Ivory Towers & Sleeping Beauties

Sleeping Beauties in Science: publications that go unnoticed for a long time, before being re-discovered and becoming very popular much later on.[1,2]

Ivory Towers in Science: an environment of intellectual pursuit disconnected from the practical concerns of everyday life.[3]

Formats of Science Communication

Social Media
Blogs
Instagram
Twitter
Youtube

Traditional Journalism
Newspapers
TV
Radio
Books
Magazines

Live / Face-to-Face
Community Outreach
Talks
Science Fairs
Science Cafes [3]

Personal Risks of Science Communication (for Academics)

Another job
It's personal/risky
Little reward
Neutrality
"Pop Scientist"
Being misunderstood

Scientific Manuscripts

+/- : rigid rules/structure
clear, concise, replicable
increased comparability
readability at different levels;
but almost exclusively
read by scientists.[4]

Styles

Creativity knows no boundaries!

Frontiers for Young Minds
Skype a Scientist
TV (I'm a Scientist – Get me our of here)
TED talks
Cartoons (ERcComics)
Comedy (Bright Club2)
Songs
Dance your PhD

Facts or Fiction?

Info overload and limited attention may cause our difficulties to separate facts from fiction.[8]

The Core of Science

Hypothesis
Idea
Observation
Evaluate
Experiment
Question
Analysis
Test
Create
Interpretation
Prediction
Theory
Science Communication

Use of skills, media, activities and dialogue to produce **AEIOU**:
Awareness, **E**njoyment, **I**nterest, **O**pinions and **U**nderstanding of science. Inevitably it thus needs to include the whole scientific method, not merely its results.[5,6]

Are we ready yet?

Real-world neuroscience?

Framing matters: what is considered normative can shaüe expectations & behaviour.

Unbalanced / incorrect translations of scientific work may lead to self-fulfilling prophecies (e.g., the teenage brain).[10]

Motivations for Science Communication

Utilitarian argument:
technical skills and useful knowledge.

Economic argument:
Science provides towards foundations of an advanced society and overall output of a region.

Cultural argument:
Science equals a 'shared heritage', is a wider part of our culture.

Democratic argument:
Science affects most major decisions in society and the publics' basic ability for interpretation of science is needed.[1,9]

Personal gains:
Skills development
Career enhancement
Research quality & impact
Personal & institutional profile
Influence & networking chances
Forming new collaborations
Enjoyment & personal reward
Increasing recruitment
Increasing awareness
Additional funding
New perspectives
Inspiring others [5,9]

Inaccurate Science

Digital Wildfires

when misleading or provocative media contents spread uncontrollably, resulting in very negative outcome.[7]

Popular Media drive Popular Beliefs

Beyond others, inaccurate representation of scientific facts can harm the image of science (e.g., self-/professional-representation), reflect badly on potential clinical populations (e.g., stigmatization of mental health disorders) or may manifest in misuse/wrong framing of scientific facts in order to drive political beliefs.

References

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