

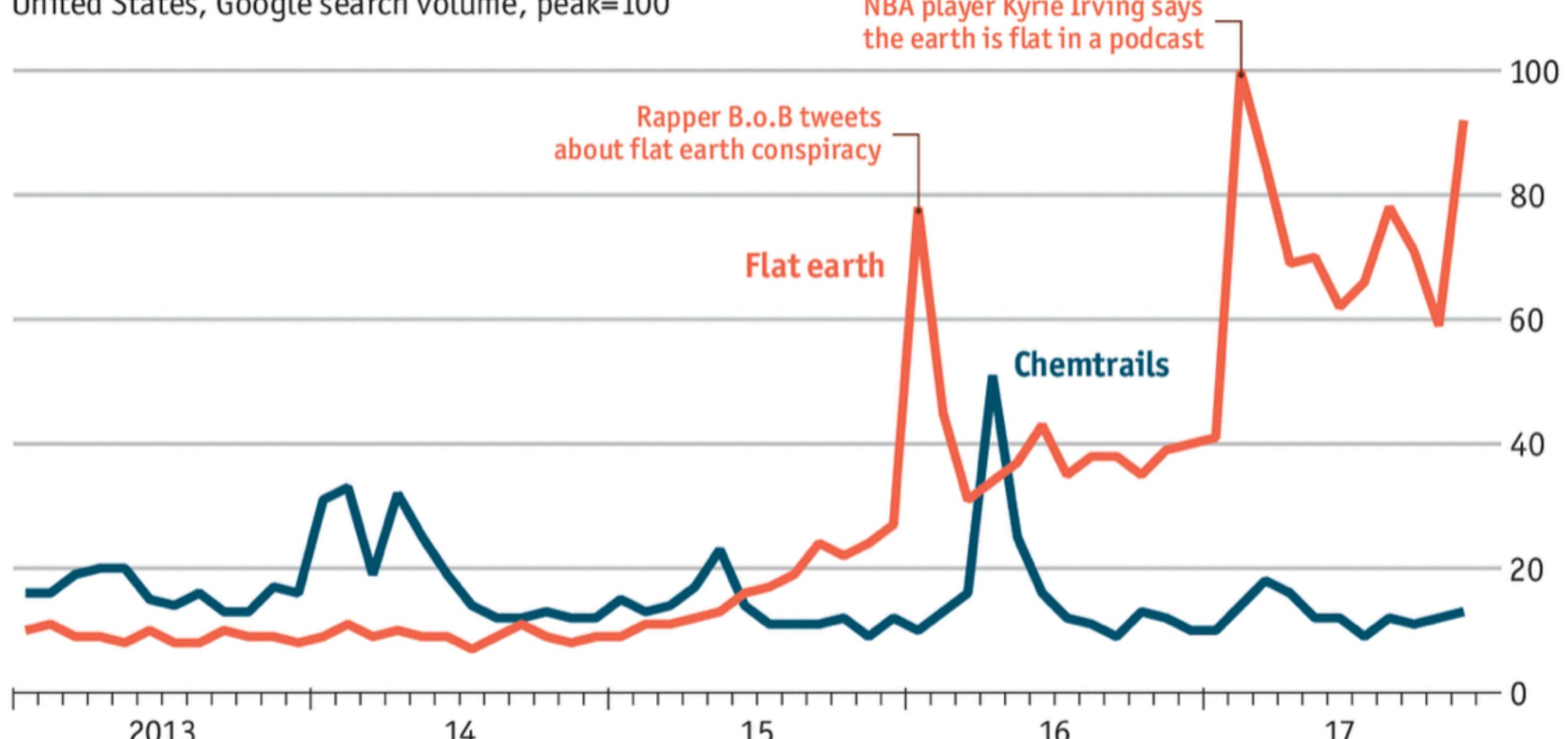
IV ISA Forum of Sociology  
23 February 2021

“No room for thinking, under the dome”. Flat earth and the boundary construction between science and non-science on Twitter.

Luca Carbone (KU Leuven)  
Peter Achterberg (Tilburg University)

## Spheres of influence

United States, Google search volume, peak=100



Source: Google Trends (<https://www.economist.com/graphic-detail/2017/11/28/americas-flat-earth-movement-appears-to-be-growing>)

- How does the public discuss the topic of FES?
- Does science acquires its legitimacy among the public through public discussions about FES?

Core

Periphery

# Periphery

## **Shortcomings:**

- Origins and motives of non-science (Harambam & Aupers 2015, 2016)
- Classificatory power to demarcate systems of knowledge (Agrawal, 1995, 2002)

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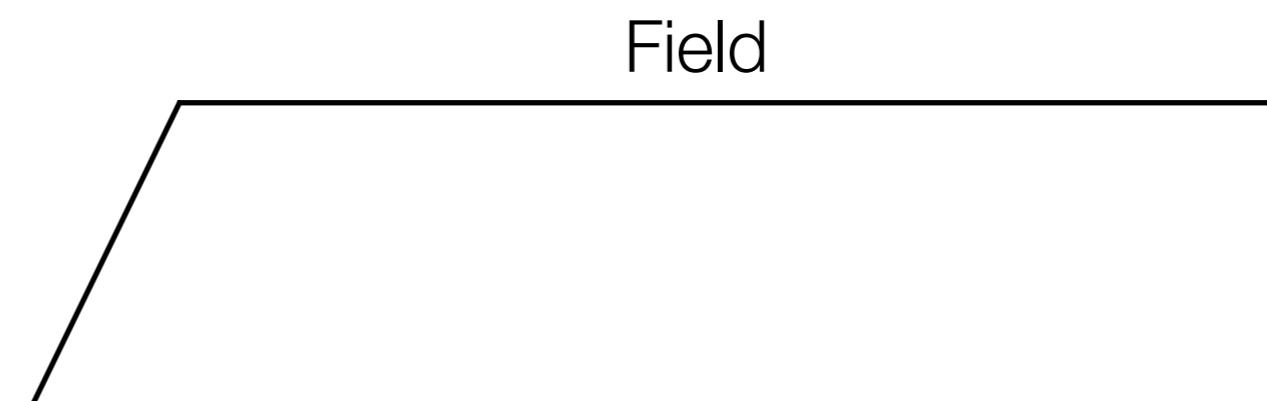
## **Constructivist approach:**

- Not only content-based (essentialist)
- Attention to representations: boundary-work (Gyerin, 1995)

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## **Constructivist approach:**

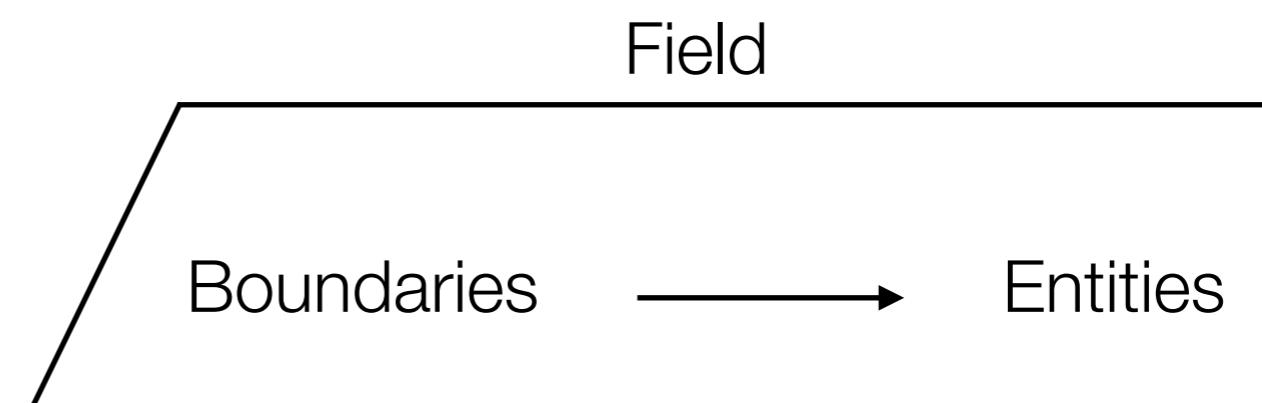
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- Twitter: symbolism, density



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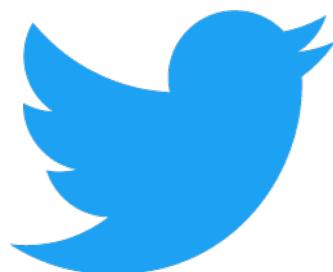
## Constructivist approach:

- Not only content-based (essentialist)
- Attention to representations: boundary-work (Gyerin, 1995)
- Twitter: symbolism, density
- Process (Abbott 1988, 1995)



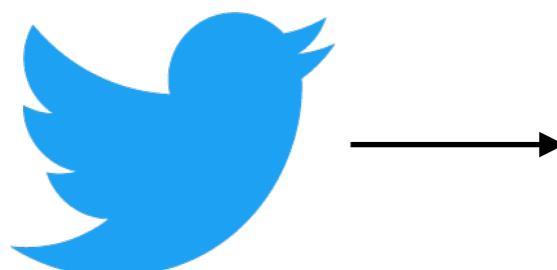
#FlatEarth

(N = 7138)



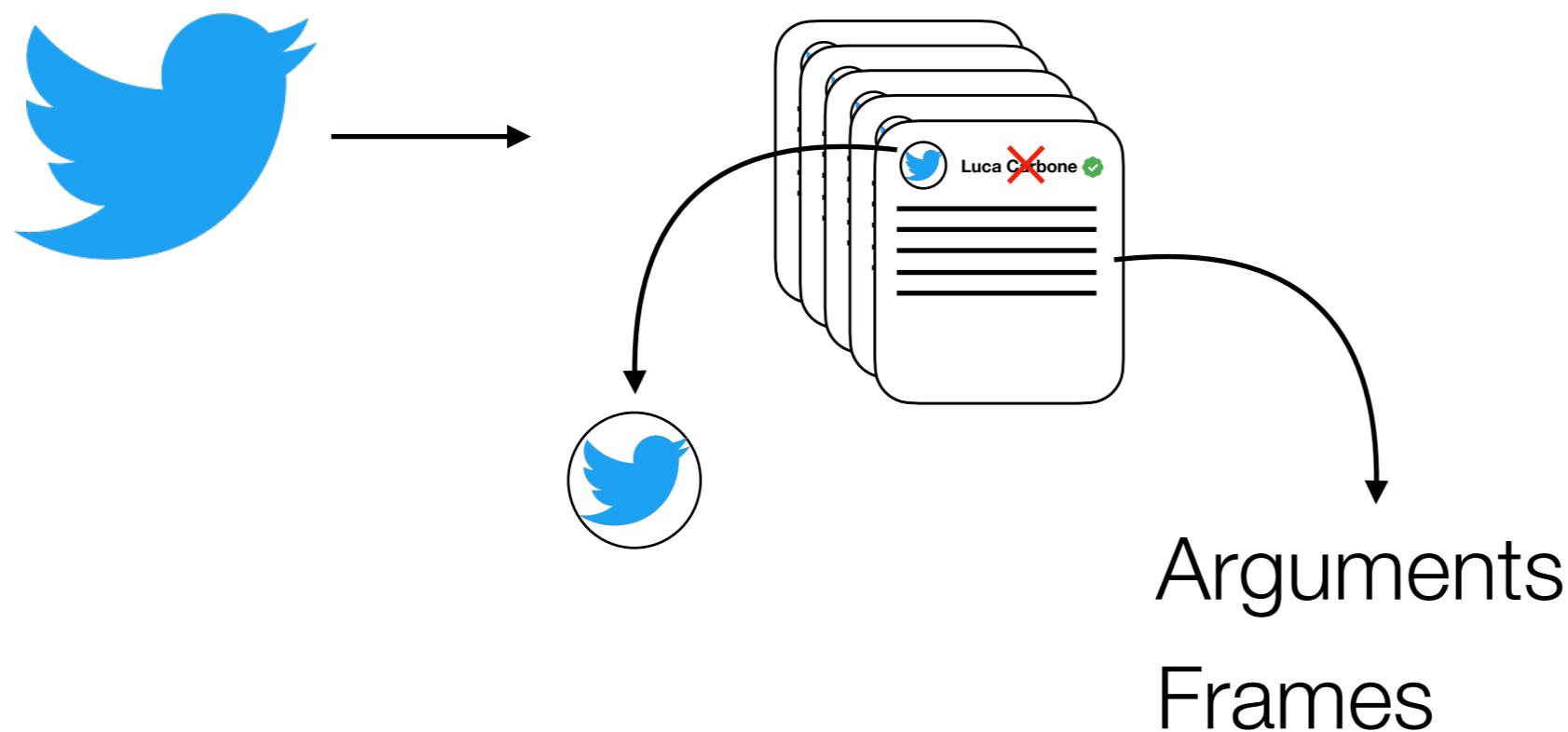
#FlatEarth  
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Content analysis  
 $N_{\text{coding schema}} = 350$   
 $N_{\text{main analysis}} = 700$



