

Communicating science to lay people

Communicating difficult science to lay people

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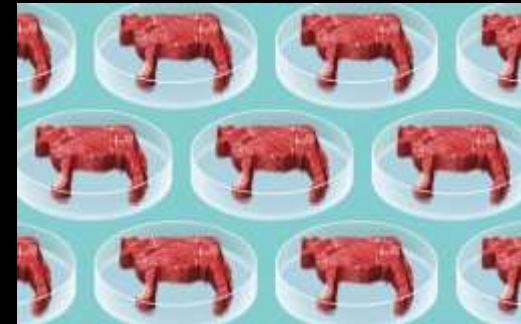
*Communicating difficult
science to lay people...?*



Communicating *difficult*
science to lay people...?

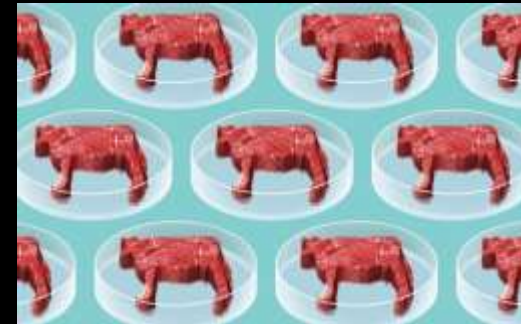


Novel foods...



Not necessarily novel problems

Novel foods...

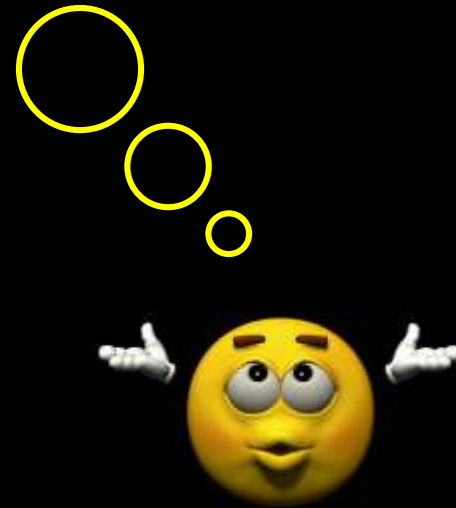


Science is probably not the difficult bit...

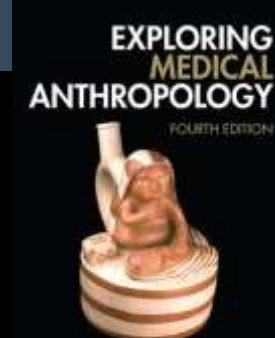
*Communicating difficult
science to lay people...?*



*Communicating difficult science **to**
lay people...?*



Why listen to me?



Why listen to me?

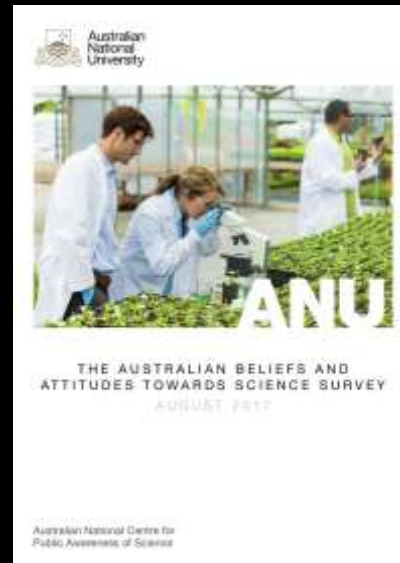
Sci-comm courses since 2000 (some of the first in the world)



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National Polls (2010, 2017, 2018)



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Risk and persuasion



Why listen to me?

