DAS OPENING SCIENCE PROJEKT: HINTERGRUND, FEHLER, GELERNTES

22. NOVEMBER 2016

SASCHA FRIESIKE

OPEN SCIENCE? BUT SCIENCE IS INHERENTLY OPEN?!

Open science / knowledge

Publication

from Latin *publicatio* “making public” / *publicare* “make public”

Patent

from Latin *patentum* “open, lying open”

2011: Opening science: towards an agenda of open science in academia and industry

- What is happening in Open Science?
- Basically from an Open Innovation view.

J Technol Transf (2015) 40:581–601
DOI 10.1007/s10961-014-9375-6

CrossMark

Opening science: towards an agenda of open science in academia and industry

Sascha Friesike · Bastian Widenmayer · Oliver Gassmann · Thomas Schildhauer

Published online: 25 November 2014

Abstract The shift towards open innovation has substantially changed the academic and practical understanding of corporate innovation. While academic studies on open innovation are burgeoning, most research on the topic focuses on the later phases of the innovation process. So far, the impact and implications of the general tendency towards more openness in academic and industrial science at the very front-end of the innovation process have been mostly neglected. Our paper presents a conceptualization of this *open science* as a new research paradigm. Based on empirical data and current literature, we analyze the phenomenon and propose four perspectives of open science. Furthermore, we outline current trends and propose directions for future developments.