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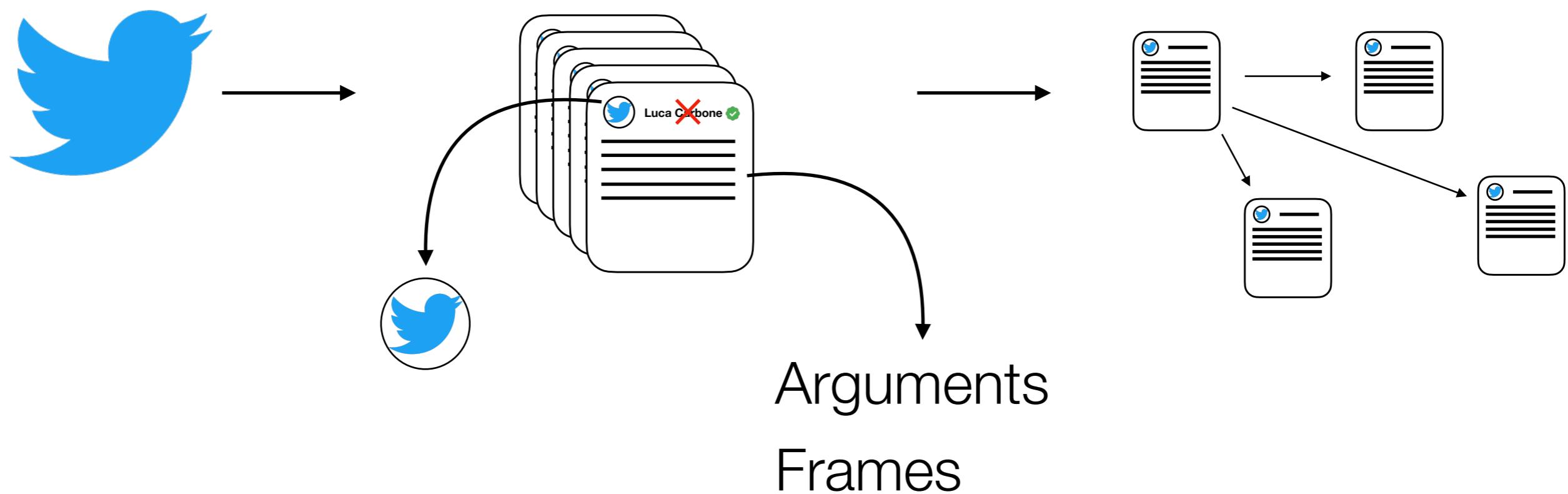
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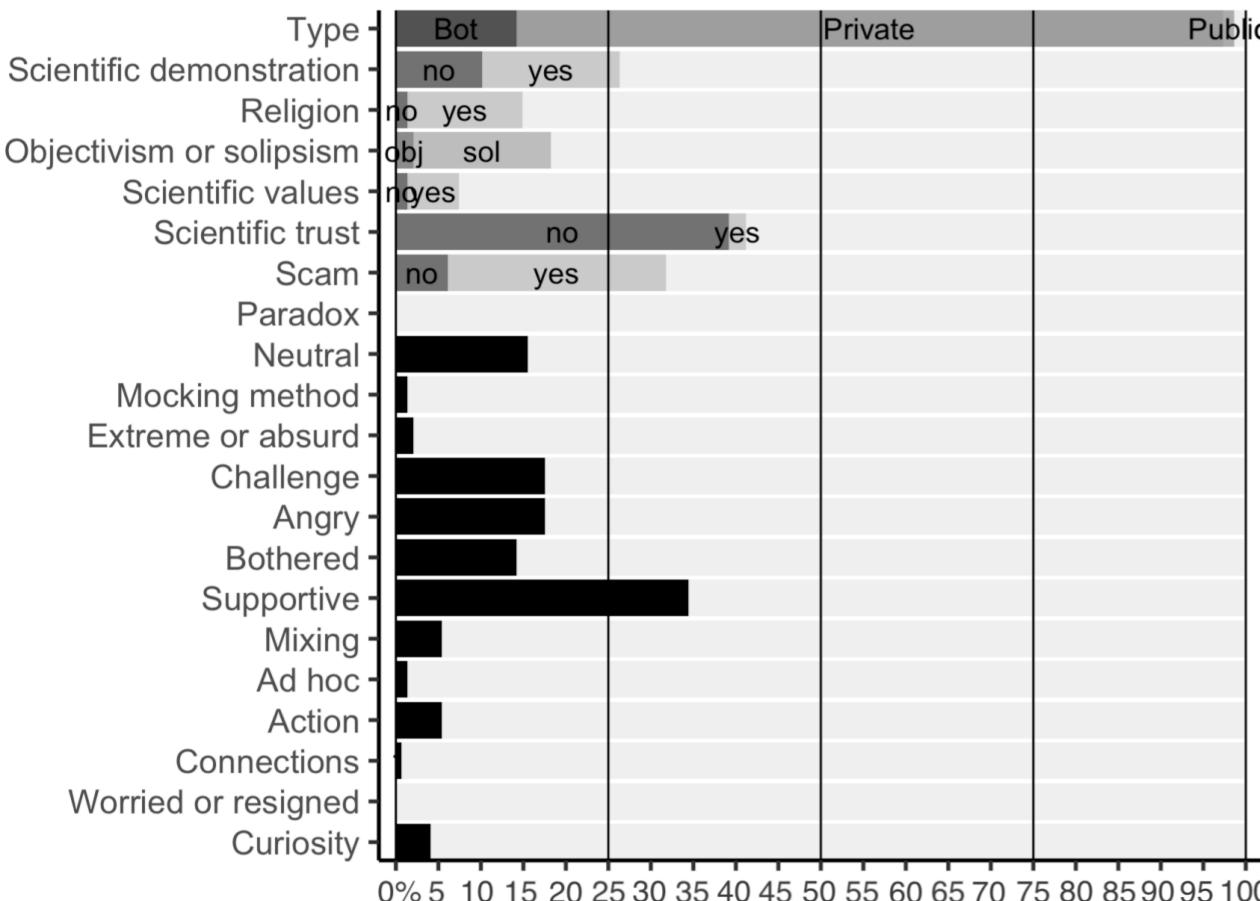
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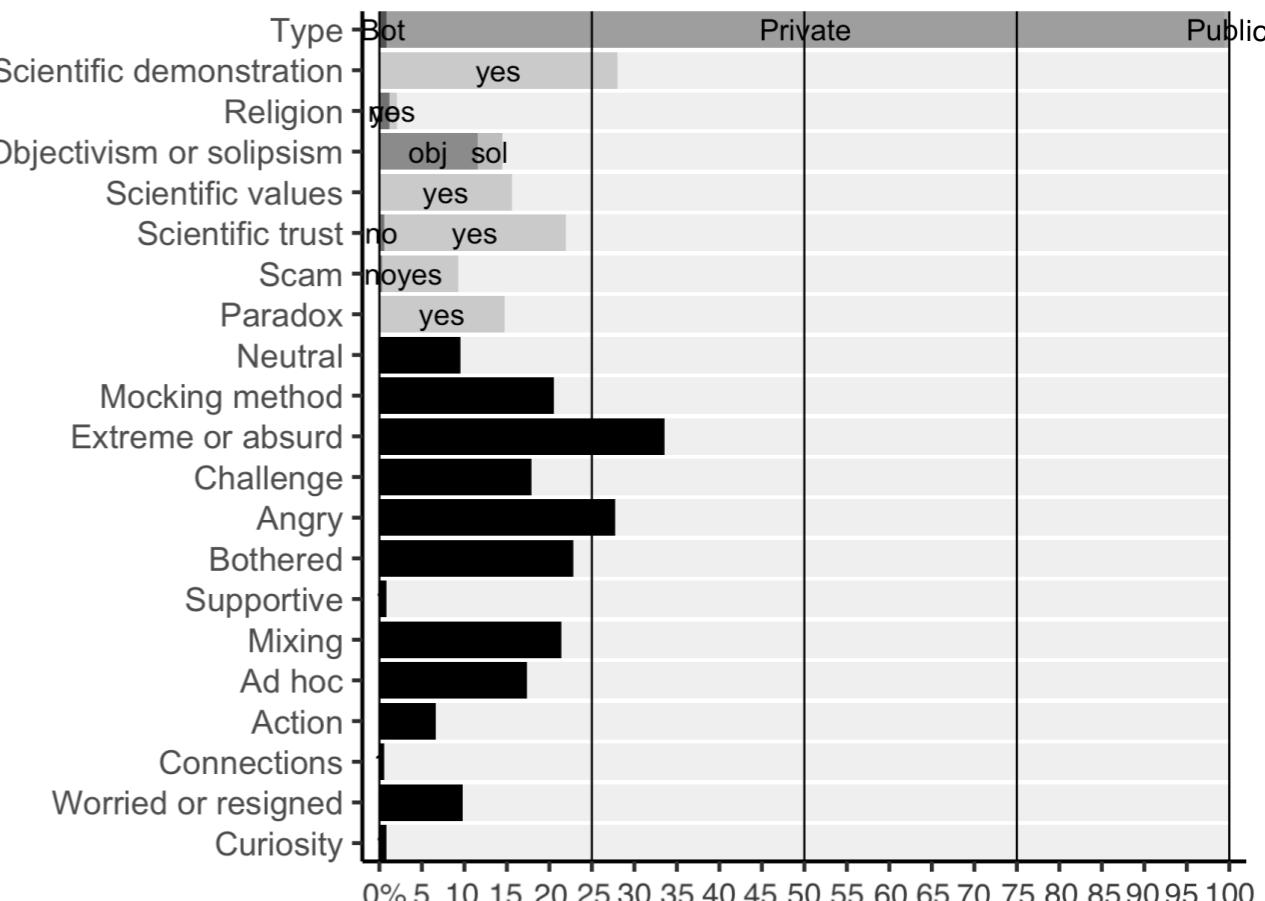
Discourse network  
analysis (Leifeld &  
Haunss, 2012)



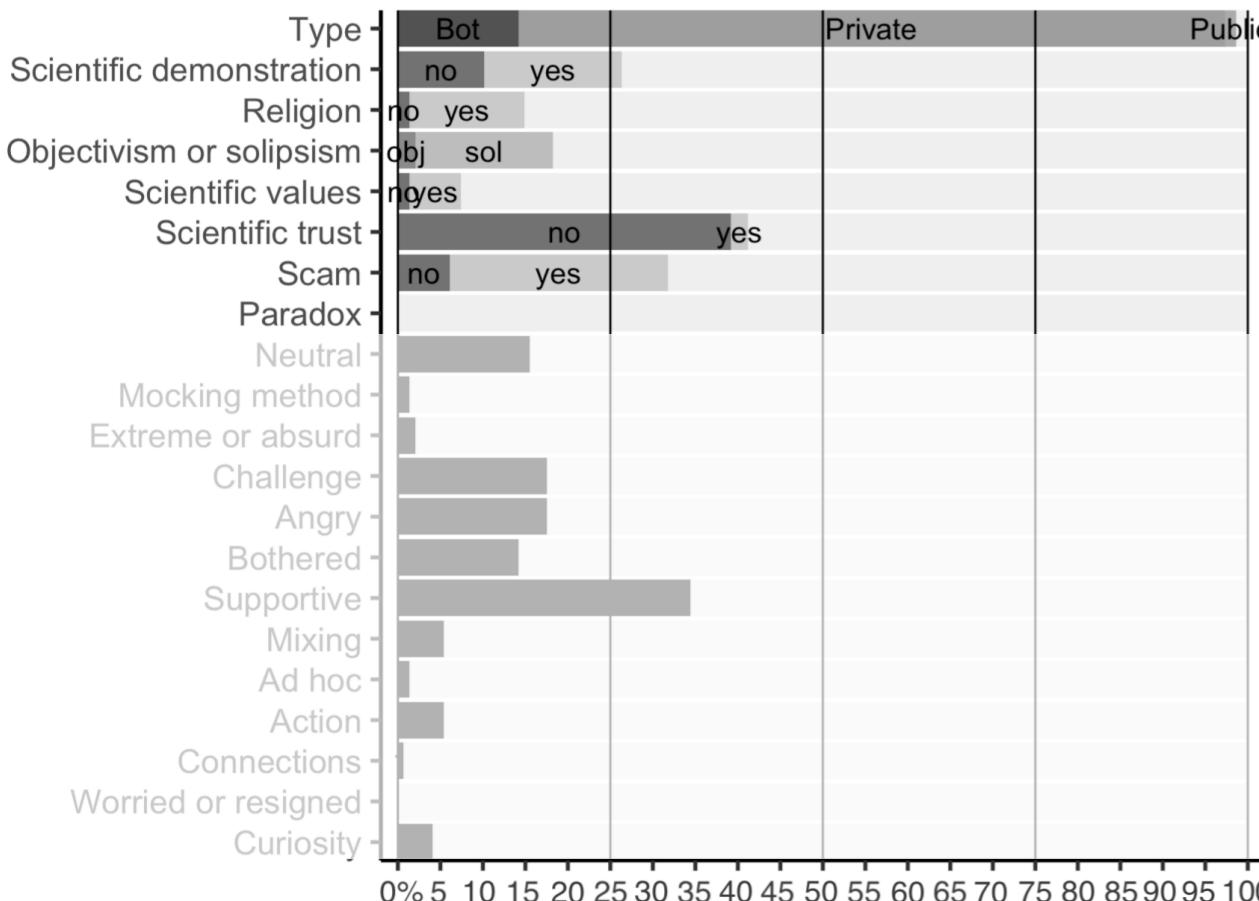
Supporters of FES (N = 148)



