

The Curse of
Too Much Knowledge

FOR THE GREATER GOOD

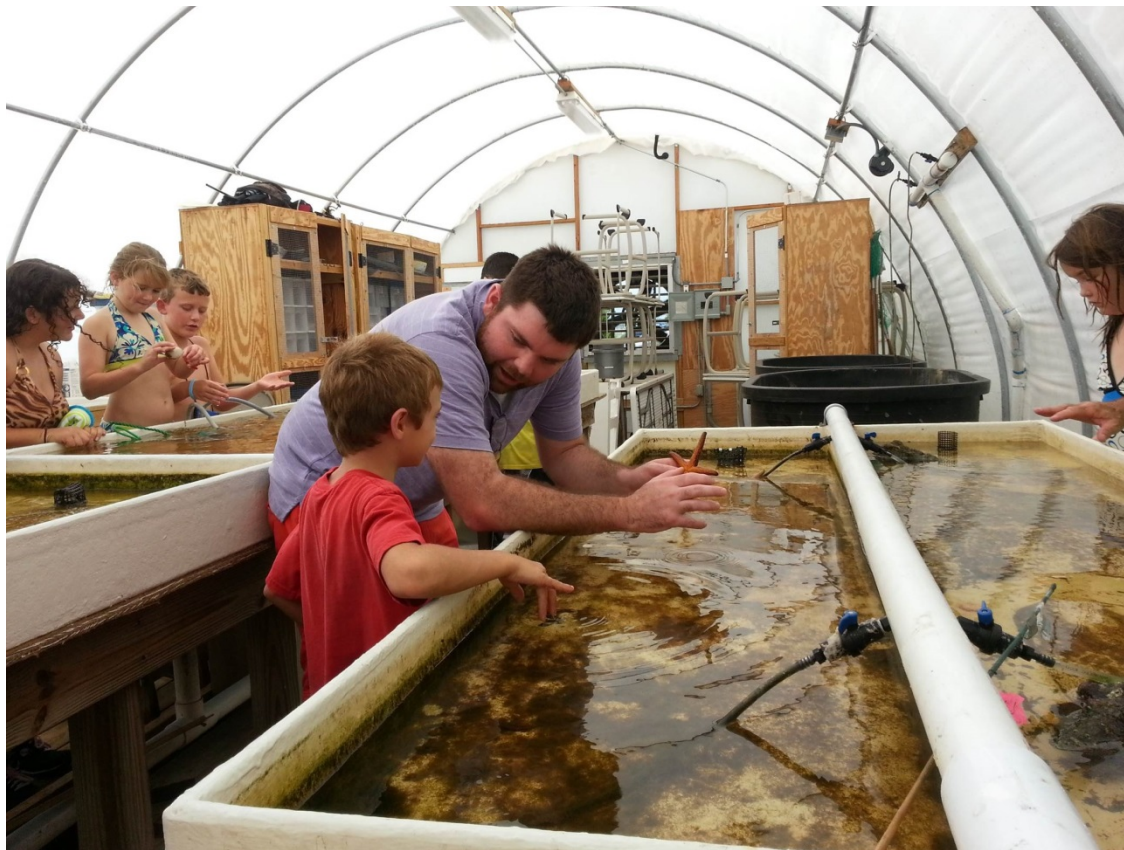
Stemming the Politicization of & Misconduct in Science

- Exxon - Campaign vs Climate Change
- Food & Drug Admin – Falsify Drug Trials
- Sugar Industry -- Paid scientists to blame fats for heart disease
- Tobacco Industry & Lung Cancer
- Right to Life Abortion & breast cancer



Earth & Sky
RADIO SERIES

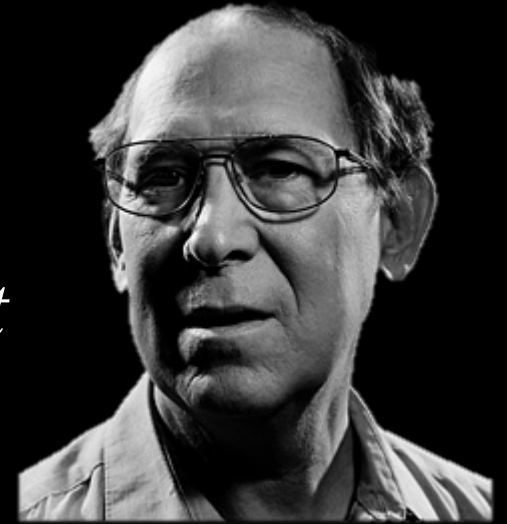
Special Report: Human World
View of the 21st Century



“More and more young people express an interest in having their life's work matter in both social and ecological contexts.”

