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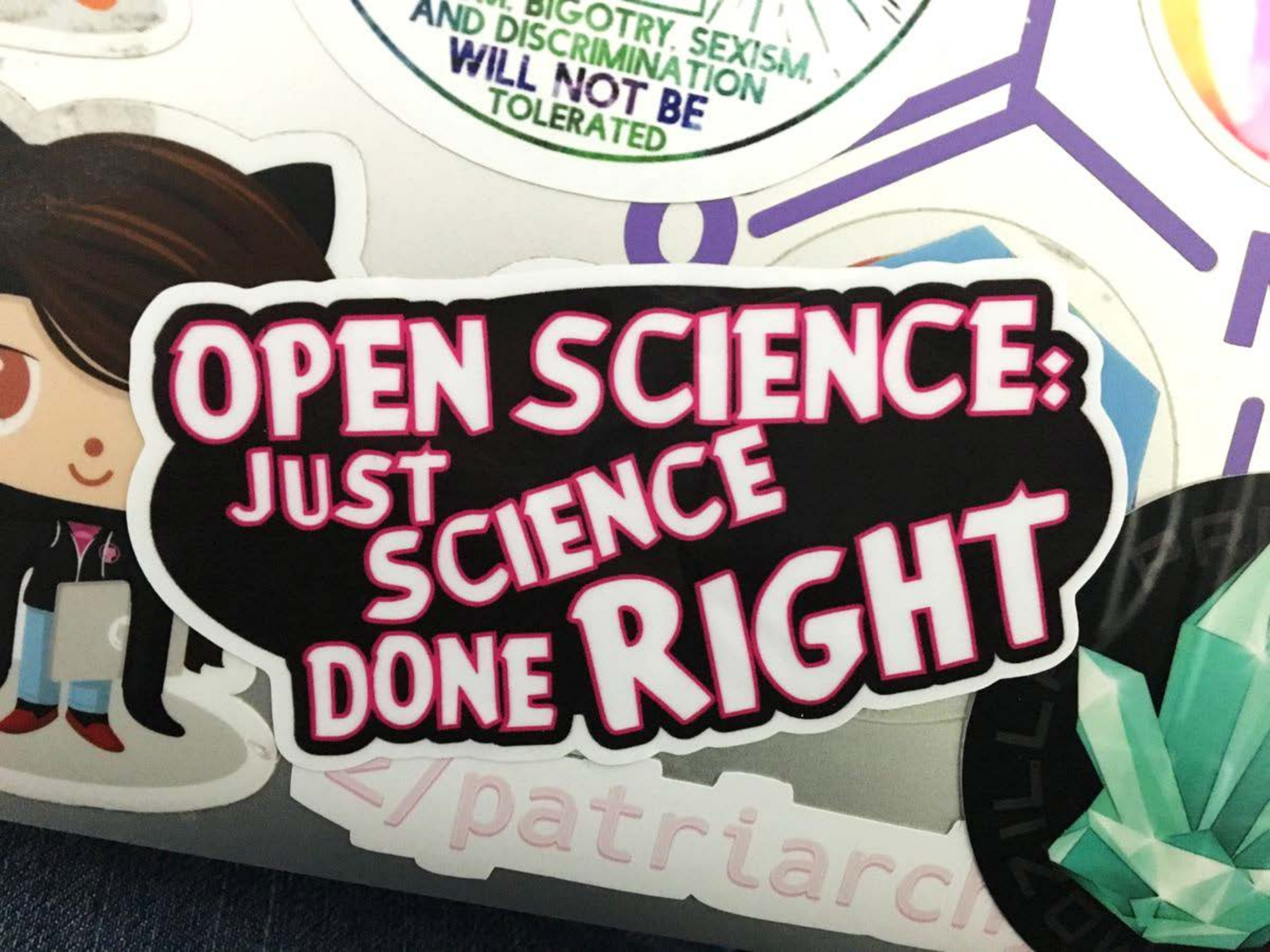
# Interdisciplinary Perspectives on Open Science and Open Scholarship

**Discussion & Networking Event**

**June 6th 2019**

**Open Science Working Group @ Freie Universität Berlin**


BIGOTRY, SEXISM,
AND DISCRIMINATION
WILL NOT BE
TOLERATED
OPEN SCIENCE:
JUST SCIENCE
DONE RIGHT
r/patriarch

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# The elements of open science

This grassroots movement has created a plethora of new concepts. Here's an overview.

