

Sharing connects people

the experience of Think Open @ CIMeC

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paper “inflation”
sustainability
replication crisis

Estimating the reproducibility of psychological science

Open Science Collaboration*†

Reproducibility is a defining feature of science, but the extent to which it characterizes current research is unknown. We conducted replications of 100 experimental and correlational studies published in three psychology journals using high-powered designs and original

The New York Times

Many Psychology Findings Not as Strong as Claimed, Study Says

Cluster failure: Why fMRI inferences for spatial extent have inflated false-positive rates

Anders Eklund^{a,b,c,1}, Thomas E. Nichols^{d,e}, and Hans Knutsson^{a,c}

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2016

SLATE

SCIENCE

Is Science Broken?

Or is it self-correcting?

OPEN SCIENCE



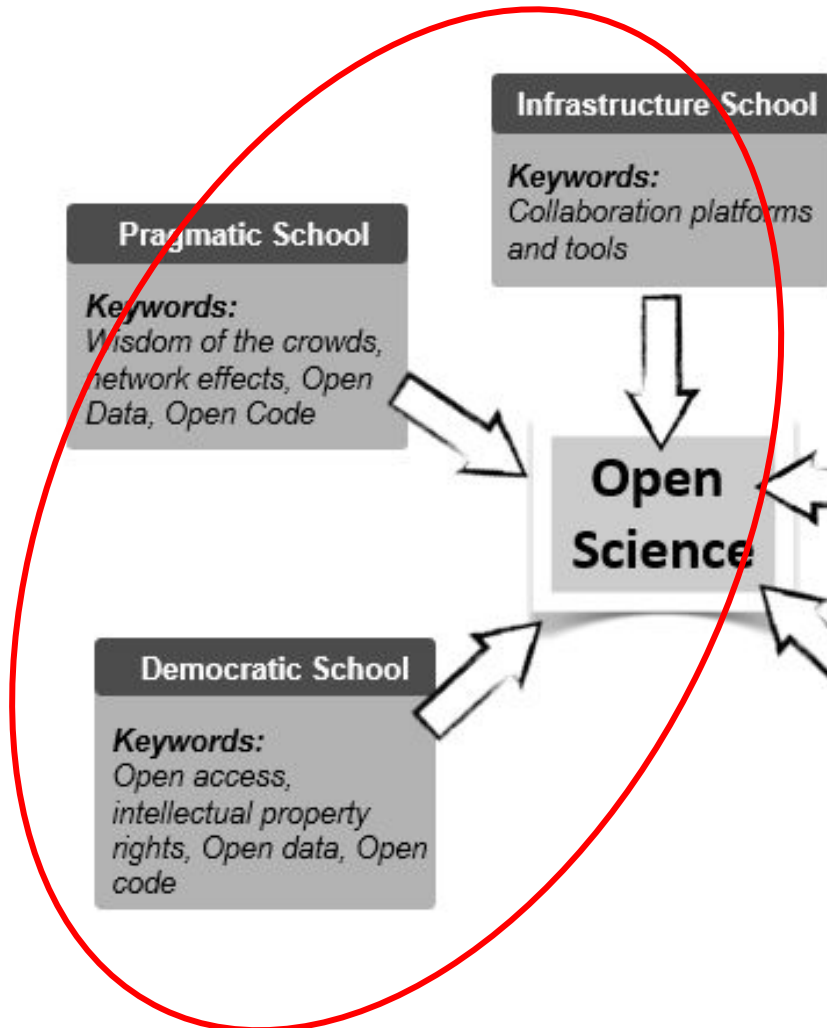
Opening Science

The Evolving Guide on How the Internet is Changing Research, Collaboration and Scholarly Publishing

Book | Open Access | © 2014

✔ You have full access to this open access Book

OPEN SCIENCE



ADAPTED from Bartling, S., & Friesike, S. (2014). [Opening science: The evolving guide on how the internet is changing research, collaboration and scholarly publishing](#) (p. 339). Springer Nature.

share

1 of 3

verb

'sher 

shared; sharing; shares

[Synonyms of *share*](#) >

transitive verb

1 a : to partake of, use, experience, occupy, or enjoy with others

b : to have in common

| they *share* a passion for opera

c (1) : to distribute on the Internet

| ... anyone you *share* a link with can *share* that link with someone else if they choose.

— Jeremy Scott



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—Jeremy Scott



to distribute pieces of FAIR information
freely, persistently and to everyone

object - oriented framing

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Think Open @ CIMeC

a virtual space where researchers can share practices and outputs from every step of the research process

early career researchers (ECR) can build an **open science portfolio** integrating open practices within their everyday routine



Open Science Portfolio

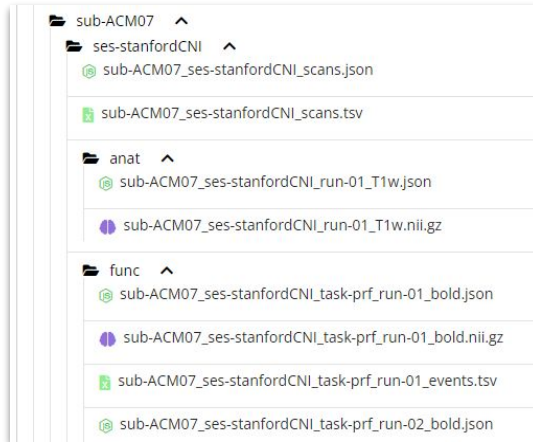
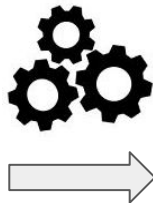


