

# Challenging science-audit: learning from editorial peer review

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# The great escape from the nervous system (Donald, 1991)

Theoretic culture and thinking are extended by customs, writing & institutions (e.g. law, religion, science, education). Like agriculture, science and cognition are extended processes.

Idem 'dispositifs' (Foucault, 1977) –heterogeneous complexes transform **observing**, chronicling, **book-keeping** etc; they shape genre-based practices such as law, philosophy, and peer review.

How do complexes shape individual, group and collective 'thinking'?



# In C20 century accounting

Entered a complex with accountability , transparency and modernizing... It is "perhaps the most powerful system of representation in social and economic life today." (Miller & Power, 2013: 557-558)

The peer review *complex* is a kind of 'accounting'. Indeed. But, since 1989, both the idea and the object of accounting have been increasingly bound to control and self-regulation.

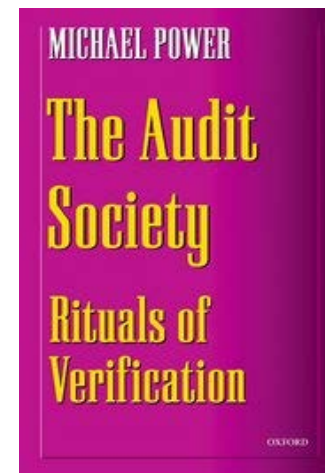


# Focusing the lens: audit

If combined with economizing, accounting can be narrowed to audit (and risk –possible results).

Societies use audits to represent, and intervene. As audit fails and changes, it drives (a) territorialization; (b) mediatization; (c) adjudication; (d) subjectivisation (Miller & Power, 2013).

Auditees self monitor and, in some places, academics find themselves in *auditand* (Murphie, 2014).



# As in stasiland

Audit arises from mistrust and demand trusts. Auditees play safe by making trails (track records).

They focus on performance –not just at work, but also outside (e.g in the gym, Facebook...).

Audits create micro-feudal entities (subjectivisation drives alienation).



# Overview

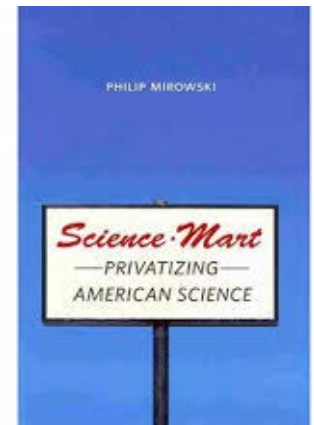
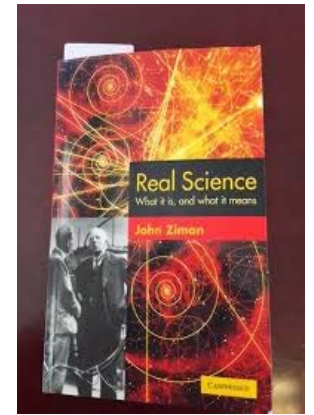
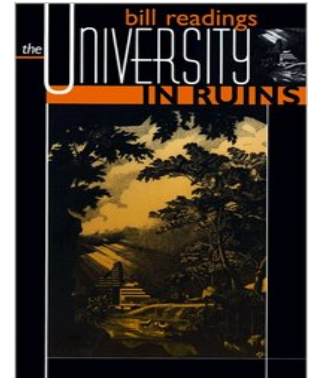
- Science and accounting (scientists as auditees).
- Editorial peer review (what we know and need to say loudly; what we don't know).
- Cognition-in-the-ecology
  - *Why peer review* matters; what we need to find out; and what we have to tell.

# Mixed emotions

New practices may undermine scholarship, real science, teaching.

Performance (and impact) reduces to measures of an entity's output (e.g. a person, institution).

It relies on input-output models (a cognitivist view of man –or woman).



# We are all auditees

As students of peer-review, we know an awful lot of uncomfortable truths.

PR was framed as a 'normative social process' that was 'institutionalised' after the second world war. It is (or resembles) 'quality control'

PR underpins to the economization of universities, research, society and use of performance indicators; it matters to each auditee (and each academic).



