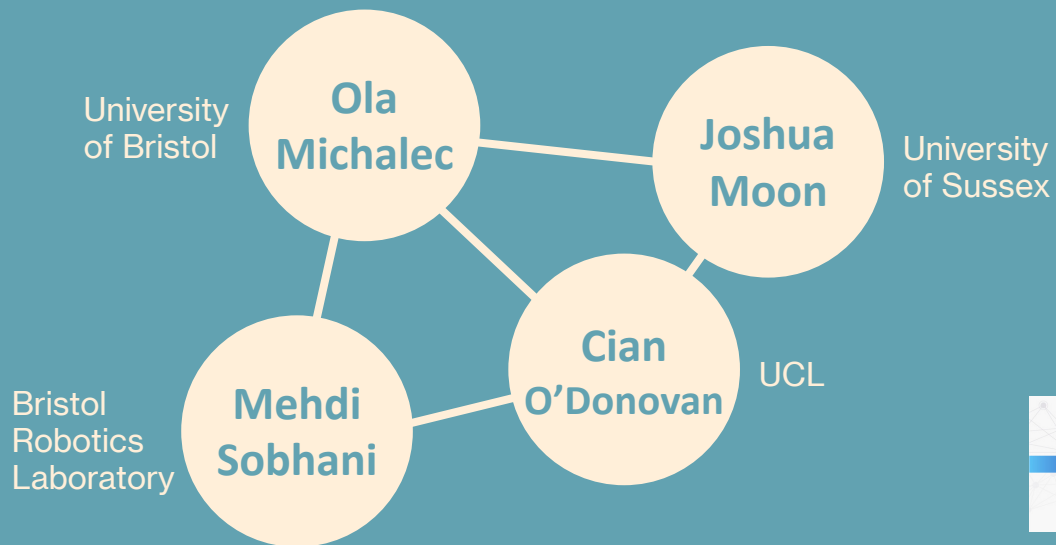# Human capabilities for interdisciplinary research 🤠🦄

A workshop for the ESRC NCRM 2021 Research Methods Festival – October 28th
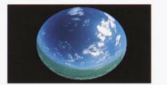
University of Bristol

Ola Michalec

Joshua Moon

University of Sussex

Cian O'Donovan

UCL

Bristol Robotics Laboratory

Mehdi Sobhani

2021 Research Methods
e Festival
Hosted by NCRM and
methods@manchester

University of BRISTOL

UCL

brl Bristol Robotics Laboratory

US UNIVERSITY OF SUSSEX

Human
capabilities

Human capabilities: real freedoms **(agency and empowerment)** to be and to do things that make up a flourishing life

Ana
Benny
Ciara

Internal endowments + external conditions → capability

Human capabilities

- Internal endowments
- External conditions and resources

- Capability approach takes into consideration the inter-connections between the internal and the external structural realities of our lives and then helps us assess and address both