Keywords Open science · Research management · Science · Open innovation

JEL Classification O31 · O32 · O33

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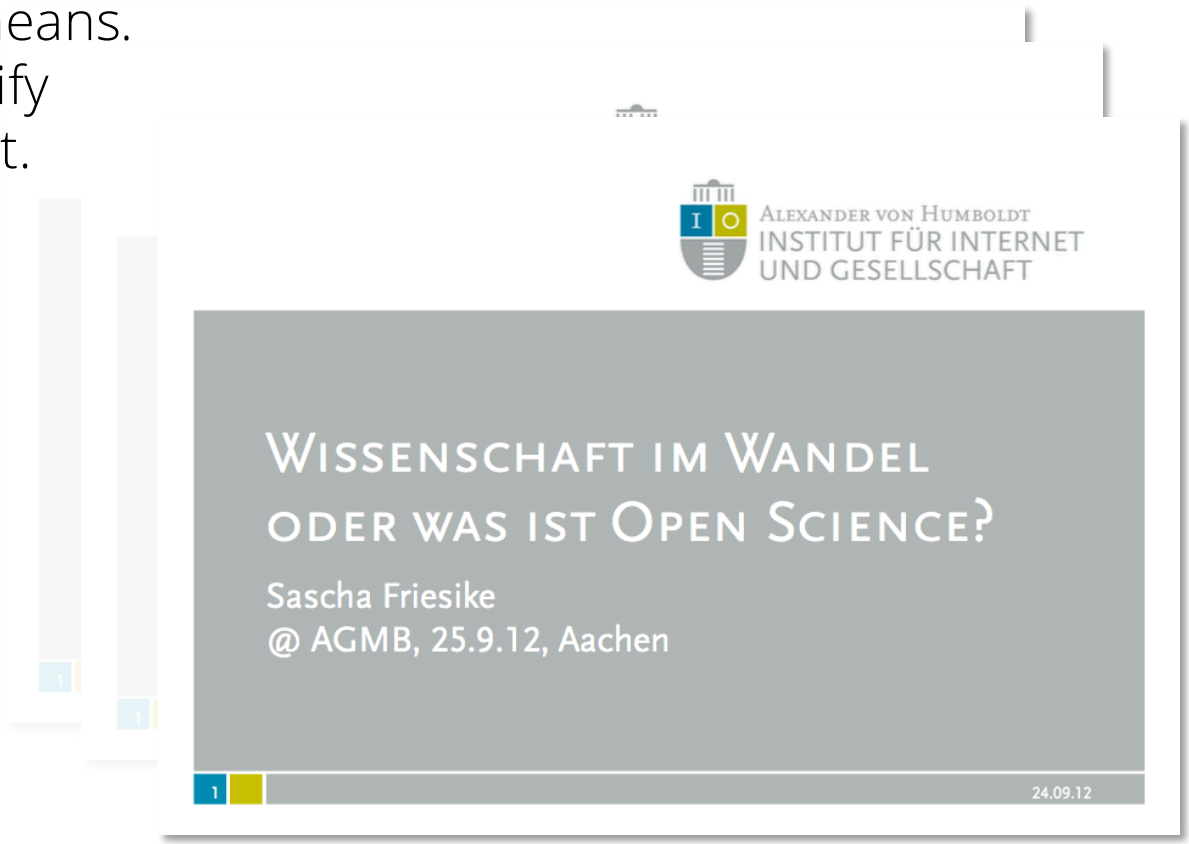
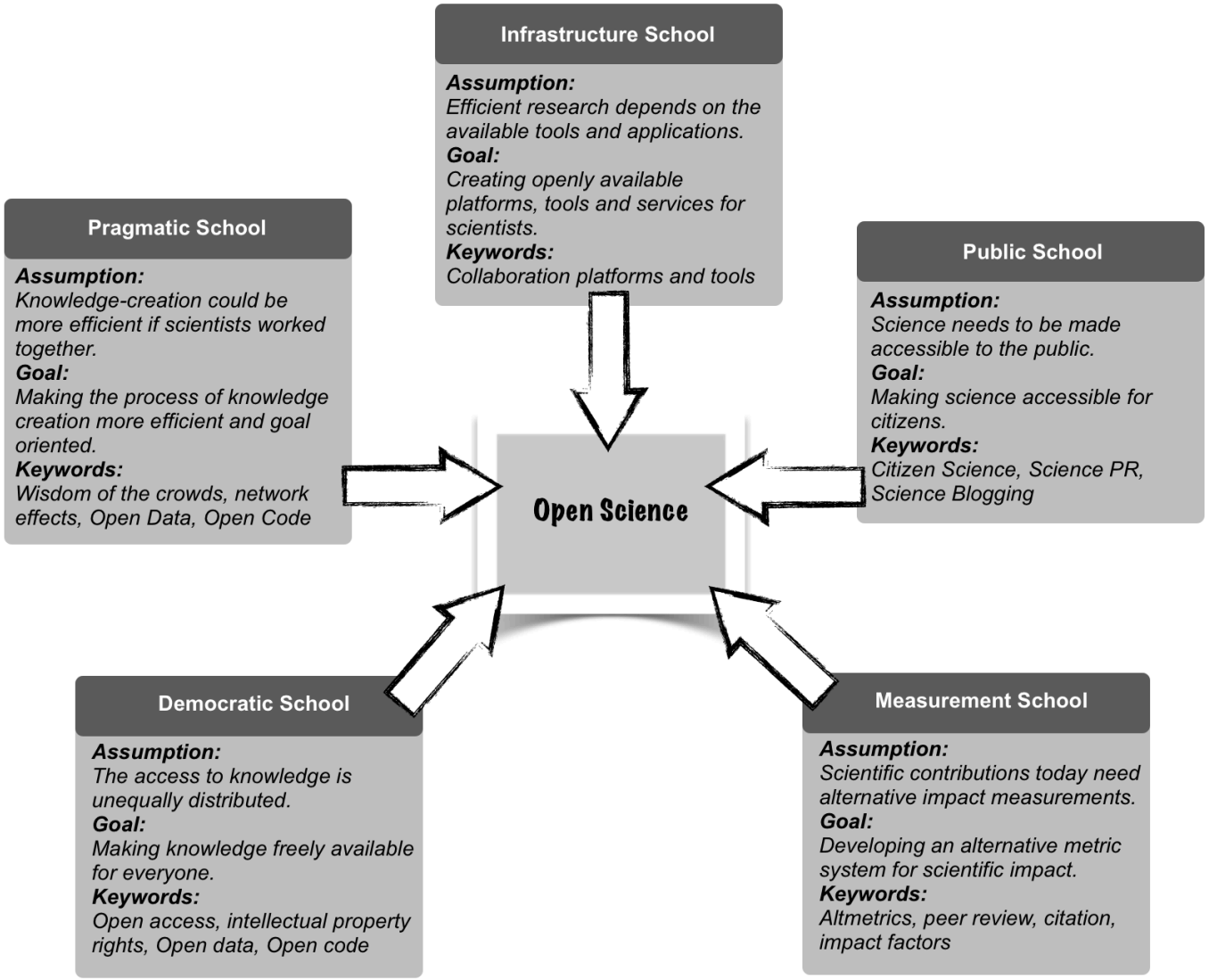
Springer

