

Paris school and scientific knowledge

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Outline

- field and capital: refresh
- scientific/expert field and capital
- scientific/expert knowledge de/securitization mechanisms
- case study: coal policy field in the Czech Republic

Bourdieu: field

- **field:** a relatively autonomous, hierarchically organized social space within which transactions, interactions, events etc. in a particular sphere of social life take place
- analogy: a “sports field” or a chess board
- there are **different kinds of fields:** political, military, organized crime, academia, art, medical, bureaucratic, scientific, security experts etc.
- each field operates according to its **own logic (nomos)**

Bourdieu: capital

- the structure of the social world is conditioned by the distribution of various forms of capital
- **capital:** an accumulated labor that enables actors to influence their position and position of others within a given field
- **economic capital:** an accumulation of money, assets, property rights
- **cultural capital:** an accumulation of knowledge, abilities, qualifications etc.
- **social capital:** an accumulation of social ties to potential resources
- **symbolic capital:** legitimated form of the other capitals

How would you define expert field and capital?

Scientific/expert field and capital

- main stake: **scientific competence**

particular agent's socially recognized capacity to speak and act legitimately in scientific matters (Bourdieu 1975: 19)

- **scientific/expert capital:** a symbolic capital of recognition in the form of scientific authority (Bourdieu 2004)
- actors produce **scientific/expert knowledge**
 - relevance for policy-making (Boswell 2008) and de/securitization processes (Berling 2011)

Who produces scientific/expert knowledge?

Producers of scientific/expert information

- Production of scientific/expert knowledge is **not limited to scientific institutions**
 - **Academia**
 - **Public authorities:** government departments, administrative agencies, and political parties
 - **Think-tanks** and generally **NGOs**
- **grey literature:** research produced outside established distribution channels (academic publishing houses)

Scientific knowledge re/production

- science influences **what can be said and what not:**

the non-politicized has no language; it is what we know without knowing that we know it (Berling 2011: 391)

- scientific or expert knowledge: a privileged form (Berling 2011)
 - **legitimation**
 - **mobilization**
 - **objectification**

Legitimation

- **legitimation**: scientific knowledge (1) strengthens **authority of speaker** and (2) **certifies** related policy/security decisions
 - privileged form of knowledge
 - often position of “neutral arbiters”
- scientific field influences status of a de/securitizing actor





Mirek Topolánek

@MirekTopolaneK

Aktivistům nic vysvětlovat nechci. Lidem s mozkiem doporučuji, ať ho používají. To, po čem jsem dlouho volal má reálnou šanci. Vědecká diskuze o alternativách změn klimatu a antropogenním vlivu. Hopefully

Translate Tweet



500 Climate Scientists Write To UN: There Is No Climate Eme...
ER Editor: The UK's Independent did pick up this story on September 6 in a hugely politicised hatchet piece ...
europereloaded.com

7:43 PM · Oct 21, 2019 · Twitter Web App

22 Retweets 126 Likes



Michal Berg @MichalBerg · Oct 21

Replying to @MirekTopolaneK
Vidím že jste při tom hledání alternativ ke vědě našel i alternativní anglický pravopis, dobrá práce ;)

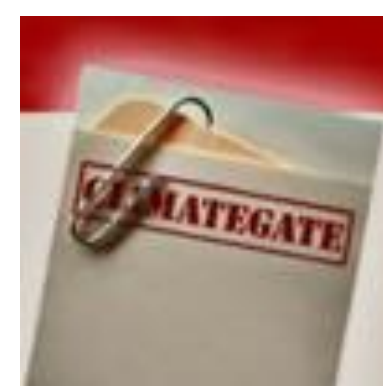
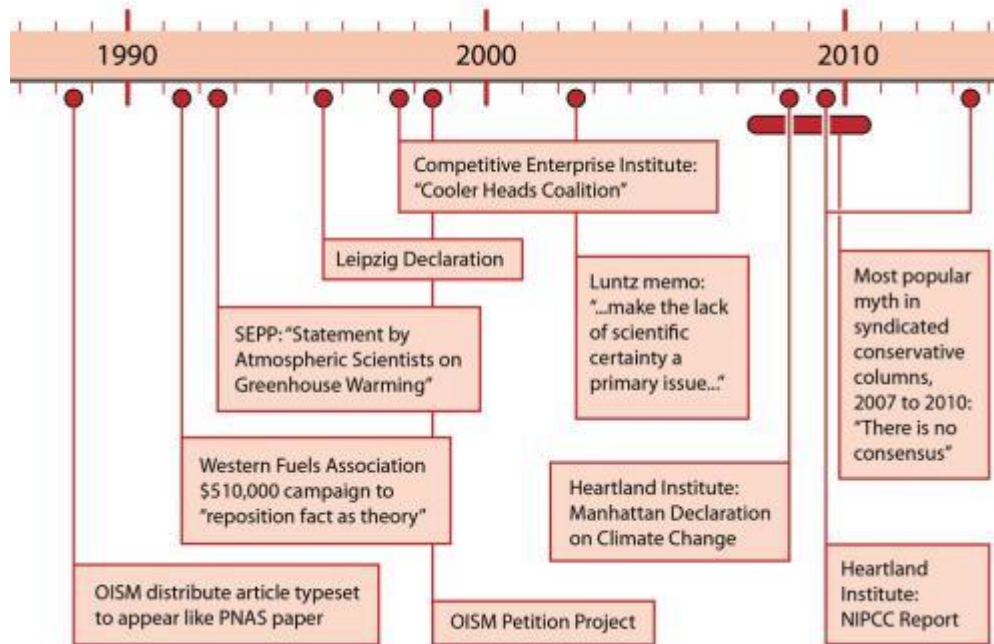


Štěpán Ryšavý @stepanrysavý · Oct 21

Replying to @MirekTopolaneK
To je ta věc, kde české vědce reprezentoval Václav Klaus st.?



Over Two Decades Manufacturing Doubt about Scientific Consensus

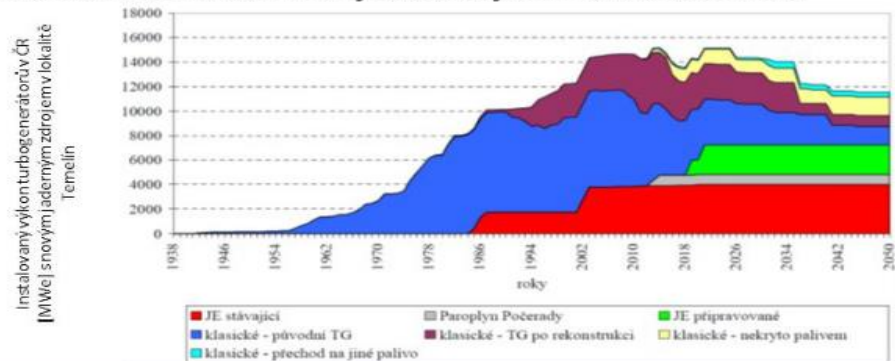


Mobilization

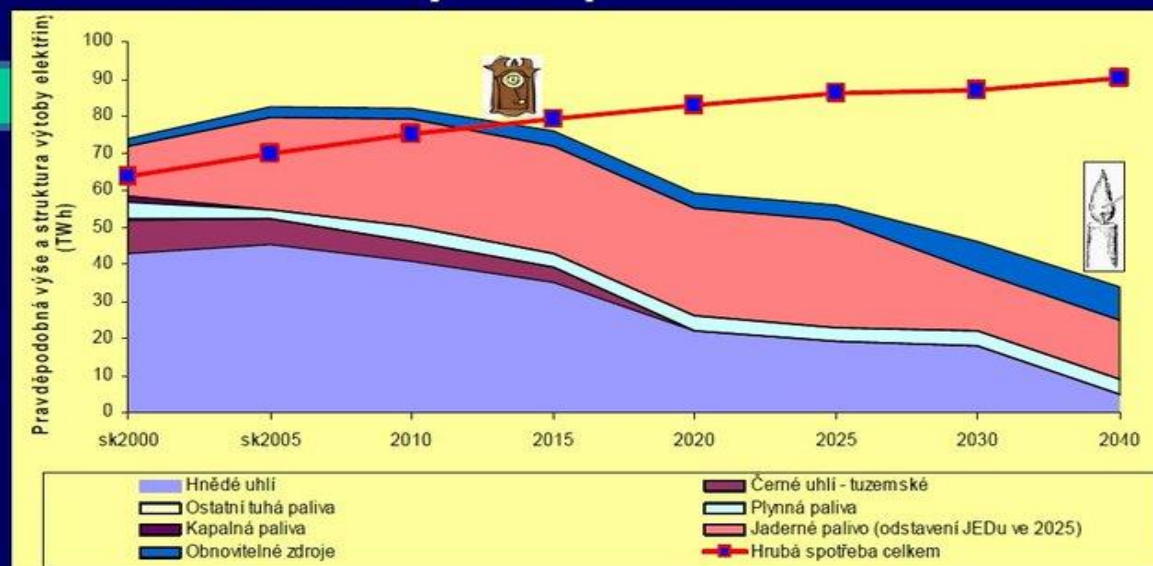
- **mobilization:** scientific knowledge and **facts used as discursive resources** to enhance de/securitization appeals
- de/securitization appeals backed (or even driven) by scientific evidence
- the goal is often to win debate/controversy and close it (**objectification**)



