



SFA Foundation

Linking Science & Society: **Public Engagement with Science**

“From Science to Impact”

The relationship between Science & Society

- What do we see when we examine the relationship between science and society?
- Are we doing enough to bridge the gap between science and society? If yes, what are we doing and how effective has this been?
- Should society be open to every research or scientific development/advancement 'sold' to them? Does society have the right to say No? To question? To debate? To contribute to this science?
- How about science? Should science and scientists respond to every need/demand society makes?

Public Engagement with Science (PES) - Context

- Africa faces profound development challenges.
- To make the most effective and robust choices to respond to these challenges, Africa must draw on the best scientific knowledge available to her.
- Controversies and uncertainties related to today's big development challenges (*e.g., Vaccines, Genetic Modification, Climate Change, Artificial Intelligence, etc*) suggests that responding to these issues is not simply a matter of utilizing the best science available.

- Increasingly, we are required to simultaneously address complex social and moral questions because discussions of new discoveries, technologies, or concerns about science take place in a socio-political context.
- Social values and personal experience also play key roles in making decisions about societal questions that science can inform.
- So rather than focusing exclusively on science; engaging with the social, political, and cultural fabric in which science gains its relevance is crucial.

Communicating Science

- Engaging with the social, political, and cultural fabric in which science gains its relevance, also referred to as ‘bridging the gap between Science and Society’ calls for communicating science beyond academia.
- Communicating Science involves different practices. These include;
 - Scientific academic communication (*scientists sharing amongst peers*),
 - **Public communication of science** (*scientists sharing science with non-scientist audiences*),
 - Educational communication (teaching and learning science) and
 - Digital Science Communication

Public Communication of Science

Public Communication of Science applies 4 models. Tayeebwa et 'al

- **Knowledge deficit model:** This posits that scientists are experts, and the public have a deficiency of knowledge. The model applies a uni-directional approach of sharing science with society. It assumes that when you feed “ignorant” people with information, they will develop positive views about science; but we know from experience, that this is not always the case.
- **Contextual model:** Based on the needs, attitudes and situations of different audiences.
- **Lay expertise model:** Acknowledges that audiences have pre-existing knowledge (e.g., Indigenous knowledge) which can be leveraged.
- **Public Engagement model:** Promotes bi-directional sharing of views between scientists and non-science public audiences with the aim of mutual learning.

These models are NOT mutually exclusive, although historically, communicating science to the public has been grounded in the knowledge deficit model. Scholars and reflective practitioners now argue for an integrated approach.

Because:

- Science Communication is more than merely translating scientific knowledge into simpler information that the public can easily understand,
- People have their own ideas, beliefs and knowledge that influence how they receive and perceive scientific information,
- Science Communication is not simply encouraging scientists to talk more about their work. <http://pus.sagepub.com/>

These arguments lay the foundation for the ‘**engagement**’ rhetoric.

In Science, 'engagement' impels scientists and non-scientist publics to adopt a **dialogic and participation model** to the development of science and its application in society.

Justification? Both parties have expertise, valuable perspectives, and knowledge to contribute to science, fostering mutual learning.

We apply this term in two ways:

- **Community Engagement (CE) and**
- **Public Engagement (PE)**

Community Engagement (CE)

- Refers to the active involvement of the research host community throughout the research life cycle, using participatory approaches and working in partnership with all key stakeholders.
- CE includes a range of activities which involve interactions between researchers, community members, and stakeholders, aimed at improving the relevance, value and conduct of research.
- CE targets communities of people who are directly affected by or involved in research. The aim is to amplify the voices of communities most affected, with the view to enhancing research design and delivery, and reducing research waste.
- At the core of CE is **research for the right reasons!**

Public Engagement (PE)

PE encapsulates broader public groups NOT Directly involved in research, but can influence research

Motives underlying PE with science are varied, so are its impacts. Key are:

- I. **‘*Democratization*’ of science** – a scientific culture that supports inclusivity, cooperation, and service (*i.e., the normative expectation of community or public involvement in science knowledge and innovation-making processes, and when possible, in science policy decisions*), and
- II. ***Creating a science engaged public.***

PE is a sub-set of science communication that seeks to enhance opportunities for various non-scientist public groups to engage with science as active participants.

Understanding the field

- Community and Public Engagement (C&PE) is a dynamic field of practice.
- There are several terms used, e.g., *Community Engagement, Community Engagement and Involvement, Patient and Public Involvement, Science Engagement, community outreach, people centred research, co-production/co-creation, engaged research, citizen science, participatory research, Human Centred Design (for innovation) etc.*
- *It involves diverse activities and interactions based on context, nature of science/research, target audience / population, and intended outcomes.*

Tenets of C&PE with Science

- Dialogic interactions between scientists and non-science publics.
- Communicating transparently and, relatability
- Seeking perspectives that scientists may have failed to anticipate by considering only their own experiences and/or values.
- Providing opportunities for mutual learning between scientists and non-science publics.
- Inclusivity – ensuring those most affected by the health and development challenges we seek to address are not left behind.
- Non-science publics are invited to be active participants in science, research, and innovation domains, contributing to the production of expert knowledge and decisions.