2012 – WHAT EXACTLY IS OPEN SCIENCE?

- Different people have different views on what Open Science really means.
- Basically we can identify five schools of thought.



FIVE SCHOOLS OF THOUGHT



2013 – WORK ON THE BOOK PROJECT

Opening Science – The Evolvin ×

Profil 1

www.openingscience.org/get-the-book/

opening science

NEWS INITIATIVES OPEN SCIENCE INTERVIEWS RESEARCH FORUMS ABOUT

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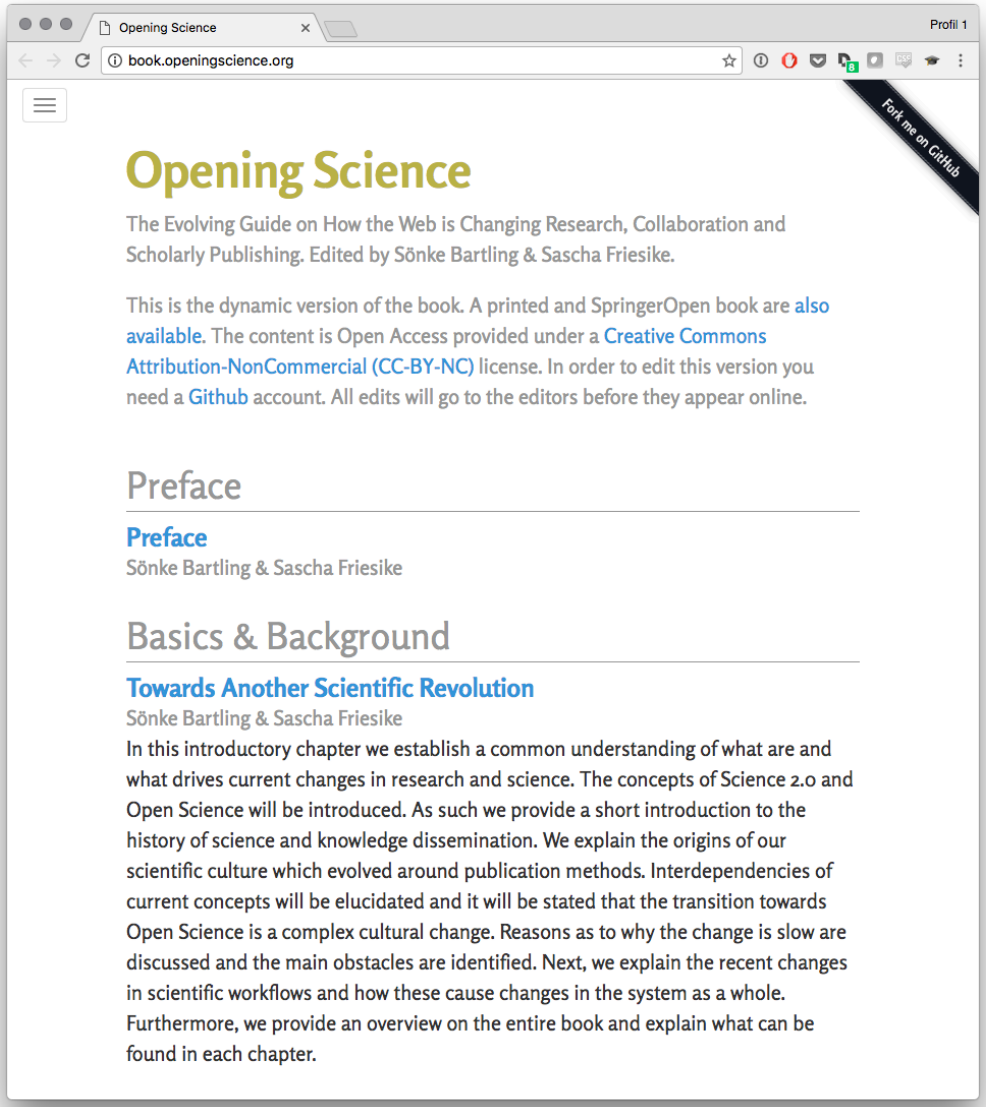

