

# Visualization of policy controverses: digital public accountability

**JEPP@21**

**Berlin 8-10 September 2019**

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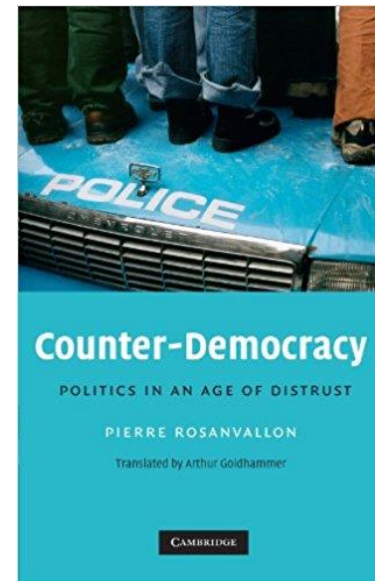
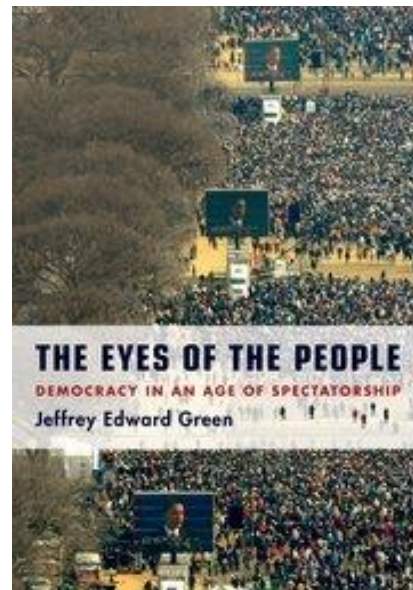
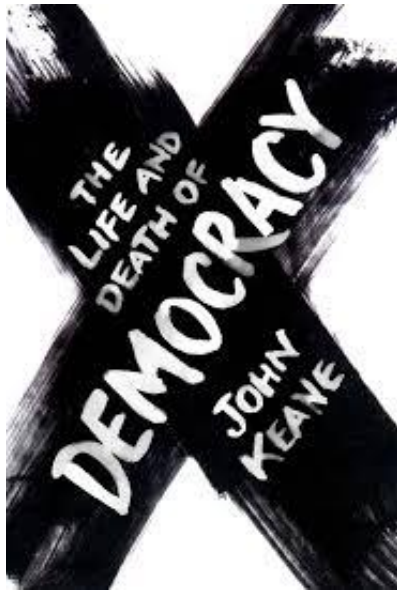
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# Ocular democracy

*From votes, to voices, to the visual:*

A free people," wrote Anacharsis Cloots during the French Revolution, "is an argus. It sees everything, hears everything, is everywhere, and never sleeps."



# Public accountability: Showing and seeing

*Public accountability: citizens who critically monitor and debate procedures and content of political decision making.*

*A forum holding the actors accountable (Bovens)*

- Showing ocular proof to *justify* actions (actor)
- Seeing by detectives and giving of ocular evidence to hold accountable. (forum)

# A picture says more than a 1000 words

- Visuals consists of condensing symbols that suggest the core frame of how people interpret an issue (Gamson and Stuart)
  - There is often some form of representation of a reality (referential)
  - Simplify complicated things
  - Stir emotions (condensation)
  - Can be made sense of in groups to help create common ground (Weick 1969)

# Seeing and showing on the internet and in social media

## Seeing

- What do citizens (the forum1) see on the internet and social media?
- What do internet detective (the forum 2) see when searching the internet and social media, and how do they show (see below)?

## Showing

- What do internet detectives (the forum) show to actors to hold them accountable?
- What do the actors show to citizens (the forum)?