skills

environment

knowledge

identity

experience

money

job   policies

inequalities

political landscape

markets
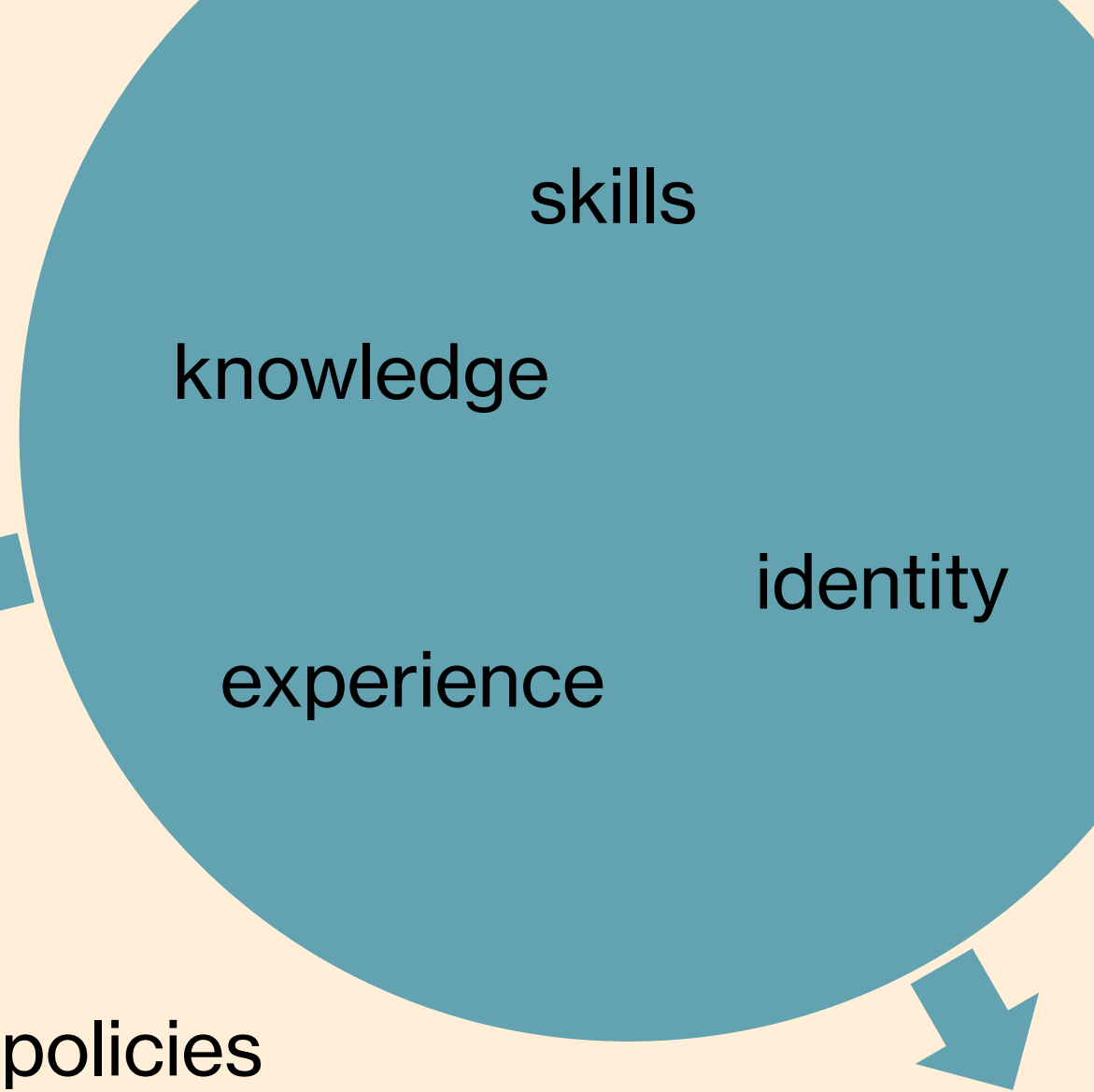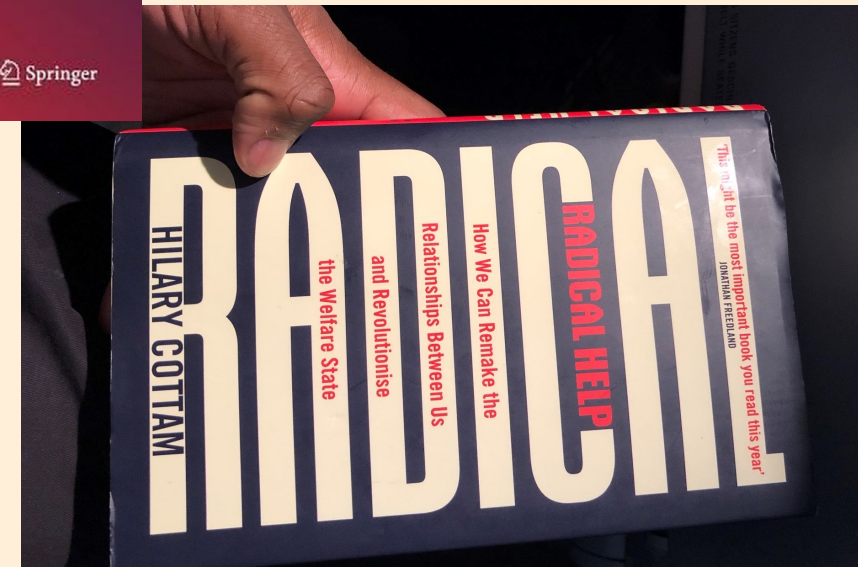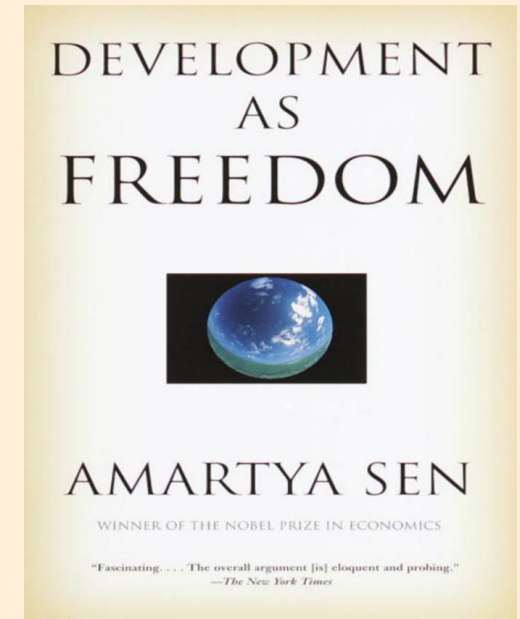
Capabilities as a [space to evaluate]…

