

# PRODUCING AND DISSEMINATING SCIENTIFIC KNOWLEDGE AT THE AGE OF OPEN SCIENCE

**Quentin Dufour**

CSI, CNRS, postdoctorate

**Didier Torny**

CSI, CNRS, senior researcher

## **Abstract:**

For many governments (Finland, France, Greece, Netherlands...), transnational and international organizations (Coalition S, European Academies, European Commission, UNESCO...), we have entered the age of open science, conceived as the only way to build sustainable and solid science. Charters, plans, principles, standards and other policies are being produced to define good practices in openness, from writing research projects to disseminating data. Every piece of knowledge is affected by this movement: methods, software and codes, data of all kinds, publications (books as well as articles) must be in line with this new scientific dissemination regime.

However, in practice, these injunctions and norms raise many questions. The aim of this panel is first to tackle the multiple implementations of Open Science within the academic world. What is openness? How academic communities concretely define it, for example is openness for code reducible to preexisting open source software? What are the new and the unchanged practices? What conflicts and controversies do openness entail, following which kind of moral economy? How is dissemination changed in this context? From preprint to open archive going through gold open access, how are publications impacted, whether in terms of writing, format, or economic model and does it go beyond the previous open access movement? From data management plans to the making of FAIR data, how is research production changed? How can closure and limits to sharing be justified and how do they materialise?

Second, beyond its implementation, openness potentially changes existing academic issues and the second aim of the panel is to highlight these transformations. How do academic institutions and researchers envision and perform dissemination to non-academic audiences in an open world, e.g. in cases of major public interest such as the COVID-19 pandemic? How are open archiving and preservation objectives designed, with what infrastructure, and how are they linked to intellectual property issues? How are the problems of misconduct, error, and fraud considered in relation to openness? How are the questions, central to STS, of material contributions and attribution processes in science, disrupted by openness, in particular around embargoes, citability and the rewarding of contributions to open science?

The panel welcomes empirical and theoretical works in STS and related social science, as soon as the focus is on open science. We expect contributions about all disciplines, countries, and types of objects, as the literature has shown the diversity of openness practices.

## **Key words:**

open science; open data; open access