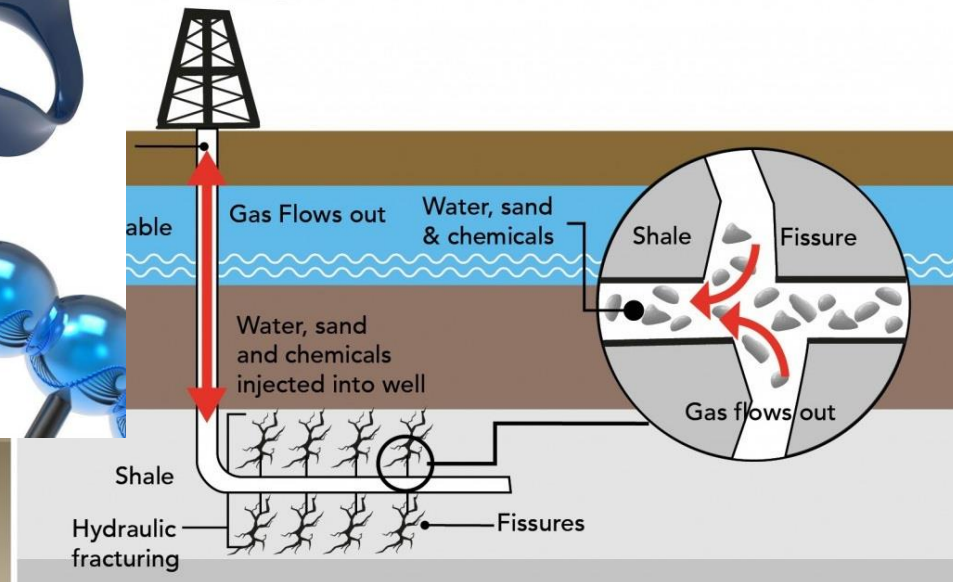
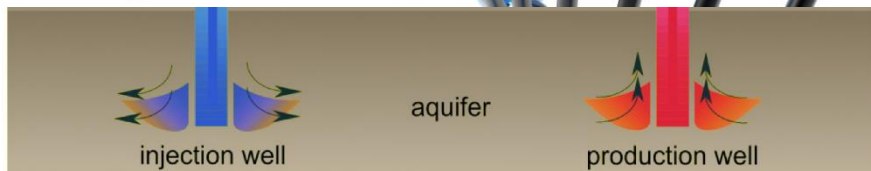
# Policy controversies: shale gas and geothermal energy and food

(Deep) Geothermal energy

Shale gas



## Shale gas extraction



# Interpretive and digital methods

- Google and duck duck go searchers
- Scraping visualizations on internet, twitter, pinterest, Instagram - #shalegas; #fracking #geothermal
- Own scraper and sorter: sorting visualizations
- Frame-analysis of the visualizations in their context: what are people
  - First interpretive, qualitative analysis
  - Developed into bins/bags of words to make an automated frame analysis of the visualizations in their context
  - Including proposals of what actions are proposed in the controversy
- Cross-platform analysis and reversed image search to study the travelling
- Science live: have people code visualizations of controversy

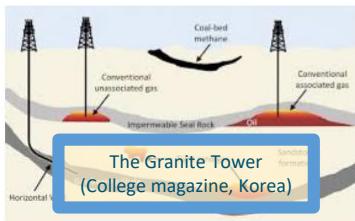
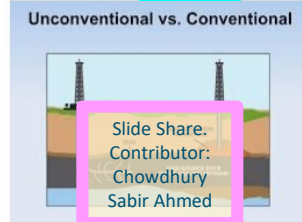
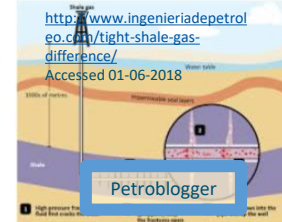
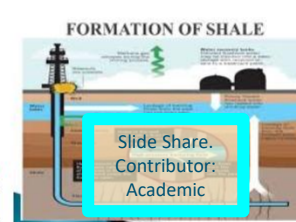
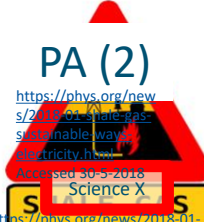
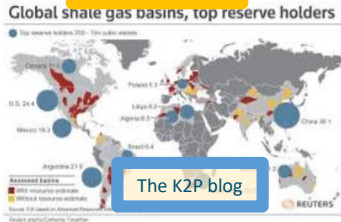
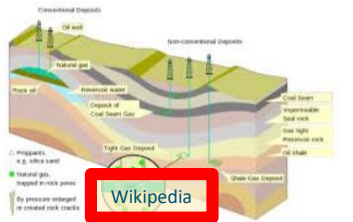
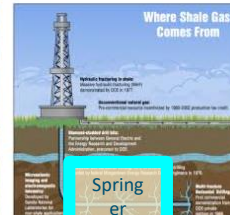
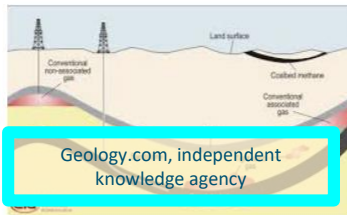
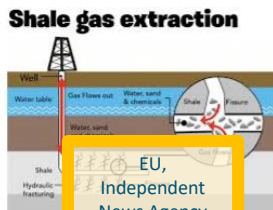