THE BOTTOM LINE

Staying out of the fray is not taking the moral high ground. It is passing the buck.

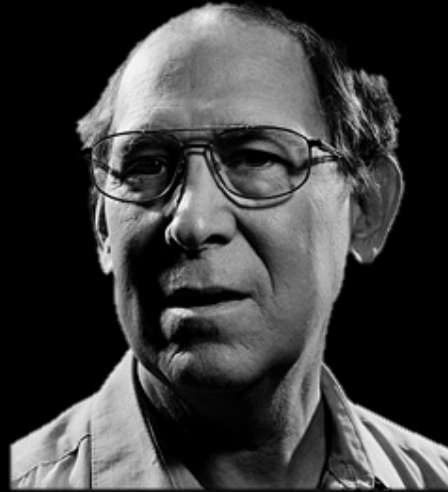


Stephen Schneider

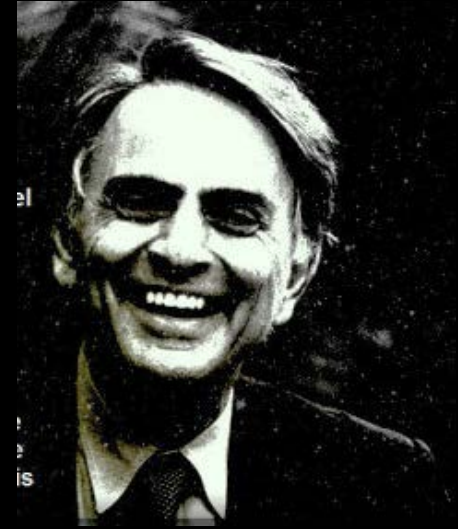
GREAT SCIENCE COMMUNICATORS



SYLVIA EARLE



STEPHEN SCHNEIDER



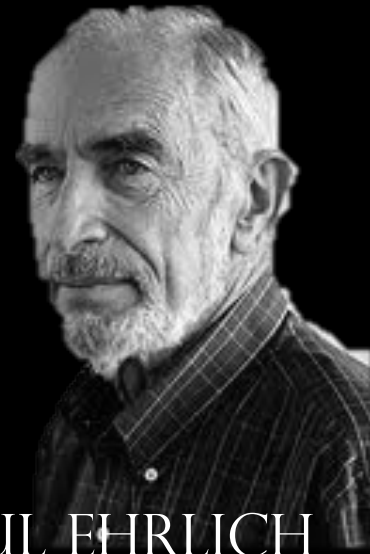
CARL SAGAN



NEIL DEGRASSE TYSON



JANE GOODALL



PAUL EHRLICH

Develop
research
questions
and plan

Assess
Results

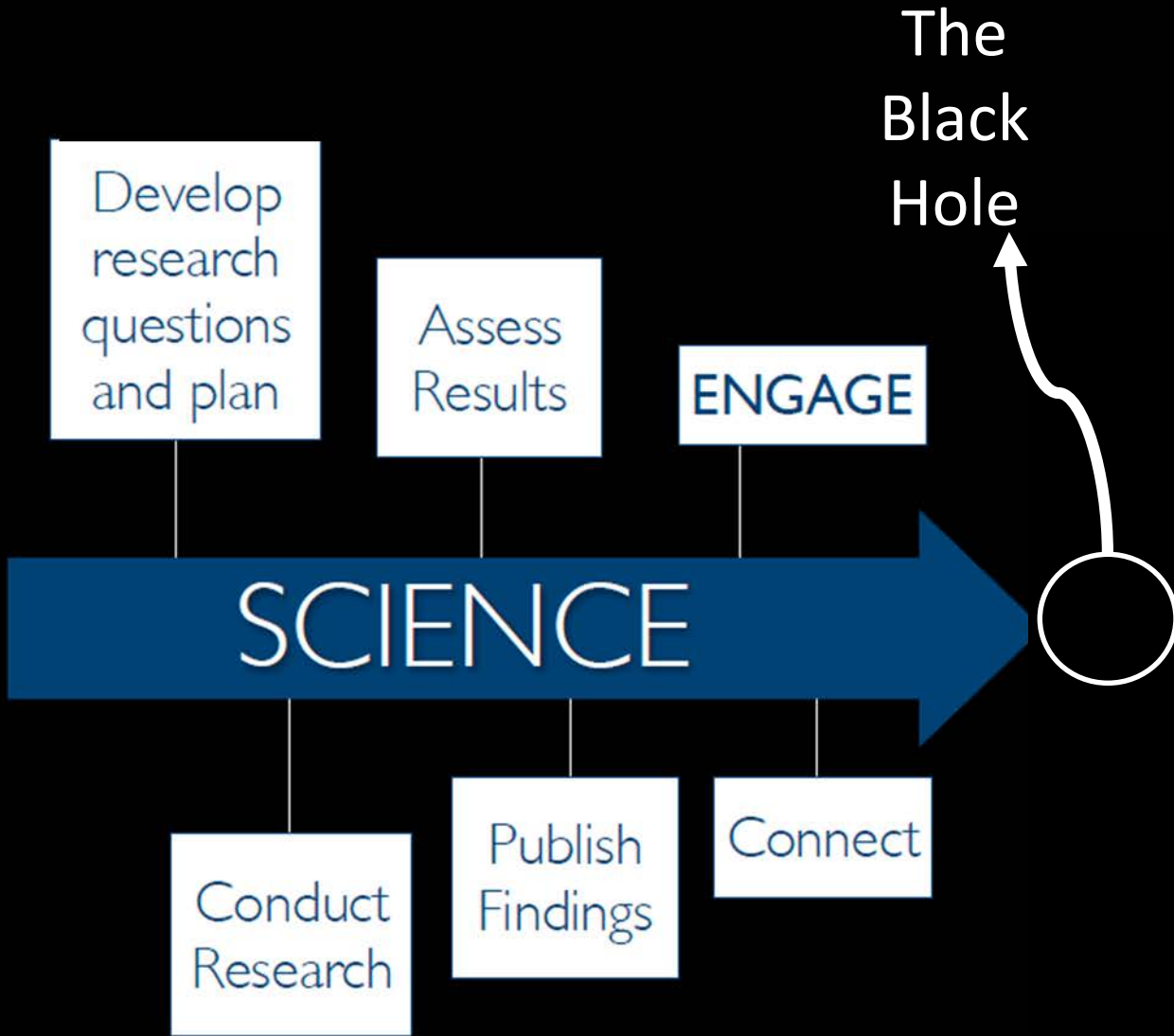
ENGAGE

SCIENCE

Conduct
Research

Publish
Findings

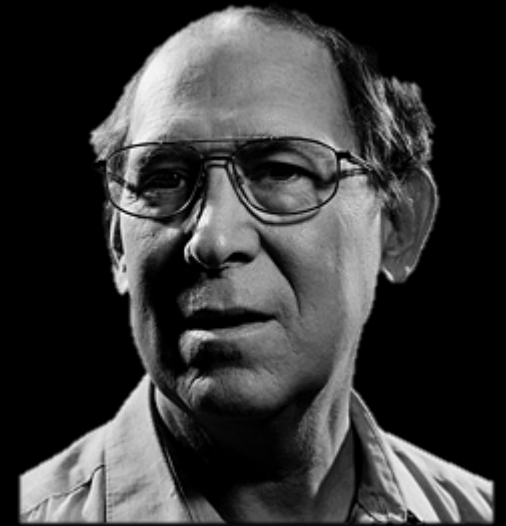
Connect



**Voila!
Change
Happens**

THE BOTTOM LINE

“Know thy audience; know
thyself; know thy stuff”



Stephen Schneider

coastal decision makers policymakers non-science audiences journalists general pu
media citizen-scientists scientific peers donors all ages families children K-12 med
sources natural resource managers board members stakeholders funding agencies
college students managers fundraisers landowners researchers scientists board mem
community groups coastal decision makers policymakers non-science audiences
journalists general public media citizen-scientists scientific peers donors all ages
families children K-12 media sources natural resource managers board members
stakeholders funding agencies college students managers fundraisers landowners
researchers scientists board members community groups coastal decision makers
policymakers non-science audiences journalists general public media citizen-scient
scientific peers donors all ages families children K-12 media sources natural resou
managers board members stakeholders funding agencies college students managers
fundraisers landowners researchers scientists board members community groups co
decision makers policymakers non-science audiences journalists general public me
citizen-scientists scientific peers donors all ages families children K-12 media sour
natural resource managers board members stakeholders funding agencies college
students managers fundraisers landowners researchers scientists board members

WHY ARE YOU TELLING ME THIS?



so what?

