FAIR Digital Objects, NFDI4DataScience and Beyond

(homage to *'Life, the Universe and Everything'*)

Adamantios Koumpis

RWTH Aachen, University of Cologne

Questions and Answers

- Do we know what a 'FAIR Digital Object' is?

- Is there a specification?

- FDOs might be, at least for the time, theoretical and we have to come up with our own working definitions and interpretations

- *This is both good and bad*

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Good and bad...

- *Good* because it allows us to experience many Eureka moments!

- *Bad* because not all falling apples spark 'sustainable', 'long-lasting', 'game-changing' innovations

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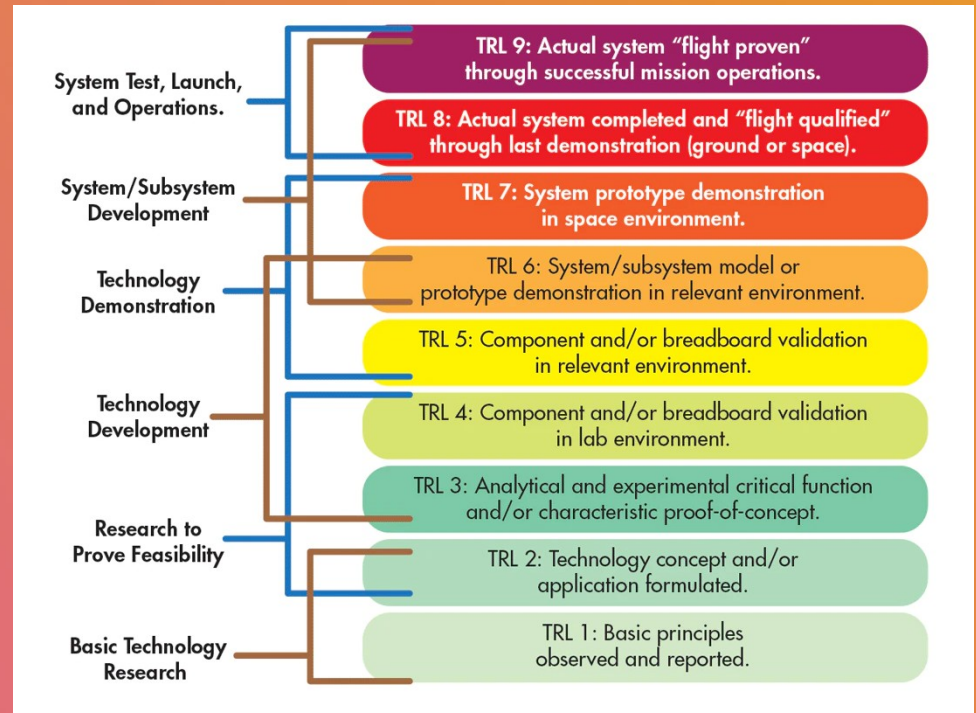# 'It takes a village' (and several years and resources…)

- Open Digital Rights Language (ODRL) was initially created in 2000

- It took about 18 years to get published as a W3C Recommendation

- This is not uncommon at all

- What may be uncommon is that other people would have given up much earlier the efforts

- *And still the outcome is not ensured*

'Do we know what an FDO is?'

- No need to make a philosophical doctrine out of it - it is *time to change course*

- Something like follow the *'I know it when I see it'* principle

- The NFDI4DS project offers an opportunity to leave theory for practice

- Building a test case for *applying a fast track approach for FDOs in the health domain*

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This means…

- *Daring for swimming upstream the TRL scale:*
- from the lower numbers (concepts, principles, characteristics)
- to higher ones that may offer better insights and enrich us with hands-on experiences

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So lets leave the area of visions for good…

"Wer Visionen hat,
soll zum Arzt gehen."

HELMUT SCHMIDT
1918 - 2015

And read the writing on the wall!

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Data Science routines

- Layers of data with …

- some data being published

- more being shared for reuse in labs and collaborations, and

- a large amount residing in transient storage
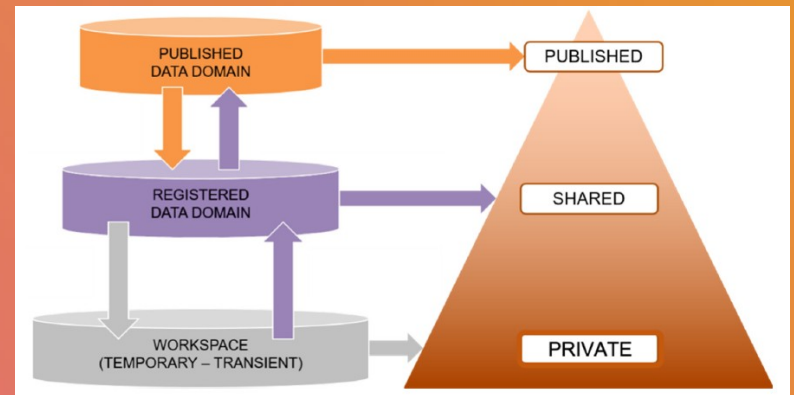
De Smedt, K.; Koureas, D.; Wittenburg, P. FAIR Digital Objects for Science: From Data Pieces to Actionable Knowledge Units. *Publications* **2020**, *8*, 21. https://doi.org/10.3390/publications8020021

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Data Science routines *(cont'd)*