Opening Science – wie das Inte ×

Profil 1

https://www.land-der-ideen.de/ausgezeichnete-orte/preistraeger/opening-science-wie-internet-forschung-ver-ndert

Deutschland Land der Ideen

NACHBARSCHAFFTINNOVATION
Gemeinschaft als Erfolgsmodell

Ausgezeichnete Orte im Land der Ideen

Nationaler Förderer Deutsche Bank

Suchbegriff eingeben

Startseite > Wettbewerbe > Ausgezeichnete Orte im Land der Ideen > Preisträger > **Opening Science – wie das Internet die Forschung verändert**

Kontakt
Presse
Englisch
Leichte Sprache
Gebärdensprache

Deutschland - Land der Ideen
Wettbewerbe
Ausgezeichnete Orte im Land der Ideen
- Jahresthema 2016
- **Preisträger**
- Der Wettbewerb
- Preisverleihungen
- Jury und Fachbeirat
- Corporate Volunteering
- Wettbewerbsjahre 2006-2015
- 10 Jahre: Festival der Ideen
- Partner und Förderer
- Pressematerial
- Publikationen

Deutscher Mobilitätspreis
NRW-Wirtschaft im Wandel
Ideen für die Bildungsrepublik

Neues aus dem Land der Ideen
Projekte im Inland
Projekte im Ausland

< Alle Ausgezeichneten Orte

Opening Science – wie das Internet die Forschung verändert

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Umbau des Elfenbeinturms

Forscher wollen wissen, welche Auswirkungen die Digitalisierung auf die wissenschaftliche Arbeit hat

Die Digitalisierung verändert die Wissenschaft. Das Projekt Opening Science erforscht, wie Onlinetechnologien genutzt werden können, um Wissenschaft vernetzter, schneller, effizienter und offener zu gestalten. In diesem Zusammenhang ergründen die Mitarbeiter des Alexander von Humboldt Instituts für Internet und Gesellschaft auch die Möglichkeiten, Laien für die Arbeit in wissenschaftlichen Projekten zu motivieren. Beispielsweise kann die Zoologie dank des Internets auf die Beobachtungen von Tausenden Freiwilligen zurückgreifen, wenn es um Daten zu einem Vogelzug geht.

Initiatoren

Alexander von Humboldt Institut für Internet und Gesellschaft

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10117 Berlin, Berlin

> www.hiig.de

Veranstaltung

am: 26. August 2015
in: Berlin

Kategorie

Wissenschaft

> **Alle zu dieser Kategorie**

Jahr

2015: Stadt, Land, Netz!

> **Alle zu diesem Jahresthema**

https://www.land-der-ideen.de

2013-2015 – MOTIVATIONAL ASPECTS OF OPEN SCIENCE

Putting open science into practice: A social dilemma?

Kaja Scheliga, Sascha Friesike

Abstract

Digital technologies carry the promise of transforming science and opening up the research process. We interviewed researchers from a variety of backgrounds about their attitudes towards and experiences with openness in their research practices. We observe a considerable discrepancy between the concept of *open science* and scholarly reality. While many researchers support open science in theory, the individual researcher is confronted with various difficulties when putting open science into practice. We analyse the major obstacles to open science and group them into two main categories: *individual obstacles* and *systemic obstacles*. We argue that the phenomenon of open science can be seen through the prism of a social dilemma: what is in the collective best interest of the scientific community is not necessarily in the best interest of the individual scientist. We discuss the possibilities of transferring theoretical solutions to social dilemma problems to the realm of open science.

