EMRS Spring 2015 Conference – Lille, France

Workshop on Science Communication
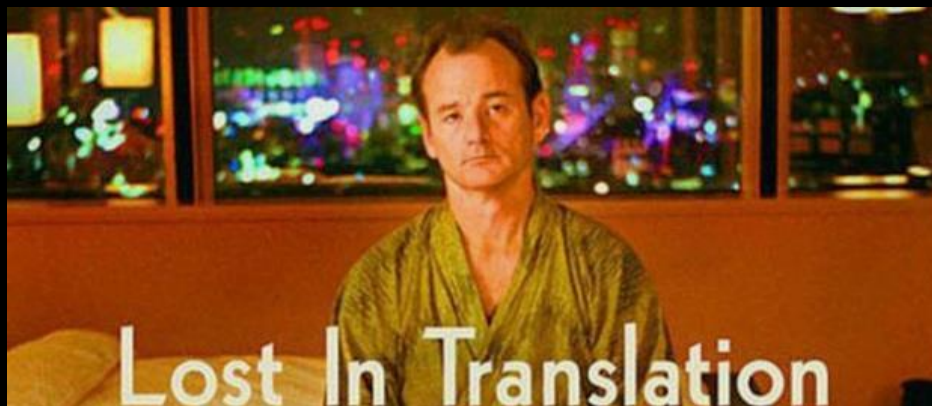
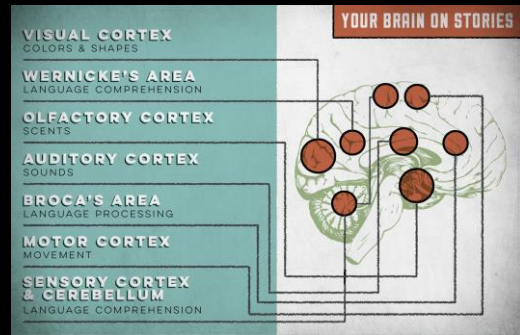Seminar handouts

15 May 2015

Science – Media – Public

Us and them
And after all we're only ordinary men...
Black and blue
And who knows which is which and who is who...
'Haven't you heard it's a battle of words'
The poster bearer cried...
With, without.
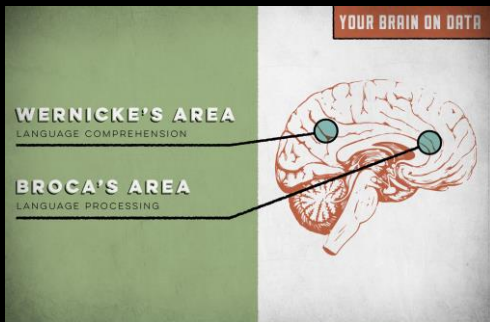And who'll deny it's what the fighting's all about?

Pink Floyd, 1969

"Give them the story"

YOUR BRAIN ON STORIES

VISUAL CORTEX
COLORS & SHAPES

WERNICKE'S AREA
LANGUAGE COMPREHENSION

OLFACTORY CORTEX
SCENTS

AUDITORY CORTEX
SOUNDS

BROCA'S AREA
LANGUAGE PROCESSING

MOTOR CORTEX
MOVEMENT

SENSORY CORTEX
& CEREBELLUM
LANGUAGE COMPREHENSION

A story doesn't spark agreement or disagreement but rather participation. In fact, stories ignite 7 parts of the brain, which is testament to why as humans we love stories.

"Give them the data"

YOUR BRAIN ON DATA

WERNICKE'S AREA
LANGUAGE COMPREHENSION

BROCA'S AREA
LANGUAGE PROCESSING

When you share facts and stats with your audience, they are going either to agree or to disagree with you > Only two parts of your audiences' brain will ignite when reacting to data.

Is what you say what they hear?

So, who is to be your story's teller?

A Science Journalist's role is…

...to get informed on science findings and technology achievements

...to understand their meaning and evaluate their impact on society

...to "translate them" to the public in a way that makes them comprehensible, without altering their meaning

Information sources of a Science Journalist

First hand:

- Peer-reviewed publications
- Conferences & Exhibitions
- Contacts with scientists
- Interviews

Second hand:

- News agencies
- Press releases
- Articles in specialised periodicals

What is "news" to a Science Journalist?