- Naplňování energetických a strategických cílů ČR (SEK – Bezpečnost, Nezávislost / Konkurenceschopnost, Udržitelný rozvoj; NEK – Pačesova komise; Politika územního rozvoje ČR)
- Náhrada dožívajících uhelných elektráren + nedostatek zdrojů uhlí
- Soulad s mezinárodními cíli a závazky ČR - Ochrana klimatu



Důsledky rozporu



Atmospheric CO₂ at Mauna Loa Observatory

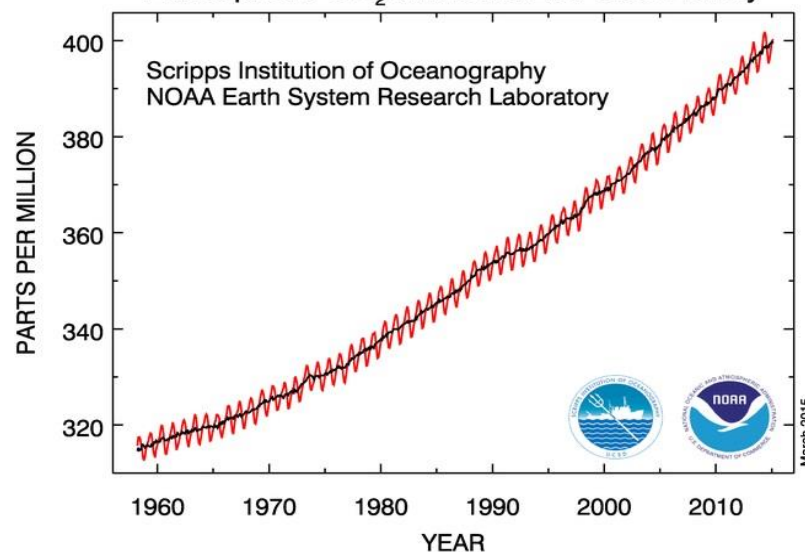
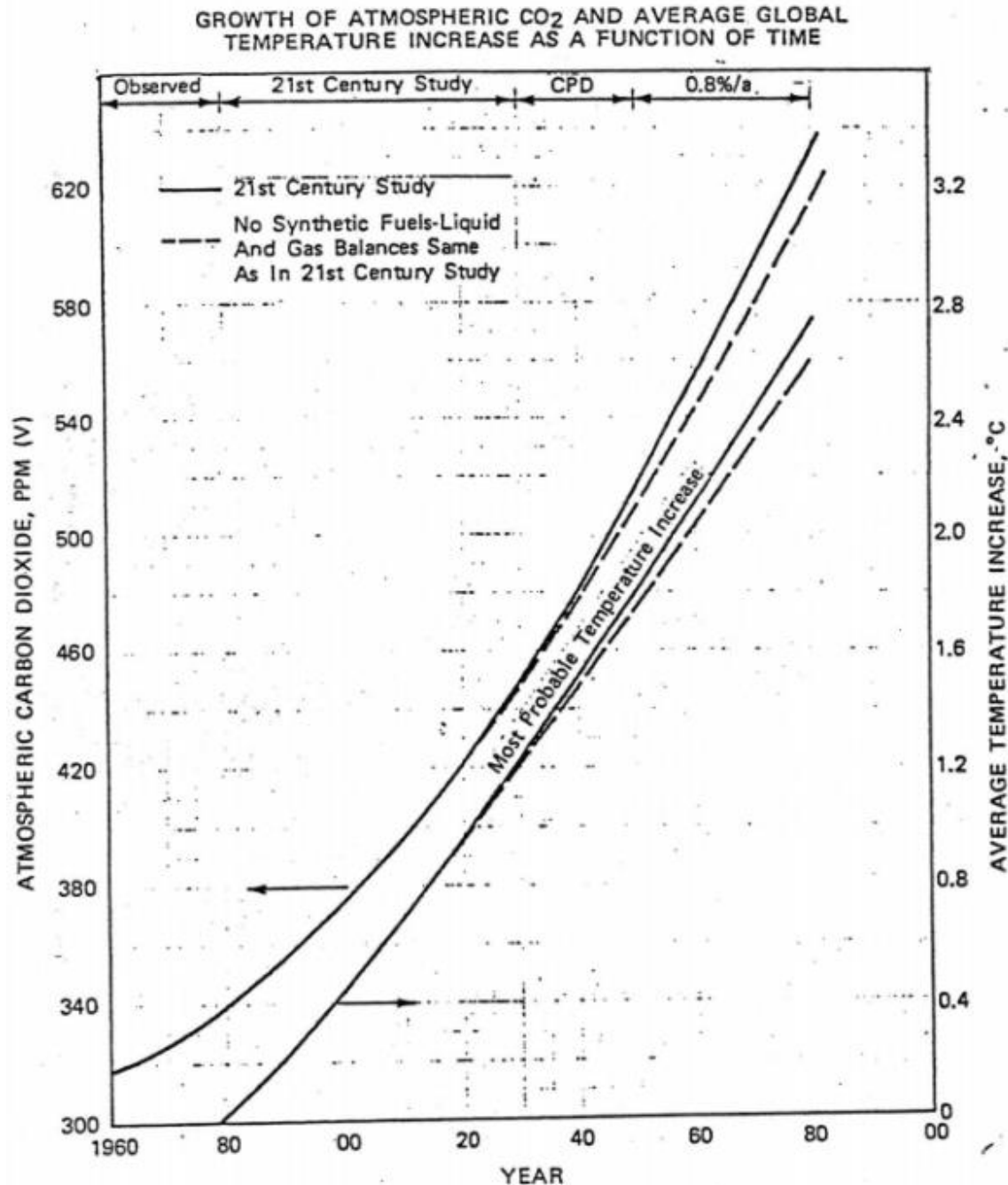