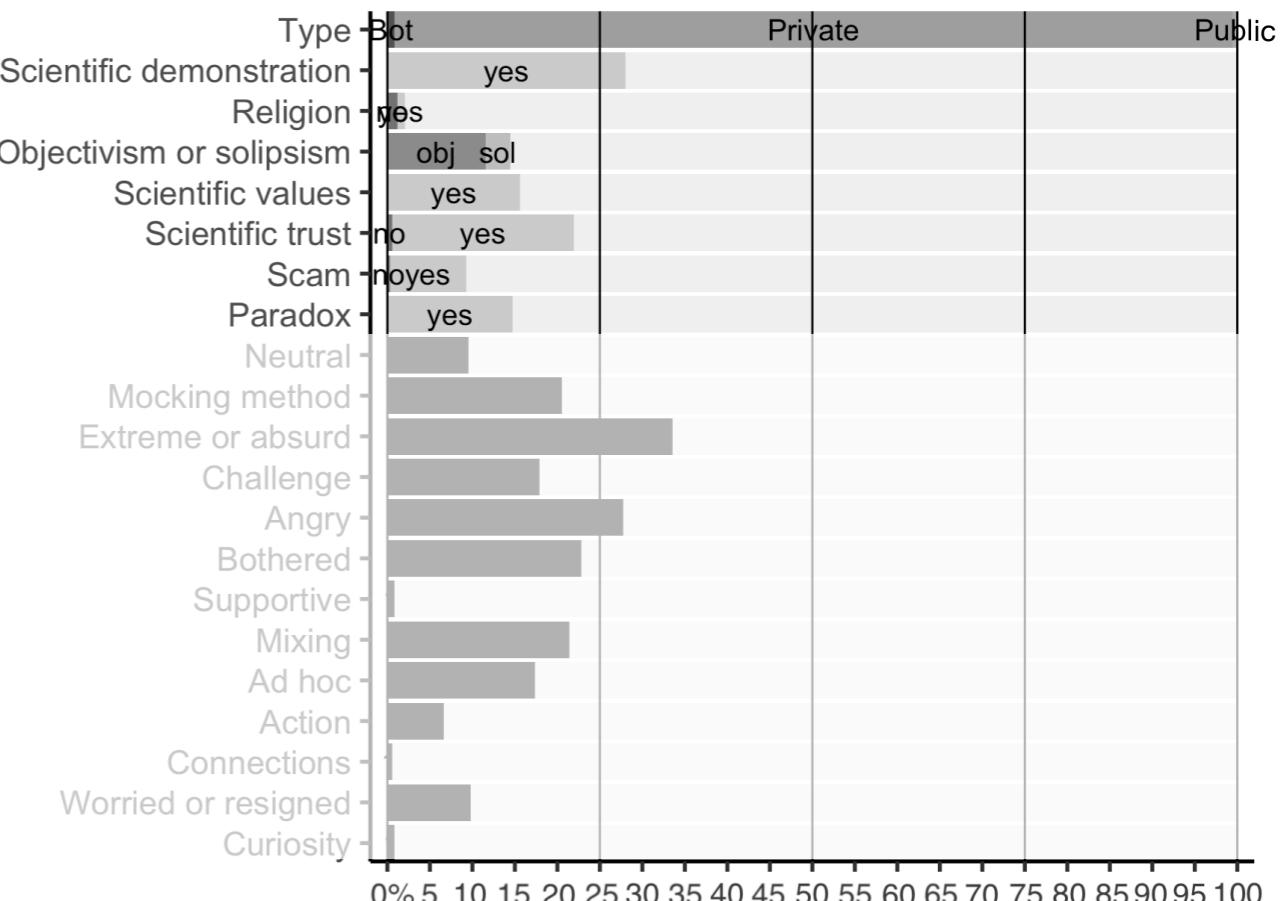
Adversaries of FES (N = 346)



**Supporters of FES (N = 148)**

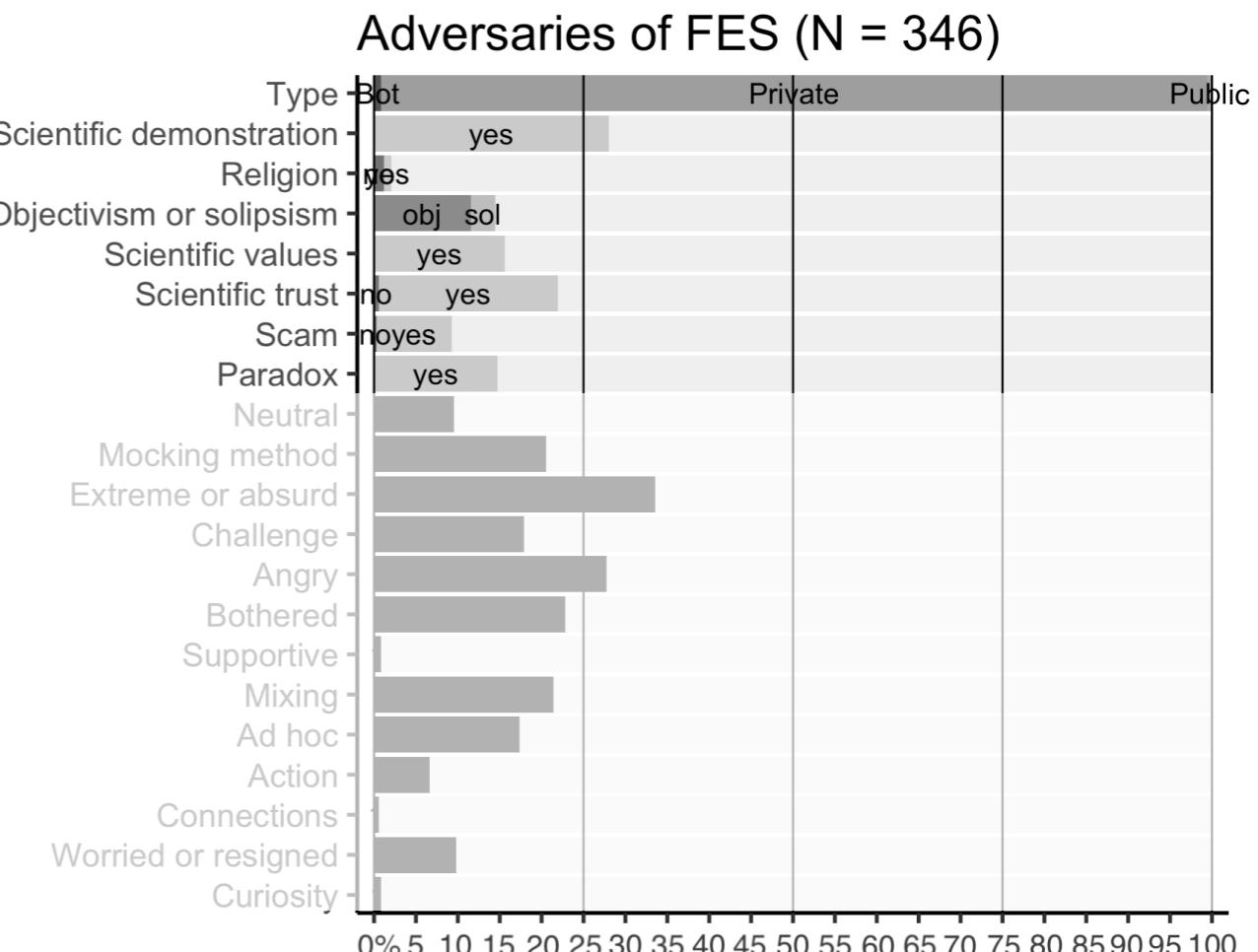
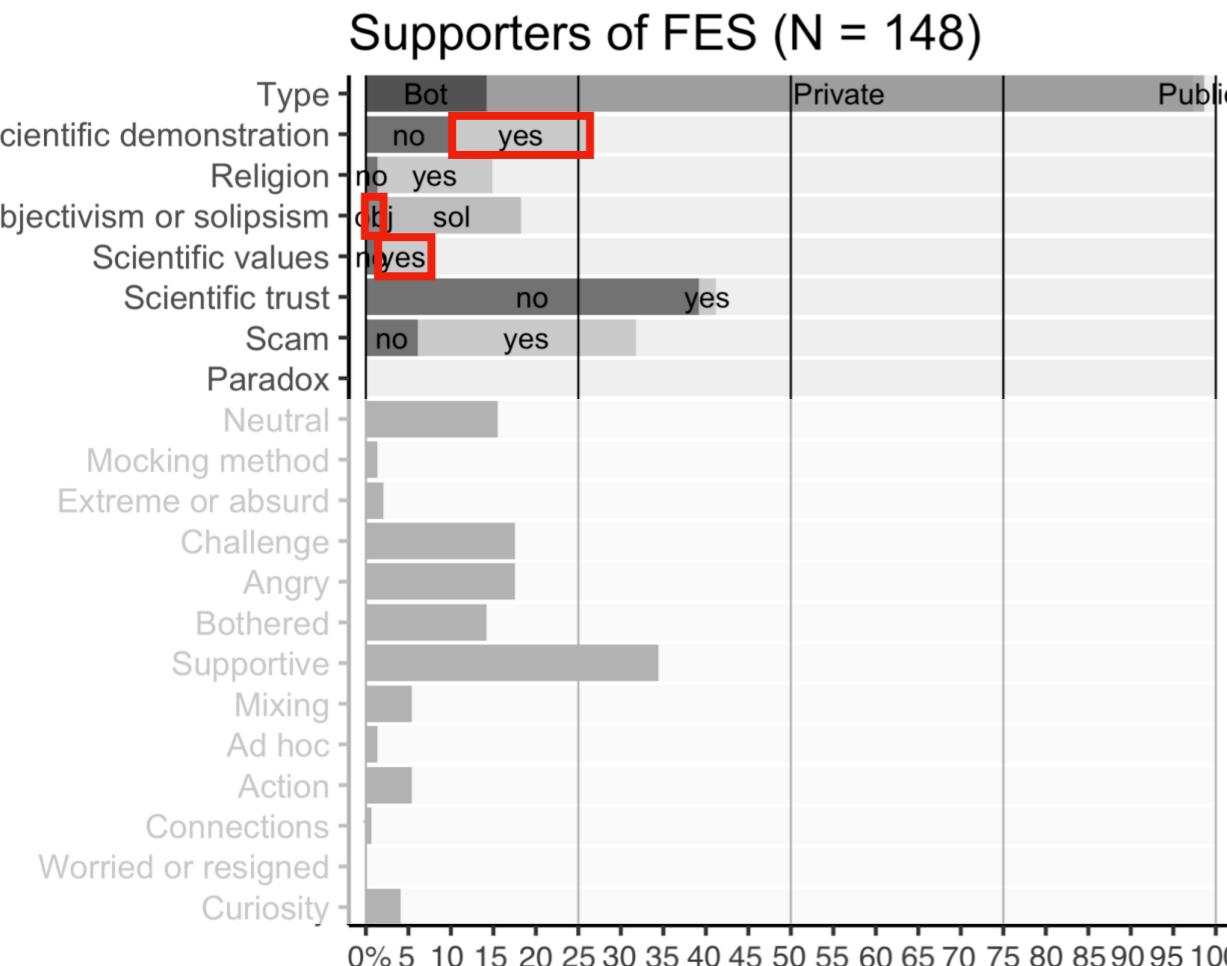