Any new development that provides:

1. Impact to readers' life
2. Immediacy (happening now)
3. Proximity (the closest to the reader the better)
4. Celebrity (involving well-known actors)
5. Surprise (unexpected)
6. Juxtaposition (drama)
7. Emotion (humanism)

and

8. is an issue of science / technology

Ah!
123
[230]
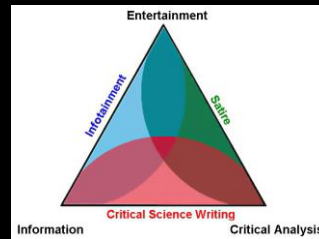The Element of Surprise!
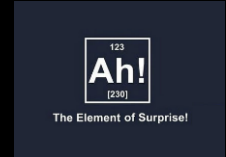
Popularisation of Science recipe

- Present the importance of finding
- Present related previous findings
- Explain meanings and terminology
- Convert in everyday terminology
- Present case as a drama plot
- Enhance presentation with easily understood graphs and images
- Compare finding with competitors findings
- Extract meaningful conclusions
- Prepare readers for next science/technology steps in the field

Popularisation of Science recipe

...as a juicy storytelling

Entertainment

Infotainment

Satire

Critical Science Writing

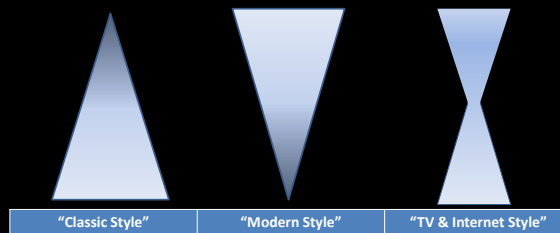Information

Critical Analysis

Check-points of Science Journalism

1. Use only peer-reviewed findings
2. Study and understand the science field you refer to
3. Cross-check reliable sources
4. Present all angles (pro and against)
5. Present issues in need of further investigation
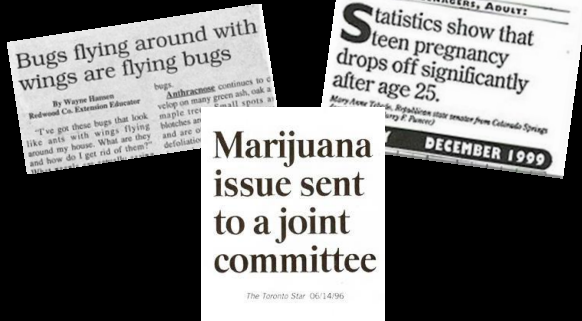6. Avoid judging as... omniscient

Styles of Storytelling

"Classic Style"   "Modern Style"   "TV & Internet Style"

Titling pitfalls

...usually committed by Editors in Chief

Bugs flying around with wings are flying bugs
By Wayne Hansen
Redwood Co. Extension Educator
"I've got these bugs that look like ants with wings flying around my house. What are they and how do I get rid of them?"

ON TEENAGERS, ADULT:
Statistics show that teen pregnancy drops off significantly after age 25.
Mary Anne Tebele, Republican state senator from Colorado Springs
DECEMBER 1999

Marijuana issue sent to a joint committee
The Toronto Star 06/14/96

What's the technique of a science interview?

Preparation:
1. Study CV
2. Study previous interviews
3. Study personality
4. Study latest achievement
5. Study what antagonists say about
6. Set questions of global value
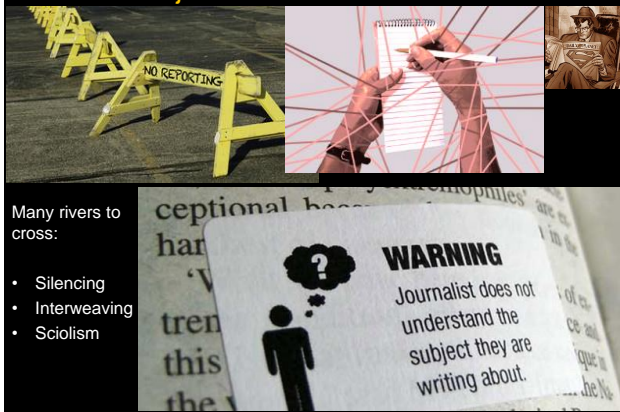7. Set questions of local value

Execution:
• Start with relaxing questions
• Then ask a shocking question
• Continue with harsh questions related to our times
• Question the scope of his/her research and project to future ramifications

and... whatever else your baits get

How objective is a Science Journalist?

NO REPORTING

Many rivers to cross:

• Silencing
• Interweaving
• Sciolism

WARNING
Journalist does not understand the subject they are writing about.

So, what can a scientist do?

1. In the case of institute press releases, get involved in their writing in order to make sure that
   – they provide the storytelling hooks the journalists seek for
   – they convey the correct message, in simplified terminology
   – they contain explanatory multimedia data (graphs, images, videos…)

2. In the case of interviews
   ➢ get prepared by… interviewing yourself as if you were a science journalist
   ➢ always record and keep a copy of the interview taken
   ➢ ask (kindly) from the journalist to see the article before publication

So, what can a scientist do?

3. In the case of self-publishing (blogging etc.)
   ✓ remember *scripta manent*: whatever the atmosphere, your words can always be used later out of context and harm you
   ✓ popularisation of science is not best served by personal comments and attacks on others' work

BLOG = an online tool for publishing one's thoughts, stories, news, links etc. in an extended form, on an ongoing basis (e-diary).

