

# Open Science und FAIR Data

Open Data und die Zukunft des Forschungsdatenmanagements in den  
Geistes- und Sozialwissenschaften

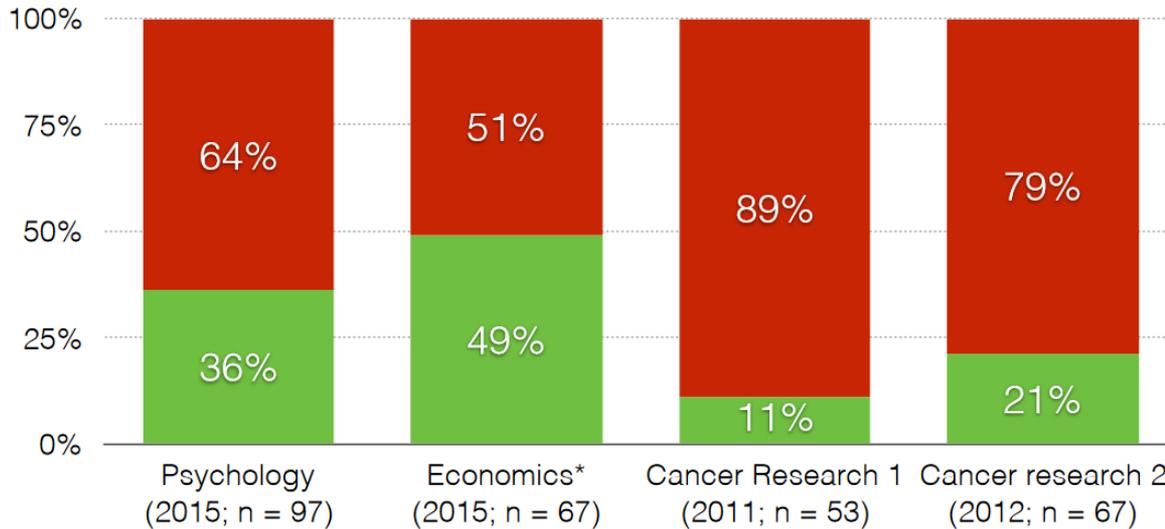
*Anja Perry,  
GESIS Data Archive*

*Forschungsdatenmanagement Reloaded,  
24. & 25. April 2019, GESIS, Köln*

 [cessda.eu](http://cessda.eu)  [@CESSDA\\_Data](https://twitter.com/CESSDA_Data)



# Replikation von veröffentlichten Forschungsergebnissen



\*The data on economics is about *reproducibility*; i.e. the attempt to get the same results if you apply the original data analysis on the original data set.

Open Science  
Collaboration (2015);  
Chang & Li (2015);  
Begley, C. G., & Ellis, L. M.  
(2012);  
Prinz, F., Schlange, T., &  
Asadullah, K. (2011)

# Offener Zugang zu Forschungsdaten. Warum?



Image: <http://ottersandsciencenews.blogspot.ca/2017/03/fake-science-how-sting-operation.html>



Researchers are not rewarded for being right,  
but rather for publishing a lot.

Nelson, Simmons, & Simonsohn (2012); Nosek, Spies, Motyl (2012); Munafo (2016)

## Berliner Erklärung zu Open Access

„Wir definieren den offenen Zugang oder den ‚Open Access‘ als eine umfassende Quelle menschlichen Wissens und kulturellen Erbes, die von der Wissenschaftsgemeinschaft bestätigt wurden.

Die Vision von einer **umfassenden und frei zugänglichen Repräsentation des Wissens** lässt sich nur realisieren, wenn sich das Internet der Zukunft durch Nachhaltigkeit, Interaktivität und Transparenz auszeichnet. Inhalte und Software müssen offen zugänglich und kompatibel sein.“

## Was sind Open Data?

“Open Data are **online, free of cost, accessible data** that can be used, reused and distributed provided that the data source is attributed.”