Keywords

internet; open science; social dilemma; digital scholarship; science 2.0; collaboration; sharing; academic research practices; qualitative research; interviews; science policy

Full Text:

HTML

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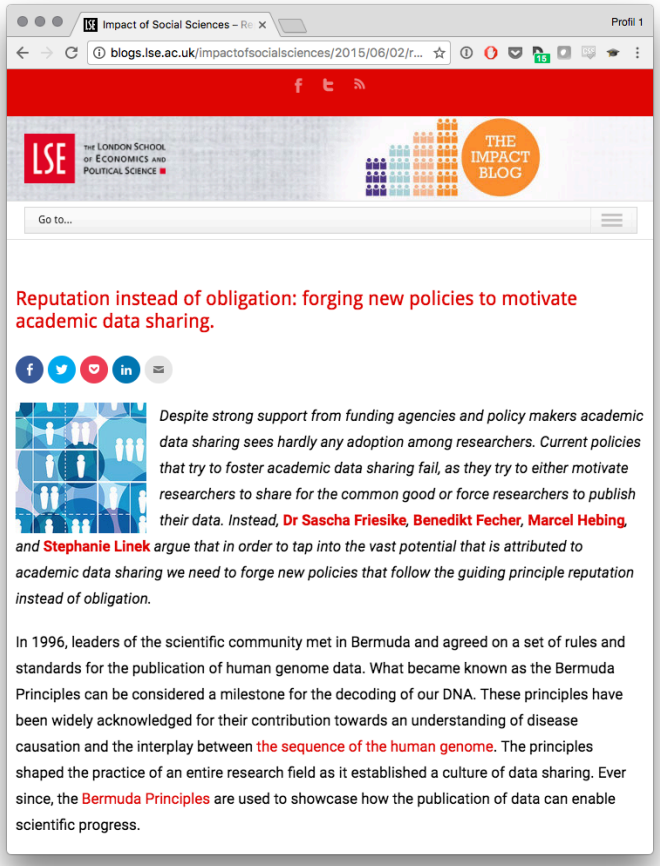
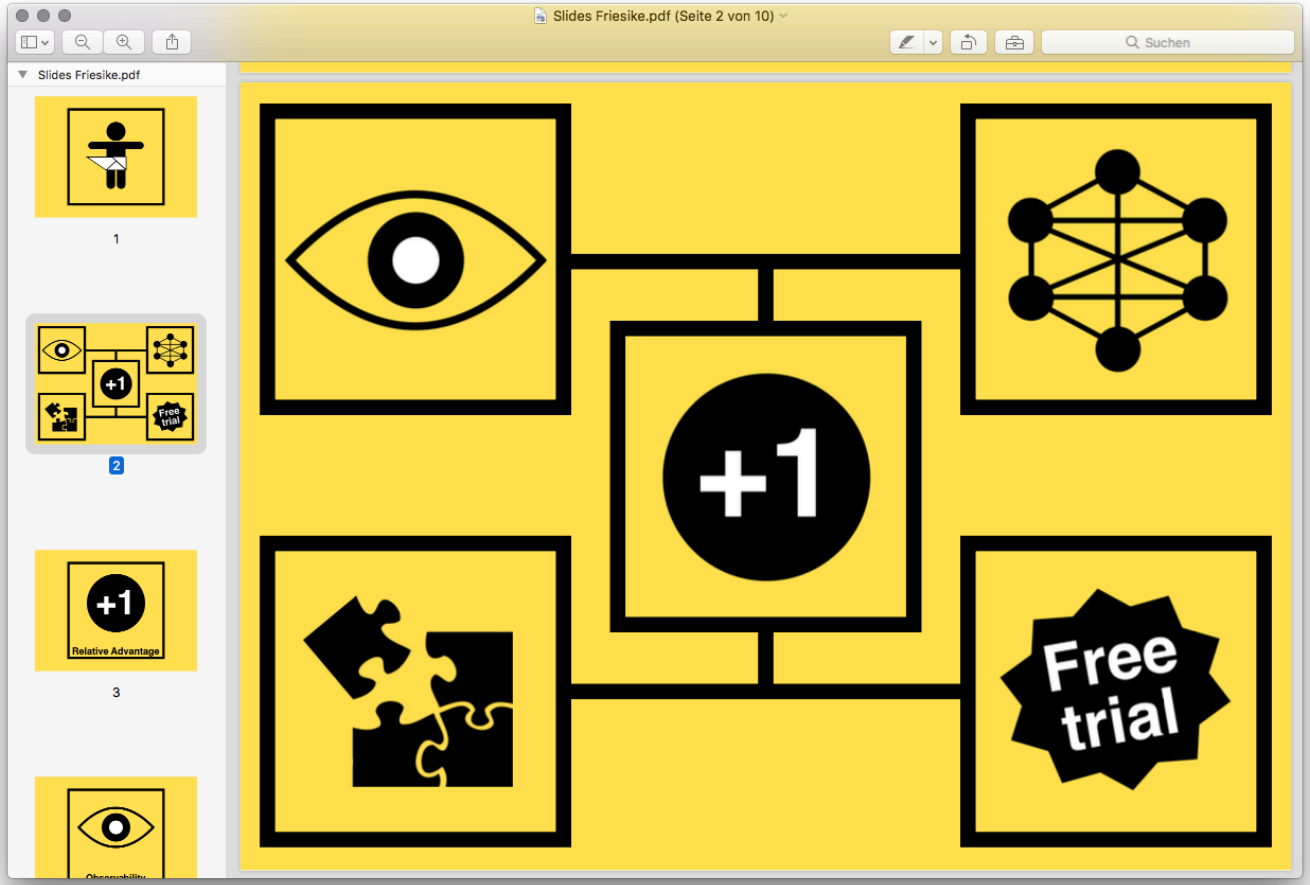