Where does Policy and Media Engagement fall?

Policy Engagement:

- Policy engagement aims to ensure that policy decisions are informed by evidence – that academic research contributes to public policy.
- Policy making is influenced by several factors besides research evidence. It is also influenced by;
 - Available resources (economics) and
 - Public opinion (*e.g., politics, ideology, values, power dynamics, interests, habits, traditions. i.e., socio-cultural/political*)
- Engaging with policy makers from the onset, rather than at the tail end of a research project is crucial to ensure research evidence is prioritized above other competing priorities.

Where does Policy and Media Engagement fall – Cont'd?

Media Engagement??

So...

**How Can We Facilitate
Meaningful Engagement?**

What Does It Look Like?



Meaningful Engagement is...

- Ethical, Practical, and Rewarding!! Engaging non-researchers (***research participants, research host communities, key stakeholders and the wider public***) in research;
 - **Safeguards ethical compliance,**
 - **Enhances research design and delivery** because more appropriate questions, methods and outcomes are chosen,
 - **Reduces research waste** because the research is less likely to fail,
 - **Facilitates participant recruitment & retention** because research is done in ways that help more people to take part and provides a better experience,
 - **Supports better health and care decisions** because the research is more relevant to the health care needs of those it is for and about,
 - Overall, **builds public trust** in science.

The research is therefore more likely to have an impact in the real world.

Yet despite these rewards, we still experience tokenism. Why?

- Science/research impact focuses on traditional academic indices e.g., # of publications, author citations & grants won.
 - Researchers not rewarded for C/PE – it's not considered a priority. (media & policy engagement prioritized)
- Researchers have limited understanding of the concept "engagement", and limited experience with effective methods of engagement.
- Researchers feel its too cumbersome!
- Minimal or no budget to support implementation.
- Limited pool of engagement experts to support researchers
- Dearth of evidence to support the value of C/PE.

**Tokenism in
community
Engagement in
research**

CONSEQUENCES OF TOKENISM IN COMMUNITY AND PUBLIC ENGAGEMENT IN RESEARCH



Reproductive Health Matters

An international journal on sexual and reproductive health and rights

ISSN: 0968-8080 (Print) 1460-9576 (Online) Journal homepage: <https://www.tandfonline.com/loi/zhm20>

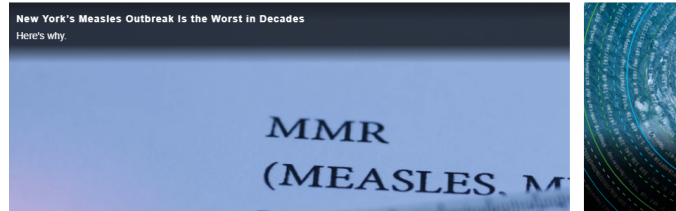
The female condom: the international denial of a strong potential

Anny Peters, Willy Jansen & Francien van Driel (Assistant Professor of Development Studies Professor of Gender Studies and Director PhD candidate)

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Measles Outbreaks Nearing Levels Not Seen Since 1992. Anti-Vax Propaganda Is Partly to Blame



Community mistrust worsening DR Congo Ebola outbreak: study

A new study says a quarter of people interviewed in eastern DR Congo last year believe Ebola is not real.