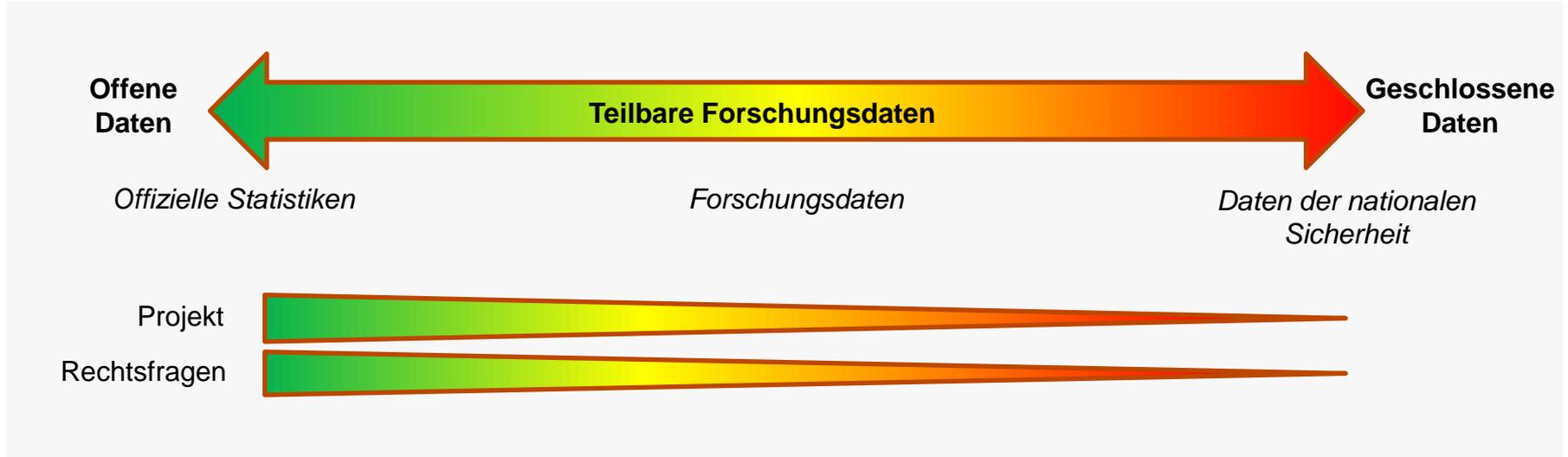
<https://www.fosteropenscience.eu/taxonomy/term/6>

## Was sind Open Data?

“Openness means **access on equal terms for the international research community** at the lowest possible cost, preferably at no more than the marginal cost of dissemination. Open access to research data from public funding should be easy, timely, user-friendly and preferably Internet-based.”

OECD Principles and Guidelines for Access to Research Data  
from Public Funding, 2007

# Zugang zu Forschungsdaten



⇒ „so offen wie möglich, so geschlossen wie nötig“

# Offener Zugang zu Forschungsdaten. Warum?

*Possibility “for third parties to **access, mine, exploit, reproduce and disseminate** (...) the data, including associated metadata”*