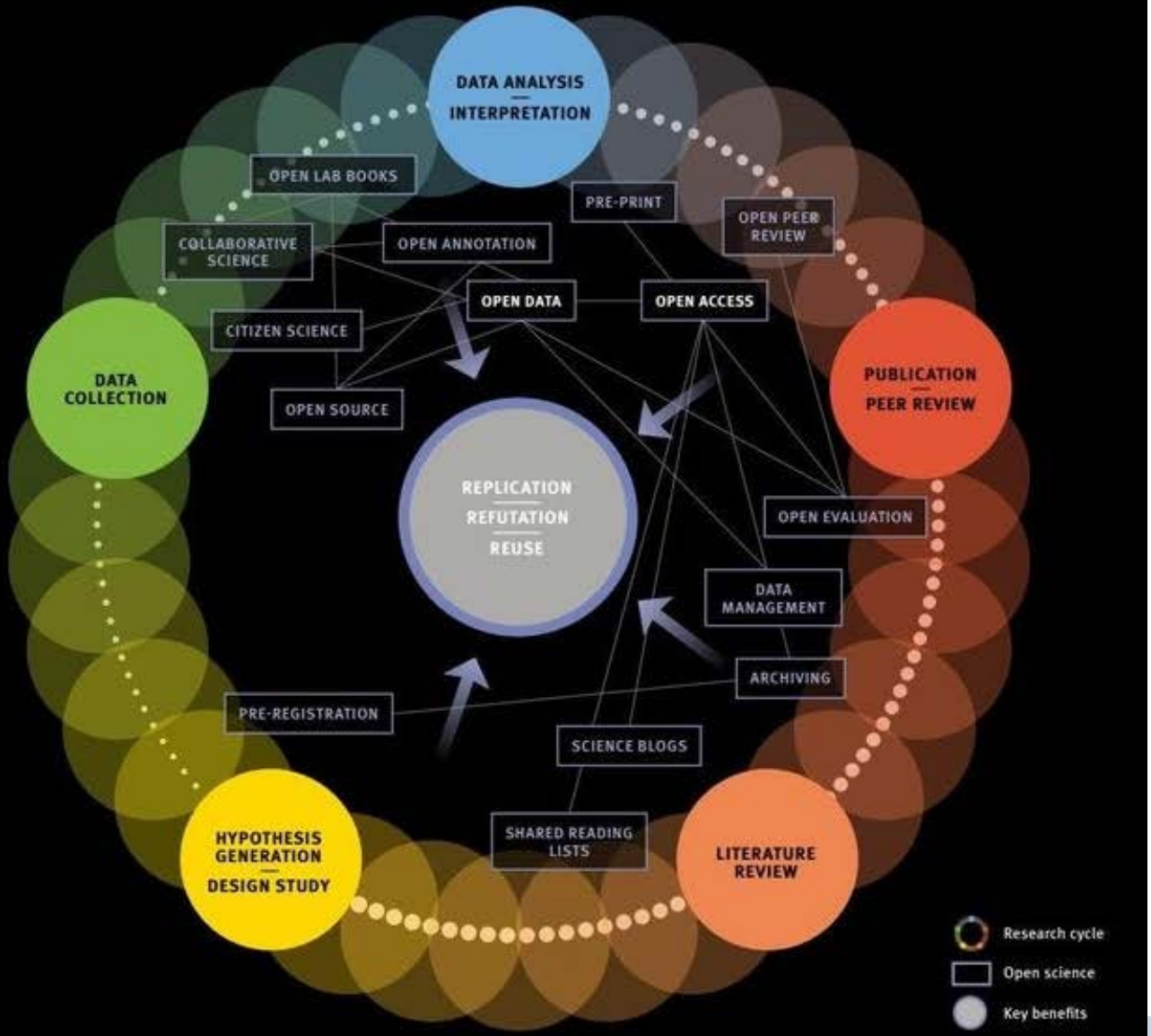


Image: Daniel Saraga, www.horizons-mag.ch/2016/08/31/the-elements-of-open-science/ Lizenz: CC-BY-NC-ND

# Open Science Definitions

- Open Science is the practice of science in such a way that others can collaborate and contribute, where research data, lab notes and other research processes are freely available, under terms that enable **reuse, redistribution and reproduction** of the research and its underlying data and methods. (FOSTER Open Science Definition)
- Open Science is transparent and accessible knowledge that is shared and developed through **collaborative networks**. (Vicente-Sáez & Martínez-Fuentes)
- Open Science is based on the **principles of inclusion**, fairness, equity, and sharing, and ultimately seeks to change the way research is done, who is involved and how it is valued. (Open Science Training Handbook)

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Ankur Midha (Institute of Immunology)

Claudia Müller-Birn (Institute of Computer Science)

Dirk Ostwald (Department of Education and Psychology)