**Adversaries of FES (N = 346)**



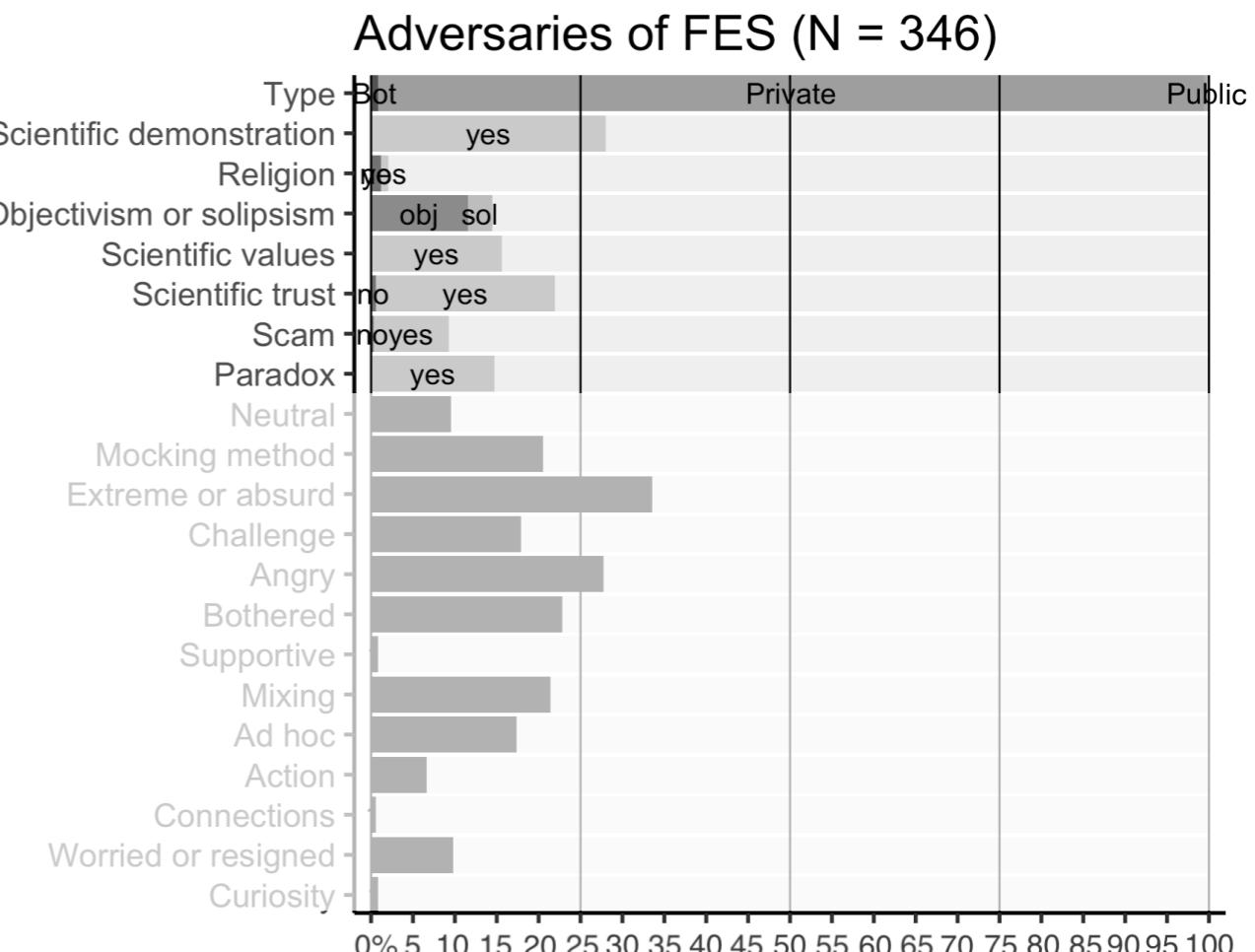
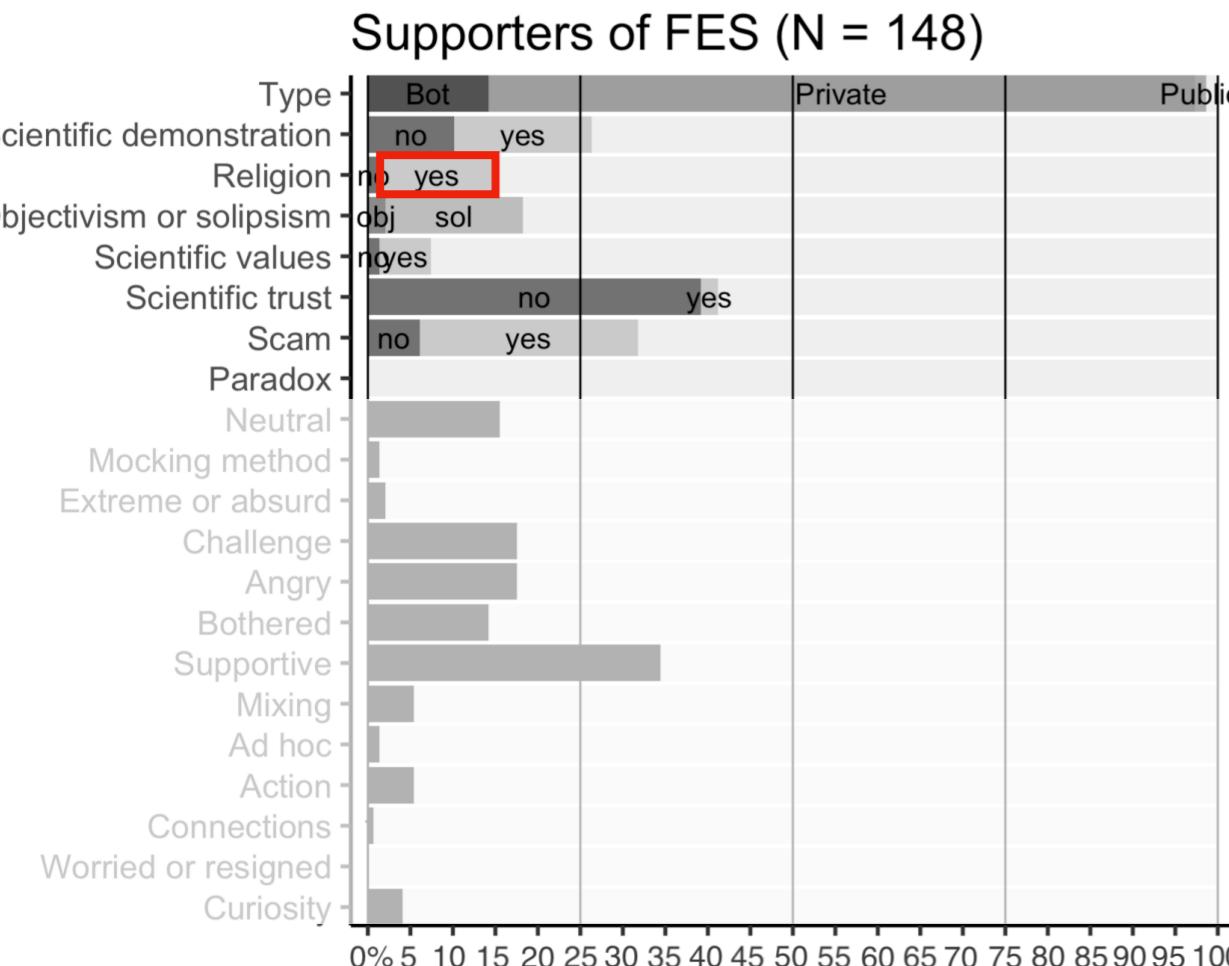


Conspiracy (27%)



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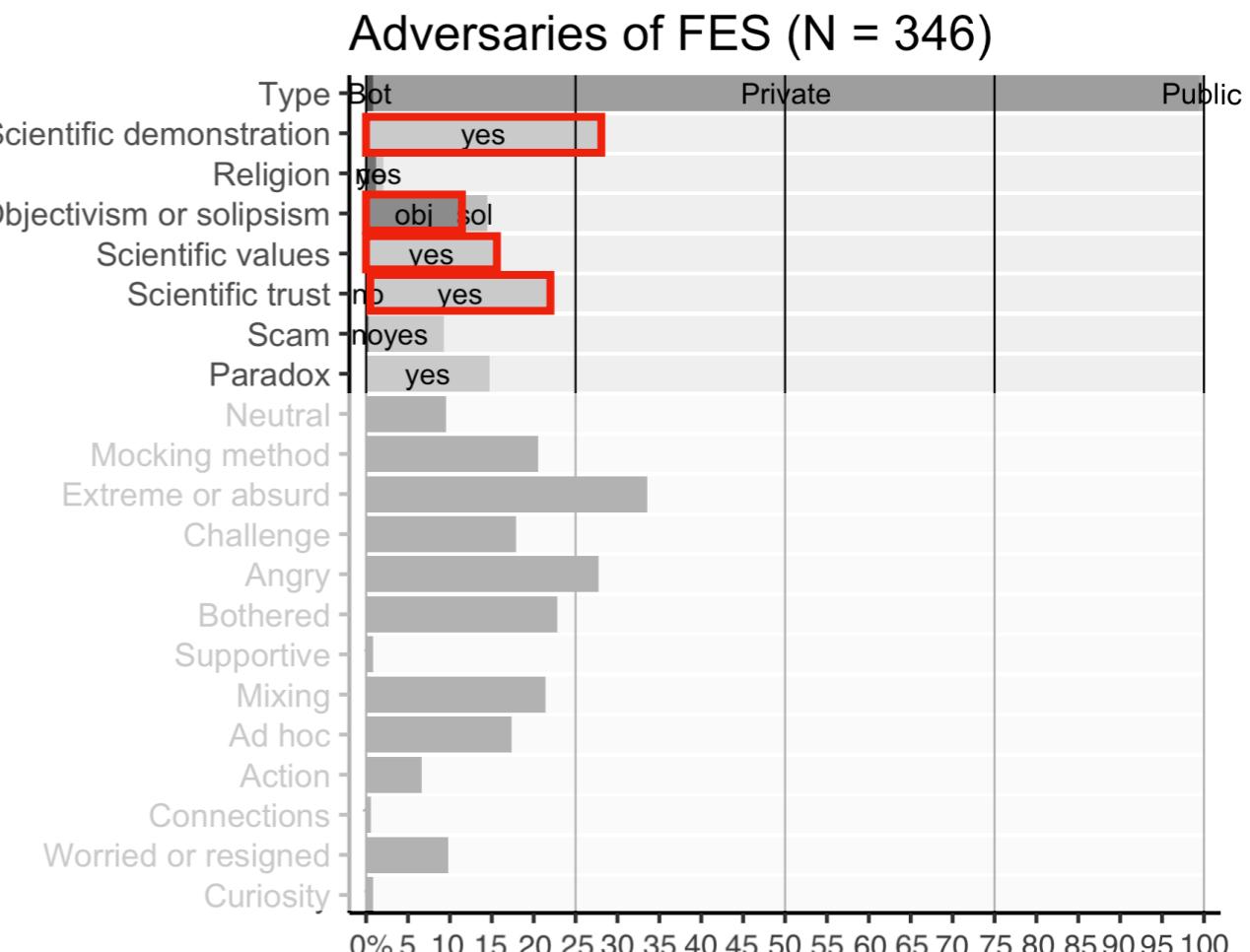
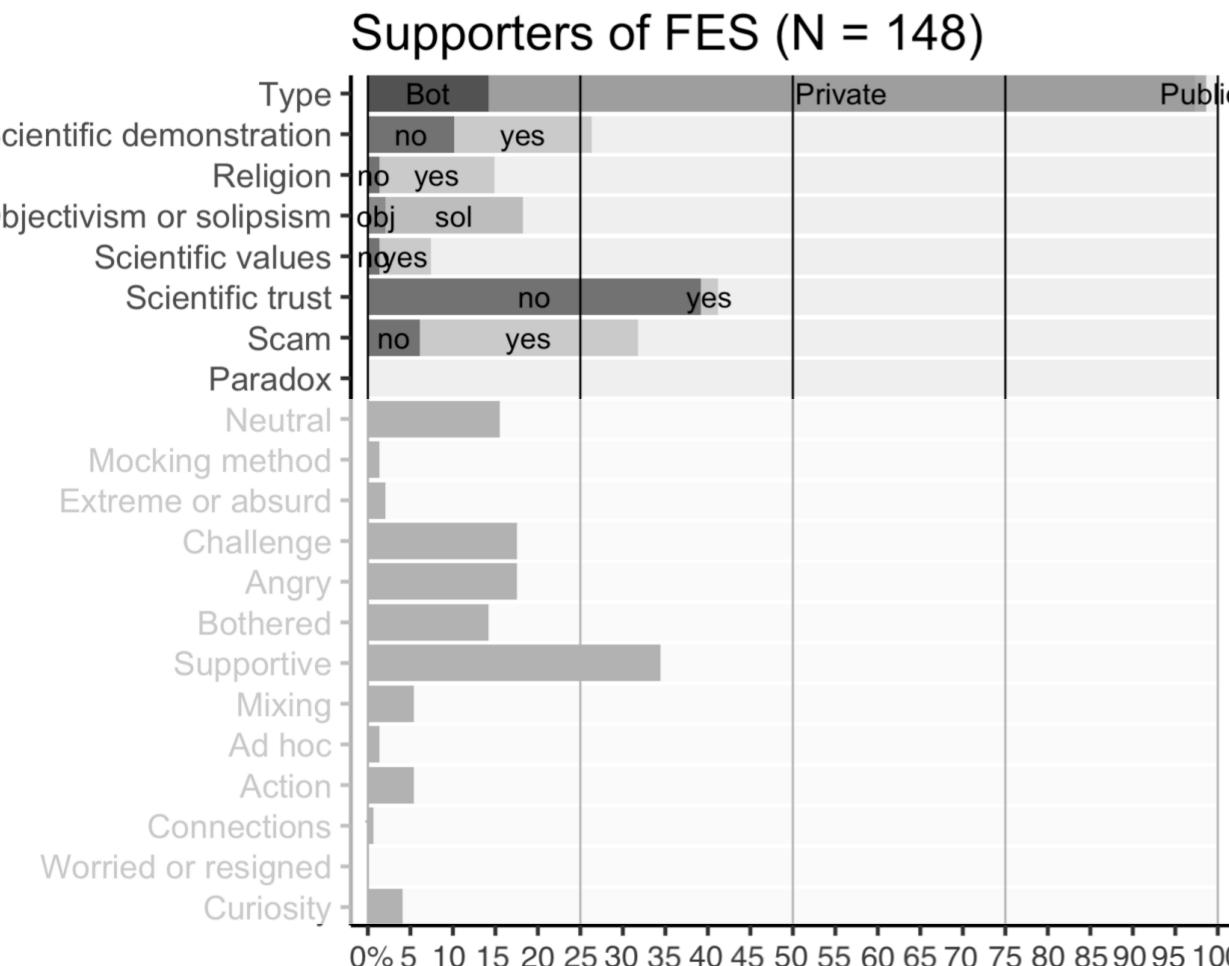
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Conspiracy (27%)

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Religious (14%)