Figure 3



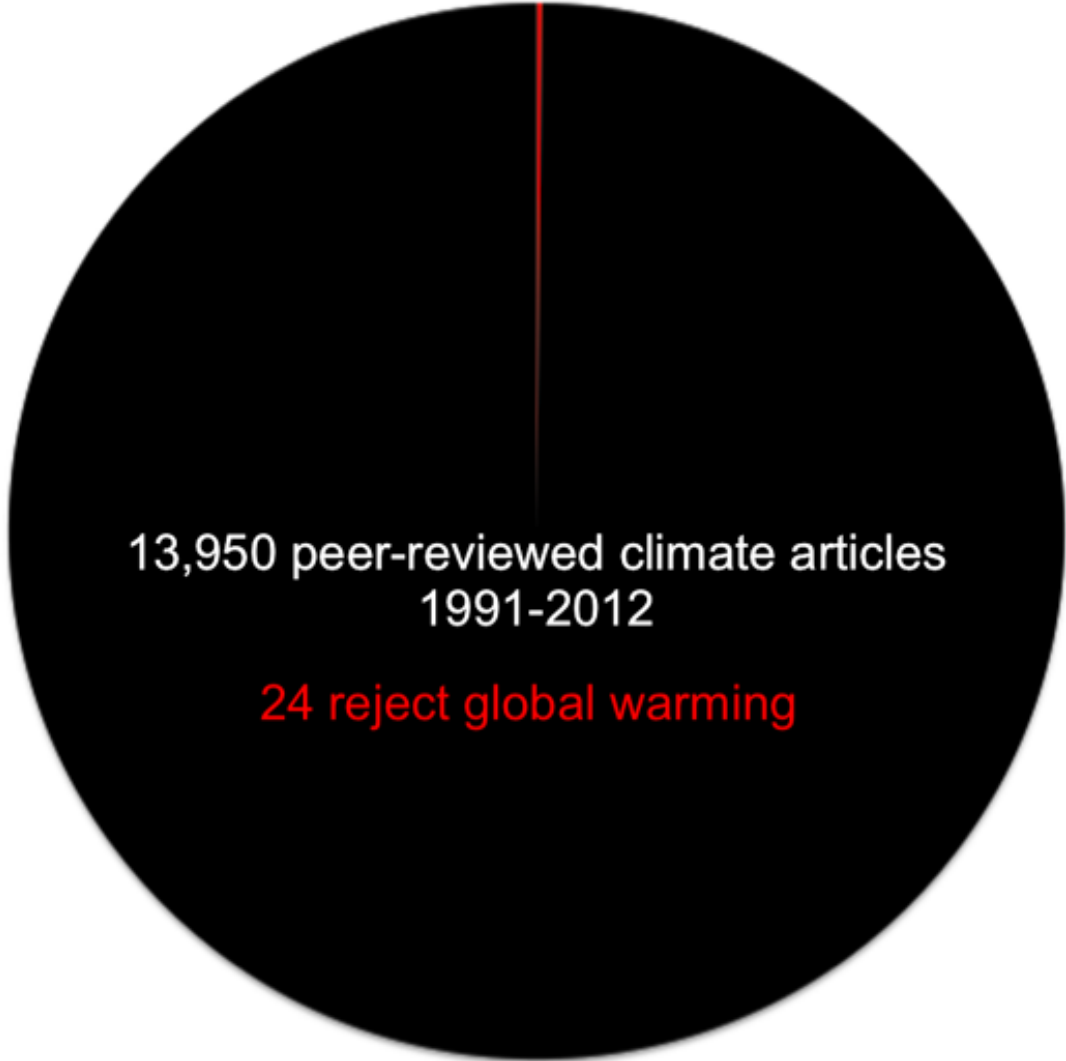
SUMMARY

- I. CO₂ RELEASE MOST LIKELY SOURCE OF INADVERTENT CLIMATE MODIFICATION.
- II. PREVAILING OPINION ATTRIBUTES CO₂ INCREASE TO FOSSIL FUEL COMBUSTION.
- III. DOUBLING CO₂ COULD INCREASE AVERAGE GLOBAL TEMPERATURE 1°C TO 3°C BY 2050 A.D. (10°C PREDICTED AT POLES).
- IV. MORE RESEARCH IS NEEDED ON MOST ASPECTS OF GREENHOUSE EFFECT
- V. 5-10 YR. TIME WINDOW TO GET NECESSARY INFORMATION
- VI. MAJOR RESEARCH EFFORT BEING CONSIDERED BY DOE

Non-knowledge: “conscious or unconscious, concrete or theoretical, it can signify willful ignorance or an inability-to-know.” (Beck 2009: 123)

Objectification

- **objectification:** issue defined as a matter of scientific inquiry or necessity
- **black-boxing:** a specific system or mechanism is understood in terms of in/out-puts
- **closing down debates/controversies:** establishes a **doxic practice**
- influences external dynamics of de/securitization



13,950 peer-reviewed climate articles
1991-2012

24 reject global warming

Case study: climate skepticism in Czechia

- **Media discourse** as crucial layer of **subsystem politics** (Broadbent et al. 2016; Kukkonen et al. 2017; Leifeld 2013)
- Involves **diverse actors** that compete through **agenda-setting** (McCombs and Shaw 1972) and (counter)**framing** (Boykoff 2011)
 - *How does presence of climate skepticism evolves over time?*
 - *What, if any, counter-framing strategies are used by skeptics?*

Focus on **title pages**: issue salience and visibility (Schuck et al. 2013)

Counter-framing strategies

– Benford & Hunt 2003 define four **counter-framing strategies**:

1. Problem denial
2. Counter-attribution
3. Counter-prognoses
4. Attacks on collective character

Expectations

E1. Prominent position of president Václav Klaus (Vávra et al. 2013; Vidomus 2013, 2018)

E2a. Shift from **epistemic skepticism** to **response skepticism** (Capstick & Pidgeon 2014)

E2b. Shift from **problem denial/counter-attribution** to **counter-prognosis**
(Benford & Hunt 2003)

Data

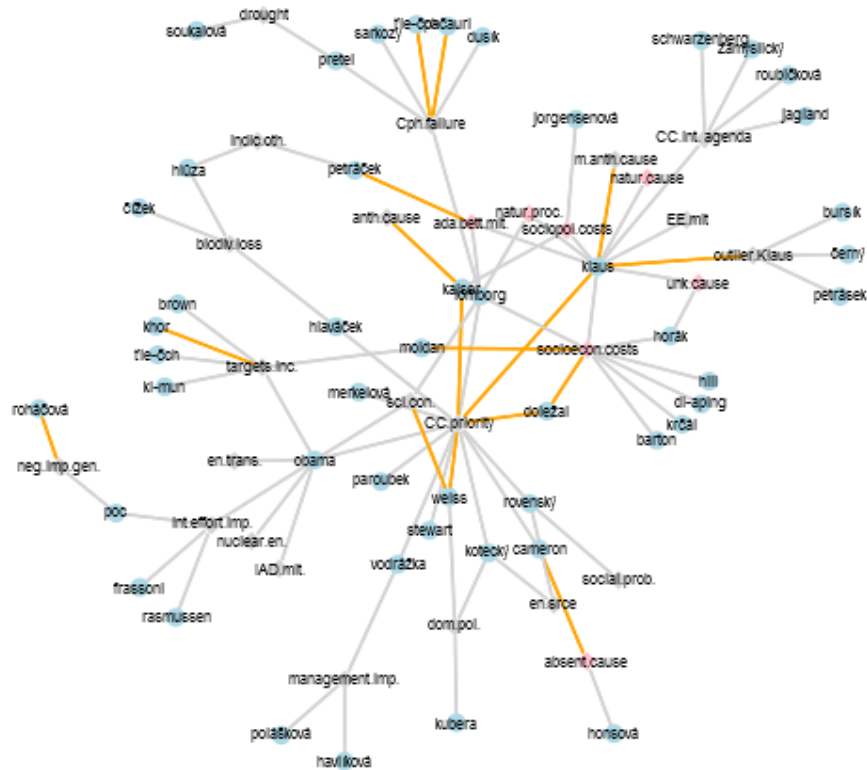
- 4 major **daily newspapers**
- Query: *(climate <AND> change) <OR> (global <AND> warming)* in fulltext
- Period: 2009-2018

- Total corpus: 6012 articles (uncleaned)
- **Sample:** 303 documents (title page contents) with 800 coding units (70 codes and 240 actors)

- Coded by **two independent coders** in Discourse Network Analyzer (Leifeld 2013)
- Krippendorff Alpha = 0.92

2009

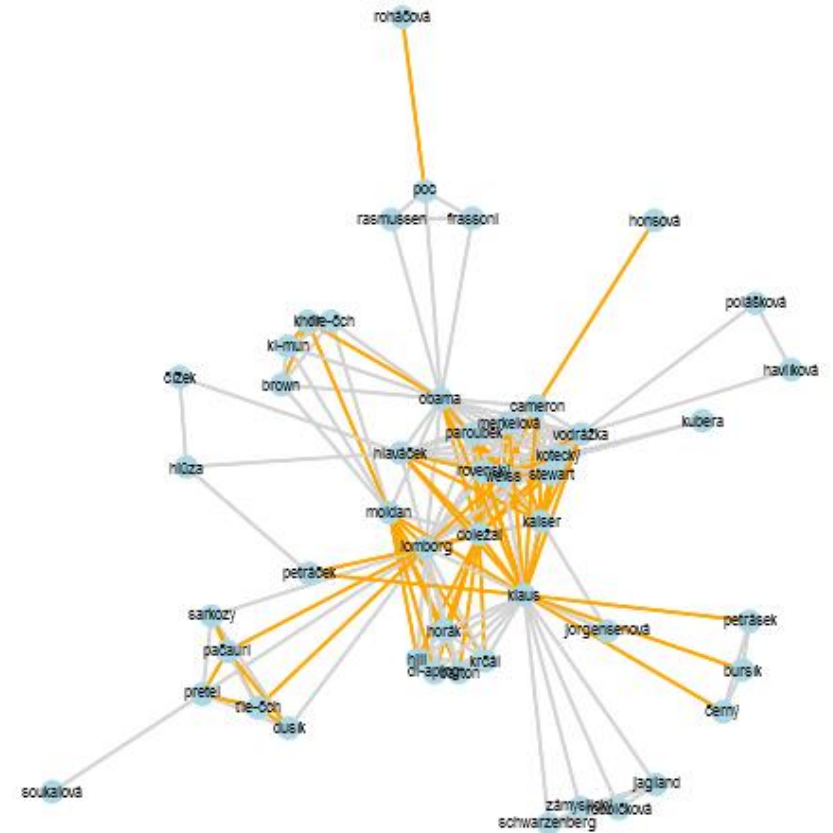
actors x concepts subtract network LC



TOP10 concepts frequencies (N = 168)