Cornelia Reiher (Department of History and Cultural Studies)

Agnieszka Wenninger (Center for Digital Systems)

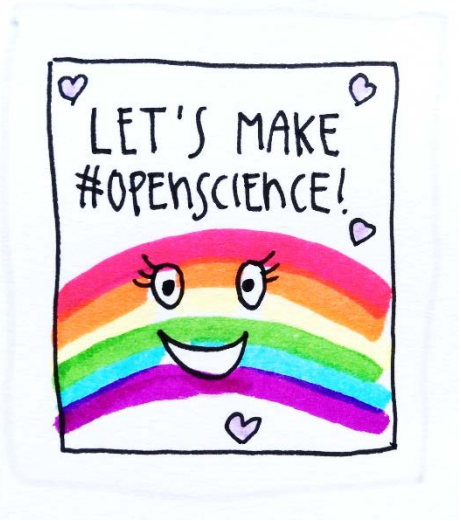
Christina Riesenweber (University Library)

# Open Science Working Group at Freie Universität Berlin

- https://wikis.fu-berlin.de/display/oswg

- If you want to be in the loop, sign up for our mailing list: https://lists.fu-berlin.de/listinfo/Open-Science-Working-Group-FU

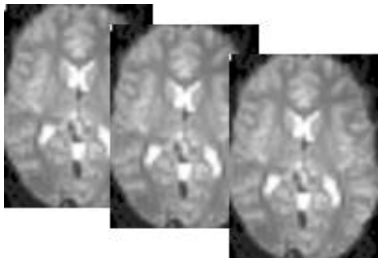
- Coming soon: www.fu-berlin.de/open-science



# Open Science in Cognitive Neuroscience

Cognitive Neuroscience : Understanding the biology of the mind

- Human experiments using (simple) computer games
- Acquisition of behavioural and non-invasive neuroimaging data (M/EEG, fMRI)
- Development of custom software for data analysis and AI behavioral models



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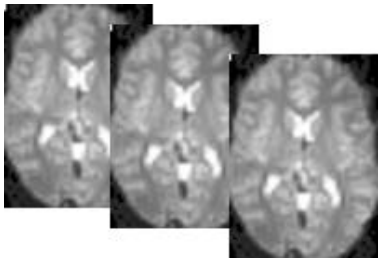

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Open Science : Transparent and reproducible research reports

- Availability of study behavioral and neuroimaging data for published research papers
- Availability of custom data analysis software for published research papers
- Publication of  properly conducted and documented null result studies

OpenNEURO
A free and open platform for sharing MRI, MEG, EEG, iEEG, and ECoG data

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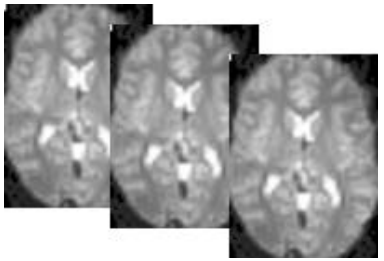

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Current state

- 3/10 research reports share their custom data analysis code proactively
- 1/10 research reports share of behavioural and neuroimaging data (data privacy)
- Recruitment and funding remain based on classical metrics (high impact journal papers)
- High impact journal papers remain based on sexy results and personal research networks

# Open Science in Cognitive Neuroscience

Let's change
what we value
in research.

# Open Science in Cognitive Neuroscience

Let's change what we value in research.

Sign DORA

BULLIED INTO BAD SCIENCE

Leading individuals and institutions in adopting open practices to improve research rigour

# The Free Research Work Group

- We align with the values of Open Science
- We believe Open Science should come from active researchers and that this encompasses something beyond Open Access
- We aim to help researchers build tools to improve their own practice of research, foster collaboration and open communication within research communities, and to help bring research to the public
- The Free Research Work Group aims to apply entrepreneurial thinking and tools to help researchers give shape to their vision and ideas

# What Japanese Studies are

- multidisciplinary and diverse Area Studies (ranging from literature studies to political science)
- very transnational (co-operation with colleagues from Japan and other countries)
- research is based on Japanese language sources
- researchers hardly work in teams
- few available jobs, university institutes (14) and chairs
- Japanese Studies journals don‘t have  a high impact factor
- Japanese Studies scholars often publish books
- Japanese studies scholars often feel inferior to „the disciplines“

# Current state of discussion on open scholarship in Japanese Studies (and East Asian Studies)

**There is no discussion on open scholarship in Germany yet.**

**What is discussed?**

- open access (lack of resources)
- sustainable management and re-use of research data (because the German Research Foundation asks about these things)
- Digital humanities (because there is funding)
- Research methods (because it is often intransparent; criticism from „the disciplines“)
- Research ethics (because people plagiarize; because it is important when applying for funding outside of Germany)