SCIENCE BLOG = a blog featuring primarily content that disseminates, explains, reports, comments upon, investigates, aggregates or otherwise deals with science and science-related concepts or events *[Wilkins, 2008]*

The evolution of scientific blogging

Traditional functions
• Debunking
• Expert opinions
• Media Criticism
• Community building among scientists
• Translation of scientific research

New functions
• Science journalism
• Sources of science news
• Curation
• Critical analysis
• Discussion of science missing from mainstream media
• Opening up the science research process
• Citizen science, etc.
• Adding value and advancing the conversation around scientific issues

SCIENCE BLOGO-JOURNALISM
• Interviewing
• Editing
• Fact checking
• Social responsibility
• News values
• Shareability
• Scientific values

"Is there anybody out there?"

BLOG readership is a function of accumulated trust:

IMPACT OF MONTHLY BLOG ARTICLES ON INBOUND TRAFFIC

TRAFFIC INDEX

MONTHLY BLOG POSTS
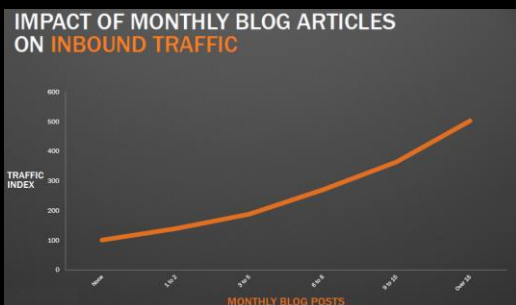
Correlation between blog writing frequency and website traffic *[graph from HubSpot, compiled from 7000 companies-worth of data and research].*

Where is Science Journalism heading to?

"Self-expression" tendency of scientists:

Content
Writers — Editors
Public — Organisational framework
Readers

Conclusion: Every field of science will produce internally "its own editors"

Problem to solve: In an era of galloping interdisciplinary research, who can be the "combinatorial editors" needed?

A growing concern: Visual language
"No more readers; just viewers"

Century of Visualisation:
Words and data are to be read only when *translated* into images, graphics and video.

Collateral damage: "Science story-telling" is to be left to those who know how and can afford multimedia productions.

Example: Videogame trailer
"Call of Duty: Black Ops III Ember" Tease www.youtube.com/watch?v=BIr053KoO6w

MANKIND'S GREATEST MISTAKE WILL BE ITS INABILITY TO CONTROL THE TECHNOLOGY IT HAS CREATED.

[video]

Suggested bibliography:
Media Survival Guides for Scientists

- European Commission (EC): "Science Communication: A Scientists' Survival Kit" http://ec.europa.eu/research/science-society/pdf/communicating-science_en.pdf
- Communicating Science News http://www.nasw.org/csn/
- How do I become 'media savvy'? www.saasta.ac.za/scicom/pdfs/media_savvy_for_scientists.pdf
- Media Skills for Scientists http://www.saasta.ac.za/scicom/pdfs/media_skills.pdf
- Media Interview Guide https://scripps.ucsd.edu/sites/scripps.ucsd.edu/files/node/3338/edit/Media_Interview_Guide.pdf
- Science and the Media (AAAS book, 2010) https://www.amacad.org/multimedia/pdfs/publications/researchpapersmonographs/sciencemedia.pdf

Thank you for your attention!

Speaker's C.V. in brief

Anastasios (Tasso) Kafantaris has studied Electrical Engineering, Industrial Design and Social Sciences and holds a M.Sc. in Automation & Computers and a M.Sc. in CAD/CAM (Cranfield University, UK). A qualified Technology Auditor for EU Projects, he is fluent in Greek, English and Romanian. An ICT columnist in magazines and newspapers since 1981, Tasso Kafantaris has served as editor-in-chief, managing editor and director in various periodicals and magazines, and as a Technology & Innovation Consultant to the industry and the Greek Government.

Working for Lambrakis Press SA since 1999, Mr Kafantaris is a Science & Technology Analyst for "To Vima" (biggest circulation Sunday newspaper in Greece). A growing number of his articles are being used by universities in Greece as case studies of "popularisation of science" and some of them were presented by the "Greek Human Rights Authority" to E.U. Information Society Programme as best popularisation examples of the "e-business" and "e-government" concepts. He is the author of two books on Information Society, author of a History/Science Fiction book (The Taste of Memory) and scientific editor of J.R. Oppenheimer's biography "American Prometheus" - Greek edition.

During 2007-2008, Tasso Kafantaris was the leader of a writing group that produced multimedia educational material for the E.U. Project "Digital Municipalities". In May 2008 he was awarded the ECOPOLIS Prize for Journalism.

e-mail: a.kafantaris@gmail.com