CC priority agenda	16
sociopol. threats	16
socioecon. costs	14
int. negotiations	11
dev. countries fund	9
Klaus as outlier	8
int. efforts crucial	8
mitigation necessary	7
higher targets	6
Copenh. failure	4

actors congruence network LC



actors

other concepts

skeptic concepts

negative ties

positive ties

2009

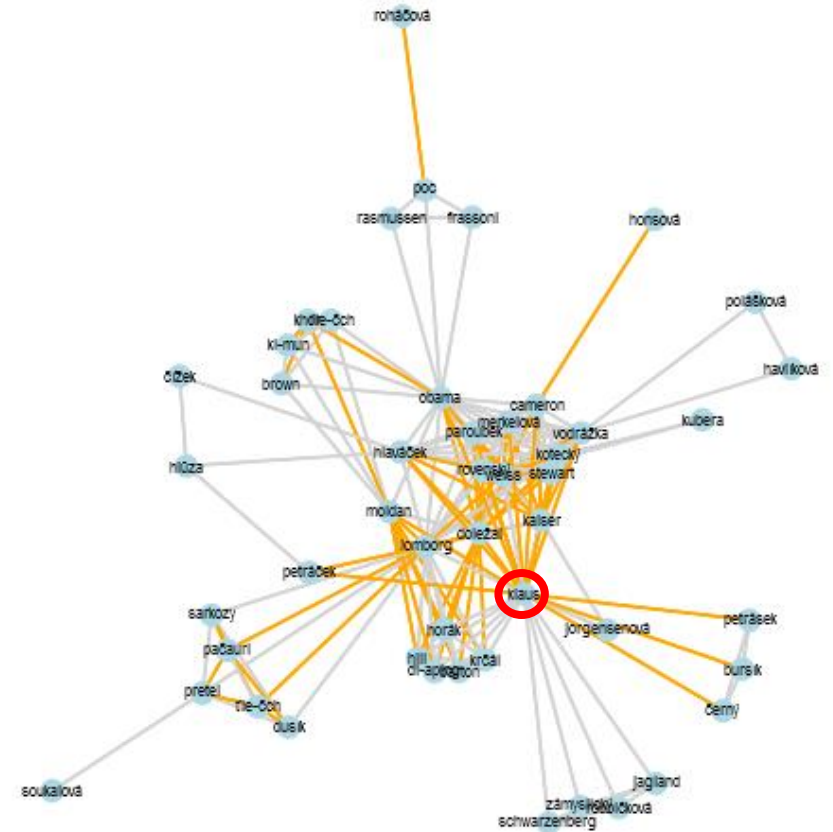
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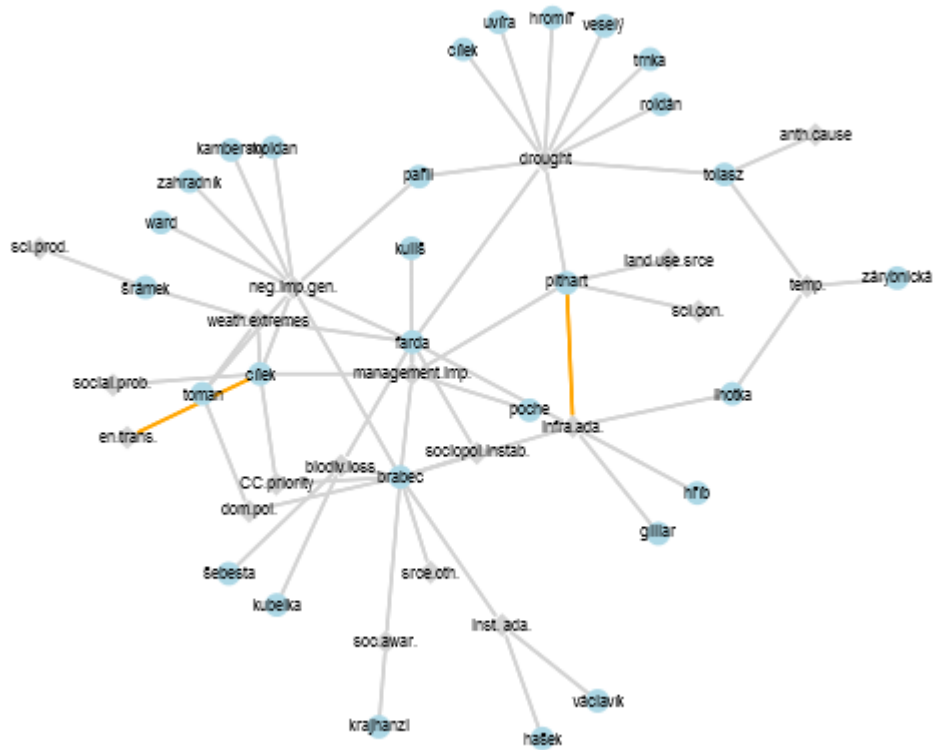
positive ties

2018

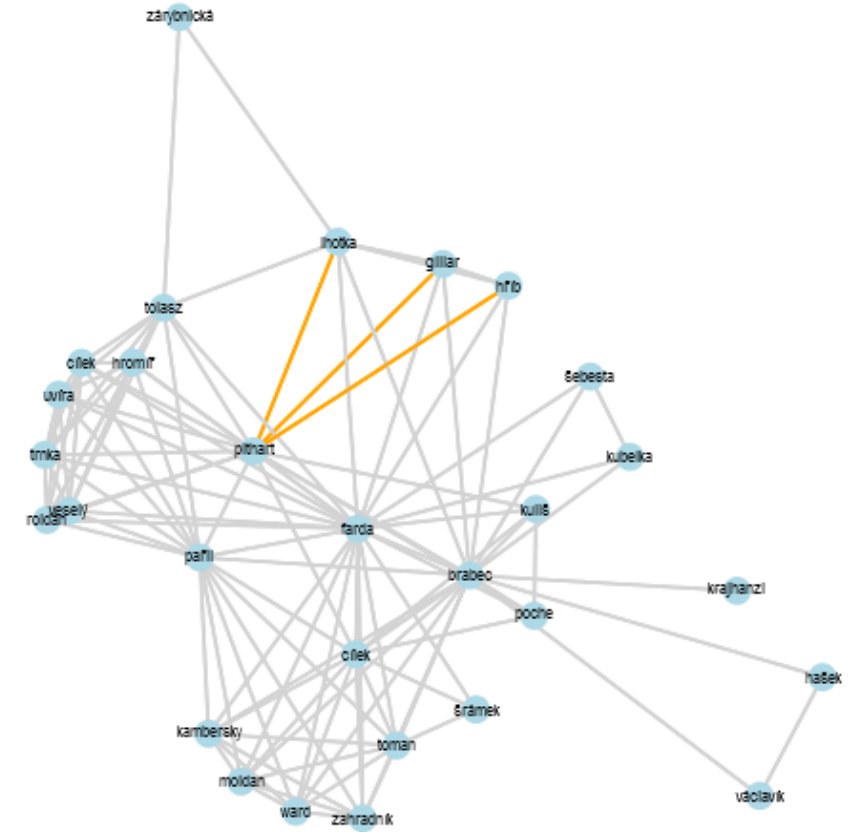
actors x concepts subtract network LC

TOP10 concepts frequencies (N = 88)

actors congruence network LC



drought	13
impacts manag.	12
gen. neg. impacts	12
extreme weather	9
biodiv. loss	6
adap. infrastructure	4
soc. awareness	4
inst. adap.	3
sources	3
temperature ind.	3