# Example 1: google search 'shale gas'

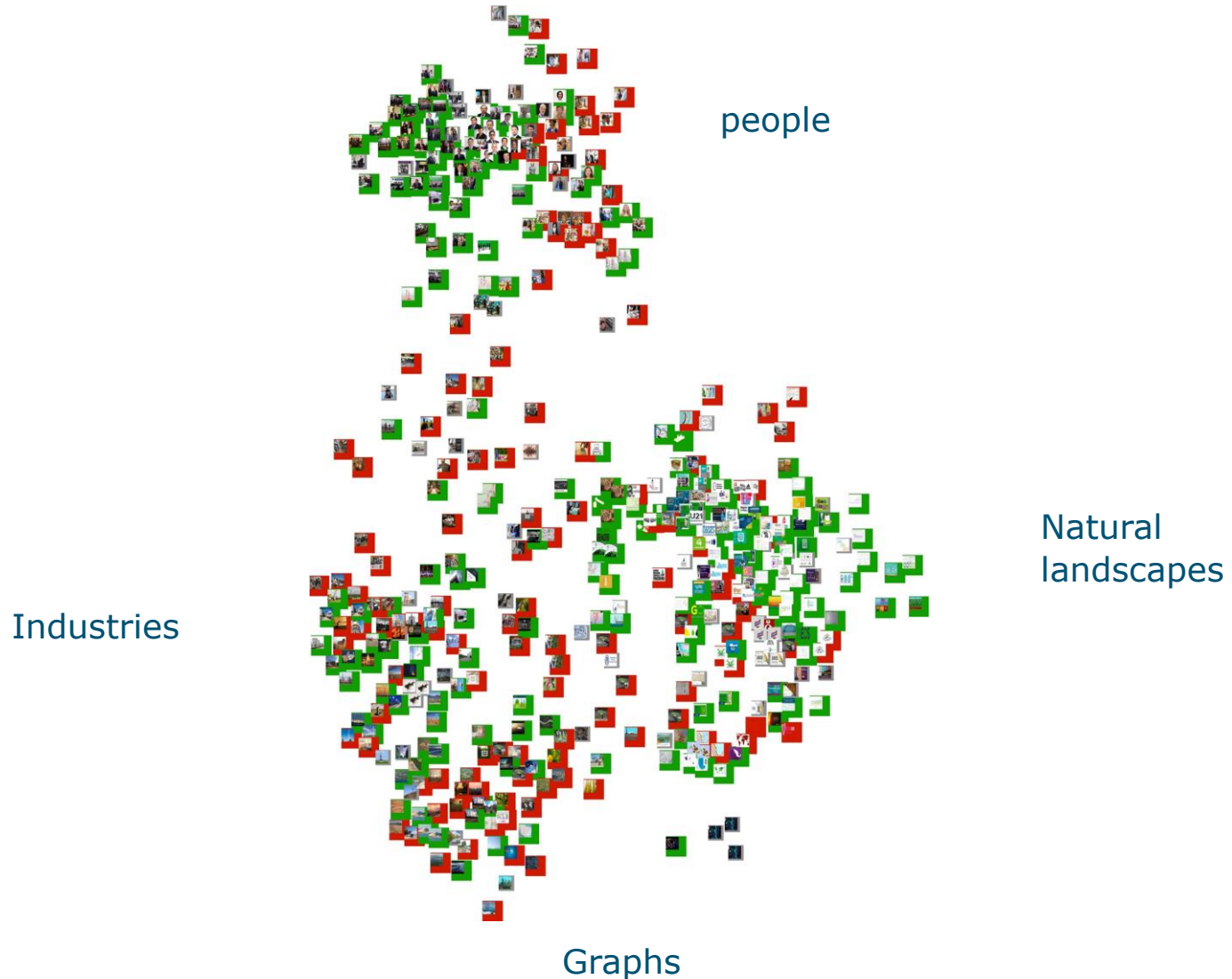
Governmental Business Academics and Experts  
 Media NGO Knowledge Boundary Online community Individual Unknown/Other