Depends on the audience ...

Each person wants to know

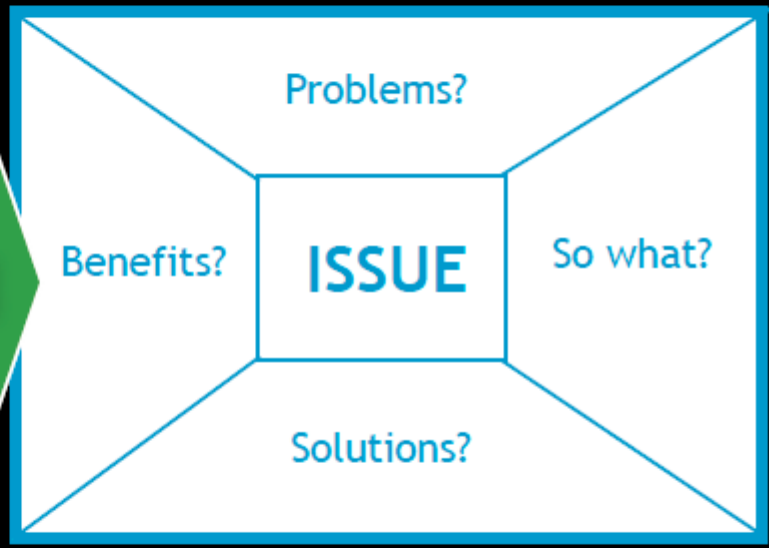
Why does this matter to me?



TRUST

trəst/ noun

noun: trust 1. firm belief in the reliability, truth, ability, or strength of someone or something. "relations have to be built on trust"



The Message Box

Patz et al, 2005. Impact of Regional Climate Change on Human Health. Nature 438:310-317

There is a large geographic difference in disease burdens due to global warming

Problems?

Climate change is triggering disease epidemics

Benefit?

So What?

Those most at risk are the least responsible for causing the problem. Herein lies the global ethical challenge

Solutions?

The US should join the rest of the world in confronting climate change. Personally, I've made easy choices as a first step

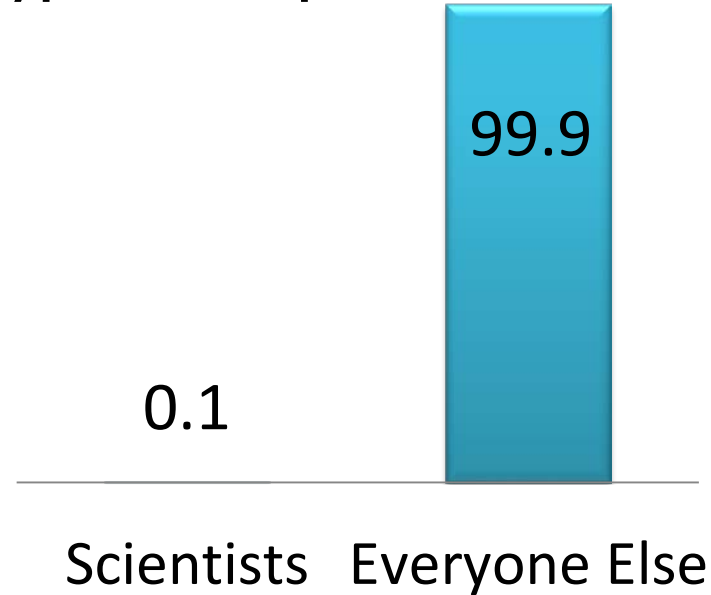
Reduces adverse health effects, w/ co-benefit of improving air quality. Take care of current populations w/o compromising health of future generations

HOW DO YOU WANT TO SAY IT?

Not this way



Types of People on the Planet (%)



OUCH!
Too bad, man



HOW DO YOU WANT TO SAY IT?

Breaking it down

Microbiota

Hypoxia

Trophic Structure

Piscivorous

Pelagic

Phototaxis



Tiny living things

Short on oxygen

Food Web

Eats Fish

Open Ocean

Moves towards light

HOW DO YOU WANT TO SAY IT?