actors

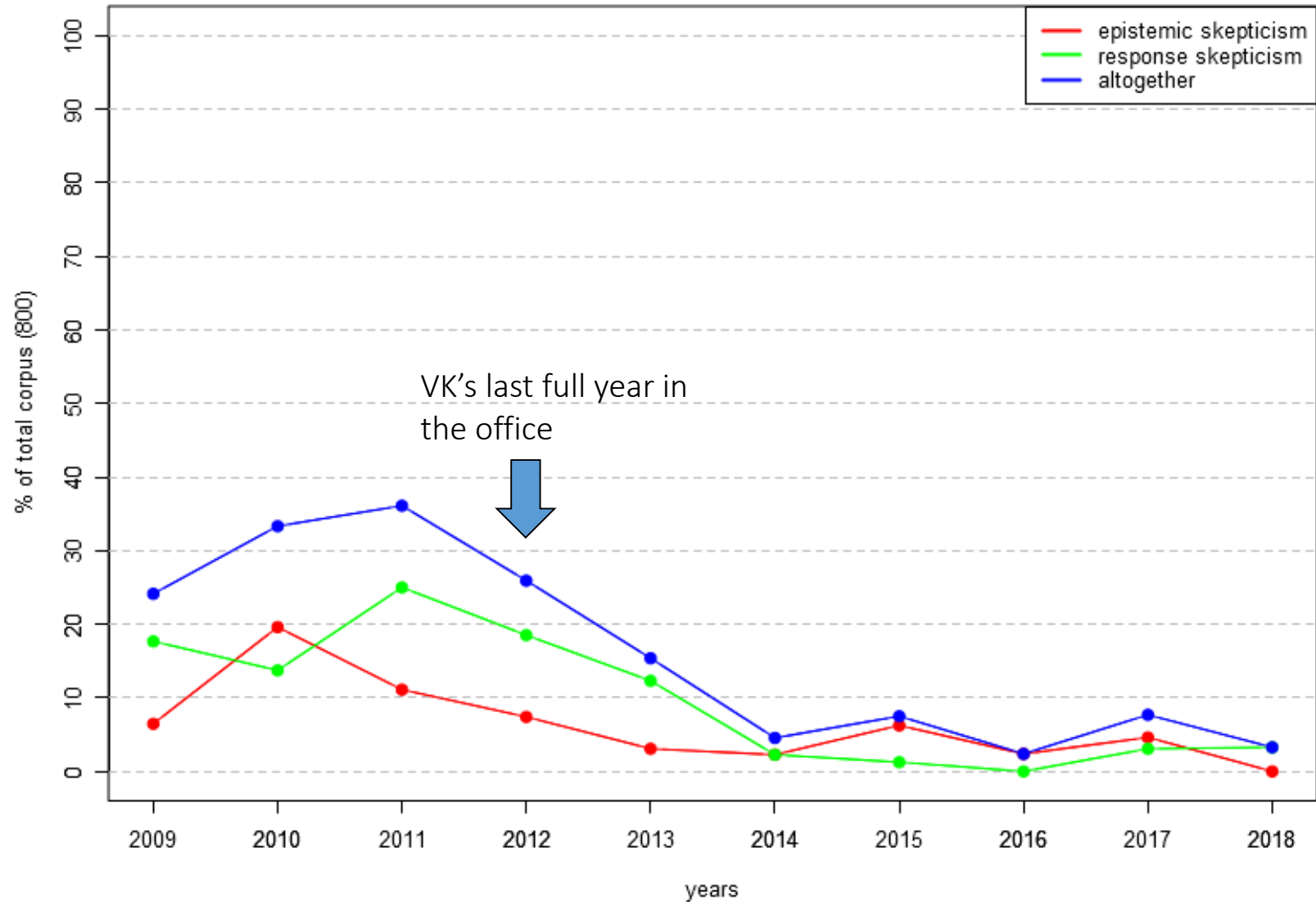
other concepts

skeptic concepts

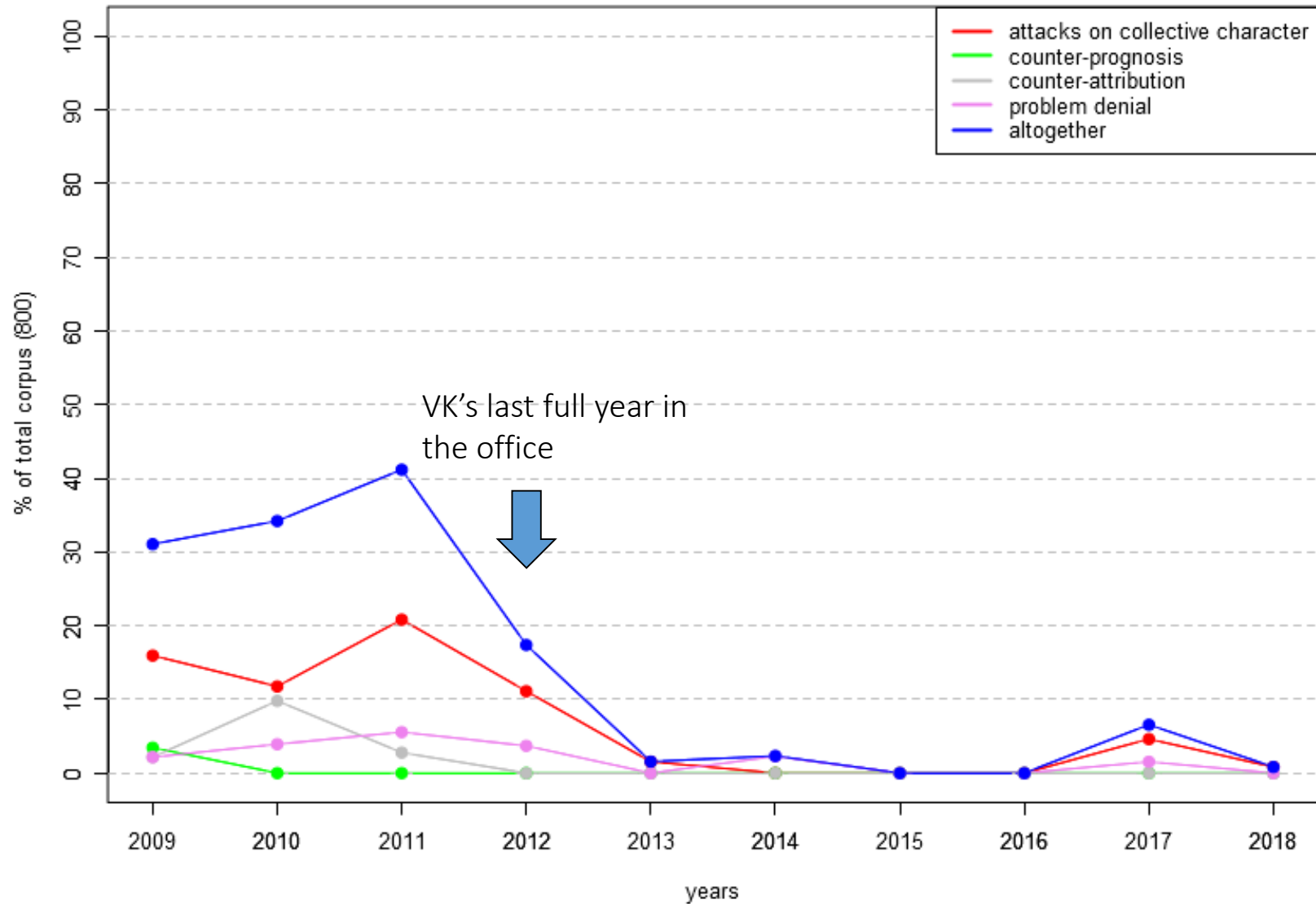
negative ties

positive ties

Presence of climate skepticism



Skeptics' counter-framing strategies



Conclusions [preliminary]

- **E1.** *Prominent position of president Václav Klaus*
- A dominant figure between 2009-2011, afterwards expertization of discourse

- **E2a.** ~~*Shift from epistemic skepticism to response skepticism*~~
- Both skepticism types move similarly, after 2013 marginal
- Response skepticism overall more present

- **E2b.** ~~*Shift from problem denial/counter attribution to counter prognosis*~~
- Attacks on collective character the only relevant counter-framing strategy
- Primarily ideological not epistemic focus

Case study: coal policy field in Czechia

- the lignite production accounts for 46% of TPES and 51% of electricity mix
- it is concentrated in the Sokolov Basin and the **North Bohemian Basin**
- the **territorial mining limits** has been established by **government decree in 1991**

stakes:

- a lifting of “the limits” became a key issue in the energy policy since then
- **transition pathway** to decarbonized economy very much depends on the future of coal



Advocacy coalitions perspective

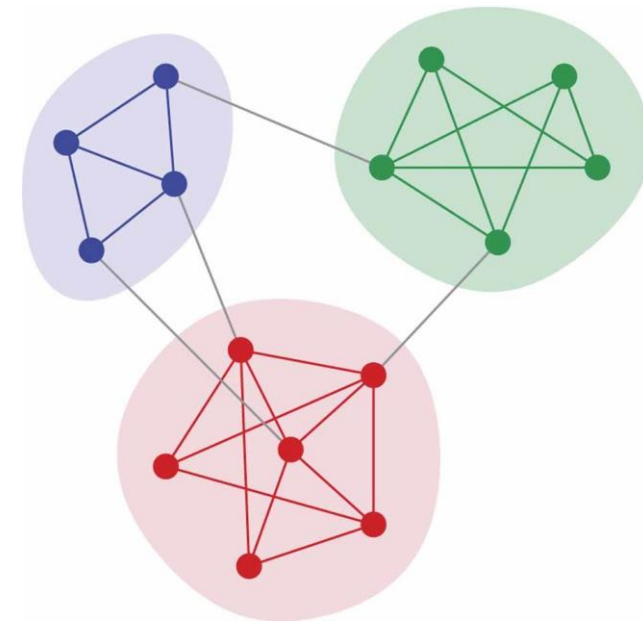
- **policy actors** (typically) cannot achieve their objectives on their own
- **public policies are shaped by interactions and coalition formation** where actors share information as well as resources, and exercise power against rival coalitions (Stoddart & Tindall 2015)
- the **advocacy coalition** perspective defines coalition as a group of actors that:
 - (1) share **policy beliefs**; and
 - (2) engage in **mutual coordination**

1. Shared policy core beliefs

- normative assumptions on how specific **policy field** ought to be organized
- captured by 4 Likert-type scales:
- **economy**: costs/benefits of coal, regional development
- **environment**: environmental and health impacts
- **policy**: future of coal in energy mix, question of the mining limits
- **process**: trust among key actors, regulatory framework