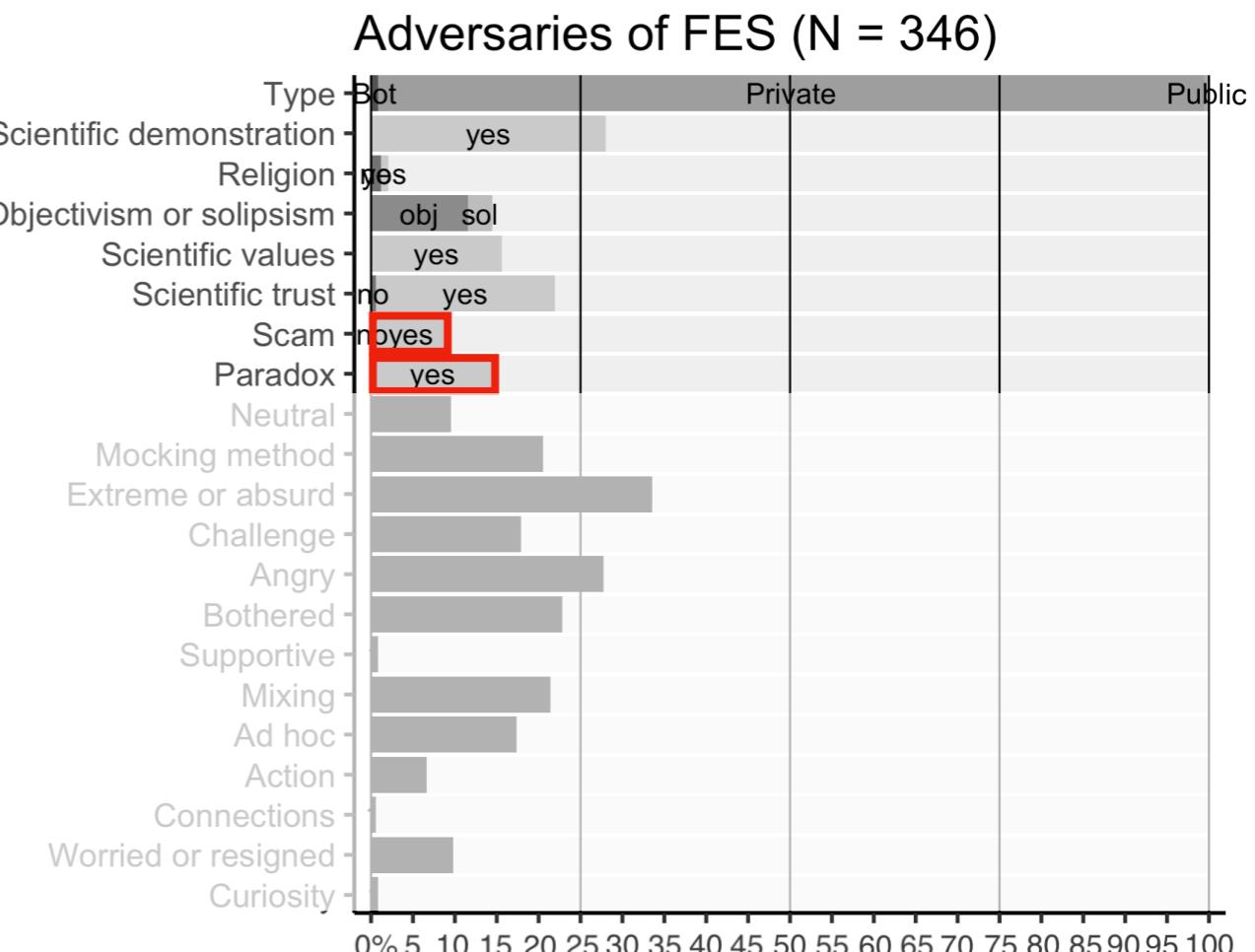
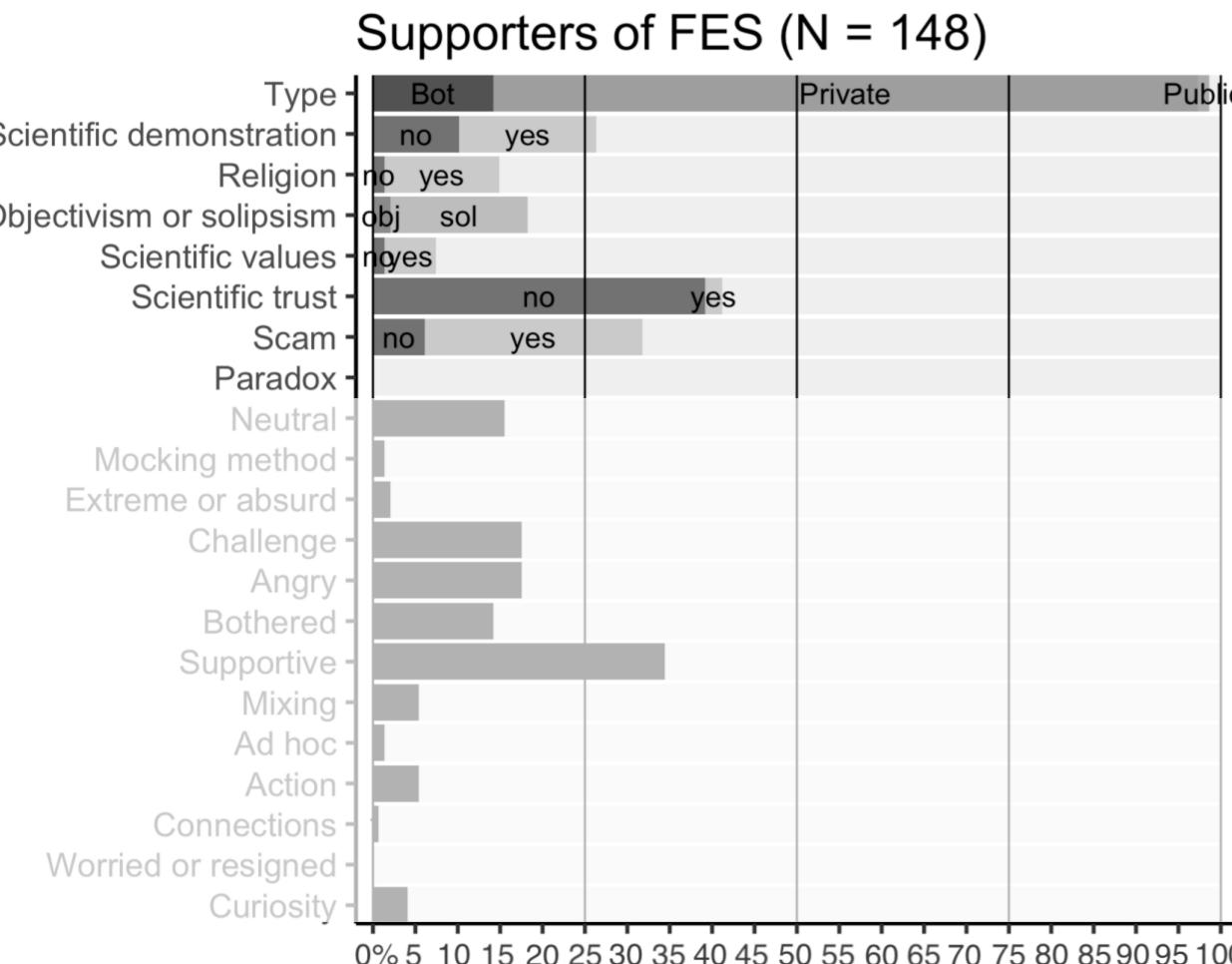


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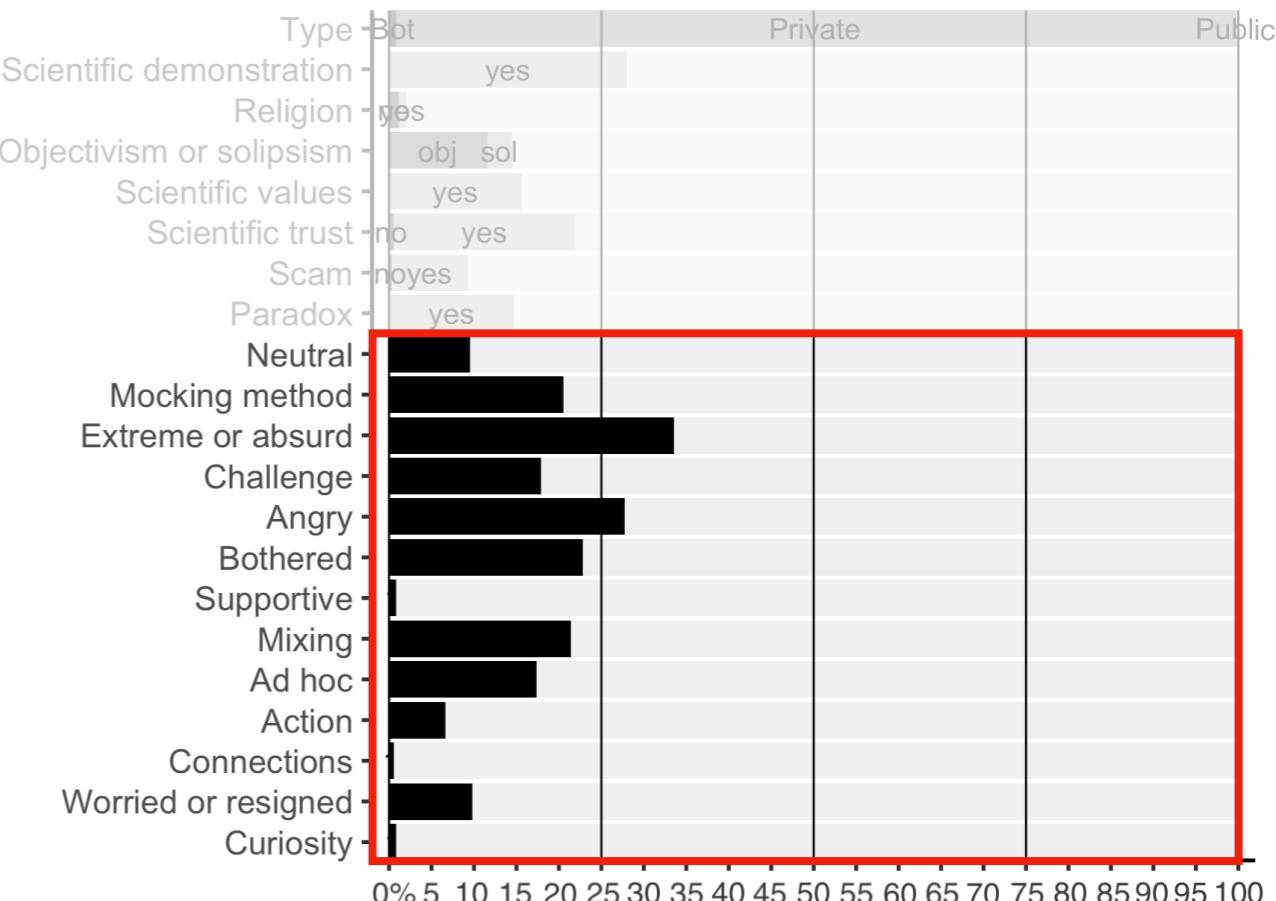
Debunkers (12%)

Skepticals (23%)

Supporters of FES (N = 148)

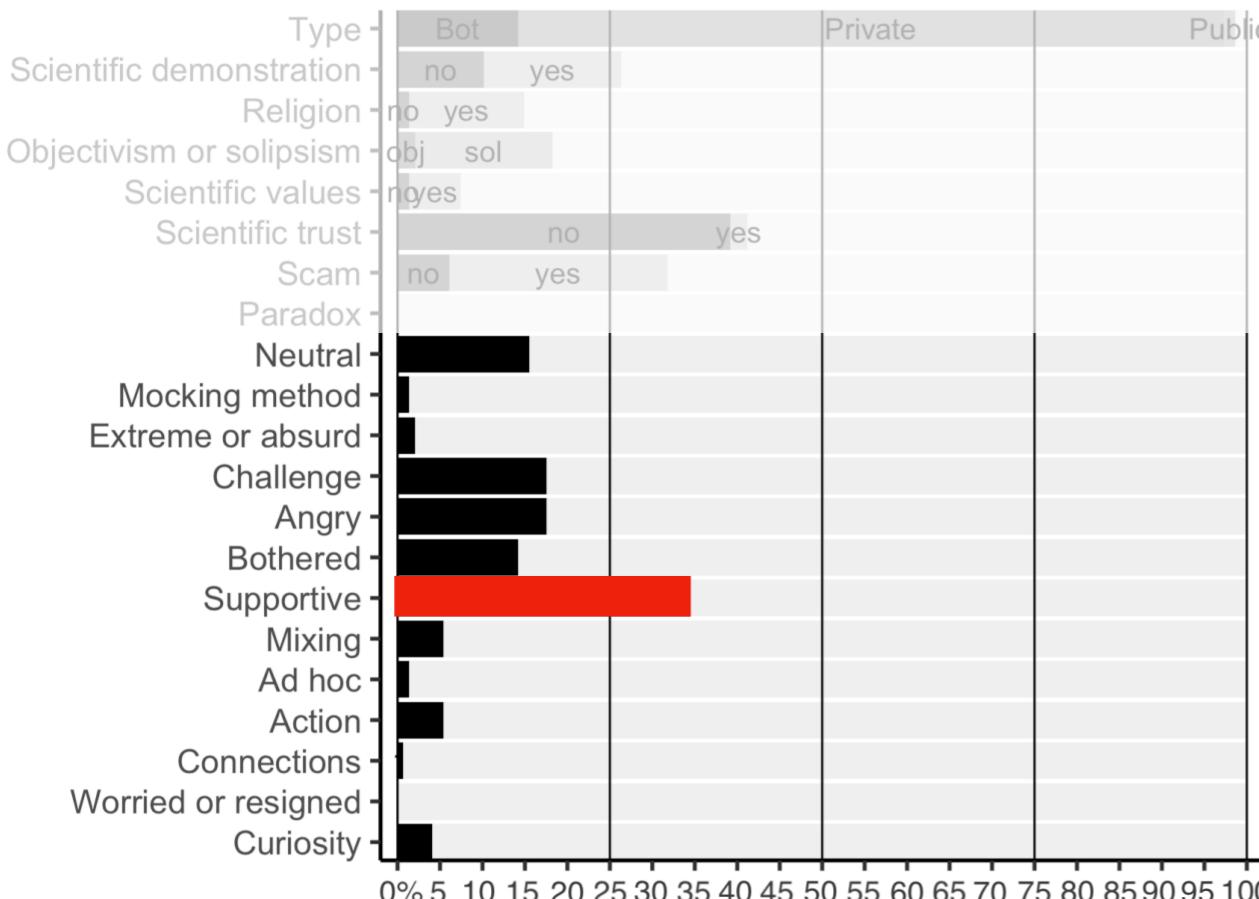


Adversaries of FES (N = 346)