28 Mar 2019

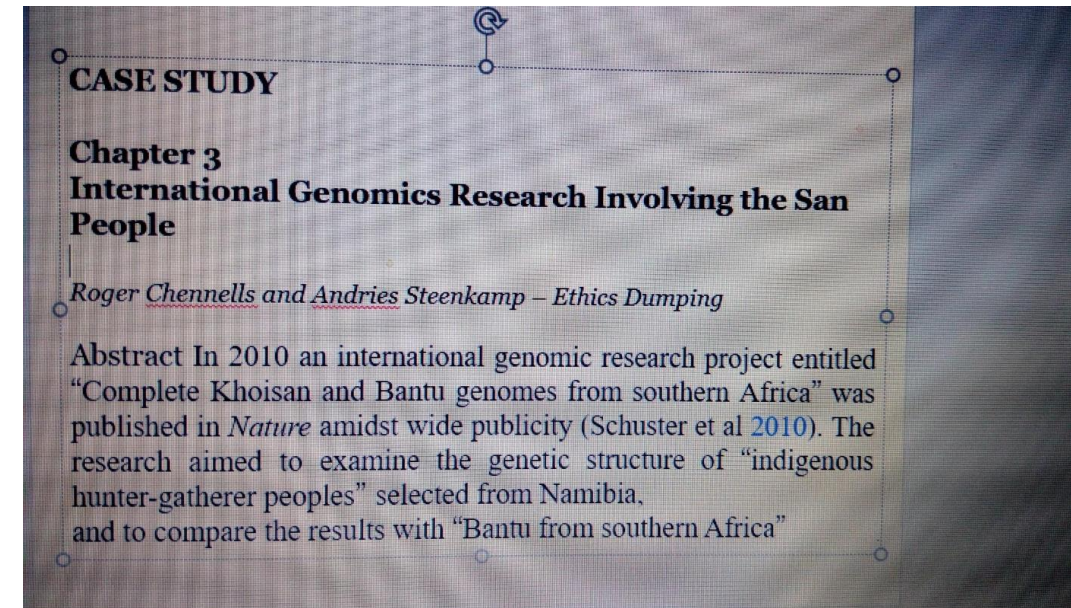
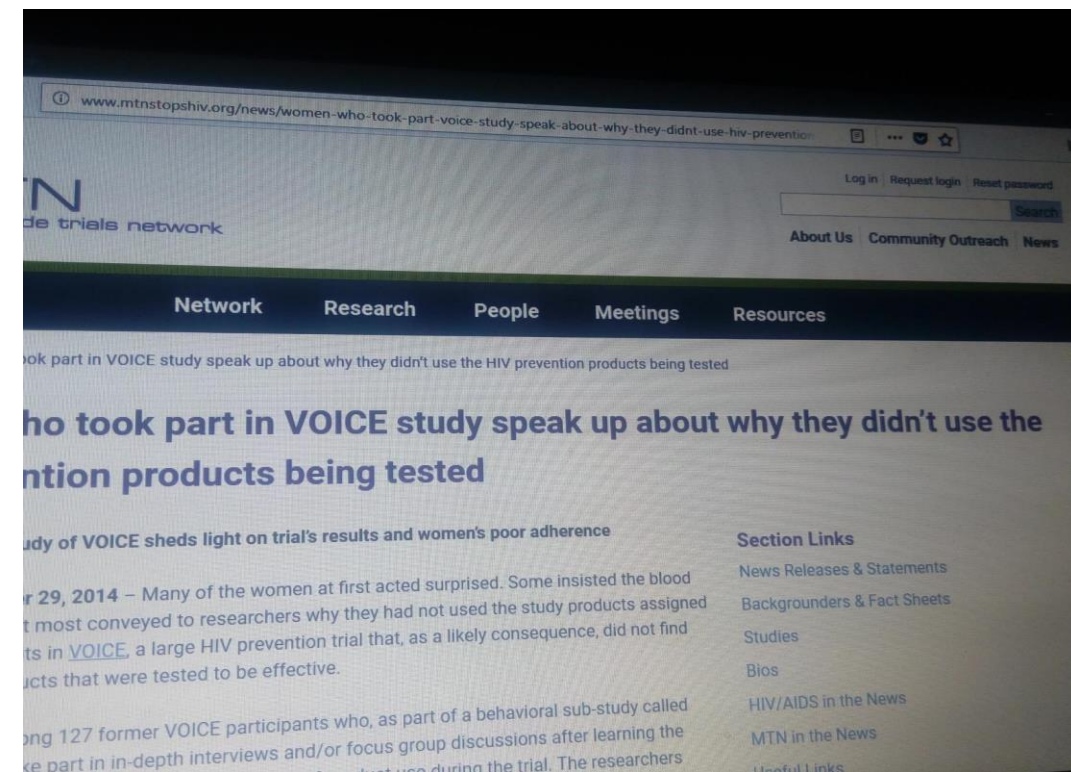


BURKINA FASO GMO

Burkina Faso split over genetically-modified mosquitoes to combat malaria

efe-epa | By Maria Rodriguez Dakar | 12 Apr 2019





THE HORIZON: GLOBAL RECOGNITION OF THE IMPORTANCE OF CE

There is increasing global traction for community engagement, with current focus on clinical trials.

- The **WHA 75.8 Clinical Trials Resolution** made a call for
 - “*Well designed, ethically conducted trials.*” What does this mean? From a patient/public perspective, this means trials that are relevant and feasible. CE when embedded in research throughout the research life cycle – including from study design phase contributes to research that is relevant, responsive and ethical.
- WHO global survey of priority areas to develop to strengthen the clinical trials ecosystem highly ranked Patient and Public involvement among priority areas needing development.
- WHO is leading efforts to operationalize WHA 75.8 clinical trials resolution including strengthening community engagement

Where to start: Good Participatory Practice (GPP) engaging Non-research Publics

- The organizational strategy includes a commitment to CE, which is actively monitored.
- The institution has a plan, budget and staffing
- Consider budgeting for this work as part of core funding instead of study specific funding.
- Embed this work in relevant institutional policies and procedures.
- Research and institution leaders actively support this work.
- Appropriate training is provided to staff to enable create shared understanding and appreciation.
- Reward researchers who participate in, support or directly engage their host communities in their research.

NUTSHELL: Science should Transform Lives!

Providing demonstrable contribution beyond Academia.

Therefore, engaging with the social, political & cultural fabric in which science gains its relevance is crucial.

When done in a meaningful way, C&PE offers REWARDS:

- It safeguards ethical compliance,
- Facilitates participant recruitment & retention in studies,
- Improves research design,
- Builds public trust in science,
- Improves research outcomes,
- Facilitates translation of research to policy,
- Enhances uptake of research products and policies,
- Inspires future generations of scientists and overall,
- Creates a supportive environment in which science can flourish.

RISKS:

- Science/research being viewed as unaccountable to society
- Science/research being seen as an endeavor of outsiders hence misunderstood and mistrusted



THE END

Thank You