- Data spread over many repositories

- With various thematic foci

- Some of them being collected and copied down again into further transient storage to be used in analytics tasks

- Newly created data and collected data reside in temporary workspaces
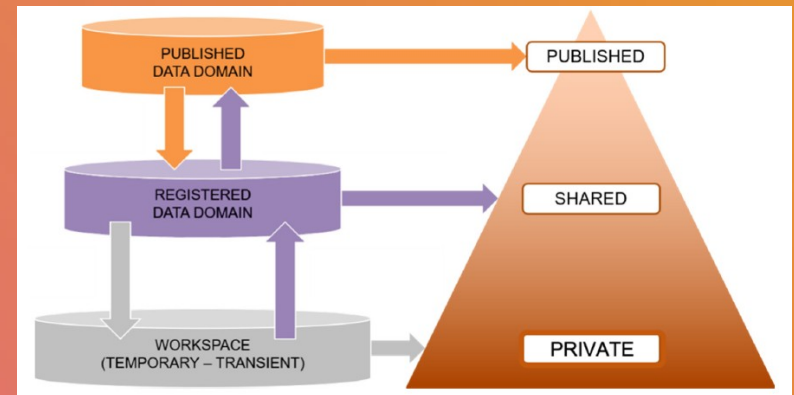
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One may *observe a lot by watching...*

- The EU General Data Protection Regulation set a major legislative milestone *not only* for the areas of data protection and privacy but of the wider area of Data Science

- It afforded *data subjects* with both transparency and greater control regarding the processing of their personal data by data controllers and took new and emerging technologies such as Big Data, AI, and the Net explicitly into account when it was first drafted

- Worth to remember that:

- *Same as for the real world there is no nature vs. nurture argument to apply for the human-made data spaces*

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Through the spyglass…

- However, one of the major shortcomings of the GDPR regulation relates to the legal basis of consent and how it is typically realized on the Web

- Imagine that to deal with FDOs, we may reverse GDPR as a *spyglass* so that 'freely given consent' is led by the FDOs and not by the data subjects

- This does not mean that we lessen the role or importance of the human users – *only that we upgrade the role we expect the FDOs to play in the field*

- What does the latter practically mean?

'Only that we upgrade the role we expect the FDOs to play in the field'

- 'We barely talk about them and seldom know their names. Philosophy has always overlooked them; even biology considers them as mere decoration on the tree of life. And yet plants give life to the Earth: they produce the atmosphere that surrounds us, they are the origin of the oxygen that animates us. Plants embody the most direct, elementary connection that life can establish with the world.'

EMANUELE COCCIA
The Life of Plants
A Metaphysics of Mixture

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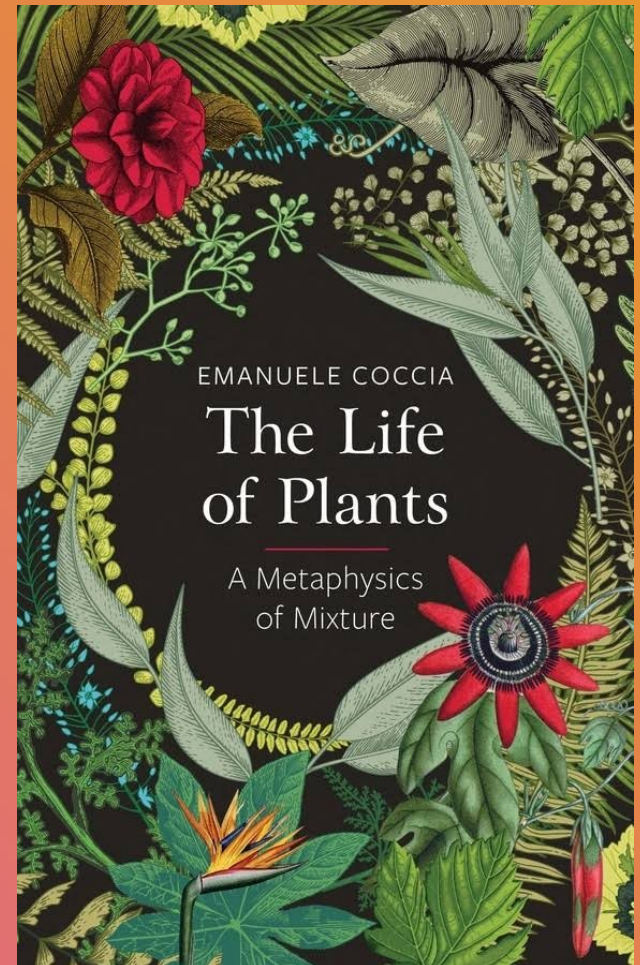
'Towards an increased respect for objects'

- As of today, our stance for 'objects' has been mainly utilitarian

- Possibly only the CLAM community had a different attitude (better informed? better educated?)

- This needs to change

- Will be a catalyst for *'Turning the Internet into a meaningful data space'*

Take away message # 1

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'Daring for swimming upstream the TRL scale'

- Ha! Who will do this?
- Who are notorious for ignorance of dangers, risks and fear?
- …
- It is the start-ups!

Take away message # 2

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Last but not least…

- Keep an eye on the developments and the progress of our work at NFDI4DataScience https://www.nfdi4datascience.de/ - ***connect with us*** to discuss and seek for synergies!

- Attend ***the*** event on FDOs:

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