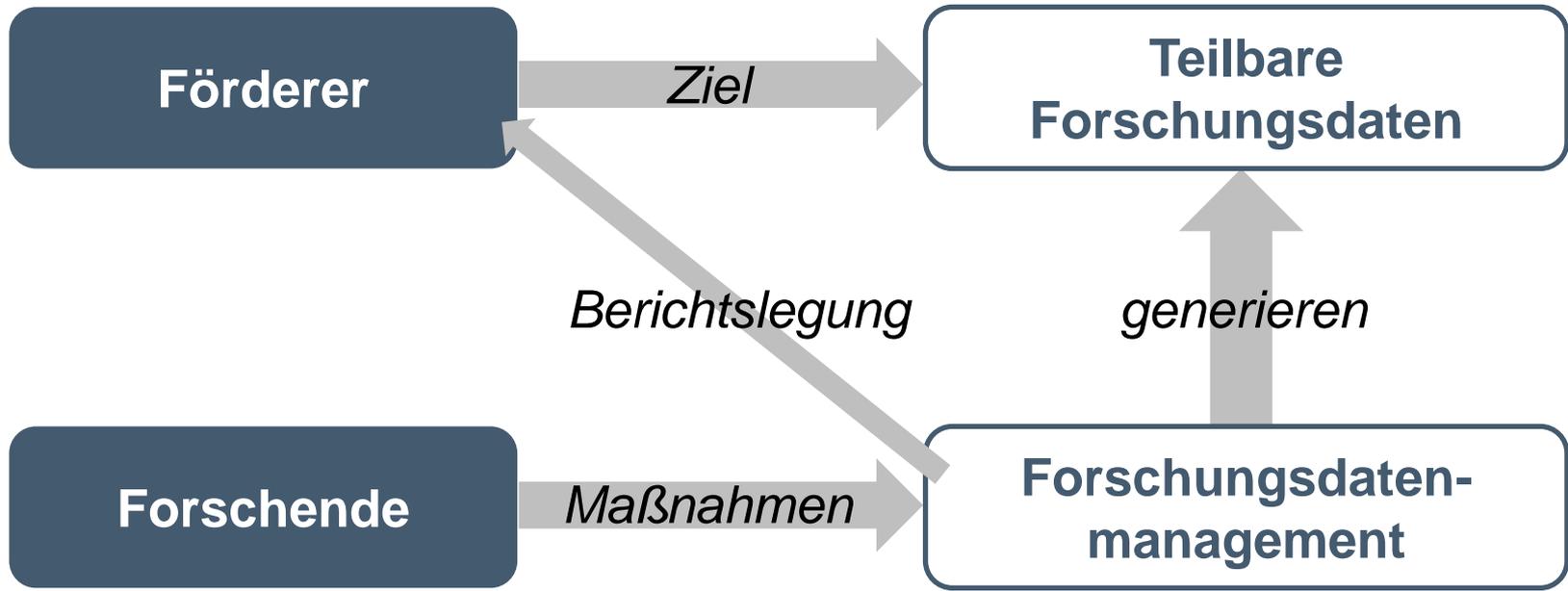
Horizon 2020: Grant Agreement, Art. 29.3.

- Replizierbarkeit ermöglichen
- Forschung befördern
- Öffentliche Gelder effizient nutzen
- Reputation verbessern
- ...



Image: Herrema, A. (2014): FOSTER Cartoon: Data Sharing. FOSTER-Project (EU-Funding 612425). Available at: <https://www.fosteropenscience.eu/foster-taxonomy/research-data-management>. (CC-by).

## Bedingungen der Förderer



# Horizon 2020: Die FAIR-Prinzipien

*“Horizon 2020 beneficiaries make their research data **findable, accessible, interoperable and reusable (FAIR)**, to ensure it is soundly managed.”*



# ... FAIR IST FAIR

Wie finden andere die Daten?

Findable

Accessible

Wie erhalten anderen Zugang zu den Daten?

Inter-operable

Re-Useable

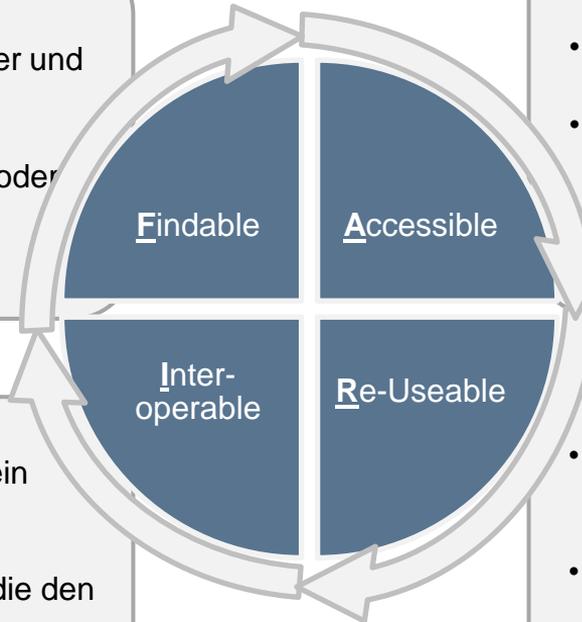
Können andere die Daten technisch wiederverwenden?

Können andere die Daten analytisch wiederverwenden?

# DIE FAIR-PRINZIPIEN

- Daten werden mit umfangreichen Metadaten beschrieben.
- (Meta-)Daten wird ein global eindeutiger und persistenter Identifikator zugewiesen.
- (Meta-)Daten werden in einer durchsuchbaren Ressource registriert oder indiziert.
- Metadaten spezifizieren den Identifikator

- (Meta-)Daten verwenden eine formale, zugängliche, gemeinsame und allgemein anwendbare Sprache für die Wissensrepräsentation.
- (Meta-)Daten verwenden Vokabulare, die den FAIR-Grundsätzen entsprechen.
- (Meta-)Daten beinhalten qualifizierte Verweise auf andere (Meta-)Daten.