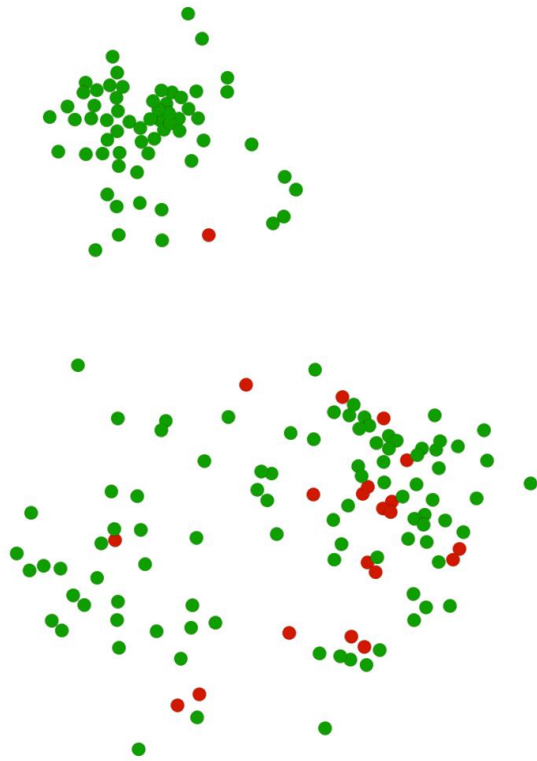
0 1 5 1 0 3 0 0 1 1 4

Energy company / consultancy  
 from non-academics, non-experts  
 Governmental-Business-Academics and Experts-NGO, at least two of the three