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Risk and persuasion

Science communication and advocacy/ activism, public intellectualism

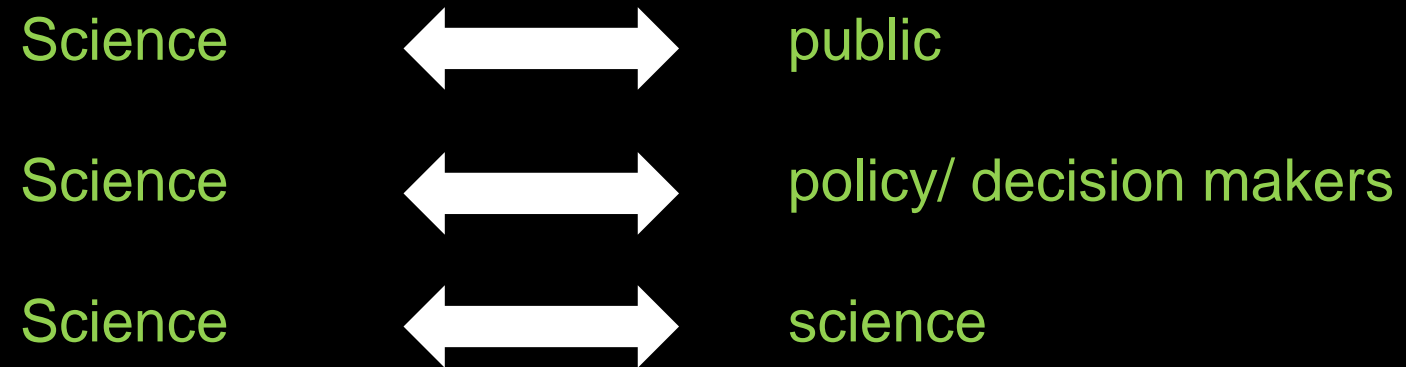


And a lot of public communication ...



<http://www.wholesomeshow.com>

Science communication is...



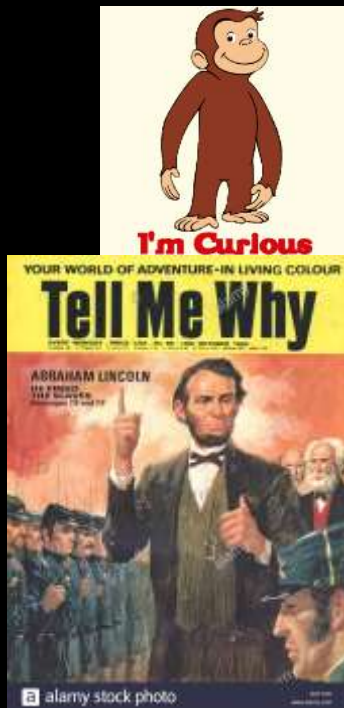
“English to English translation”

In context



*it's important that people
understand this science*





so they'll see there's a problem, and...

they'll do something about it

The Deficit Model

Education =

motivation

inspiration

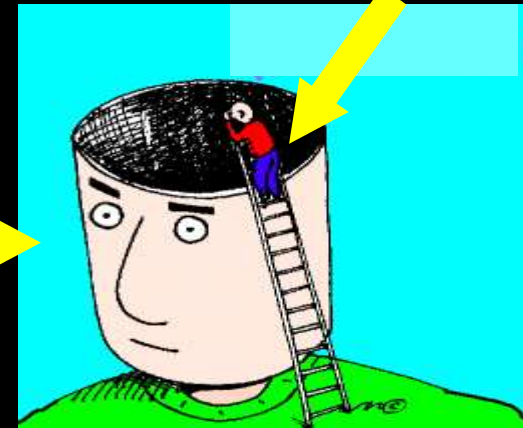
attitude change

behaviour change

acceptance of science

Science knowledge privileged
above all other

Public →



Scientist

Expertise = formal, scientific
qualifications

The Deficit Model

*Relies on the belief that
people are rational*

*(or are at least motivated to behave
rationally)*



Actually...



Actually...

*It's not that people aren't
rational*

*It's that their rationales aren't
always apparent*



often more than the science
matters

Bunch of hippy crap?