Experimental data

File Modifica Visualizza Inserisci Formato Dati Str

100% € % ,0_ .00 123 Predefinito

	A	B	E	F
	Participant ID	Label	Reaction Time	Accuracy
2	001	3382A1A8	0.34	46.24%
3	002	179881BE	0.14	44.11%
4	003	76AE93B1	0.05	57.59%
5	004	B824ADC2	0.46	75.58%
6	005	129147CA	0.03	41.52%
7	006	440FEF25	0.51	84.90%
8	007	824AC0BB	0.36	32.08%
9	008	8341B25F	0.78	42.42%
10	009	CFFFE870	0.23	57.36%
11	010	B32BF2AC	0.46	67.05%
12	011	197296CF	0.17	33.51%
13	012	18DFE4C2	0.84	79.19%
14	013	54B3A12D	0.80	6.75%
15	014	5A2CF043	0.95	47.60%
16	015	56FE4507	0.78	72.19%
17	016	8F5B6442	0.18	72.07%
18	017	60ED878E	0.13	24.08%
19	018	0237A1BF	0.68	44.87%
20	019	1D315730	0.96	51.90%
21	020	D939ABCD	0.78	6.88%
22	021	4AF28762	0.15	19.45%
23	022	79E0557F	0.90	31.41%
24	023	C871FBB9	0.42	79.10%



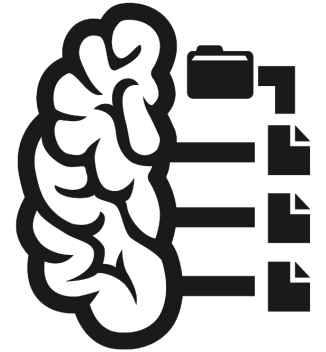
Open Science Portfolio



Standard dataset preparation



from: a messy collection of information
to: a properly arranged dataset



BIDS
BRAIN IMAGING DATA STRUCTURE

Open Science Portfolio



UNIVERSITÀ
DI TRENTO

CiMeC
Center for Mind/Brain Sciences

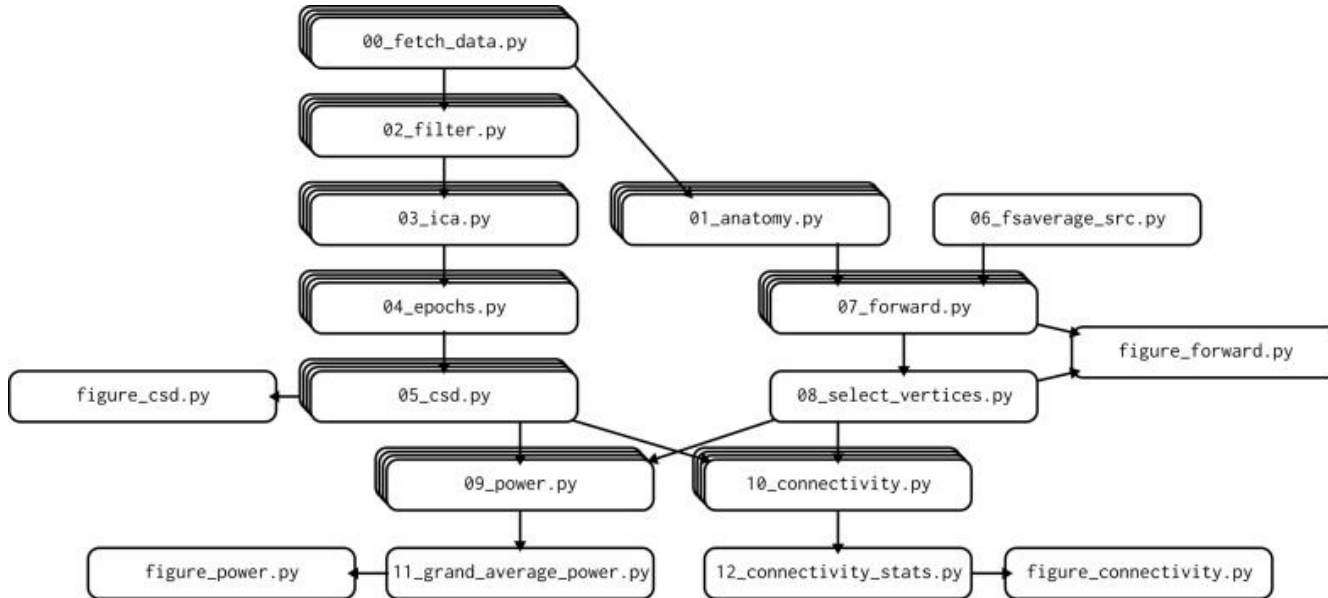
```
vittorio@mat-cimec-vip:~/data_analysis$ tree
```

```
.
├── data_analysis_script_preproc.py
├── data_analysis_script_preproc_v1.py
├── clean_dir.py
├── 20240608-clean.dir.py
├── analysis_first_part_final.py
├── analysis_first_part_final_REVISED.py
├── analysis_first_part_final_ERROR.py
└── ALL_THE_SCRIPTS.py
```

```
0 directories, 8 files
```

Open Science Portfolio

Fine - tuning data analysis scripts



van Vliet M. Seven quick tips for analysis scripts in neuroimaging. PLoS Comput Biol. 2020

Open Science Portfolio



ECR approached novel practices and original ways of doing “their” things



recurring bottom-up, informal initiatives kept the interest ongoing and established new links

mutual help and practice sharing replicates, between current and future ECR generations, creating practice-based communities

Building Open Communities

- ❑ Think Open @ CIMeC
thinkopen.cimec@unitn.it
www.cimec.unitn.it/1005/open-science
- ❑ Italian Reproducibility Network
contact@itrn.org
www.itrn.org
- ❑ Comunità Italiana Data Stewards
data-stewards@lists.icdi.it
“vorrei iscrivermi”