2. Factions

- **cohesive parts of the field/network** =
- groups of actors that are connected more among themselves than with others



Data collection

- organizational actors involved in **coal policy** field

sector	responded	total	response rate (%)
central and regional governance	16	16	100
central and regional political parties	16	18	89
environmental non-governmental organizations	8	9	89
research organizations	14	16	88
professional associations & trade unions	3	7	43
industry	11	17	65
total	68	83	82

Note: includes partial responses

Data collection

- the survey instrument (a self-administered online questionnaire) collects data on attribute variables: (1) **policy core beliefs** and (2) **network ties**

network	tie
political influence (PI) network	directed binary tie
expert information (EI) exchange network	directed binary tie
political cooperation (PC) network	directed binary tie

Results: usual suspects

- The **Industry Coalition:**

- **dominant coalition** with superior resources and **direct access to decision-making**
- huge **vested interests** that go against transition

- consists of **17 organizations:**

- 3 political parties (central)
- 2 political parties (Ústí region)
- 2 state agencies (central)
- 1 state agency (Ústí region)
- 2 regional agencies (Ústí region)
- 6 companies

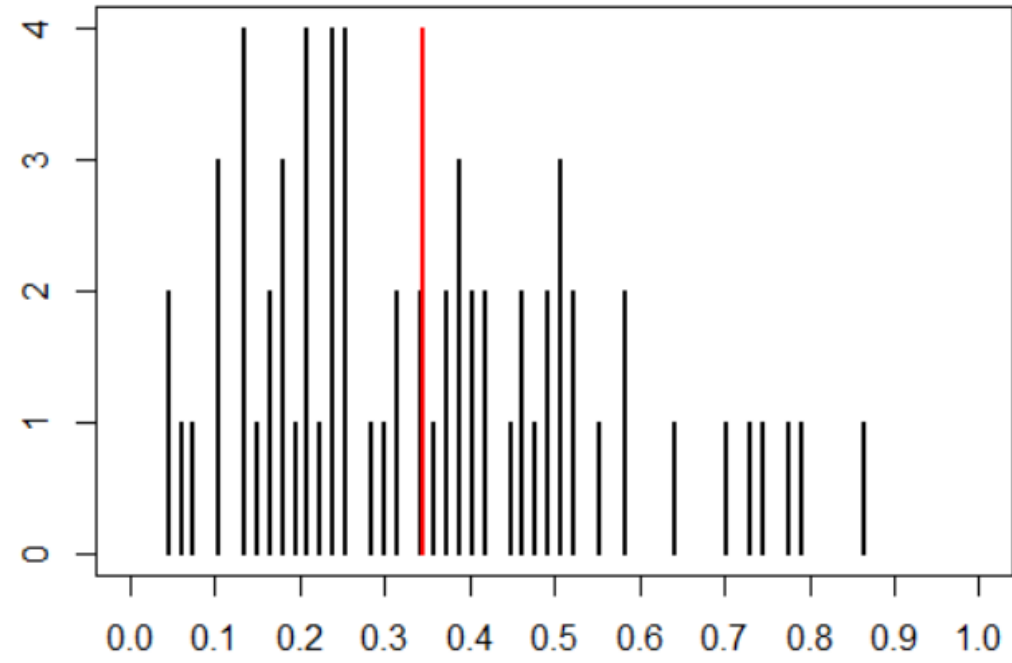
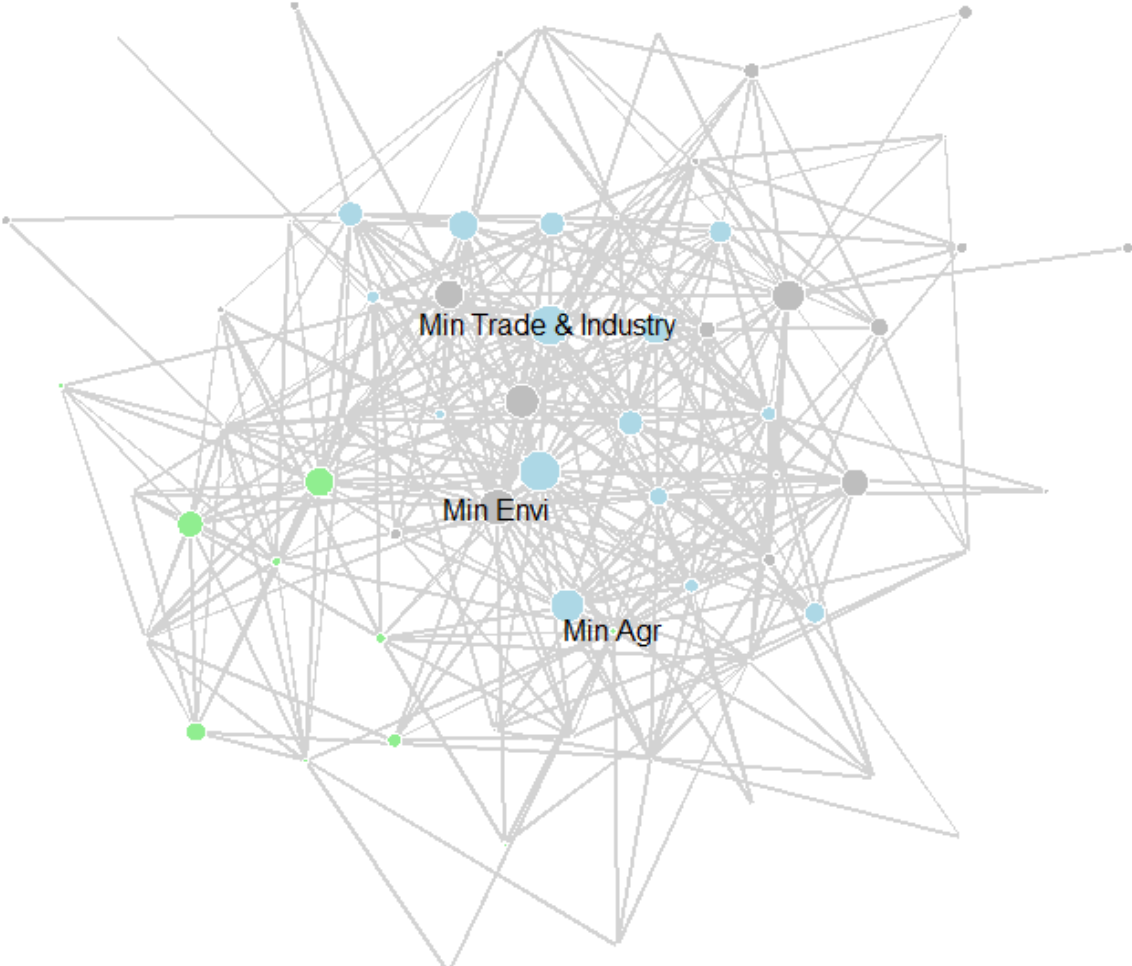
- The **Environmental Coalition:**

- **minor coalition** reliant on its **relational capacity** and **expert knowledge**