*But what if
you just have
straight
forward data?*



Trisomy 21 - Down's Syndrome

Mother's Age	Risk of Down's
20 - 30 years	1:1,500
30 - 35 years	1:750
35 - 40 years	1:600
40 - 45 years	1:300
45 plus	1:60



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Yes, facts speak for themselves

But - they have the annoying habit of saying different things, to different people, in different contexts

So - their effects can also be... different

Risk perception & communication



Technically



Risk

=



Probability

X



Consequence

BUT

Risk perception is influenced by many other factors, e.g.,

The **rarity** of the event

How much **control** we believe we have over the hazard

How **bad** we think the **outcomes** will be

Whether the risk is **voluntarily**

Socially



Risk

=



Hazard

+



Outrage

Or ...



=



x



The “real” risk

*You should listen to us, we know
what’s actually going on...*



If only they would tell us the real risks...



Two of the most common errors in risk communication...

*Trying to convince people to accept a risk
where they get (less than) no benefit*



Two of the most common errors in risk communication...

Trying to convince people to accept a risk where they get (less than) no benefit

Focussing on technical arguments to do it



CONTEXT
MATTERS

*You don't get to tell people what's
important to them*

Quarantine



Don't do this

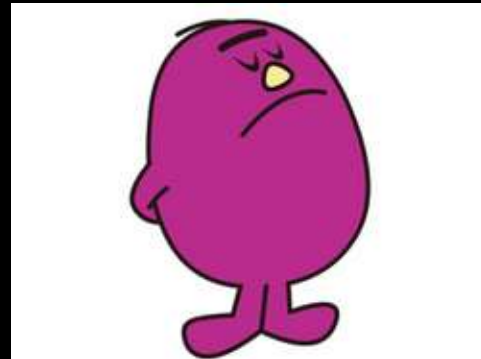


Because you (should)
care about this

But you can let them tell you



I'll see it when I believe it



“motivated numeracy”



...respondents performed wildly differently on what was in essence the same basic problem, simply depending upon whether they had been told that it involved guns or whether they had been told that it involved a new skin cream.

Audiences, publics, lay people

Far more diverse than people expect

Far more nuanced than people expect

Over-generalizing not likely to work well

Audiences



Audiences

What does your audience want from you?

How do you know?

What do you want from them?

Be explicit about this



*Just because scientific facts inform your
message doesn't mean they need to
feature in your message*

(unless your goal is to convey the science)

Assumption...



Are you offering a solution to a problem people don't believe they have?

Assumption hunting

*What people need to
know...*

It's important that...

We should...

You must understand ...





Persuasion ...

OK for advertisers

OK for politicians

So...OK for science/ scientists, too?

Depends on your goals

Persuasion ...

THE CONVERSATION

Academic rigour, journalistic flair

Arts + Culture Business + Economy Cities Education Environment + Energy Health + Medicine Politics + Society Science + Technology



Facts won't beat the climate deniers – using their tactics will

March 13, 2014 3:37pm AEDT

Persuasion ...

Axe the Tax

Repay the debt

Stop the boats



Persuasion ...

*We're breaking
the climate*

There is no doubt

Let's fix it

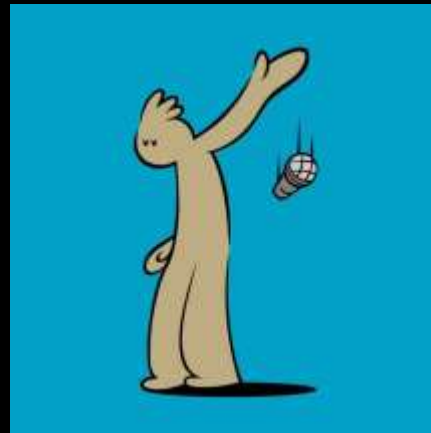






*The “right” thing to do
depends on what you want to
achieve...*

*(and the trade-offs you are prepared
to make to achieve it)*



Thank you