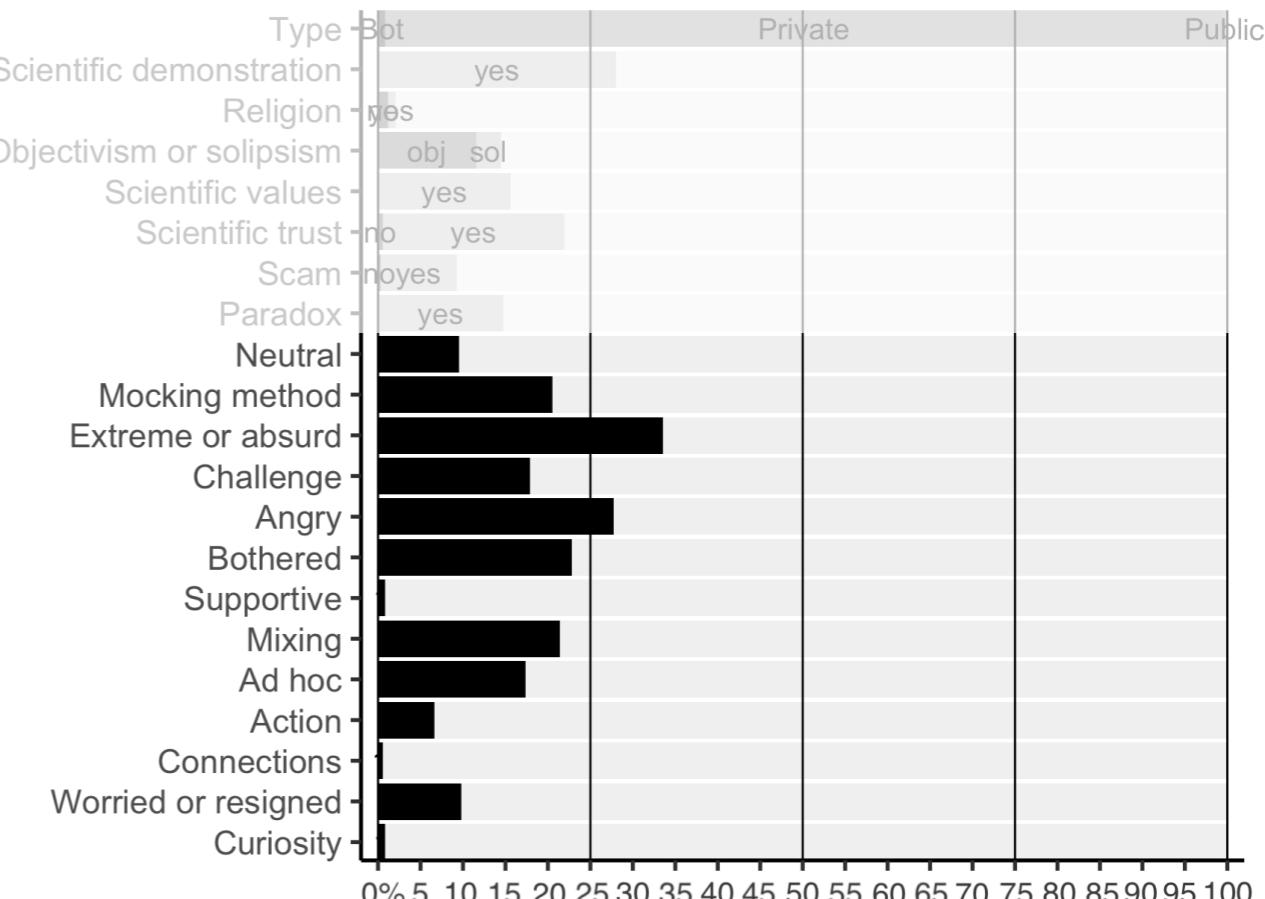


More active in framing strategies

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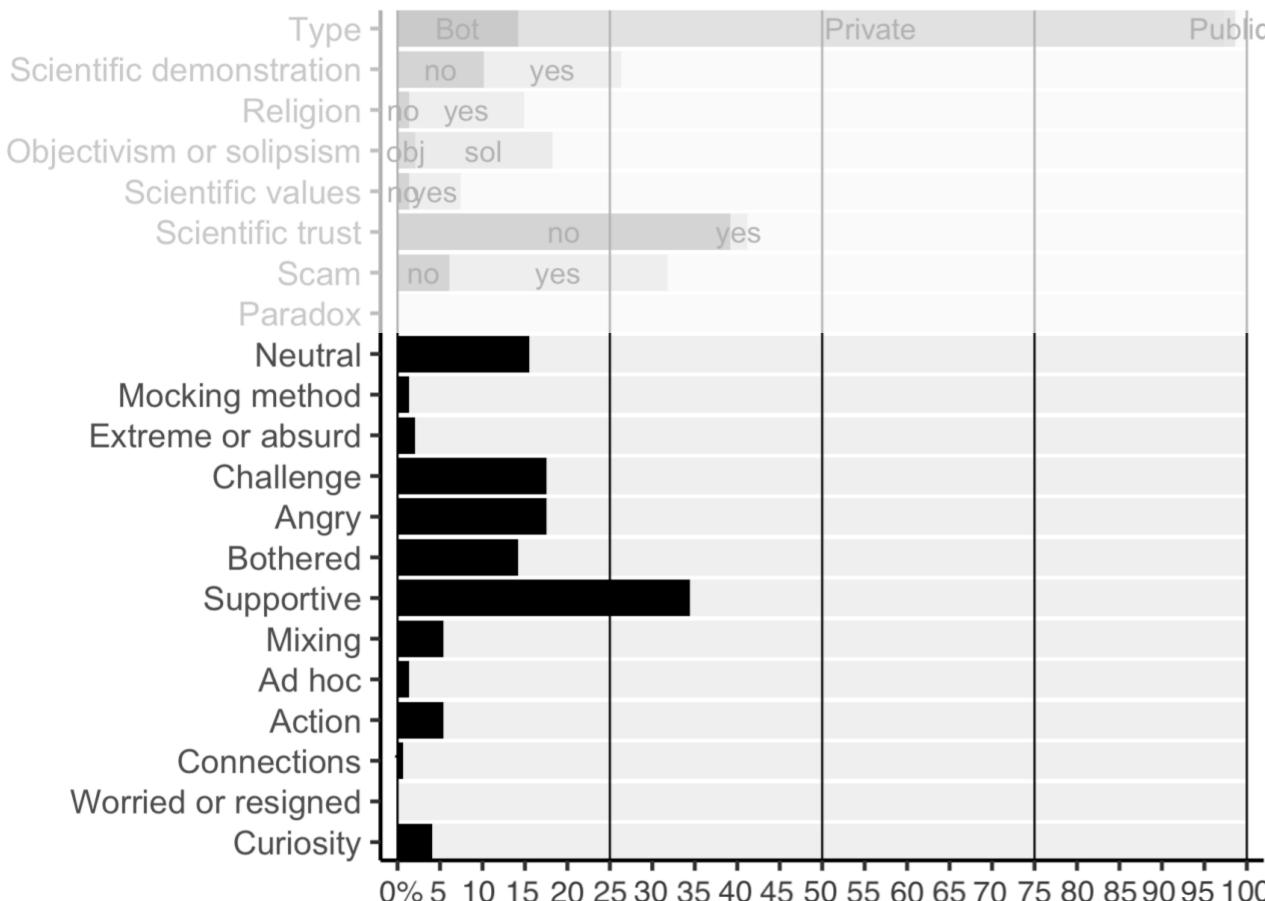
Adversaries of FES (N = 346)



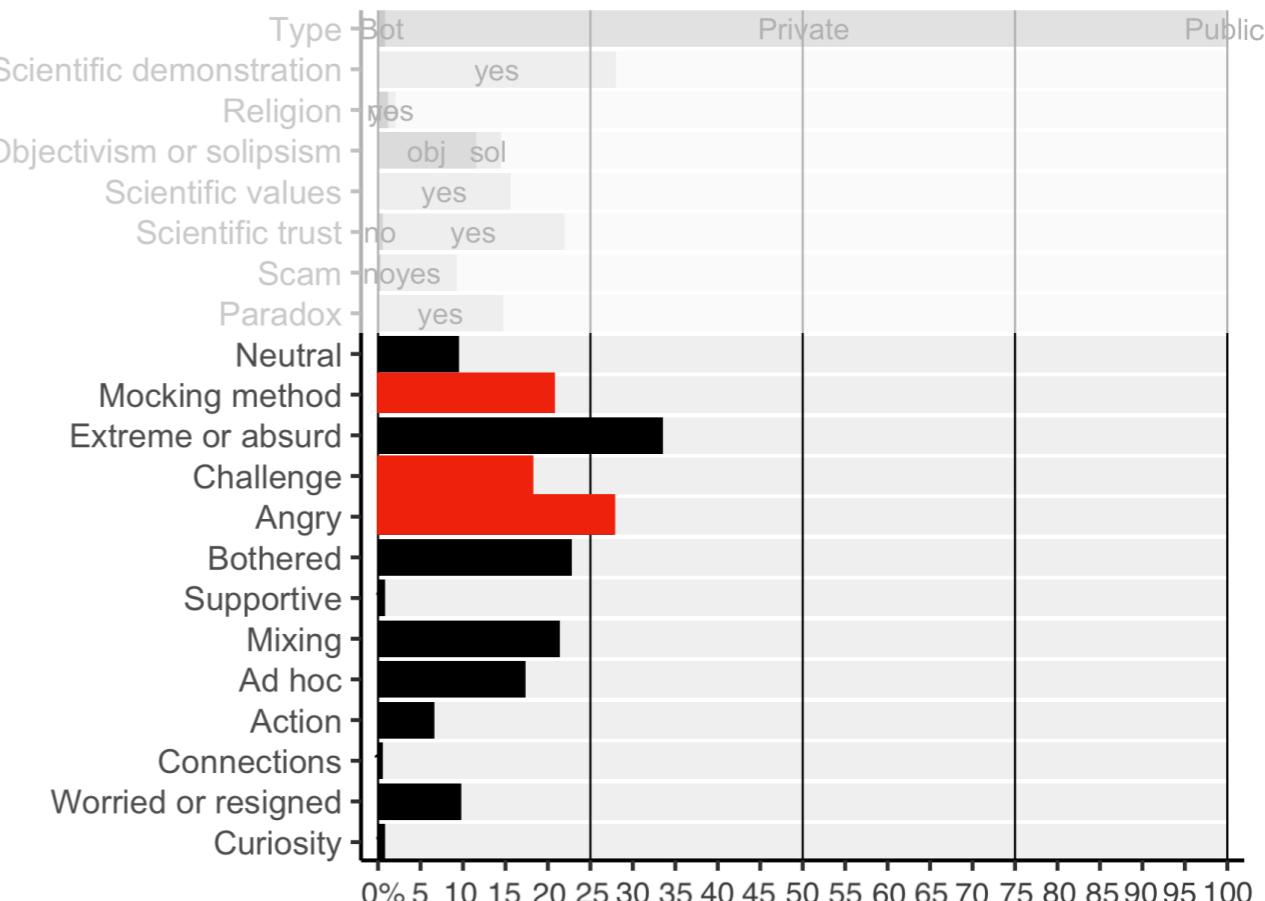
Social boundary: ingroup

More active in framing strategies

Supporters of FES (N = 148)



Adversaries of FES (N = 346)