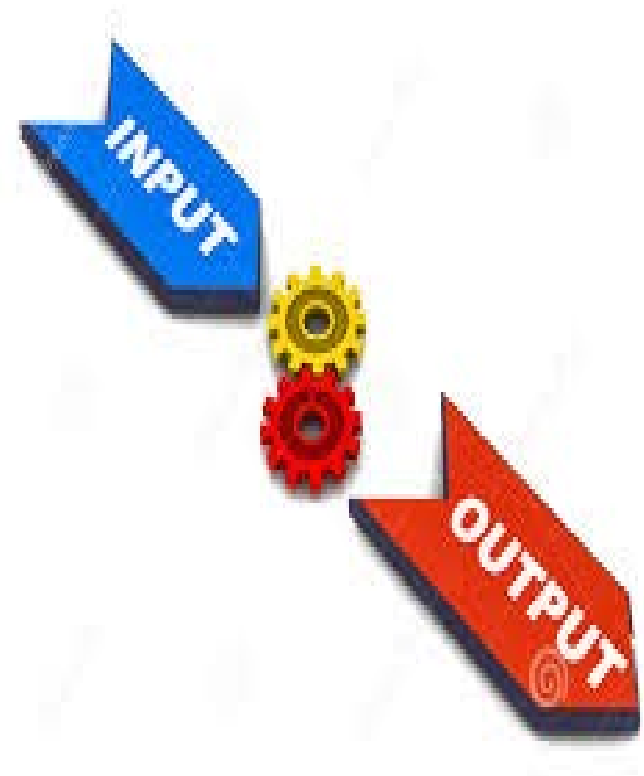


# An input-output process

A manuscript is input to a complex; it is reviewed and, after a process, it is published or rejected.

As output, it can be evaluated –e.g. through citations, media interest, journal impact factor (or even by reading!) etc.

The process, we are told, is normative and uses CUDOS (i.e. as/like [quality control](#)).



# Over and over and over again

Research shows peer-review to be unreliable, biased and, in relation to impact, lacking predictive validity (Bornmann, 2011; Cowley, in prep).

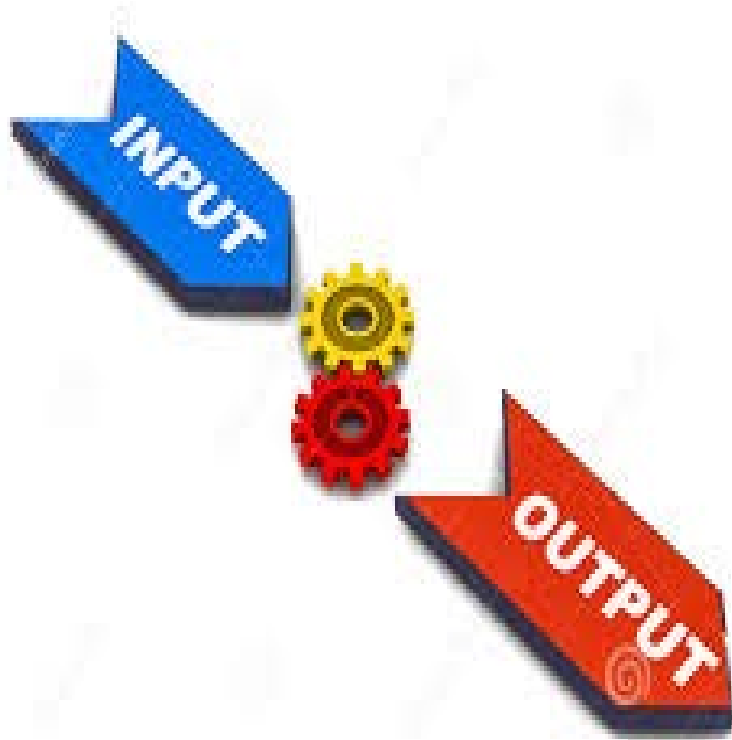
”Investigating fraud is hard work, and it is easier for journal editors to ignore the problem and perpetuate the myth that peer review of trial reports ensures their scientific quality (Roberts, 2015) “

There is little or no evidence of CUDOS.