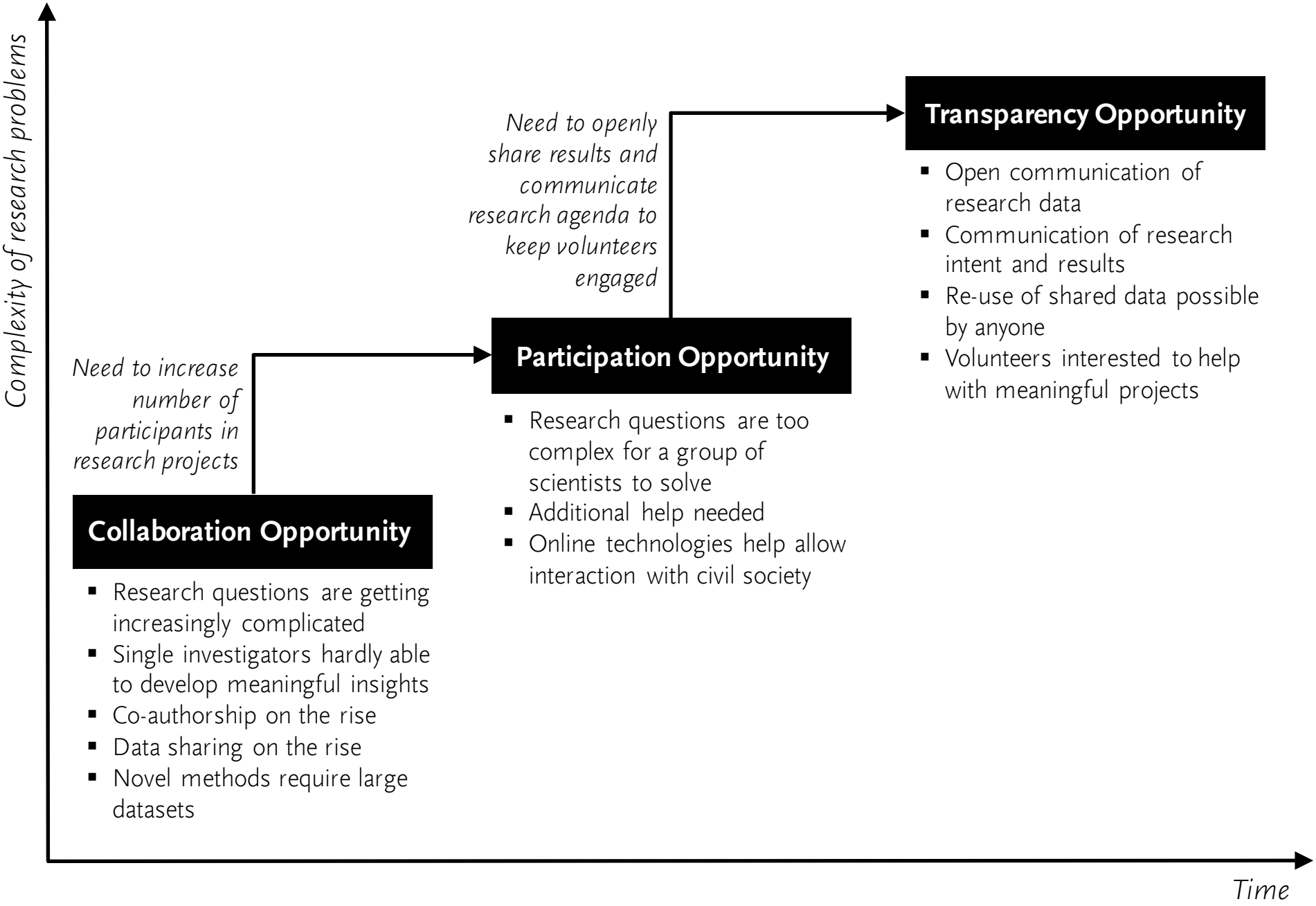
Reputation instead of obligation: forging new policies to motivate academic data sharing.

