

Musings on Scientific Cultures and the intersection of SciCom/OS

Monique Oliveira

WP3

**Universidade Estadual de Campinas
(Unicamp)**

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**1. Conceptions of
Scientific Culture**

**2. Definition
Proposal**

**3. Open Science's
Influence on
Scientific Culture**

**4. Case Study:
The Pandemic**

**5. The
Intersection of
Infrastructures
and Practices**

1

Conceptions of "scientific culture"

"Multifaceted", "large number of players and disciplines", "constant contact with the public", "depends on policies and the whole society to achieve its objectives"

(Diaz Constanzo & Golombek, 2020)

Here, an imprecise definition is mixed with a "functional" description.

1

Conceptions of "scientific culture"

**A set of
methodological
and epistemic skills
related to science,
which should be
developed in the
public.**

**This definition aligns
with some views in
Public Understanding
of Science (PUS).**

1

**Conceptions of
"scientific
culture"**

**A field with an
unique dynamic,
relative autonomy,
specific language,
and distinct
characteristics,
formed by
"boundary work". It
also includes the
"tacit" or the
unspoken in
papers, polysemy,
contro
versy, and elements
beyond the "results".**

**(Contributors: Merton,
Bourdieu, Vacarezza,
Gieryn, Latour,
Jasanoff, and others)**

1

Conceptions of "scientific culture"

The idea of scientific culture can also be understood from the intersection of science with society -- "the other".

The spiral somewhat represents this movement.

In a more "sociologized" view of this, the intersection is from a "stable" image -- the monossemic stage - that science projects of itself.

1

**The idea of culture
as invention**

**Culture is a
relational
concept for
dealing with the
"other". It does
not designate
something in
itself. It is a
creative
construct that
describes a
border (Wagner,
2017)**

**From STS, a
category that
also describes the
attempt to leave
some objects
stable and others
diverse and
unstable.**

2

Definition Proposal

This can be discussed in line with a more "pragmatic" definition: the PUS one, where "scientific culture" is to be nurtured in the public as a skill.

2

(we can go further)

Definition Proposal

Scientific culture is also relational category. It reinforces boundary work and does not aim to divide epistemic authority. The goal is to "reform" scientific culture and depict the "world of science" with a permeable boundary and a more distributed authority.

2

Definition Proposal

But, we can go further

**Speaking of the idea of an
internal scientific culture -it's
also a creative construct to
stabilize objects**

(this is pure STS)

3

How does open science shape scientific culture?

Open data, open notebooks, etc., can engender a trend where this internal science (more polysemic) meets society.

In this sense, open science makes scientific culture more polysemic. It leads to the "internal culture" integrating the presentation of the "result".

How does open science shape scientific culture?

3

By providing more public access to raw scientific knowledge, we can disrupt the image of stability that science often projects.

The pandemic served as a significant example of this. It was a case of "open science" not only in terms of infrastructure, but also as an "open black box," with extended peer review of initial evidence and debates.

4

While this "OS radicalization" can bring greater transparency and inclusion, it might also introduce problems.

These could include the challenge of establishing a clear course of action with social support, or inadvertently providing a platform for misinformation.

4

How can we suggest potential approaches to mitigate the problems associated with the pandemic without undermining Open Science (OS) or resorting to a narrow and "deficient" framing of Public Understanding of Science (PUS)?

5

One approach should be merging of Open Science (OS) with other disciplines, such as science education and science communication.

Open Science would be a way to make these disciplines less "monosemic" and more "epistemic." In WP3, we work with the notion of "informed epistemic trust" and "epistemic practices" for this junction.

This merging would also make open science address certain aspects of "social responsibility" arising from the pandemic.

Obrigada