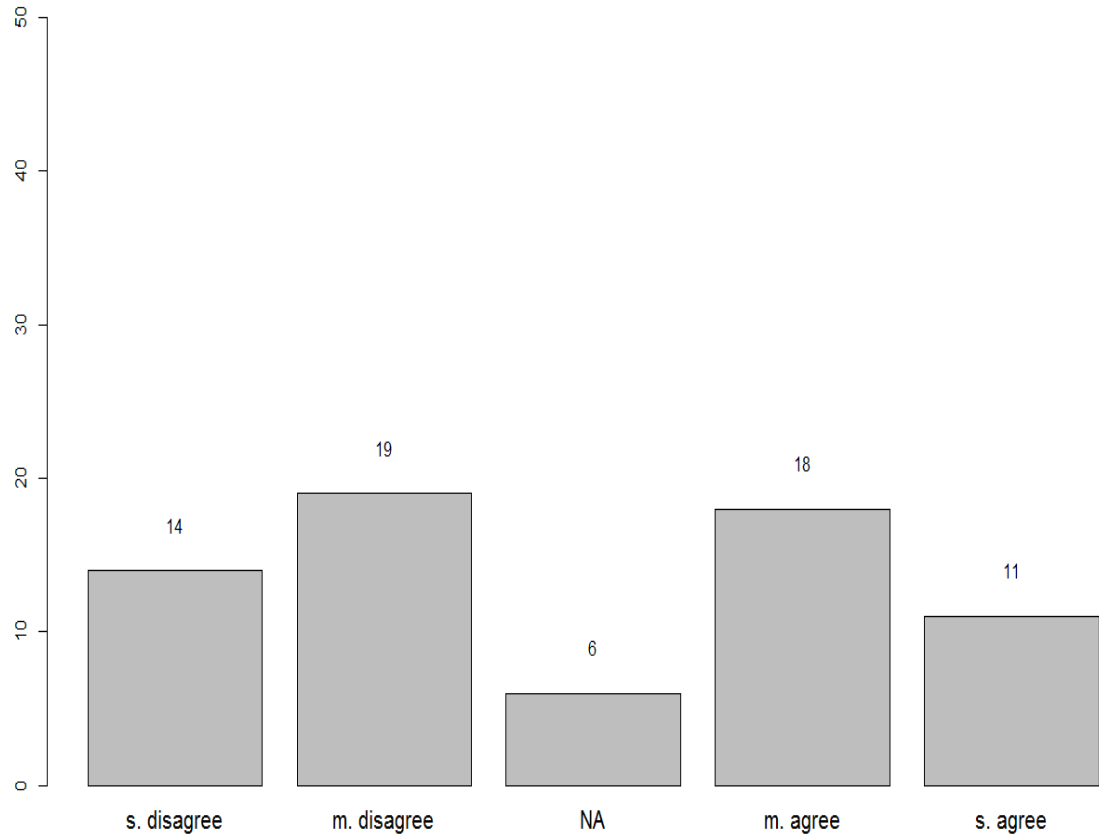
- consists of **18 organizations:**

- 8 ENGOs
- 2 state agencies (central)
- 2 political parties (central)
- 6 research organizations

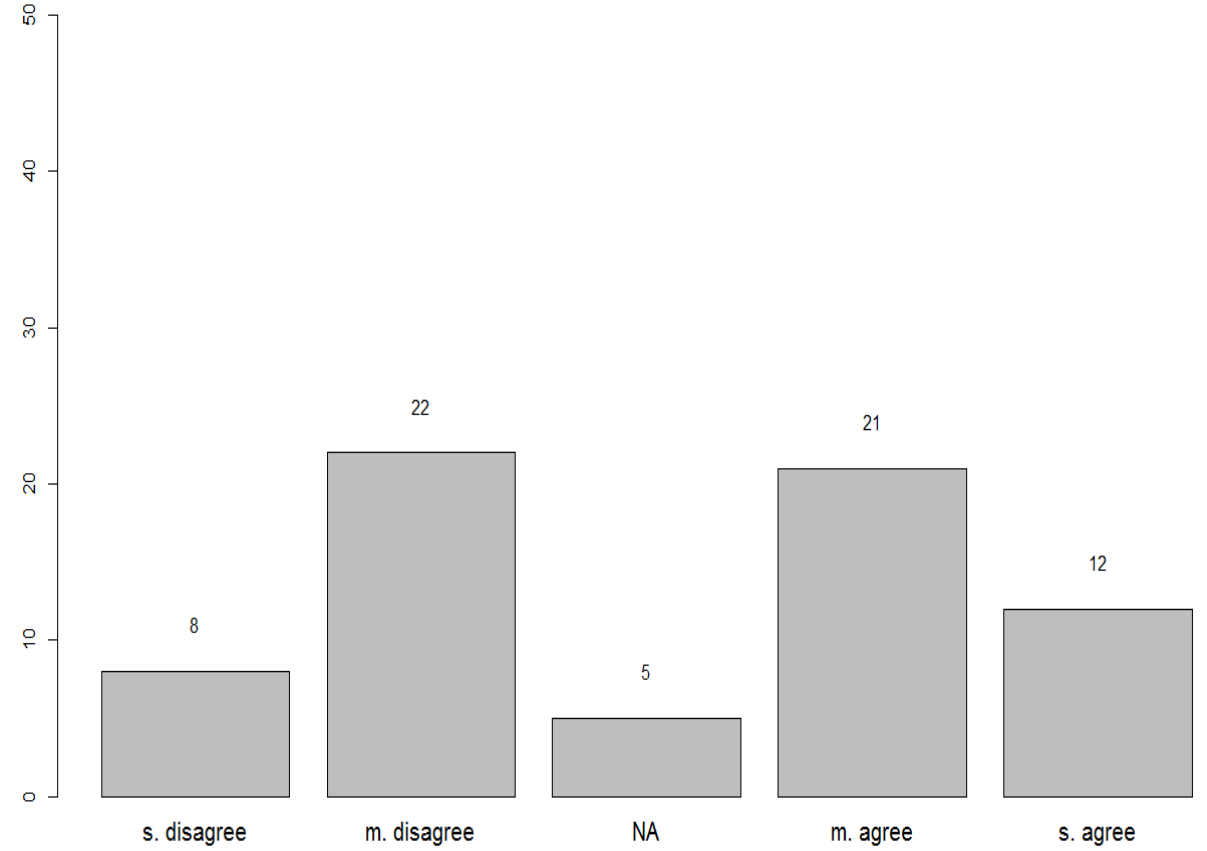
Results: usual suspects

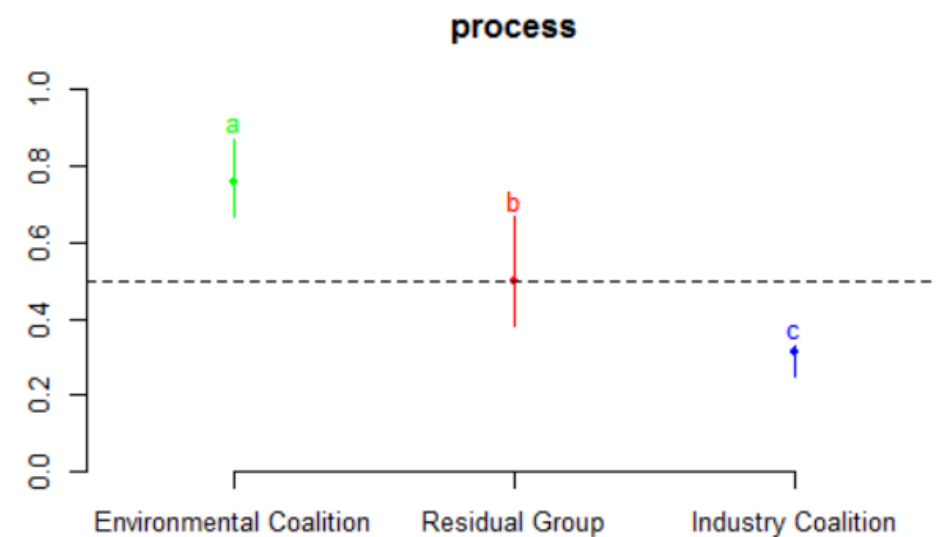
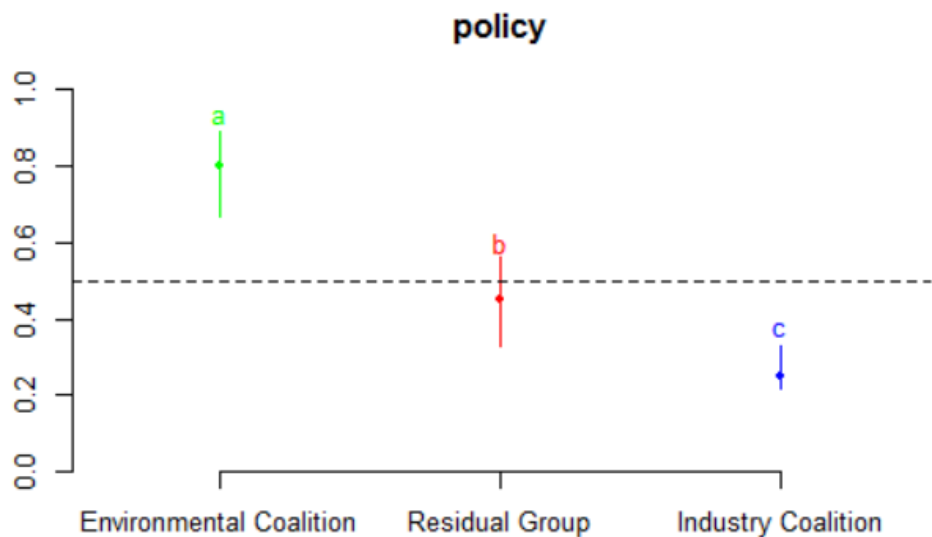
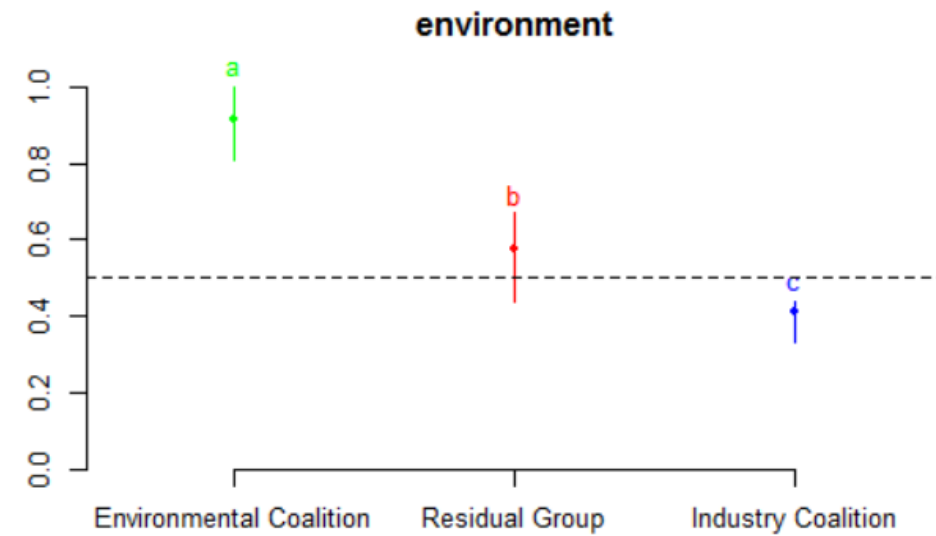
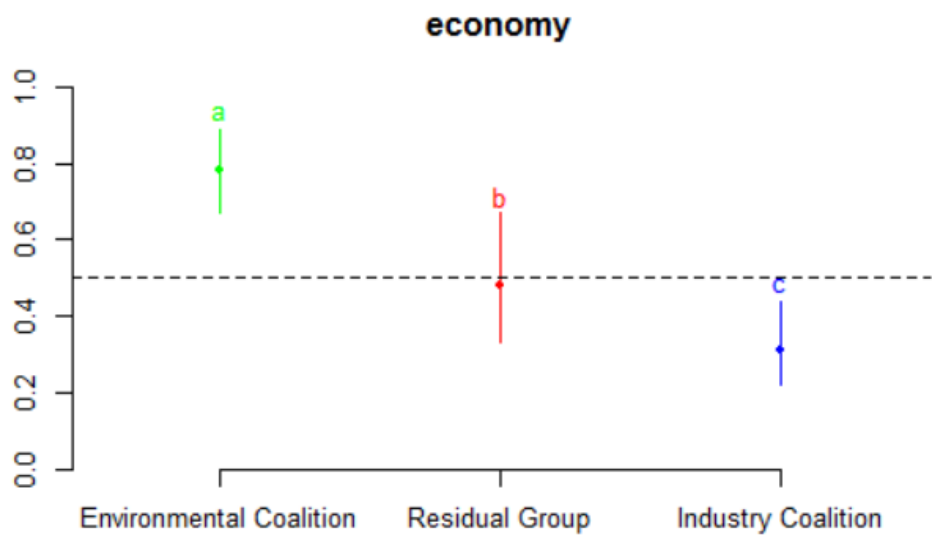


