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Conference Abstract

FAIRifying the dependencies of FAIR Digital Objects within and beyond the research ecosystem

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Abstract

As the FAIR Principles about findability, accessiblity, interoperability and reusability of research (Wilkinson et al. 2016) reach further and deeper into the research ecosystem, they are increasingly reflected in research policies, research infrastructures, data management plans and other elements of the research landscape. Yet many of these elements are themselves limited in their FAIRness, which hinders the FAIRification - adaptation to the FAIR Principles - of elements that depend on them, e.g. datasets, software, reviews, replication attempts or research evaluation. This can cause friction in alignment with current practices, thereby leading to missed educational and community engagement opportunities and hampering efficient monitoring of compliance or systematic identification of potential improvements.

This poster looks at how the FAIRness of FAIR Digital Objects is affected by the FAIRness of their dependencies, focusing on two types of examples - research data policies and research ethics workflows.

In the first part, the poster explores how the role of research data-related policies and regulations would change if theiy would increasingly involve FAIR Digital Objects, e.g. if policies and their key stipulations would have persistable identifiers linked to well-defined and machine-actionable schemas. These explorations will touch upon both technical and

social aspects: what mechanisms are available and already used to increase the FAIRness of policies? Does it help or hinder if certain aspects of the transition to a FAIRer ecosystem are shared in a more or less FAIR way or with shorter or longer delays? Does having more FAIR policies themselves provide funders, institutions, publishers or other organizations with more of an edge or a handicap in terms of assisting their respective communities in the transition towards more FAIRness in their respective corner of the research ecosystem? How can the design of FAIR policy elements be tailored to optimize learning opportunities for specific stakeholder groups pertaining to specific types of collections of FAIR Digital Objects?

In the second part, the poster explores what the benefits and risks would be of making more use of FAIR Digital Objects in research ethics workflows (Hegde et al. 2022). The components considered include the circumstances suggesting or even requiring an ethical review, the types of information that need to be exchanged during the process, the types of communications set up to convey said information, the stakeholders involved in any part of the process, the ways in which metadata about the process is stored and shared, and rules that govern any of these aspects and related matters. These questions will be discussed from the perspectives of several stakeholder groups, e.g. researchers, research subjects, research administrators, reviewers (on ethics committees or during manuscript or grant proposal review), data stewards, tool developers, science journalists, ethics educators and others. Another aspect considered is the potential of a more FAIR ethics process to reduce the burden on the stakeholders involved and to make their participation more meaningful, while raising compliance with applicable regulations, increasing the speed and transparency of the process and improving documentation and standardization.

Generalizing based on these two examples, the poster concludes with a depiction of how to include dependencies of research-related FAIR Digital Objects in FAIR Digital workflows and assessments or reuses thereof.

Keywords

research workflows, research data, research data policy, research ethics, dependencies, research ecosystem, FAIRness, FAIRification

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