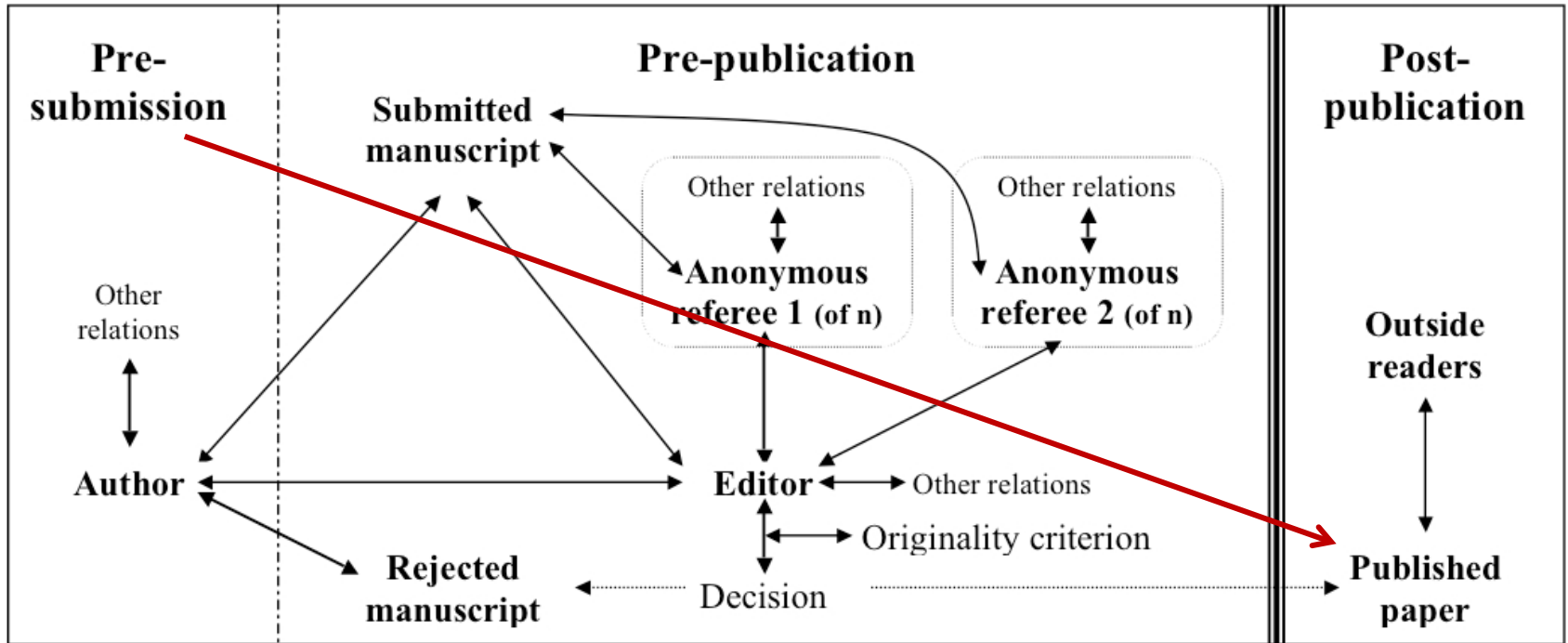
**As quality control, peer-review fails.**



# So why the assumptions?



# There are other frames



As a technology in a changing cultural ecosystem PR enacts what Gaudet (2014) calls structural relations. These alter symbolisations (line in red) that, for members of the ecosystem define a field's 'content' (i.e. questions, facts – and how these can be framed).

# Remember that **PR is accounting.**

Just as in the middle ages and in the enlightenment, review is accounting. We comment on observations, data-sets, data-manipulations and results.

PR is part of science. It uses symbolisations to bind individual, group and collective thinking in a complex adaptive system. It is not reducible to audit –it is not quality control.

If science and peer review stress content, its accounting can be used to challenge economisation and audit-science.

# A research gulf

PR affects living beings—and beliefs and expectations (the Achilles heel of economics).

We can ask how PR helps people change symbolisations: We can pursue PR's effects on individuals, groups & collective decision making.

Auditland is part of democracy: once we see, we can challenge (or embrace) the economization of science (and the academy).



# Hypotheses

H1: The values of PR and editing change. (c.f. territorialisation, mediation, adjudication and subjectivisation).

H2: Good journals (as judged by peers) will encourage different review practices (and authors) from those used in high-impact journals (also scientific problem finding & (inter)disciplinary work).

H3: If comparably resourced, institutions and research groups based on audit science will generate content unlike that of (shall we say) 'real research'.

# We can use what we know

Economisation can be pursued around actual results, reviewing-practice, scientific display, beliefs/expectations etc.

Research use the PR complex to specify what we mean by scholarship and the common good.