- Sen
  - evaluating development as freedom
  - vs. evaluating development as people's preferences or economic utility

- Others –
  - Social welfare
  - Education
  - The impact of technology on well-being

Capabilities as a space to evaluate researchers

Capabilities as a [space to evaluate] interdisciplinary research*ers*

Capabilities as a [space to evaluate] interdisciplinary research!

Disciplines discipline!

- Capabilities to transgress disciplinary boundaries

- **Relational capabilities**

- Aggregate capabilities

- Collective capabilities

- For funders and society: capabilities as capacity
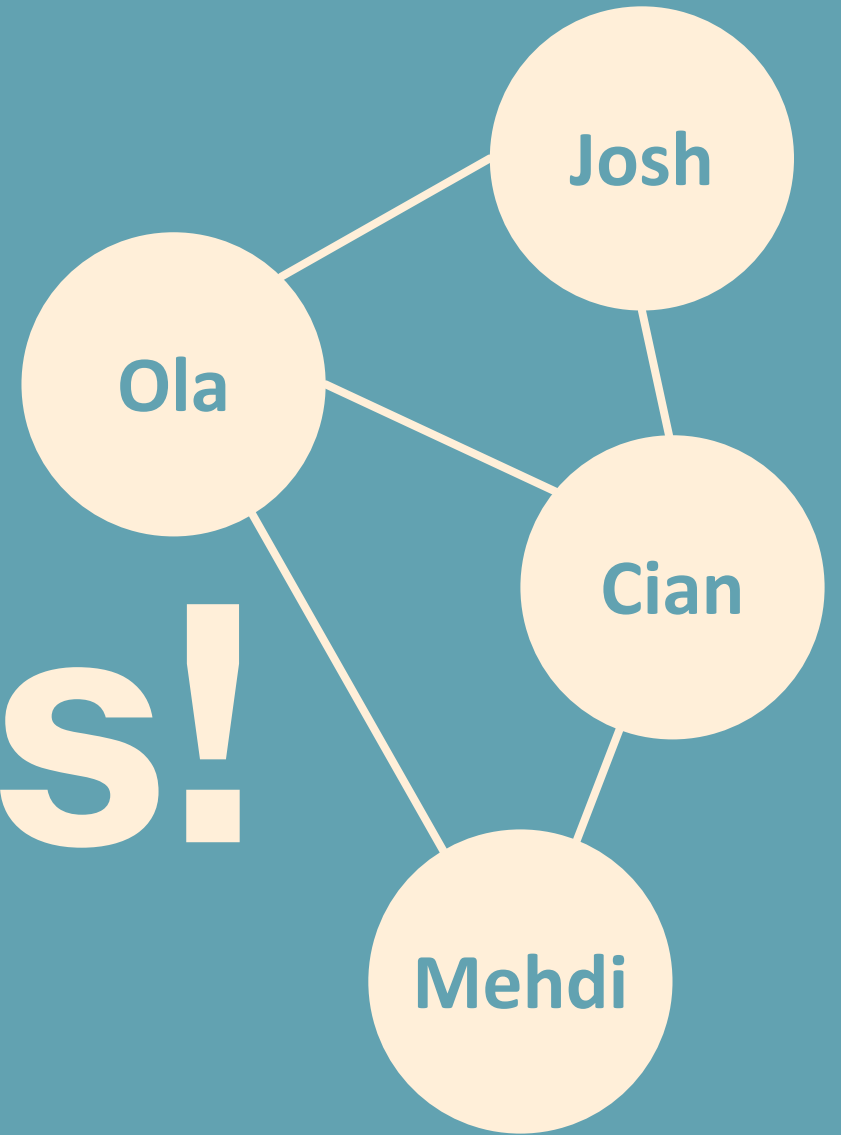
policies

funding

inequalities

environment

Map Yourselves!

