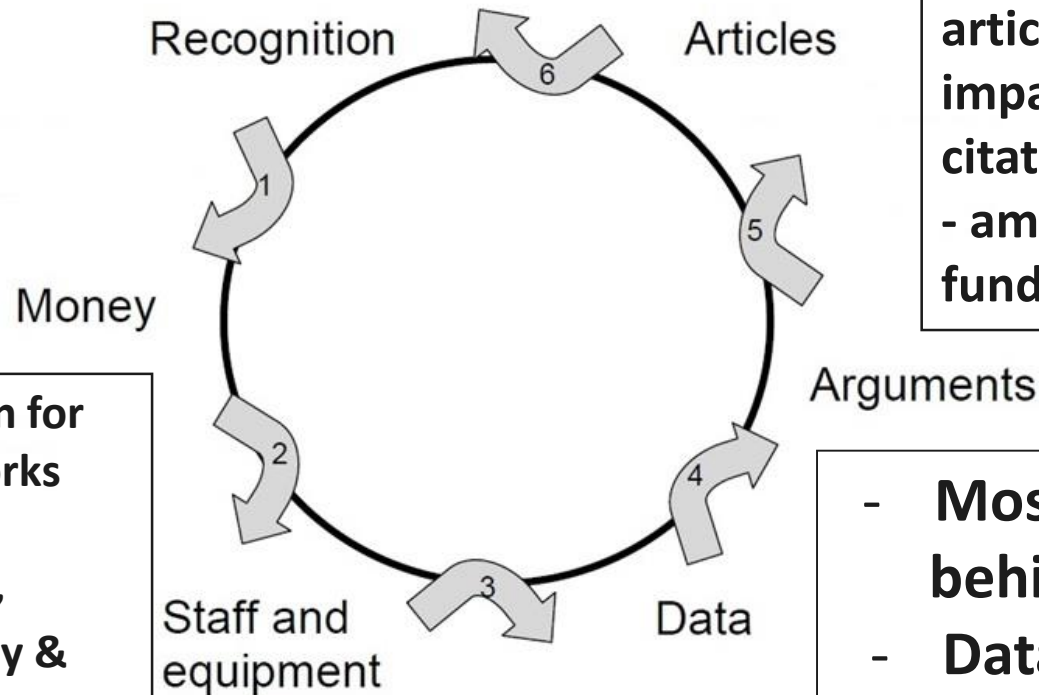


Problems of the Current Reward System in Science

Society is largely absent from the *credibility cycle*

Quality in Quantitative terms:

- number of articles, journal impact factor, citations, H-index
- amount of funding obtained



Hypercompetition for limited funds works against Team-Science, Multidisciplinarity & Diversity

- Most papers still behind a paywall
- Data not shared



Metrics Shapes Science 1

The Science System

- Quality, relevance and impact are subordinate to *novelty and quantity*
- Problem choice suffers from short-termism and risk aversion
- Universities outsource talent management to funders based on flawed metrics



Metrics Shapes Science 2

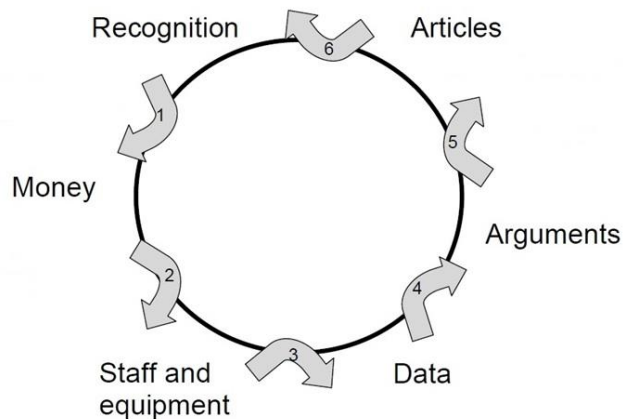
The Contract with Society

- The (inter)national and institutional **research agenda's do not properly reflect societal needs** (disease burden) (WHO SDG or Societal Grand Challenges)
- Open Science Practices, FAIR DATASHARING and Open Access are just 'nice to have'



UMC Utrecht (2015): Inclusive set of generic indicators for research quality and impact

Engagement of societal stakeholders in problem choice and research design



FAIR data sharing

Indicators:

Teamwork/ academic culture

OS practices

Relevance of Question Quality

Societal Impact

Use in & Outside Academia

<https://www.umcutrecht.nl/getattachment/Research/Science-in-Transition/Format-Impact-indicator-evaluation-pilot-incl-introduction.pdf.aspx?lang=en-US>

<https://sfdora.org> The San Francisco Declaration on Research Assessment