Adding the verbal bling

“Antarctic ice shelves crumble off the continent like the edges of an overcooked pie crust” *Christopher Joyce, NPR*

“Rainforests are the lungs of the planet.” *Charles, Prince of Wales*

“We are fishing for bait and headed for jellyfish.” *Daniel Pauly, UBC*



Christopher Joyce



Prince Charles



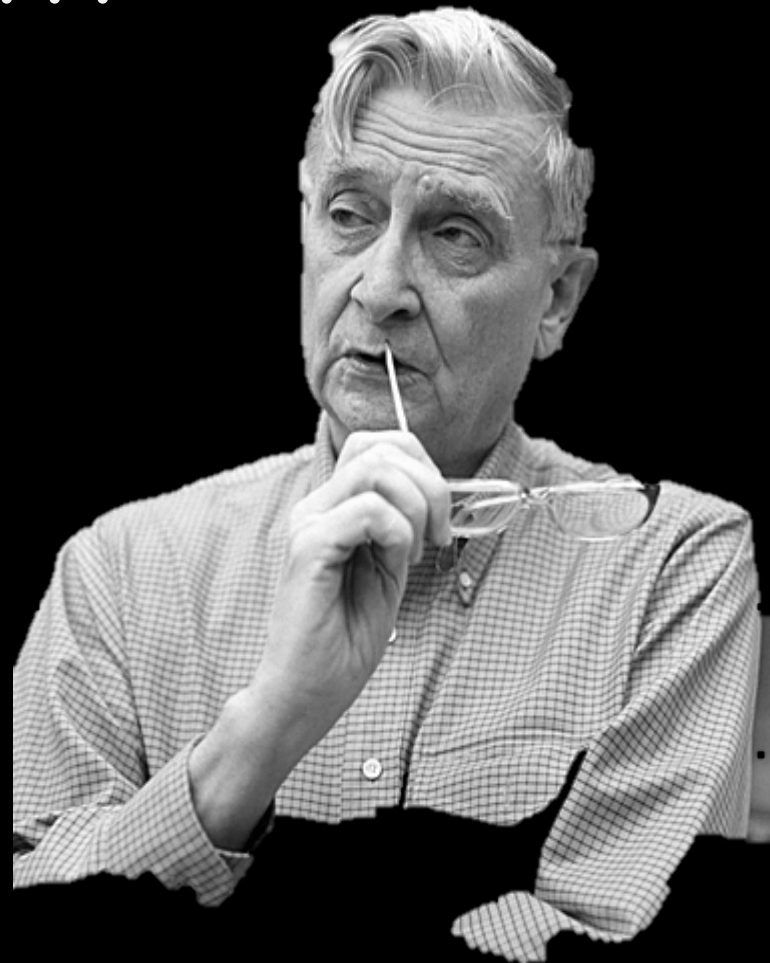
Daniel Pauly

*The ideal scientist thinks like a poet . . .
works like a bookkeeper and . . .
if gifted with a full quiver . . .
writes like a journalist*

E. O. WILSON, HARVARD

IN “CONSILIENCE: THE UNITY OF
KNOWLEDGE”

[HTTP://WWW.AMERICANSIENTIST.ORG/ISSUES/PUB/SCIENTIS
TS-SCHOLARS-KNAVES-AND-FOOLS](http://www.americanscientist.org/issues/pub/scientists-scholars-knaves-and-fools)



THE ELEVATOR TALK



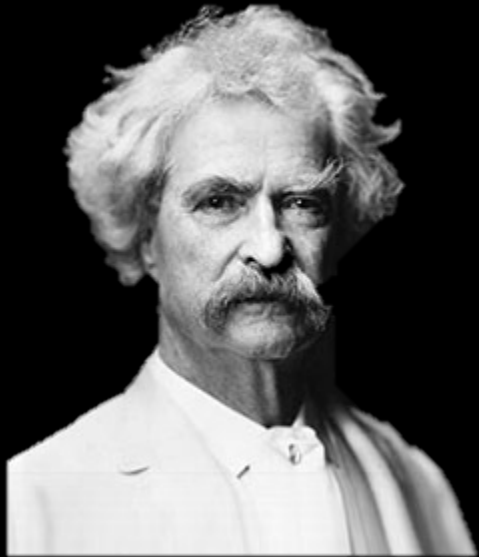
Two Minutes (or 30 seconds?) to Impress

GOAL – to get someone interested without telling them everything you know

Roberta Kwok. 2013. Nature 494:138

“If you want . . . a 2-hr presentation, I am ready today.
If you want . . . a 5-minute speech, it will take me
two weeks to prepare.”

--Mark Twain



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