# Obstacles to open scholarship in Japanese Studies

- Structural problems: high competitiveness (job selection is based on single-authored journal papers or monographs and third-party research funding) discourages researchers from collaborating and sharing data
- Characteristics of Japanese Studies: in qualitative research, data collected through long-term fieldwork by individual researchers enabled through long-term trust-relations with informants and embedded in particular contexts cannot be „re-used“ and „re-produced“
- Transnational cooperation across disciplines: different disciplines, funding bodies and academic communities in different countries have specific requirements of how to collect, store and use research data (i.e. ethical requirements)

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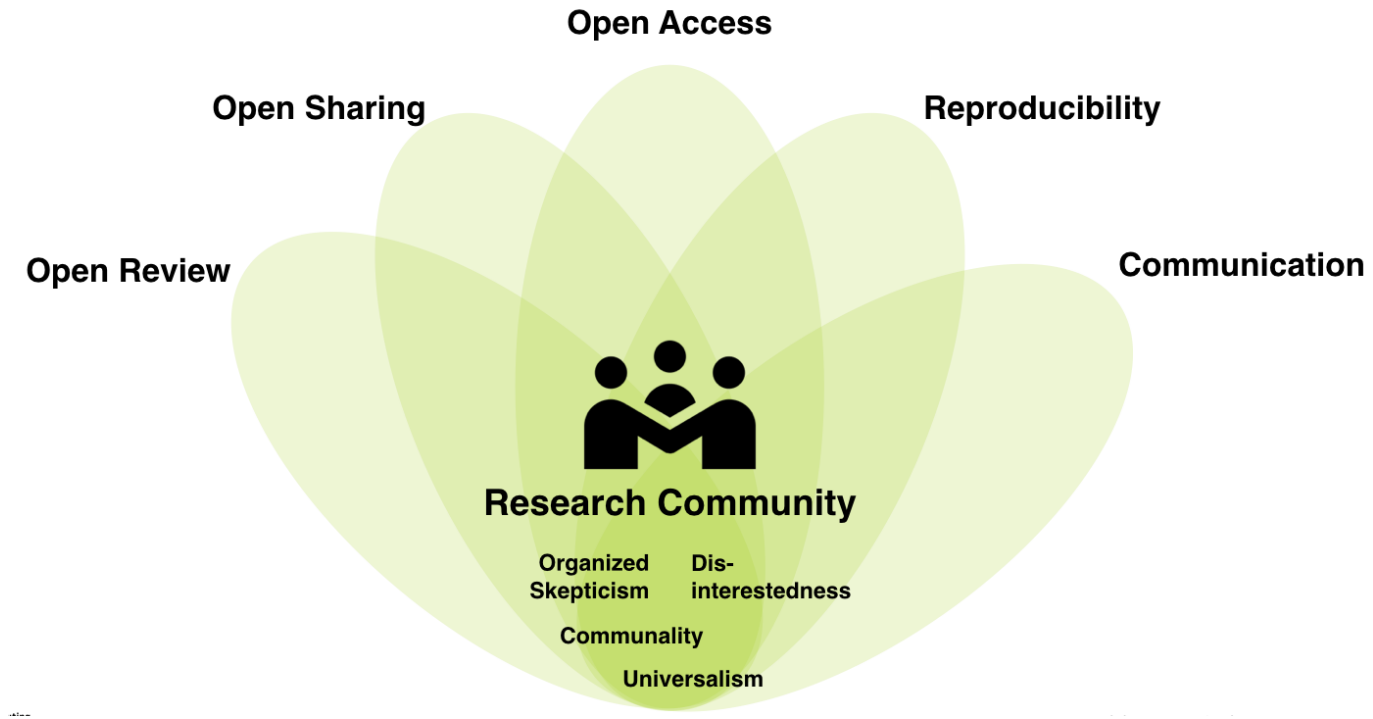
# Open Science @ Computer Science (Human-Centered Computing)

# Our Values in Our Research Practice

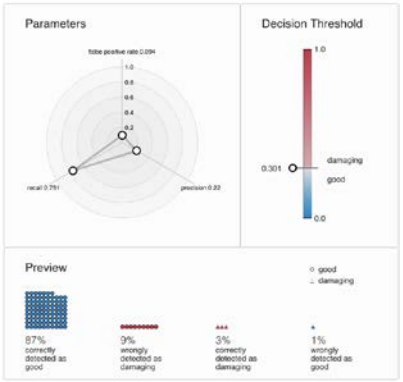
Excerpt from our group presentation:

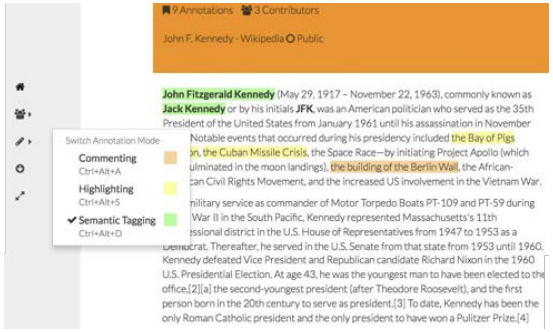
*“ [...] we advocate the use and development of open source software, the principles of open science in her research work, and the open access to scholarly knowledge.”*



# What is our Research about?

In our research, we focus on human-machine collaboration, thus, we design interactive intelligent systems. These systems range of the areas of collaboration ideation, interactive visualization to human-centered machine learning.




Even though, our research entails a theoretical, an empirical and an engineering dimension, it is all about software. Software is for us an epistemological artefact.

**How does fit our approach of developing software to using open source software?**

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# What are the Challenges and what would I like to achieve in this group?

Should we use GitHub or GitLab for storing our software code?

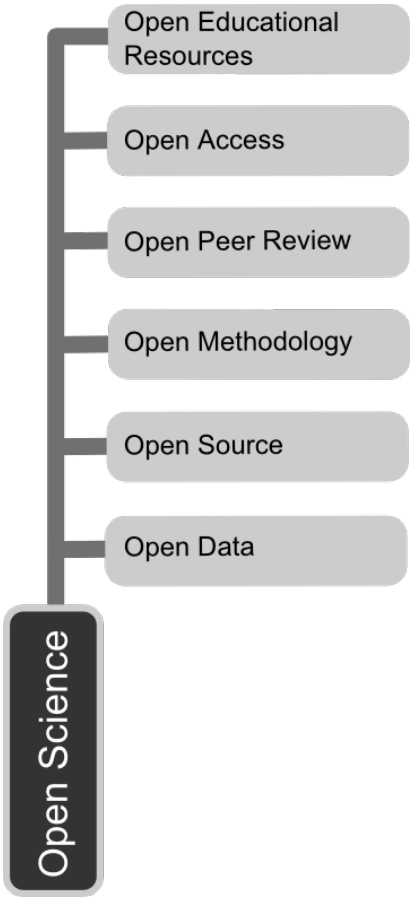
Where should we acquire a DOI for our software?

Can we use GitHub/GitLab to provide our source code, for example in BMBF funded projects? Do I have to ask before and if so who?

Are there any privacy issues (GDPB) if I ask my team members to use git + GitHub/GitLab? The activity can then be viewed publicly.

Which software licenses make sense in the scientific field and when?

# Looking through the infrastructure perspective




## So far a strong focus on open access

- Funding, repository, advocacy & training, publishing services (OJS, OMP, OES), etc.

## Currently establishing the (Open) Research Data Services

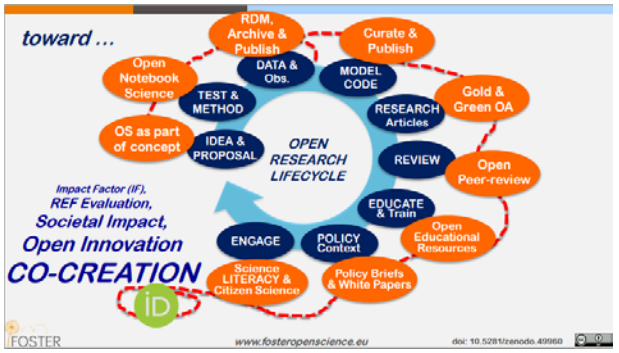
Aktionstag Forschungsdaten on October 30, 2019

## Occasional engagement in other areas

Open Hardware Workshop on October 23, 2019

Register now at: www.fu-berlin.de/en/open_access/weiteres/Veranstaltungen/oa-week-2019_open_hardware_workshop

# Challenges




- Advance “openness” as a key field of action for the library and its engagement with open science
- Shape the transformation from subscription to open access
- Provide services along the research life cycle & cooperate closely with researchers (equal footing)
- Further develop repository and information infrastructures
- Engage in open science training provision, especially for junior researchers
  - together with other stakeholders within the university (e.g. faculties, DRS; contribute to courses in the field of research integrity, etc.)
- Facilitate collaboration
  - provide „labs/spaces“, e.g. to learn open science methods, technology know-how …