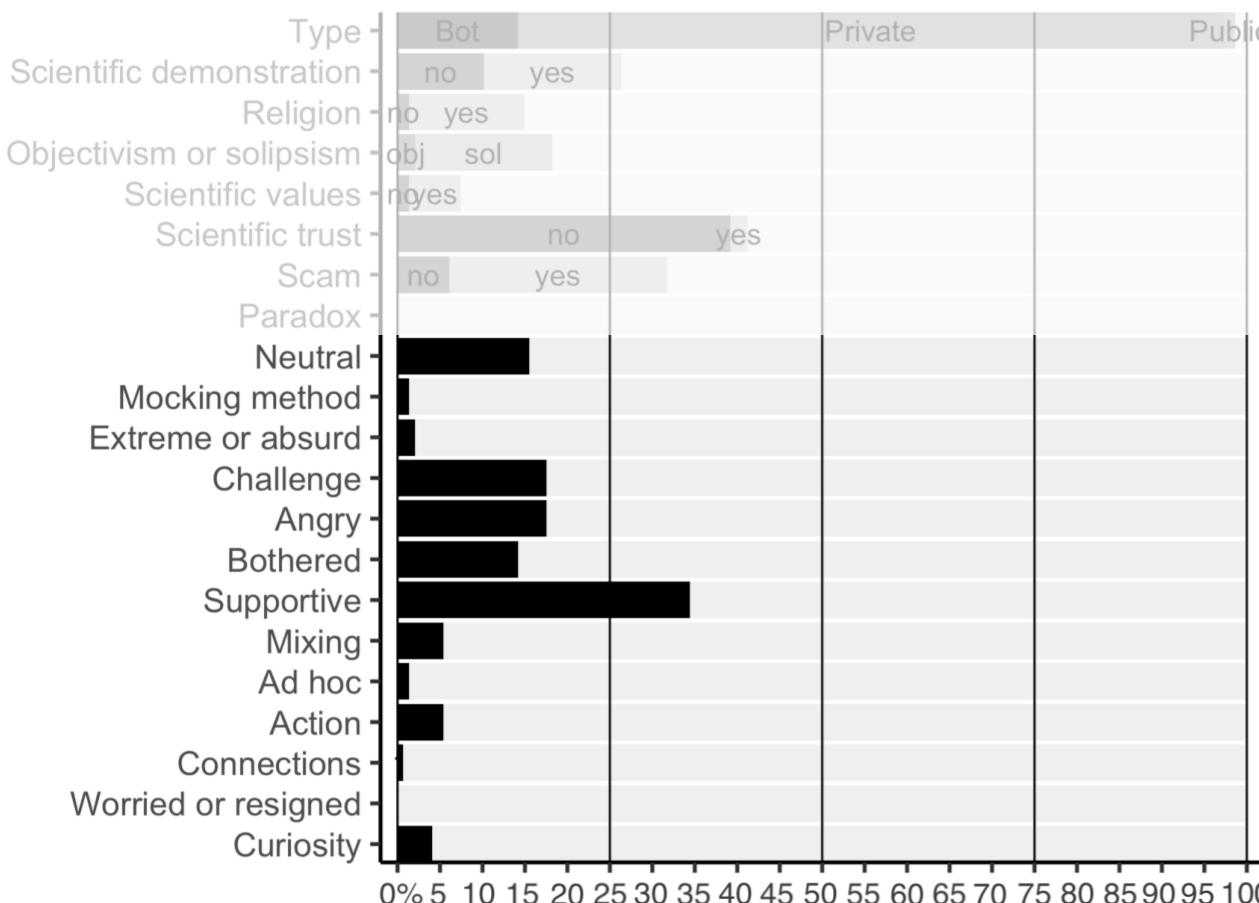


Social boundary: ingroup

More active in framing strategies

Social boundary: outgroup

Supporters of FES (N = 148)



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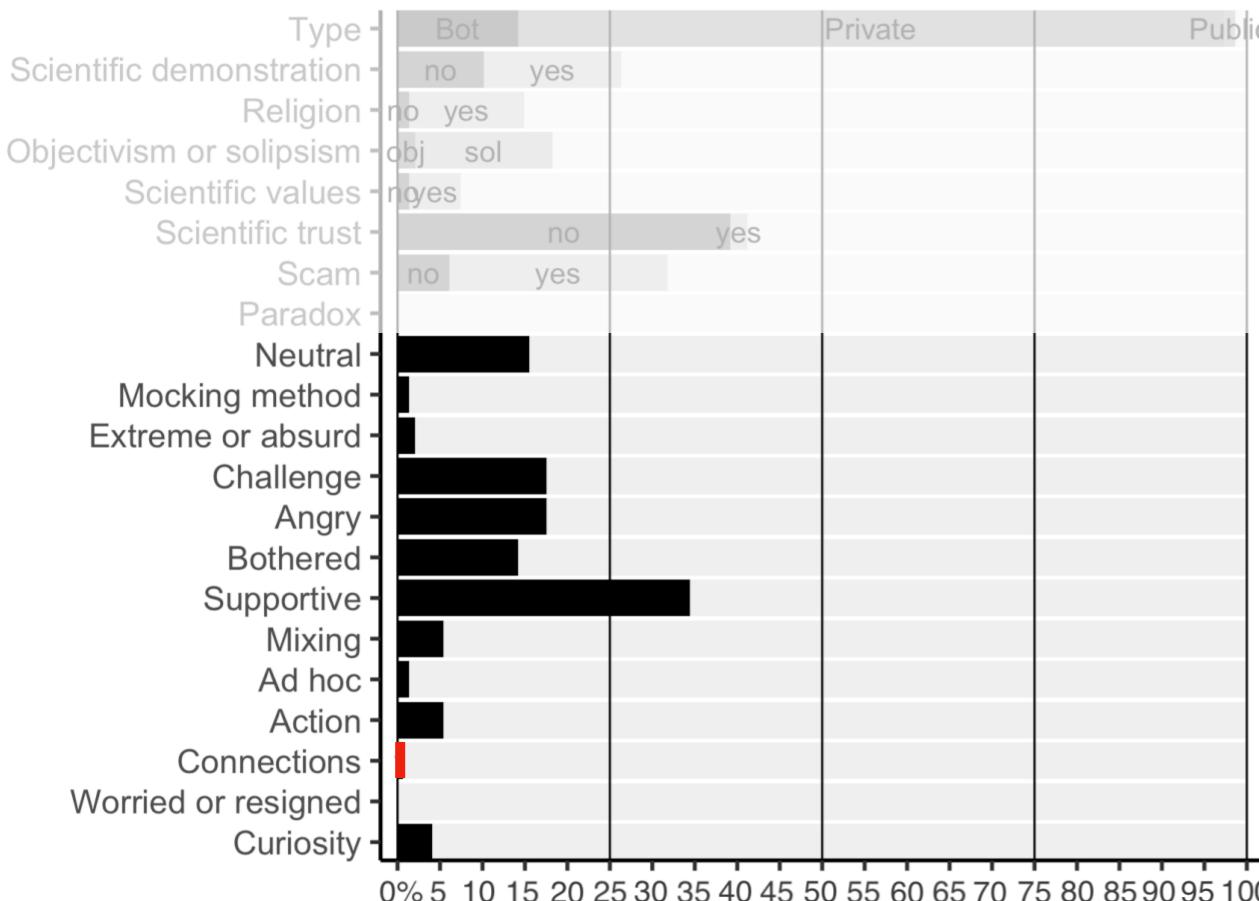
Social boundary: ingroup

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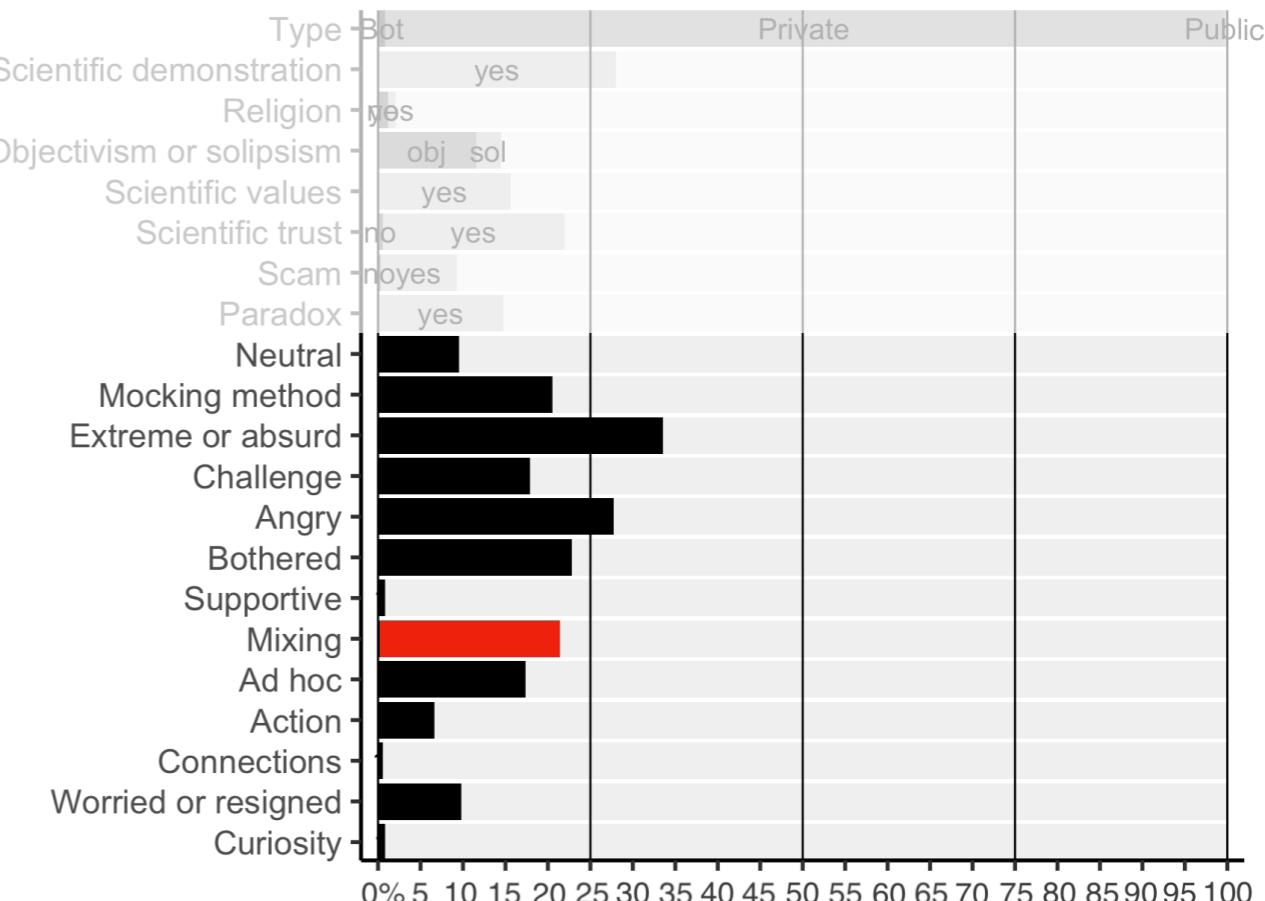
Social boundary: outgroup

Normative boundary: educate or ignore

Supporters of FES (N = 148)



Adversaries of FES (N = 346)



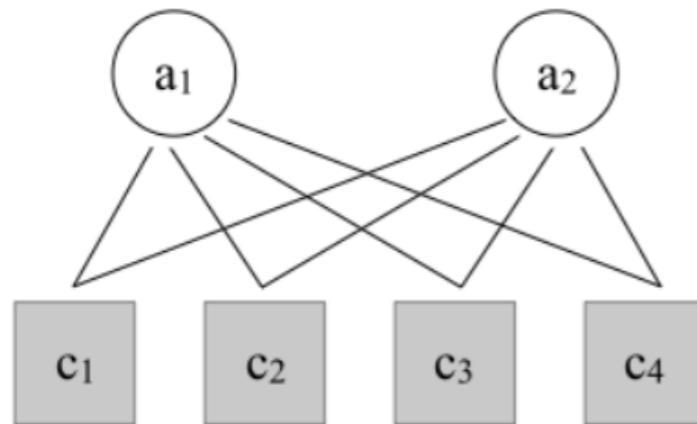
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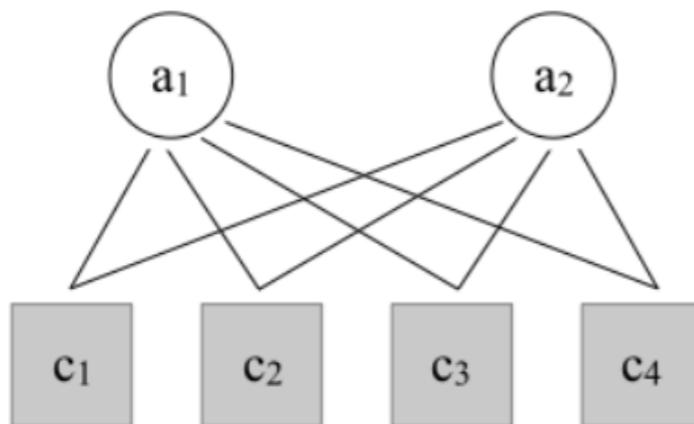
## Actor-congruence



**Measures of network clusterization**

		Actor-Congruence	
		Modularity	Edge density
Supporters	Modularity	0.33	+
	Edge density	0.17	-
Adversaries	Modularity	0.20	-
	Edge density	0.34	+

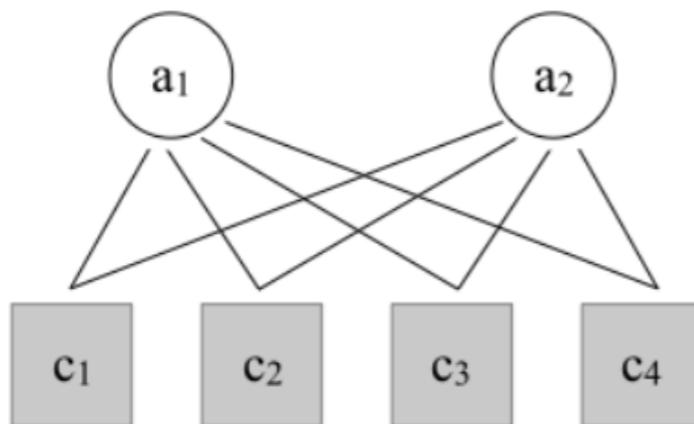
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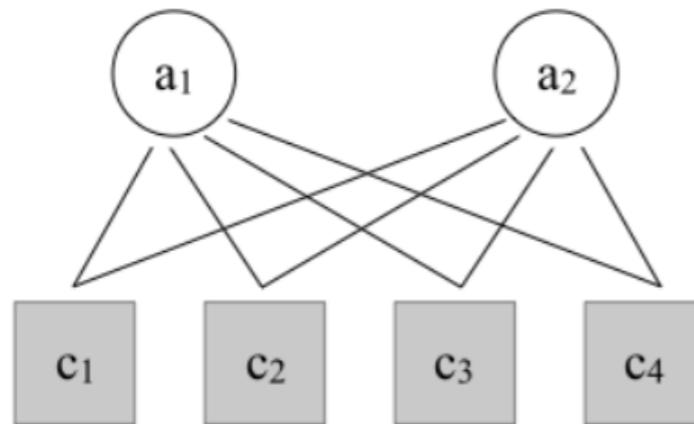
## Actor-congruence



