### Climate Change Scientists as Advocates? The tensions between scientific independence, poor policy, and avoiding a dangerous world

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#### Crude dilemma

summary:

Experts have the knowledge, but they're not the ones that have been democratically elected to sort the problem out.



Ryan Cross

To add to that, climate change is really a rather urgent wicked problem, and communicating uncertain science can be tricky.

Independence Trust

MIS INFORMATION



So what's a climate change scientist to do?

Policies that work Take (more) action now



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# **Research Structure**

#### Values

To assess what different theories say about scientists engaging in advocacy and the methods available for maintaining trust and independence.

#### **Practices**

To learn about how CC scientists currently (do not) engage in advocacy, the methods they use, and the obstacles and tensions (perceived and actual).

#### **Strategies**

Identify agreement and gaps between the theory and practice. Propose how practice can change to be more like the normative theory & how the theory may need to change if it is silent or wrong about the practice.

Political philosophy, philosophy of science, communication ethics literature

Interviewed 47 climate change scientists (semi-structured interviews in the USA & UK)

Practical analysis and using methods of best practice from theory and practice.

# **Defining Advocacy**

'a **plea** in active support of something in order that **others may be persuaded** to act'.

- Different from just lending support
- Also not manipulation



For example:

- Advocates already (for funding, for publication, etc.) (Gascoigne, 2008).
- Possibility that silence can be a form of advocacy
- Depends on the audience and context (e.g., internal discussions on consensus, vs. media publications)

# **Mapping Advocacy**

#### 'Informative' Advocacy

- Argues the facts
- Sticks to positive questions
- "...injecting the scientific realities into the many different categories of information that decision makers must take into account when formulating policy." (Hadly & Barnosky, 2014)

#### 'Prescriptive' Advocacy

- Argues a particular course of action in the face of uncertainty
- Pursues normative questions
- *"… narrows choices for the decision makers."* (Hadly & Barnosky, 2014)

No Advocacy	Informative	Prescriptive	
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# Mapping Advocacy

#### 'Informative' Advocacy

#### **'Prescriptive'** Advocacy



- Boundaries are not clear cut
- Also does not help distinguish between types of prescriptive advocacy that may be acceptable, and those that are not





# **Factors effecting Mapping**

The Voice The Content The Audience



- Background
- Individual or group
- Substance
- Communication
  method
- Framing

- Worldviews
- Context

# Key tensions: Non-engagement & Policy Advice



- Moral duty of scientists to inform society & forewarn about harm. (Karr, 2006)
- Policy-makers have a plethora of other causes vying for their attention and therefore do not explore issues they are not told about. (Shrader-Fréchette, 1994)
- Scientists are really only the ones who can understand the seriousness of the threat, and are citizens too.
- Silence can be interpreted as a form of advocacy.

# Key tensions: Policy Advice & Action Advocacy



- Communicating uncertainties and complex science to nonexperts may mean making a partisan judgement about the saliency, robustness, and richness of descriptions. (Stephens et al., 2012)
- Communication methods (i.e. visualizations) and their interpretation (particularly in regard to risks) may result in advocacy due to audience perception. (Sunblad *et al.*, 2007; Adler & Hadorn, 2014; Pidgeon & Fischoff, 2011; Sandman, 1987).
- Consensus dynamics bias in 'independent' research (and expert elicitation), arguments about transparency. (Adler & Hadorn, 2014; Jasanoff, 2010; Weingart, 1999; Henderson, 2008)
- Could be accused of not speaking up for issues that are currently not on/are low on the policy making agenda. (Oreskes, 2004)

### Key tensions: Specific Policy Advocacy



- Perception that scientists are straying from their role in a democratic society as informers. (Trench, 2008; Pielke, 2007)
- Risk scientific integrity and independence by allowing political values to influence the interpretation and communication of results. (Lackey, 2007)
- Risks further 'politicizing' science, making it a battle ground for politics. (Adler & Hadorn, 2014; Pidgeon & Fischoff, 2011).
- Framing may alienate audiences, and be counterproductive to decision-making, especially when trying to evoke emotional reactions. (Nisbet, 2009; Lakoff, 2010; Schwartz, et al., 2010; Moser, 2010)

# **Key tensions**

- Advocacy poses a threat to trust
- Not advocating for some form of action may leave us with (more) devastating climate change
- Communicating the uncertainties of climate change provides challenges for framing and advocacy
- Perceptions of advocacy can differ between scientist and audience

- Defining Advocacy
- Acceptable Advocacy
- Independence & Credibility
- Being a Citizen
- Ethics of Advocacy
- Practical Methods in
  Framing & Dialogue

#### - Defining Advocacy

The **advocacy spectrum** still seems to work and folk like it. (Yay!) Also seemed to understand the spherical model (although we're all a bit stuck as to how to make it easier to understand).

Questions about 'scicomm'.



### - Acceptable Advocacy

Greatly dependent upon communication context.

**Event attribution science** - Bit of a controversial area. For some, it could be seen as an advocacy science (and different views on what tensions it creates).

#### - Independence & Credibility

**Area of expertise** greatly defines capacity to credibly advocate - proselytising about issues outside of your expertise without saying that it's outside of your expertise is a risk to credibility (i.e. abuse of authority)

**Credibility** - Main concern is with the *scientific community's* perception of credibility. Independence - philosophy of science re. role of values in science. Also need to be transparent about funding and the scientific method, etc.



**Scientific status/prestige** – the amount of evidence and experience behind an individual acts as a buffer to some advocacy tensions.

#### - Being a Citizen

Being clear about the capacity they are trying to communicate in, closely linked to area of **expertise** and **credibility**. A few quoted Steve Schneider's advice on stating your values upfront. Tensions for **government employees** with what it is they are and are not allowed to do.

#### - Ethics of Advocacy

Not a lot on this. Mainly gut feelings around acceptable communication frames.

Some express a **desire to advocate more/speak up**, and feel they should, but do not know how to.

#### - Practical Methods in Framing & Dialogue

**Citizen science and science communication** - science that is done for society, with society, and by society, means that when science speaks, it is carrying an identity shared with society - not separate from it – form dialogue early on.

**Speak with authenticity** about what it is you know – i.e. as a father, as a Christian, as a bee keeper, etc.

**Clear communication of the uncertainties** is needed and must be navigated carefully (i.e. not exaggerated or underplayed).

**The role of consensus and speaking as a collective** - enables unity around a shared set of values. Also shifts attention away from individuals to the community.

### **Additional themes from Interviews**

- How the **conversation in the US is different to the UK** in that scientists feel like they're not anywhere near being able to debate about different policies to combat climate change, they've got to advocate that science is a thing worth having first.

- **Diversity in science** can help with views about **credibility** - this has come up a few times about hearing from people other than the 'old white balding man' stereotype - how diversity can help bring credibility when science reflects society.

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### **Thanks for listening!**

### **Any Questions?**

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