

Yufering Open Science (OSc) Ambassadors

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<https://zenodo.org/records/12701662>

Why open science?

- ▶ fundamental to the nature of science
- ▶ society needs full access to science for decision-making

OSc ambassadors: What (minimum)?

- ▶ identify active open science researchers
- ▶ increase our social capital
 - *“effective functioning of social groups through interpersonal relationships, a shared sense of identity, a shared understanding, shared norms, shared values, trust, cooperation, and reciprocity”*
 - Pietilä+2023 D5.2 10131115, §2.2 recognise and reward researchers’ OSc
 - verifiability, e.g. [OpenScienceTeamUMKCosmo](#) YAML format
 - Full Open Science (FOS; Yufering WP5, Task 5.3) ≠ FOSS
- ▶ create horizontal network of YUFE open science researchers
- ▶ YUFE@Zenodo
- ▶ YERUN interview, 13 Oct 2024

Who?

- ▶ UCY: Marina Šantić d:Q57555992; Ivana Kunda ORCID:0000-0001-9636-9117; Saša Zelenika d:Q91282650; Marina Ivašić-Kos d:Q90393298; Vedran Miletić d:Q59698289
 - ▶ UEF: Tomi Rosti(?) d:Q126597654
 - ▶ UESSEX: Osama Mahmoud d:Q87907061; Abhimanyu Gupta d:Q102413877
 - ▶ UM: Cyrus Mody(?) d:Q62178355
 - ▶ UMK: Boud Roukema d:Q123176767; Krystian Erwiński ORCID:0000-0001-6899-1785
- d: = Wikidata

(known as of 13 June 2024)

How OSc – participatory decision-making + FOSS?

Participate in Yufering institutional decision-making for OSc?

- ▶ help in the transition to open decision-making in YUFE universities – Decidim

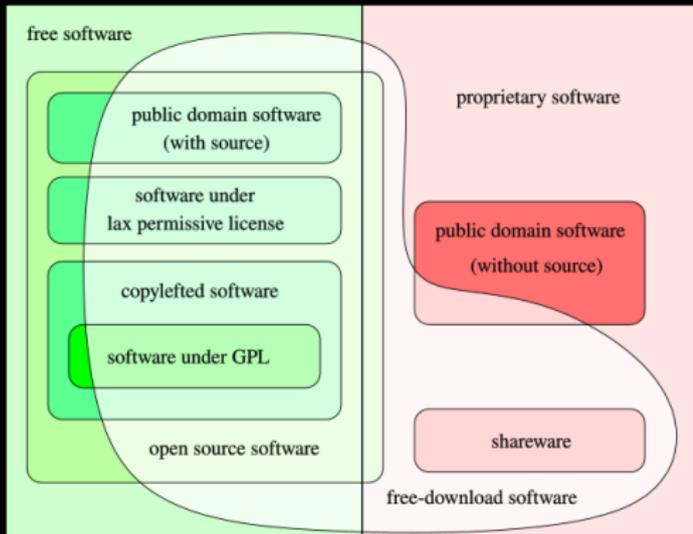
- ▶ – help in the shift from **authoritarian** software/organisations (GAFAM: Google/Apple/Facebook/Amazon/Microsoft, **Zoom**) to **Free and open-source software** (FOSS) ecosystem
 - FOSS: *obligatory* @public sector @Switzerland since 2024-01-01
 - FOSS: *planned* for **Open Research Europe** (§2.4.5) (ORE) (2024-07)

Why does OSc need FOSS?

- ▶ Four software freedoms - freedom to:

0: use	1: modify
2: redistribute	3: redistribute modified version

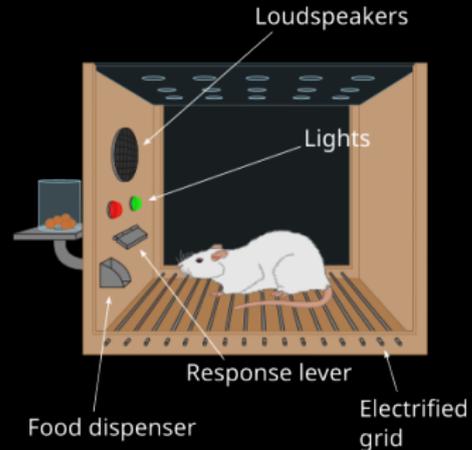
- ▶ all four make sense for open science



How OSc – researchers as objects or subjects?