- (Meta-)Daten sind durch ihren Identifikator unter Verwendung eines standardisierten Kommunikationsprotokolls abrufbar.
  - Das Protokoll ist offen, frei und universell einsetzbar.
  - Das Protokoll sieht ein Authentifizierungs- und Autorisierungsverfahren vor, falls erforderlich.
- Metadaten sind zugänglich, auch wenn die Daten nicht mehr verfügbar sind.

- Metadaten haben eine Vielzahl von genauen und relevanten Attributen.
- (Meta-)Daten werden mit einer klaren und zugänglichen Lizenz zur Datennutzung freigegeben.
  - (Meta-)Daten sind mit ihrer Herkunft verknüpft.
  - (Meta-)Daten entsprechen domänenrelevanten Gemeinschaftsstandards

Fragen?



# BACK-UP

# Ressourcen



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# Ressources



## Welcome to the home of the Open Science MOOC!

This website is aimed to provide information about our MOOC on Open Science principles and practices, its rationale, the current state of the project, and the people behind it.

### CURRENT STATUS: **IN DEVELOPMENT**

The first draft of Module 5 has been completed and awaiting feedback from the wider community (including you!)

This project was started in early 2017 after a barcamp at the Open Science Conference in Berlin. Soon, more than 30 people contributed and a first draft curriculum was made. Now, already more than 100 volunteers have agreed to share their knowledge about Open Science and to contribute to what they see as an extremely important issue in nowadays and future science. Concomitantly, the European Commission published its report Providing researchers with the skills and competencies they need to practice Open Science, supporting the importance of the topic and thereby the necessity to

## Twitter

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Tweets by @OpenScienceMOOC

 Open Science MOOC Retweeted

 **Egon Willigh@gen**  
@egonwillighagen

two weeks left to improve the Open Science Monitor

  1h

## Data Colada

Thinking about evidence and vice versa

02.06.18

by Uri Simonsohn

### [69] Eight things I do to make my open research more findable and understandable

It is now common for researchers to post original materials, data, and/or code behind their published research. That's obviously great, but open research is often difficult to find and understand.

In this post I discuss 8 things I do, in my papers, code, and datafiles, to combat that.

#### **Paper**

1) Before all method sections, I include a paragraph overviewing the open research practices behind the paper.  
Like this:

#### **Transparent Reporting**

For each study we set sample size before any data were collected, always at 50+ per cell.

<http://datacolada.org/69>

# Ressourcen

☰ MENU

**FELIX SCHÖNBRODT**  
PD Dr. Dipl.-Psych.



## Blog

Open Science

Research ▾

Software ▾

Talks & Workshops

Publications

About me (CV)

→ shinyapps.org

→ researchtransparency.org

## Hiring Policy at the LMU Psychology Department: Better have some open science track record

June 25, 2018

In 2015, the psychology department at LMU Munich for the first time announced a professorship position with an [“open science statement”](#) (see original job description [here](#)):

““Our department embraces the values of open science and strives for replicable and reproducible research. For this goal we support transparent research with open data, open materials, and study pre-registration. Candidates are asked to describe in what way they already pursued and plan to pursue these goals.”

<http://www.nicebread.de/>



## Ressourcen



**Christian Knudsen** @chrbknudsen · 13. Aug. ▼

Some times I get the feeling that not everyone using the word **#openscience** have any idea what it means.  
Maybe they are just afraid to ask?  
I'm not.  
What is the/a concise definition of open science?

Tweet übersetzen



**Dr. Mark Hoffarth** @MarkHoffarth · 17 Std. ▼

1. I started preregistering a year ago. When I did it for the first time it seemed like a huge ordeal. Now, it takes about an hour to write up the prereg and review for typos. **#openscience**

Tweet übersetzen



[Diesen Thread anzeigen](#)



**Graeme Moffat** @graemedmoffat · 22 Std. ▼

[https://twitter.com/  
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