We can resist, organise and do real research. As auditing fails, we can use its products (and, perhaps, resist its effects on us).

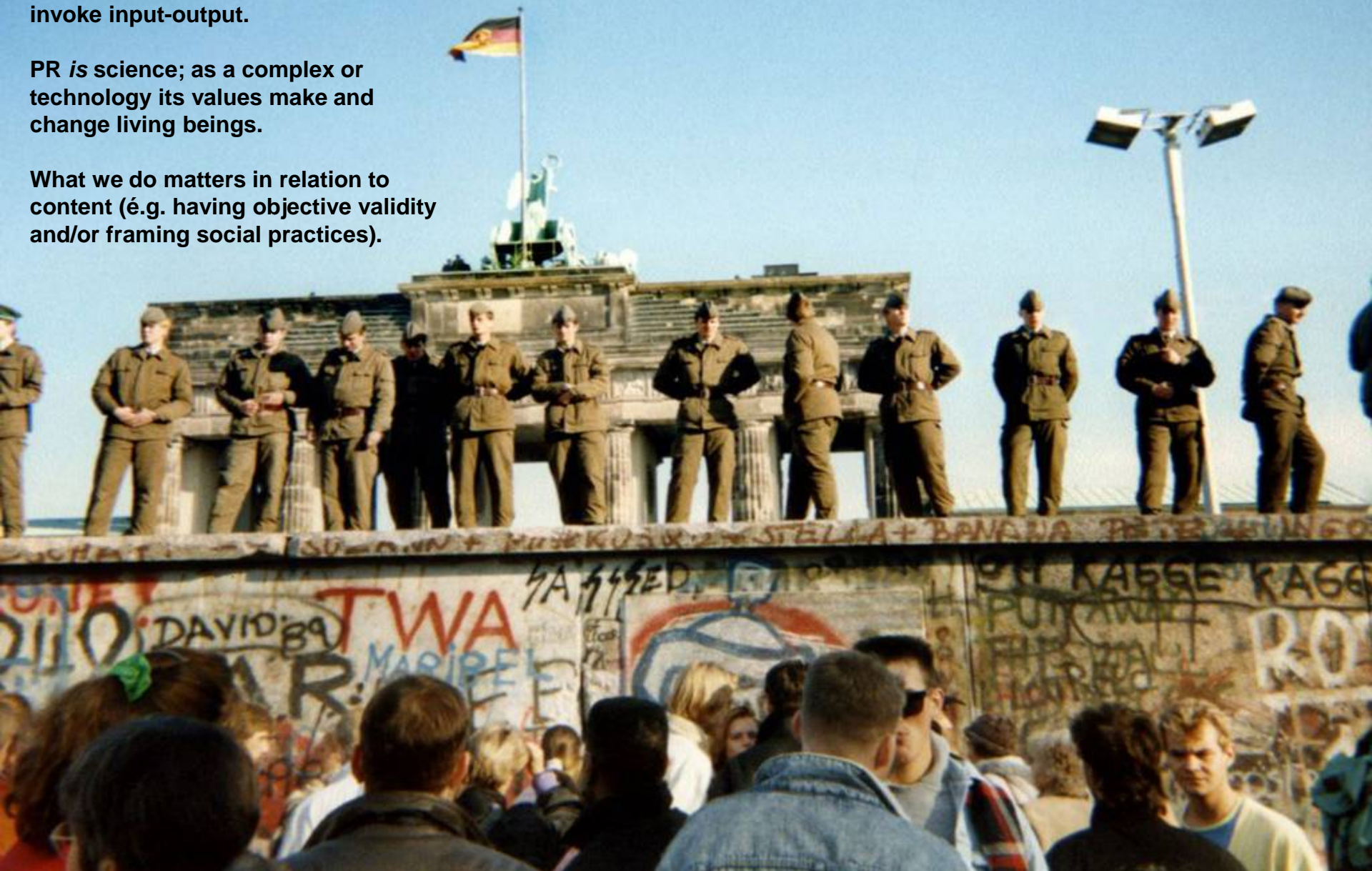




CUDOS belongsto the 1940s: it is trivial to see peer review as a normative social process and wrong to invoke input-output.

PR *is* science; as a complex or technology its values make and change living beings.

What we do matters in relation to content (é.g. having objective validity and/or framing social practices).



# Thank you



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