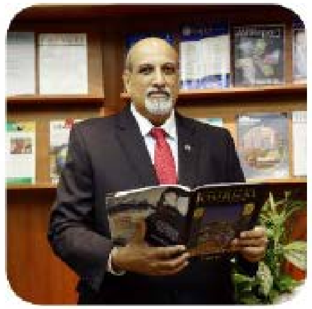
SciCOM
South African Research Chair in Science Communication

SA scientists and public engagement – risks and rewards

Marina Joubert
Stellenbosch University
26 March 2019

Demands on scientists to engage ….

- **Publicly funded science = publicly available**
- **Science should be democratised**
- **Public and political support**
- **Combat anti- and pseudoscience**
- **Inspiring future scientists**







DOCTOBER

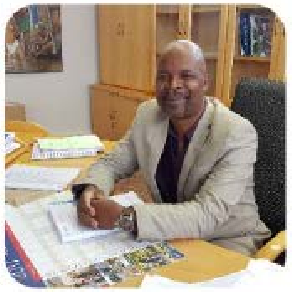

SOUTH AFRICA
N. Cape
W. Cape
Springbok
Kimberley
Bloemfontein
Durban
East London
Port Elizabeth
Mossel Bay






















JCOM
JOURNAL OF SCIENCE COMMUNICATION

Country-specific factors that compel South African scientists to engage with public audiences

Marina Joubert

A study in South Africa shed light on a set of factors, specific to this country, that compel South African scientists towards public engagement. It highlights the importance of history, politics, culture and socio-economic conditions in influencing scientists' willingness to engage with lay audiences. These factors have largely been overlooked in studies of scientists' public communication behaviours.

Public engagement with science and technology; Science communication in the developing world

SciCOM
South African Research Chair in Science Communication

SA scientists want to engage … motivated by:

- **history and politics**
- **misinformation, disease and poverty**
- **population group and language**
- **the natural environment.**


serve society
influence policy
funding
love of science
tax payer
informed public
education
passion
trust
democracy
improve lives
role modelling
visibility
careers
enjoyment
duty
ego
hope
feedback
support
promote university
public good
make a difference
students
economy
gratitude
national pride
combat misinformation
change behaviour


time
funding
skills
stress
jargon
capacity
lack of recognition
language barriers
media fears


NORMS
© The G&R Cooperative, LLC

"One thing I'll say for us, Meyer—we never stooped to popularizing science."

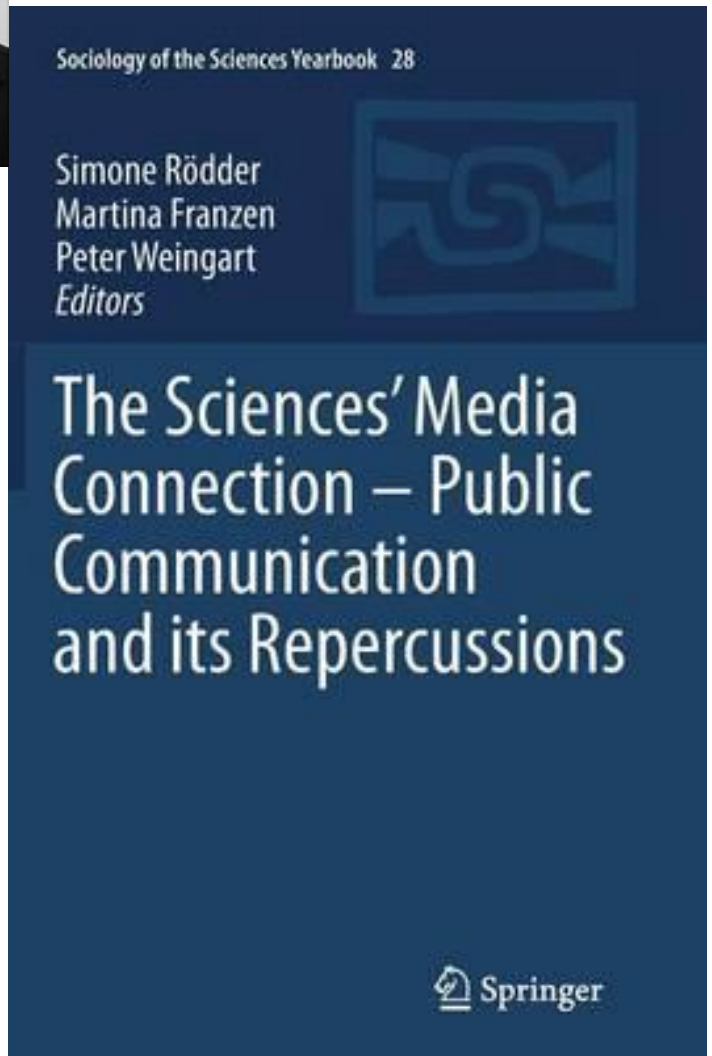
Normative nature of science

vs

new demands from society

(funders, institutions, publics)

Simone Rödder, 2012



The norms of science are changing in response to new demands from society.