Coal should remain a key part of energy mix and its mining should be developed further (N = 68)



Economic benefits of coal mining to society are irreplaceable (N = 68)





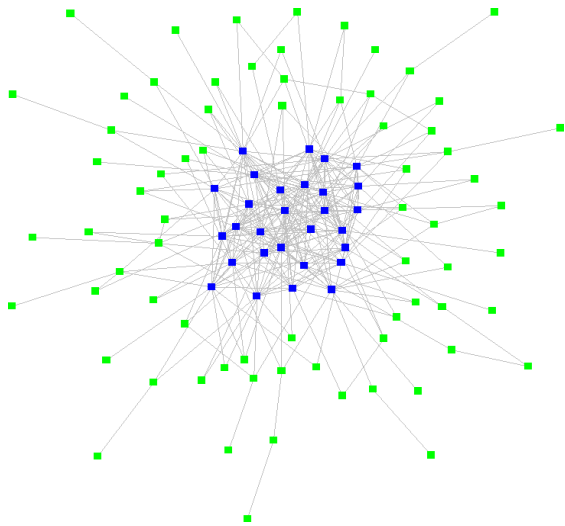
the scales range between $\langle 0,1 \rangle$; where 0 = very strong pro-coal position, 1 = very strong anti-coal position
 different colors/letters indicate statistically significant difference between the groups at $p < 0.05$

Expert information: Tell me I am right?

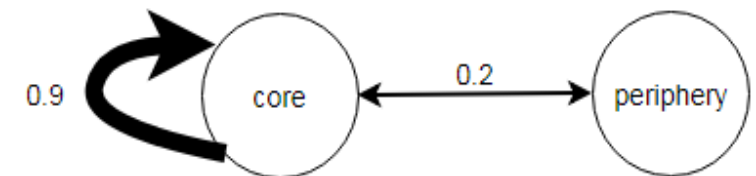
- **Expert information** is crucial for management of complex socio-technical systems (Giddens 1990) – includes **evidence-based policy-making**
- Its importance increases under **conditions of uncertainty** (Cairney et al. 2016)
- Two opposing approaches:
 - **Technocratic governance:** exp info abrades ideological differences and “builds bridges”
 - **Expertise politics:** exp info is used to defend ideological positions of their holders/providers

Block modeling

- Block model (BM) is a **simplified representation of a network** (White et al. 1976):
 - Groups of nodes with similar relations to others (blocks)
 - Patterns of relations among blocks (social roles)



	core	periphery
core	0.9	0.2
periphery	0.2	0.05



network density = 0.12
only interactions with sign. different density displayed

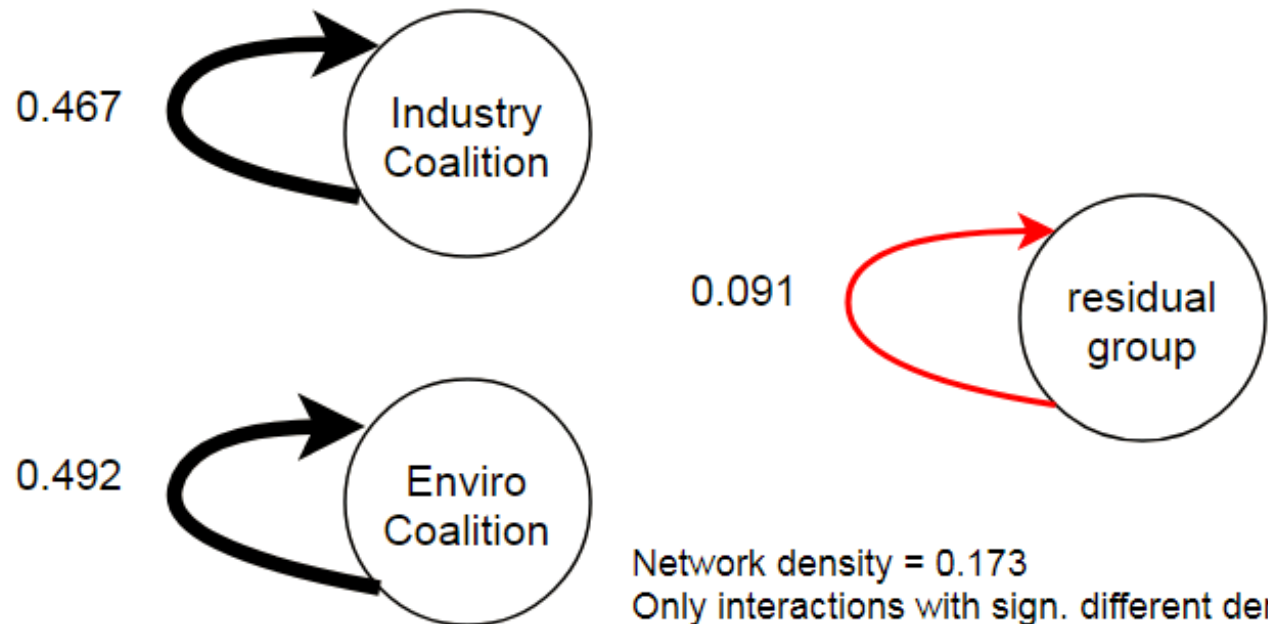
Expert information: Tell me I am right?

- Coalitions identified based on political cooperation network and shared policy core beliefs

Blocked density matrix: expert information
Adj R² = 0.102

	Industry Coalition	Enviro Coalition	residual group
Industry Coalition	0.467	0.161	0.158
Enviro Coalition	0.147	0.492	0.064
residual group	0.186	0.127	0.091

Bolded cells indicate significant differences from the average (network density = 0.173)



Expert information: Tell me I am right?

- **expert information** is crucial for management of complex socio-technical systems (Giddens 1990)
 - **evidence-based policy-making**
 - its importance increases under **conditions of uncertainty**
- ~~**technocratic governance:** exp info abrades ideological differences and “builds bridges”~~
- **expertise politics:** exp info is used to defend ideological positions of their holders/providers
- more than 2.5 times more likely to exchange expert information within advocacy coalitions than between the coalitions
- contributes to **polarization** and limits **policy change by learning**