Despite strong support from funding agencies and policy makers academic data sharing sees hardly any adoption among researchers. Current policies that try to foster academic data sharing fail, as they try to either motivate researchers to share for the common good or force researchers to publish their data. Instead, **Dr Sascha Friesike**, **Benedikt Fecher**, **Marcel Hebing**, *and* **Stephanie Linek** *argue that in order to tap into the vast potential that is attributed to academic data sharing we need to forge new policies that follow the guiding principle reputation instead of obligation.*

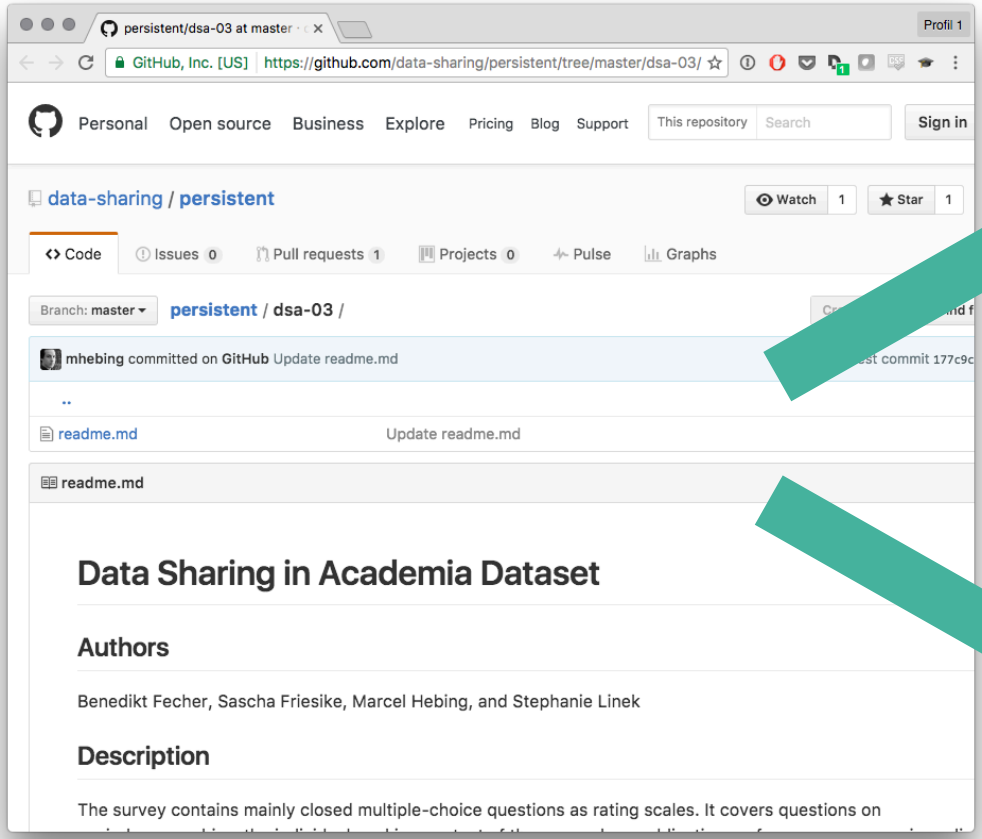
In 1996, leaders of the scientific community met in Bermuda and agreed on a set of rules and standards for the publication of human genome data. What became known as the Bermuda Principles can be considered a milestone for the decoding of our DNA. These principles have been widely acknowledged for their contribution towards an understanding of disease causation and the interplay between the sequence of the human genome. The principles shaped the practice of an entire research field as it established a culture of data sharing. Ever since, the Bermuda Principles are used to showcase how the publication of data can enable scientific progress.

KE TALK ON ADOPTION OF OPEN SCIENCE




Complexity of research problems
Time
Need to increase number of participants in research projects
Collaboration Opportunity
Research questions are getting increasingly complicated
Single investigators hardly able to develop meaningful insights
Co-authorship on the rise
Data sharing on the rise
Novel methods require large datasets
Need to openly share results and communicate research agenda to keep volunteers engaged
Participation Opportunity
Research questions are too complex for a group of scientists to solve
Additional help needed
Online technologies help allow interaction with civil society
Transparency Opportunity
Open communication of research data
Communication of research intent and results
Re-use of shared data possible by anyone
Volunteers interested to help with meaningful projects

2013-2016 – DATA SHARING PROJECT



Psychological paper
Personality traits and data sharing

Social science paper
Reward mechanisms in data sharing

2015: CROWDSCIENCE

- Qualitative study on how crowd science projects come to be.
- Case studies of Germany crowd science initiatives.

Theoretical/research paper

P | U | S

Public Understanding of Science
1–20

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Setting up crowd science projects

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Benedikt Fecher
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Abstract
Crowd science is scientific research that is conducted with the participation of volunteers who are not professional scientists. Thanks to the Internet and online platforms, project initiators can draw on a potentially large number of volunteers. This crowd can be involved to support data-rich or labour-intensive projects that would otherwise be unfeasible. So far, research on crowd science has mainly focused on analysing individual crowd science projects. In our research, we focus on the perspective of project initiators and explore how crowd science projects are set up. Based on multiple case study research, we discuss the objectives of crowd science projects and the strategies of their initiators for accessing volunteers. We also categorise the tasks allocated to volunteers and reflect on the issue of quality assurance as well as feedback mechanisms. With this article, we contribute to a better understanding of how crowd science projects are set up and how volunteers can contribute to science. We suggest that our findings are of practical relevance for initiators of crowd science projects, for science communication as well as for informed science policy making.

Keywords
case study research, citizen science, crowd science, crowdsourcing, digitisation of research, online platforms, science communication, volunteer engagement

1. Introduction

Online technologies help to organise thousands of people around the world who engage in the process of knowledge creation (Castells, 2000; Dickel and Franzen, 2016; Meyer and Schroeder,

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