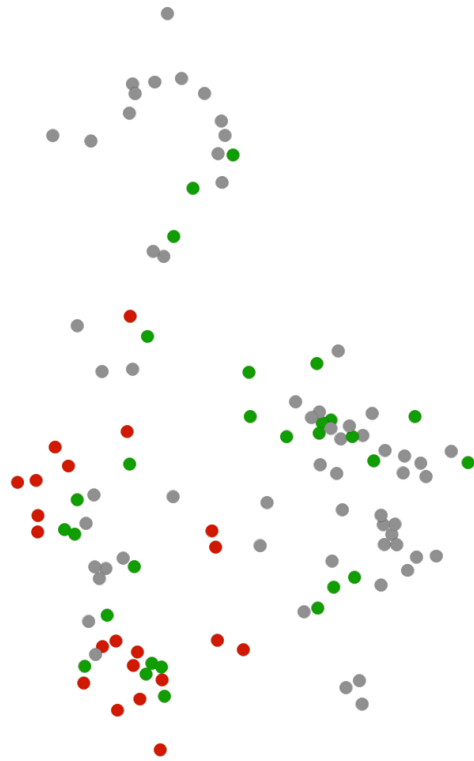


## Example 2: Actors' stance and image map

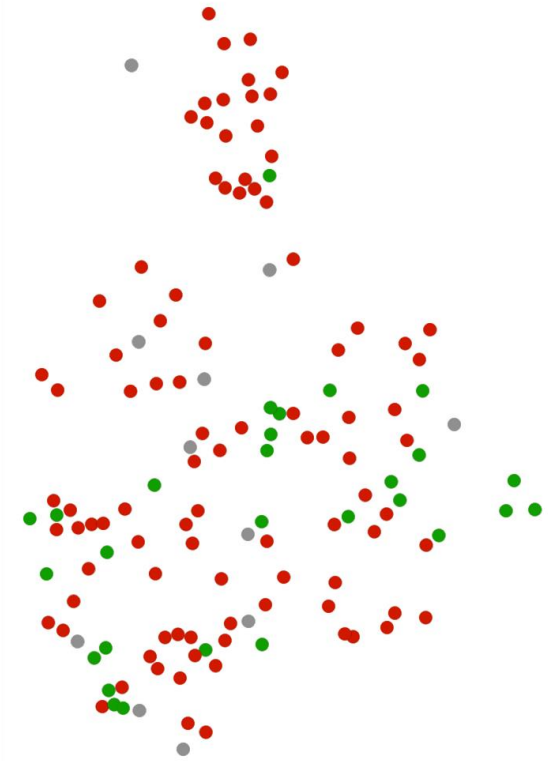




**Mexico**

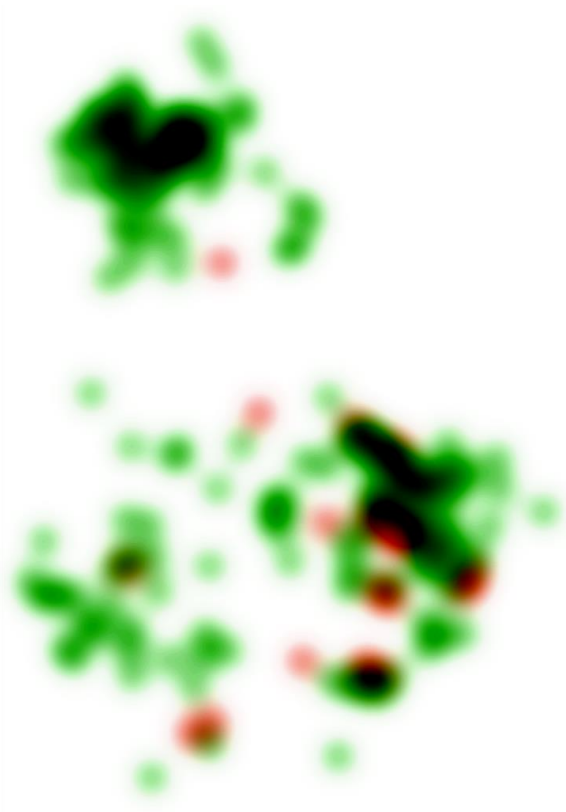


**South Africa**



**United Kingdom**

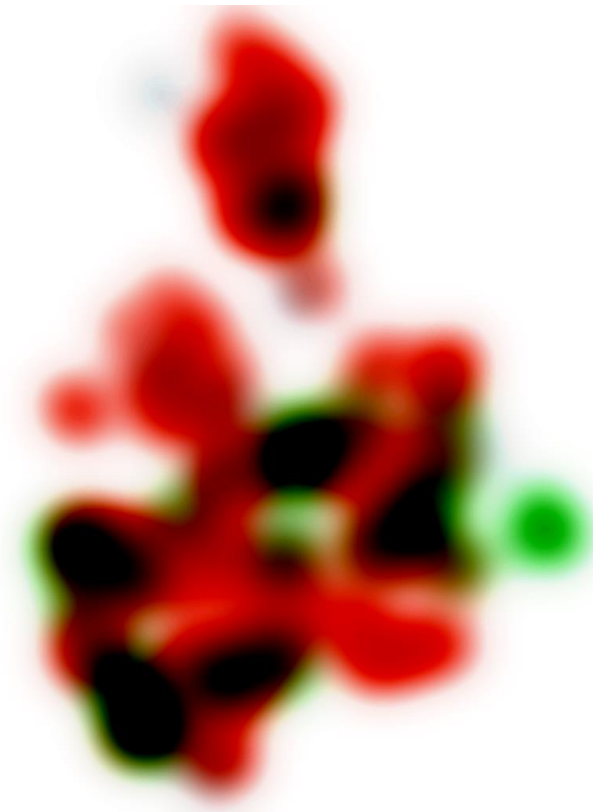
# Heat map of the shale gas controversy on the internet in visuals per region