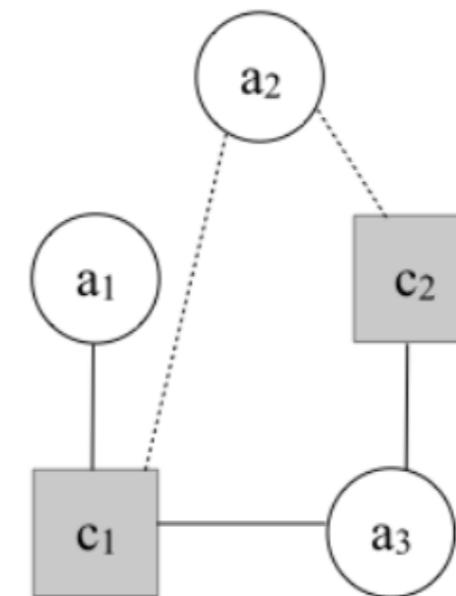
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## Actor-congruence



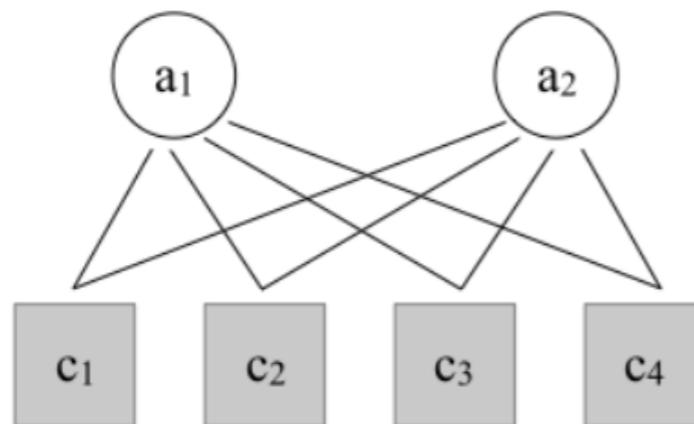
## Conflict



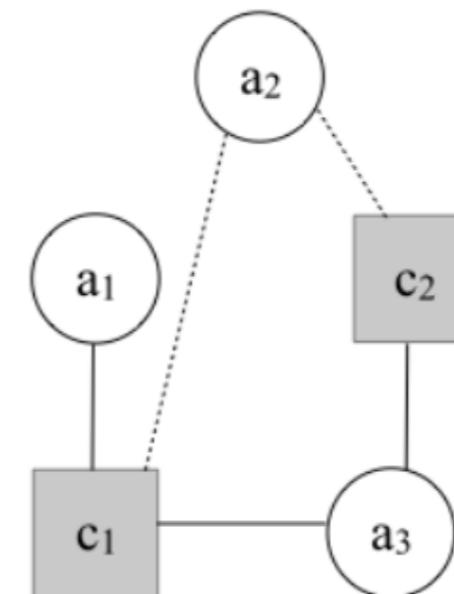
### Measures of network clusterization

		Actor-Congruence	Conflict		
Supporters	Modularity	0.33	+	0.18	-
	Edge density	0.17	-	0.15	-
Adversaries	Modularity	0.20	-	0.17	-
	Edge density	0.34	+	0.19	-

## Actor-congruence



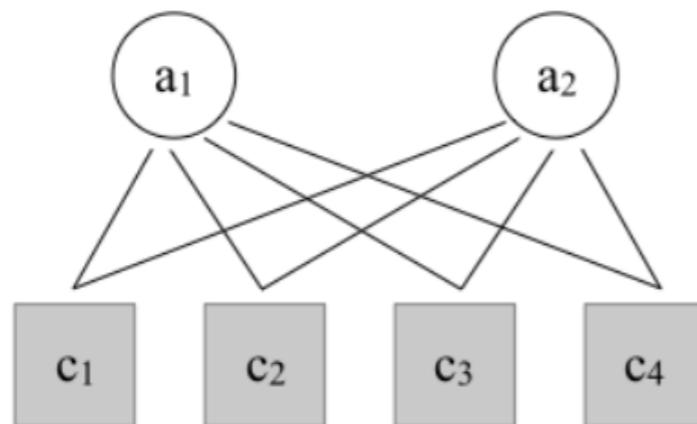
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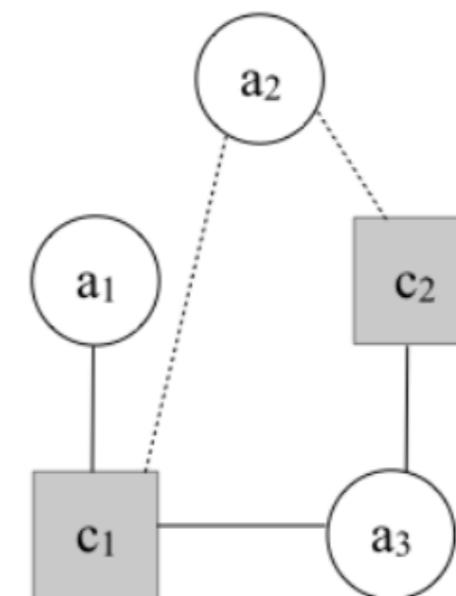
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## Actor-congruence



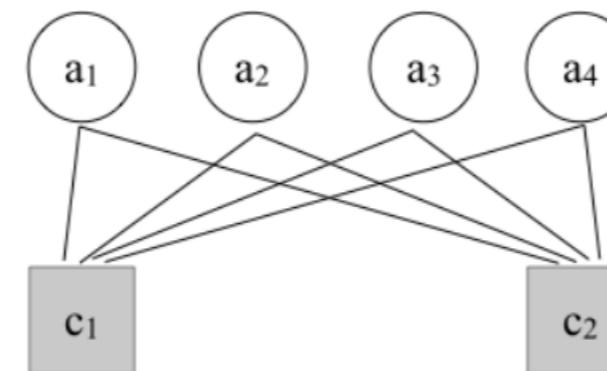
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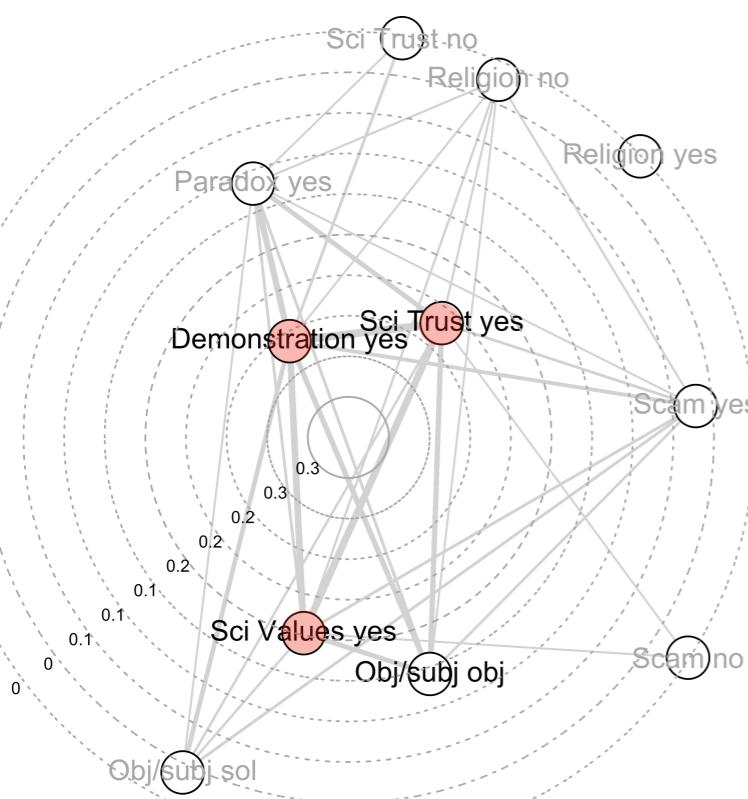
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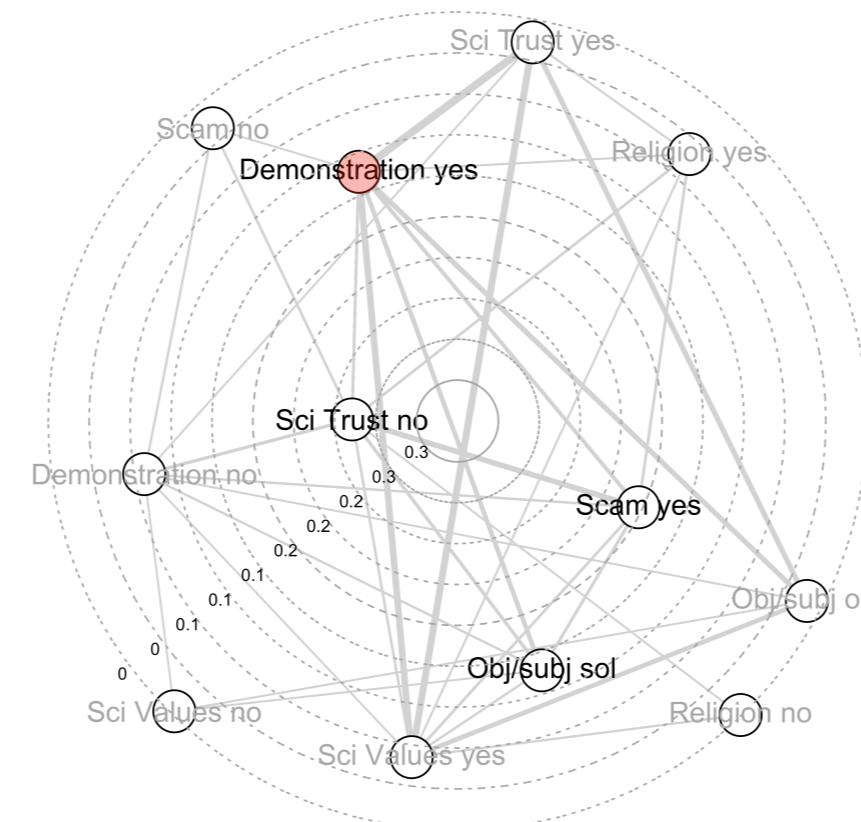
## Concept-congruence



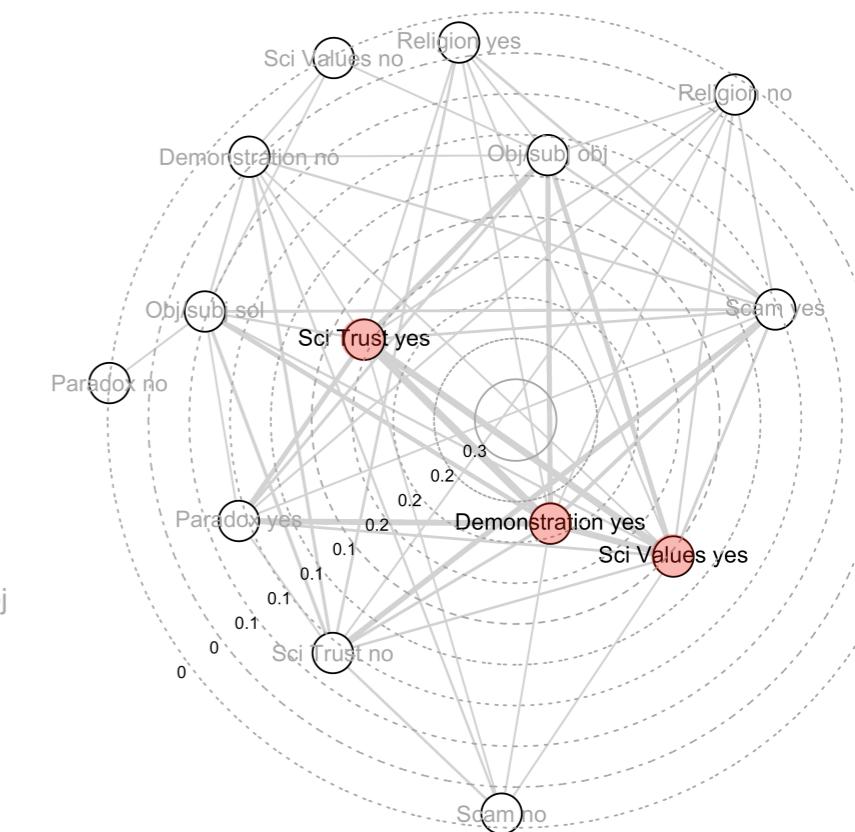
Adversaries



Supporters



Total





## 1. Heterogeneity of positions

1. Heterogeneity of positions
2. Social and normative boundaries

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2. Social and normative boundaries
3. Entities:
  - supporters as pseudo-scientists
  - adversaries as gatekeepers

1. How is the process of agenda-setting established?

Periphery → Core

1. How is the process of agenda-setting established?

Periphery → Core

2. Importance of the field: surveys contextualized

Thank you!

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Twitter: @lucacarbone\_lc

syntax and data: [https://osf.io/xwtdc/?view\\_only=daa2a0893e7546ba87d0103929bc893a](https://osf.io/xwtdc/?view_only=daa2a0893e7546ba87d0103929bc893a)