Measuring Capabilities

- Relationships are everywhere and take many forms
  - Financial
  - Romantic
  - Friendship
  - Social
  - Professional
  - Pastoral
  - Twitter

Photo by Melissa Askew on Unsplash

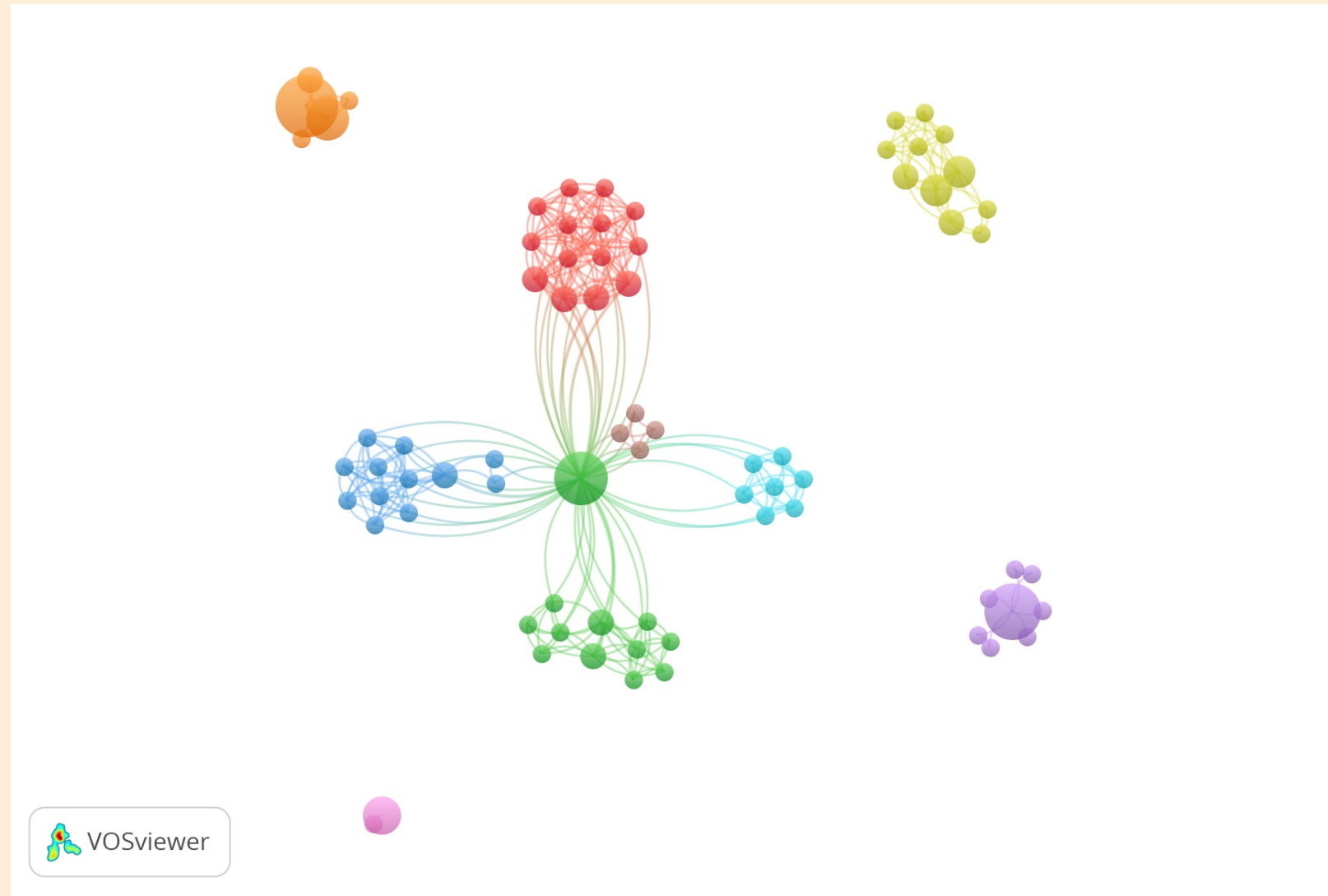Photo by Alex Lujan on Unsplash

Photo by Kiki Falconer on Unsplash

Photo by Nathan Dumlao on Unsplash

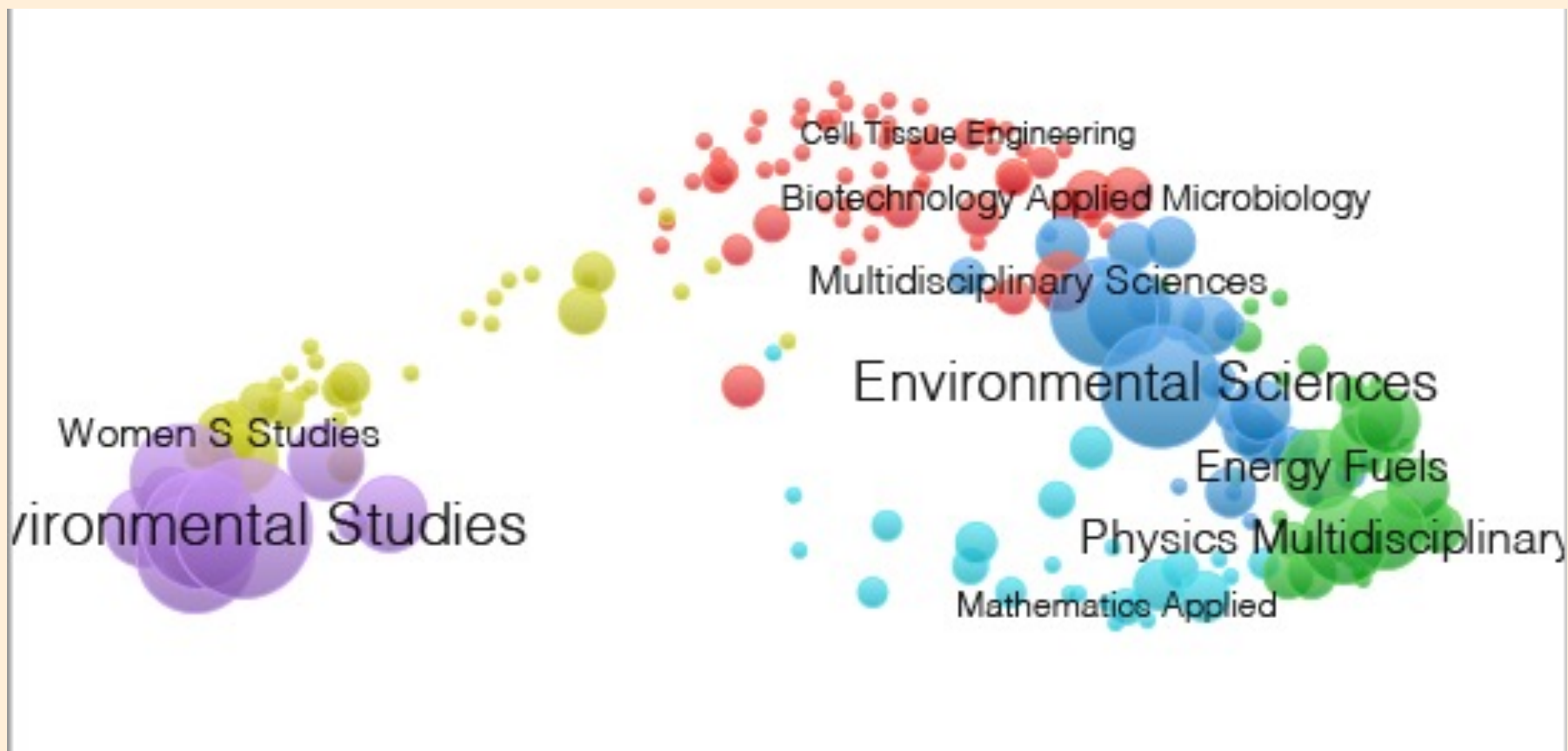# Measuring Capabilities

- Relationships can be measured in many ways:
  - Direct/Participant Observation
  - Social Networks
  - Statistical Models
  - Actor Networks
  - Interviews/Surveys
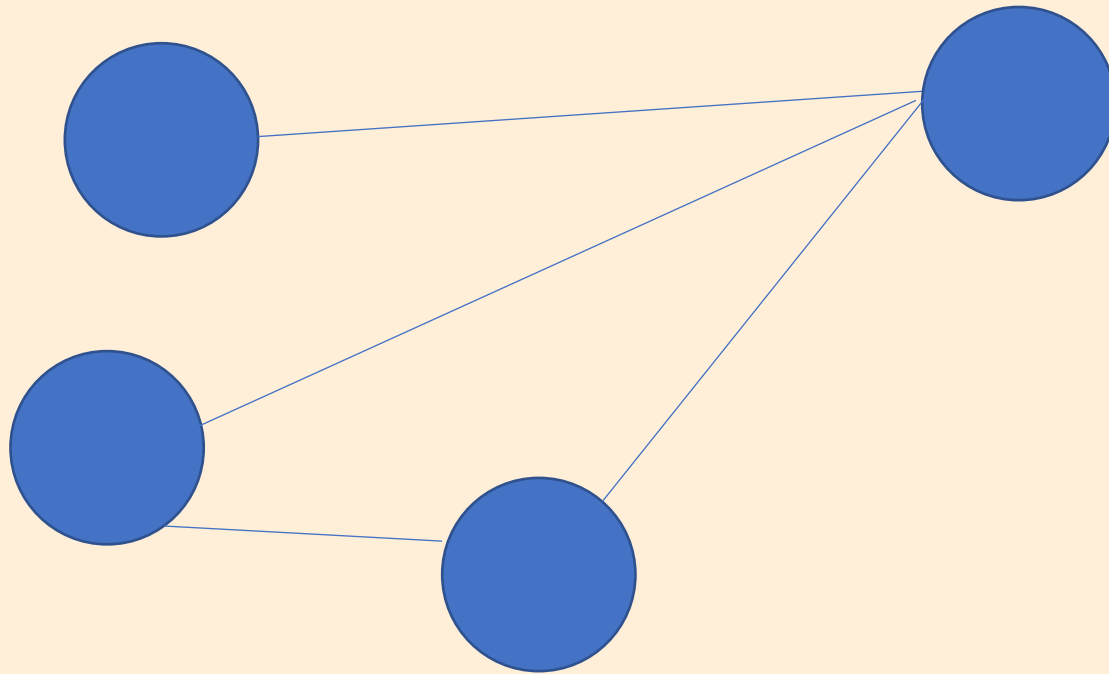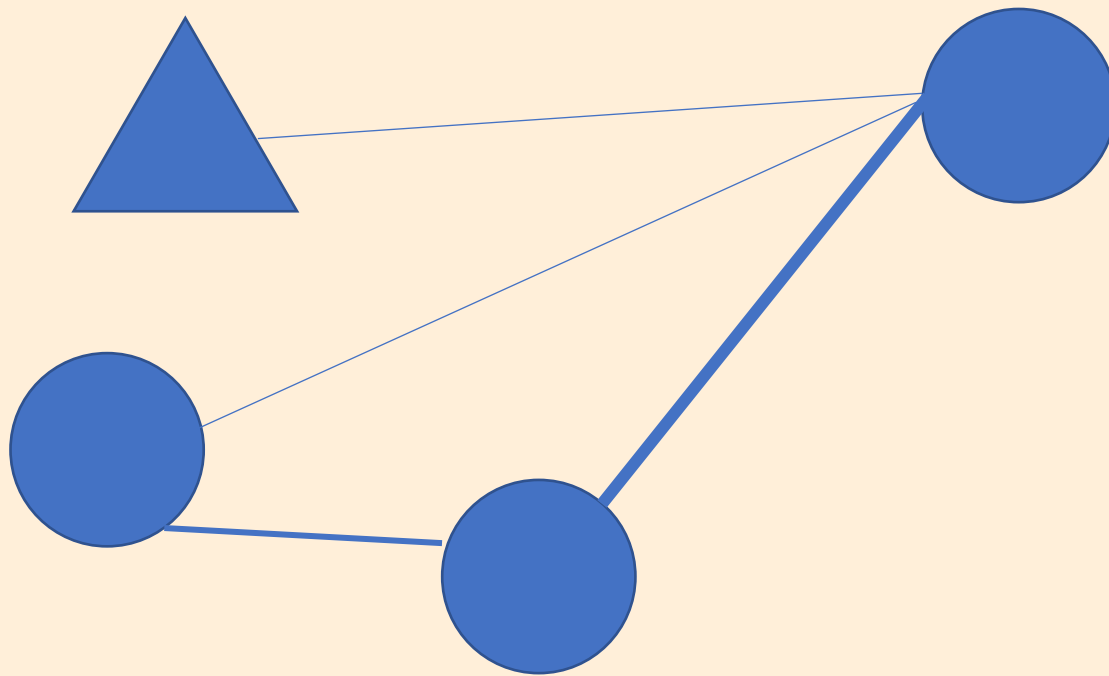 - 'Big Data'