The scientific community is becoming more tolerant of visible scientists.

ASTRONOMICAL COMMUNITY

Beyond the Sagan effect

Astronomers around the world are keen and confident public communicators, with academic leaders in senior positions being the most active. They enjoy engaging with the public, with no rewards expected.

Marina Joubert

In 1992, Carl Sagan's nomination to the US National Academy of Sciences was voted down, despite his solid reputation as a leading planetary scientist[1]. It is widely believed that he was denied academy membership because, at the time, the science community did not approve of his media visibility. Sagan later admitted that he was mostly blissfully unaware of hostile comments about his dual career as a scientist and science popularizer, but other high-profile scientists have experienced losing the respect of their peers upon becoming 'media darlings' or 'celebrity scientists'[2,3]. Subsequently, scientists' fears that public visibility could penalize them career-wise, became known as the 'Sagan effect'[4].

For today's astronomers, however, the Sagan effect seems to be fading. A global study[5] of astronomers by Marta Entradas and Martin Bauer in *Nature Astronomy* paints a picture of a scientific community where most of its members are enthusiastically involved in public communication, with 87% of astronomers regularly participating in public events and media activities, and half of them taking part in at least nine such events per year. They are not deterred by fears that their peers may criticize their public visibility. Few of them care about rewards, such as recognition or

world. Its findings distinguish astronomers from a broader view of scientists across scientific disciplines where public science communication frequently emerges as a problematic and peripheral activity, hindered by time constraints and a lack of incentives.

The study shows that, globally, more than two-thirds of astronomy outreach activities take place in North America and Europe — that is, in regions where most astronomy research and research-active astronomers are located. However, the most active engagers are more likely to work in less-developed regions that host large astronomy infrastructure projects, such as the European Southern Observatory in Chile and the Square Kilometre Array (SKA) in South Africa. This distribution is particularly important in Africa, where astronomy is positioned as a scientific field that is uniquely able to stimulate science engagement with marginalized communities, thereby fostering socioeconomic development across the continent[6]. For example, Sphesihle Makhathini (Fig. 1) is one of many astronomers associated with the SKA project in South Africa who are also actively participating in outreach projects such as Hip Hop Science Spaza, a science

Fig. 1 | Astronomer Sphesihle Makhathini addresses the crowd during a Hip Hop Science Spaza event. Credit: Kavo R / Jive Media Africa

Get your science into the news with help from your press office.

Press ahead

Public information officers can help scientists to share their research more widely.

From science to media:
communication,
or PR?

Matt Shipman

Public information officer (ex-reporter)

Media must report on science – many benefits, including for science

As long as science public relations are done responsibly – not exaggerated – it can bolster public interest, trust and support for research funding.

Prof Emma Weitkamp

Researcher in science communication

- Concerned about increasing reliance of science journalists on PR sources
- Not comfortable with the copy-paste approach (from university press releases to news)
- Universities are self-interested organisations with own agendas
- Press releases framed to suit the organisation.

Journalists should read these critically and treat them with caution

On Designing Communication between the Scientific Community, the Public and the Media

Science & media
= essential pillars of democracy

Both changing profoundly

Science (universities): funding crisis; increased competition; indicator-based metrics

Media: digitisation & fragmentation; changing character; economic pressures

Internet & social media – science now directly to the public

PUBLIC COMMUNICATION FROM RESEARCH INSTITUTES: IS IT SCIENCE COMMUNICATION OR PUBLIC RELATIONS?

The changing rationale of science communication: a challenge to scientific autonomy

Frank Marcinkowski and Matthias Kohring

ABSTRACT: *We argue that the institutionalized push communication of academic institutions has become the dominant form of public science communication and has tended to force other forms and functions of science communication into the background. Given the new schemes of public funding, public communication of science now primarily serves the purpose of enabling academic institutions to promote themselves in a competition that has been forced upon them by the political domain. What academics working under these conditions say about themselves and their work (and what they do not) will depend crucially on the strategic communication goals and concepts of the organizations to which they belong. We surmise that the inherent logic of this form of science communication represents a potential threat to the autonomy of scientific research.*

Frank Marcinkowski & Matthias Kohring

Science communication researchers

Need more focus on the lay public and less on media. Critical of institutionalised "push" communication and the so-called "mediatization" of academic institutions where universities simply cannot get enough of publicity.

This kind of science communication – focused on getting public attention – may actually threaten the autonomy of scientific research - the desire for media visibility may cause researchers to choose topics purely on the basis of their potential for media attention and popularity.

PCST = A professional anomaly

- Needed
- Valued
- Rewarding
- Increased demand
- A pathway to policy influence
- A requirement for leadership

OBJECTIVE: PUBLIC GOOD

- Low-status activity
- Stigmatised and criticised
- Potentially harmful
- Little or no support / recognition
- Very few incentives
- Not for ‘serious’ scientists

OBJECTIVE: SELF-PROMOTION