“human resources” ⇒ objects, not subjects

- ▶ be perceived as pawns for substance-free sound-bites/jargon
- ▶ operant conditioning is for *objects*, not subjects



How – researchers as objects or subjects?

Risks of non-participatory, non-transparent decision-making in Yufering OSc:

- ▶ provide raw resources – PD or CC-BY data – for authoritarian organisations to use with closed decision-making – **furthering the concentration of power** and increasing the Gini index
- ▶ pay the cognitive secrecy tax – “[in]efficient internal communications”, “system-wide cognitive decline” (Assange conjecture 2006)

How – researchers as subjects?

Real-world hybrid (online+offline) participatory decision-making communities:

▶ GNU Project



▶ LINUX: <https://kernel.org>



▶ Debian: <https://debian.org>



▶ Wikipedia: <https://wikipedia.org>



▶ Metadecidim: <https://meta.decidim.org>

- Open University of Catalonia
- University of Bordeaux
- University of Caen Normandy



▶ Codeberg: <https://codeberg.org> (tiny scale)



- hosts  **git** repositories

Open science in astronomy

▶ research paper OA:

- almost all cosmology since the late '90s: **green open access**
- big majority of general astronomy: green OA

▶ FOSS:

- some major cosmology codes are FOSS (e.g. **RAMSES**)
- some cosmo codes: publicly available but **non-free (proprietary)**
- some cosmo codes are non-public
- wide ignorance of software ecosystem incompatibility of non-free codes

▶ online open data since the 1990s – more or less FAIR:

- most major telescope datasets: OA after an initial proprietary period (e.g. 1 yr, 5 yrs)
- **Strasbourg astronomical Data Center (CDS)**
- **NASA/IPAC Extragalactic Database**

▶ research paper reproducibility (same data, same method):

- mostly **irreproducible** – non-author expert $t \sim$ months
- **MANEAGE** – long-term, archivable reproducibility – **started by astronomers**

What is challenging for OSc?

- ▶ full research reproducibility is a **lot** of work; devs needed
- ▶ vested interests (publishers, corporations, governments) opposed to open science/open decision-making
- ▶ misleading tactics by corporations: Embrace, extend, and extinguish – **authoritarian** behaviour track record of MS
- ▶ fads/FOMO, school-level **miseducation** about software (exceptions: Kerala, Andalusia, Finland (5%, 2010))
 - “click and believe” – students trained as obedient slaves to software rather than use + modify + share software for understanding the world

Science/open science on the Fediverse

- ▶ <https://scholar.social>
- ▶ <https://hcommons.social> (human sciences)
- ▶ <https://glamr.us> (librarians, archivists)
- ▶ <https://lemmy.world/c/science>
- ▶ <https://lemmy.ml/c/science>
- ▶ <https://sciencemastodon.com>
- ▶ <https://mstdn.science>
- ▶ <https://fediscience.org>
- ▶ <https://astrodon.social> (astro)
- ▶ <https://mathstodon.xyz> (maths)
- ▶ <https://social.umk.pl> (not yet!)

Conclusion: what concrete steps?

- ▶ horizontal networking – *open science needs open decision-making*
 - we need a **wiki** or other non-GAFAM coordination forum – which institution will host this?
 - long-term proposal: **Decidim** – for participatory decision-making (in depth)
 - ▶ more conversational (social network) style discussion:
 - persuade each of our 10 institutions to host **Fediverse** instances (e.g. **KBIN**, **LEMMY**, **MASTODON**, **MISSKEY**, **PEERTUBE**, **PIXELFED**) – with individual moderation policies and registration limited to students/faculty of the institution
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codeberg.org/boud/open_science_meta
- FOSS OS – Debian live CD (for this presentation):
<https://debian.org/CD/live>