Measuring Capabilities

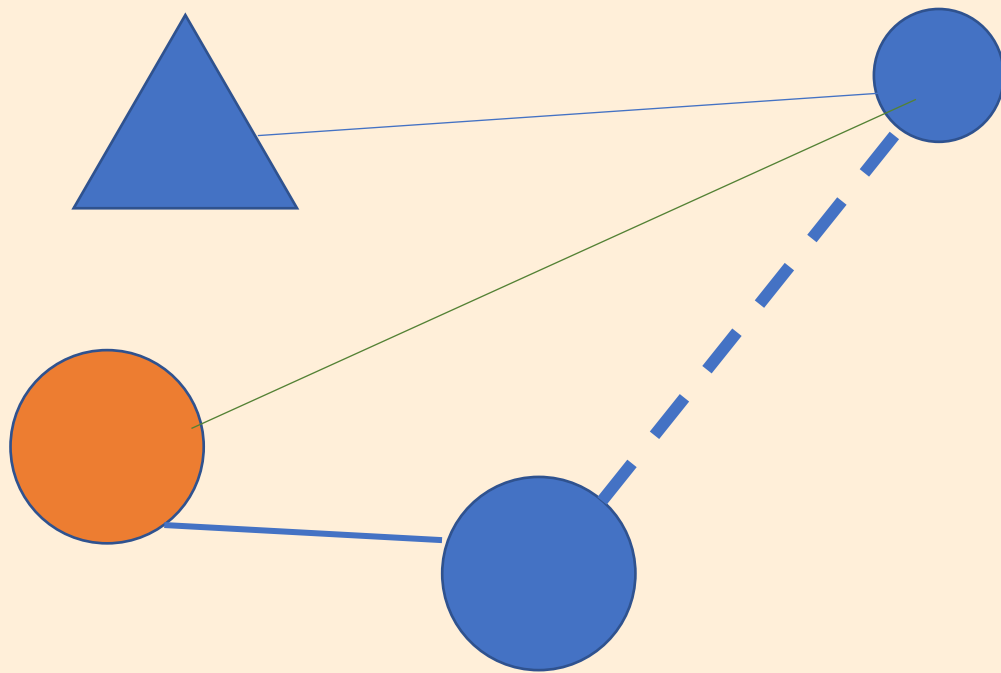# Bibliometrics 'Flattens' relationships

Network 'Layering'

Network 'Layering'

Network 'Layering'

Measuring Capabilities

- Bibliometrics works by flattening relationships in a two-dimensional plane
- Layering of different dimensions & representations can make these more and more complex
- However, representations are still limited in number (risk cognitive overload for audience)
- 'Classic' bilbiometrics foregrounds co-authorship as a relational tie but this can be misleading
- What kinds of relationships are hidden by co-authorships and how can these be re-surfaced?

Further reading

Capabilities for Transdisciplinary Research.
O'Donovan, C., Michalec, O., & Moon, J. (forthcoming).
Research Evaluation. https://keepfaking.it/articles/odonovan_et_al_2021_transdisciplinary_capabilities.pdf

What is robotics made of? The interdisciplinary politics of robotics research.
Michalec, O., O'Donovan, C., & Sobhani, M. (2021).
Humanities and Social Sciences Communications. https://doi.org/10/gh7qwm

Technology and Human Capabilities in UK Makerspaces.
O'Donovan, C., & Smith, A. (2020).
Journal of Human Development and Capabilities, https://doi.org/10/gh6s7x