**Mexico**

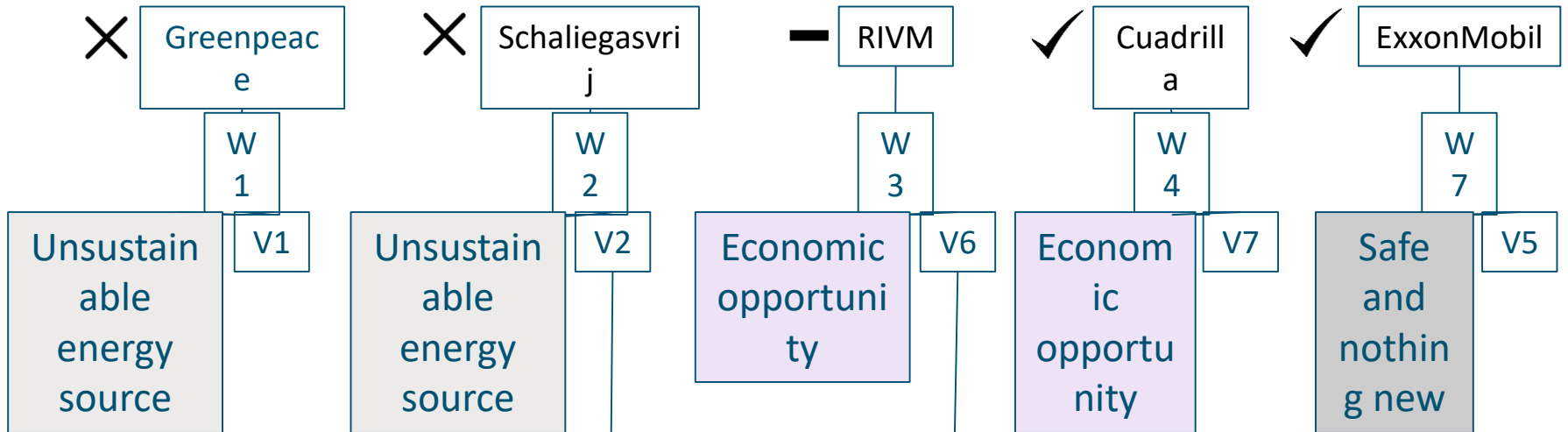


**South Africa**



**United Kingdom**

# Example 3: Visual discourse coalitions

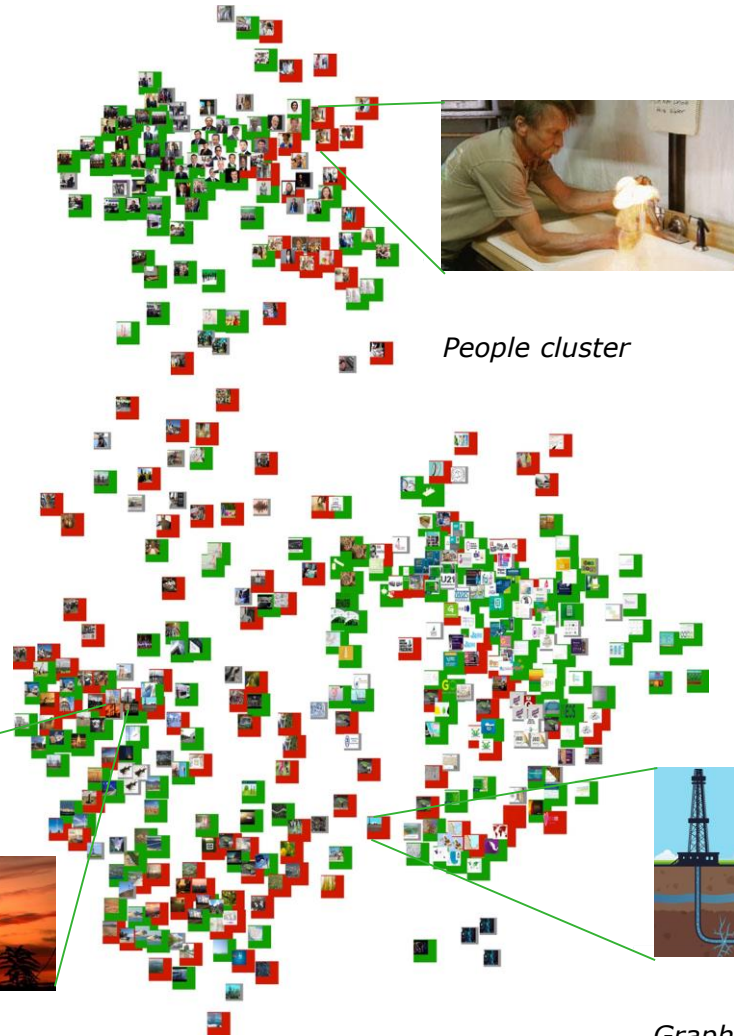


↔ Polarization





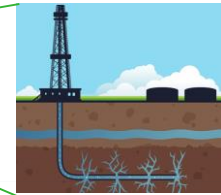
# Example 4: Emblematic images



*People cluster*



*Landscape cluster*



*Graphics cluster*

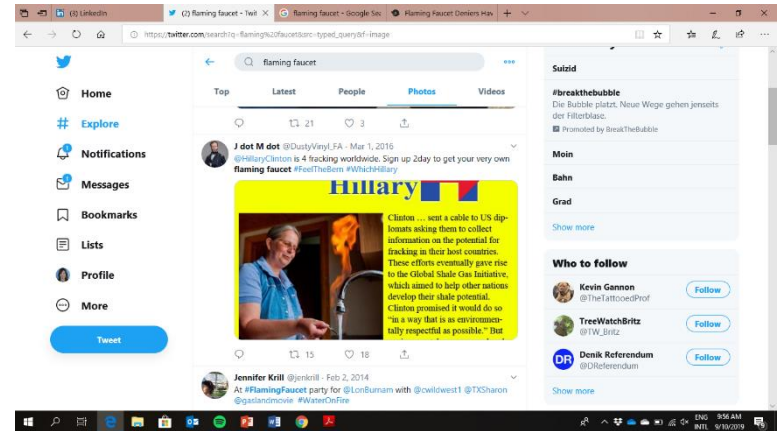


# Example 5: Travelling for accountability



Josh Fox  
-  
Gasland

Friends of the earth  
and other people's  
replicas



Used in tweets  
all over the  
world to hold  
governors  
accountable

# Conclusions

- Different actors active on the internet and social media
- Search engines goggles favour the *showing* of evidence by governing and industrial actors
- On internet: governing actors and citizen detectives most of all visualize 'facts', and suggest to provide technical information.
- On social media: more condensation images by internet detectives
- Seeing by 'citizen detectives' (sometimes including academic experts) more dominant in search results for shale gas and risk and on social media

# Discussion

- Showing (giving account by actor) more dominant in search results overall
- Seeing (giving counter evidence) – is more prominent in controversial cases, and in social media
- Conceptually:
  - Being accountable and holding accountable seem to mix on the internet. Governing actors see, show – as do citizens/NGO's and so on. Less clear who is the actor or forum.
  - The public is multiple and interacts with decision makers in different ways.
- Impact on governance/decision making?
- Ocular democracy: creating common ground – from deliberative governance to ocular governance?

# THANK YOU!

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# Example 1: Results simple google search 'geothermal'

05-01-2018

Governmental Business Academics and Experts Media NGO Knowledge Boundary Online community Individual Unknown/Other

3 3 0 1 1 6

Energy company / consultancy

from non-academics, non-experts

Industrial

Wikimedia Natural

Union of Concerned Scientists

Wikimedia

US Energy Information Administration Industrial

Invest in Islands Natural

Office of Energy Efficiency & Renewable Energy, US Department of Energy Industrial

Wikimedia

Quora

Utilities Natural

IDB Natural

IV: Diagram of a geothermal power plant

Technique (Industrial)

Technique (Industrial)

Earth

Alaska Energy Wiki

ThinkGeoenergy (Represent interests of companies)

C=Condensation  
R=Referential