

Quo vadis IETF? Is the IETF (becoming) ossified?

IESG Open Microphone Session

Two minutes per question
Two minutes per answer

Ignacio Castro
IETF115 – WG Chairs Forum



Analysing decision making in the IETF



Published work:

- P. Khare, M. Karan, S. McQuistin, C. Perkins, G. Tyson, M. Purver, P. Healey, I. Castro. *“The Web We Weave: Untangling the Social Graph of the IETF”*. AAI ICWSM, 2022.
- S. McQuistin, M. Karan, P. Khare, C. Perkins, G. Tyson, M. Purver, P. Healey, W. Iqbal, J. Qadir, Ignacio Castro. *“Characterising the IETF Through the Lens of RFC Deployment”*. ACM IMC, 2021

Project:

- SODESTREAM: Streamlining Social Decision Making for Improved Internet Standards (<https://sodestream.github.io>)



How hard is to chair a WG?

- More complex discussions
- Harder to publish
- Influential minority





Influential minority

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Complex discussions — — — Hard to publish





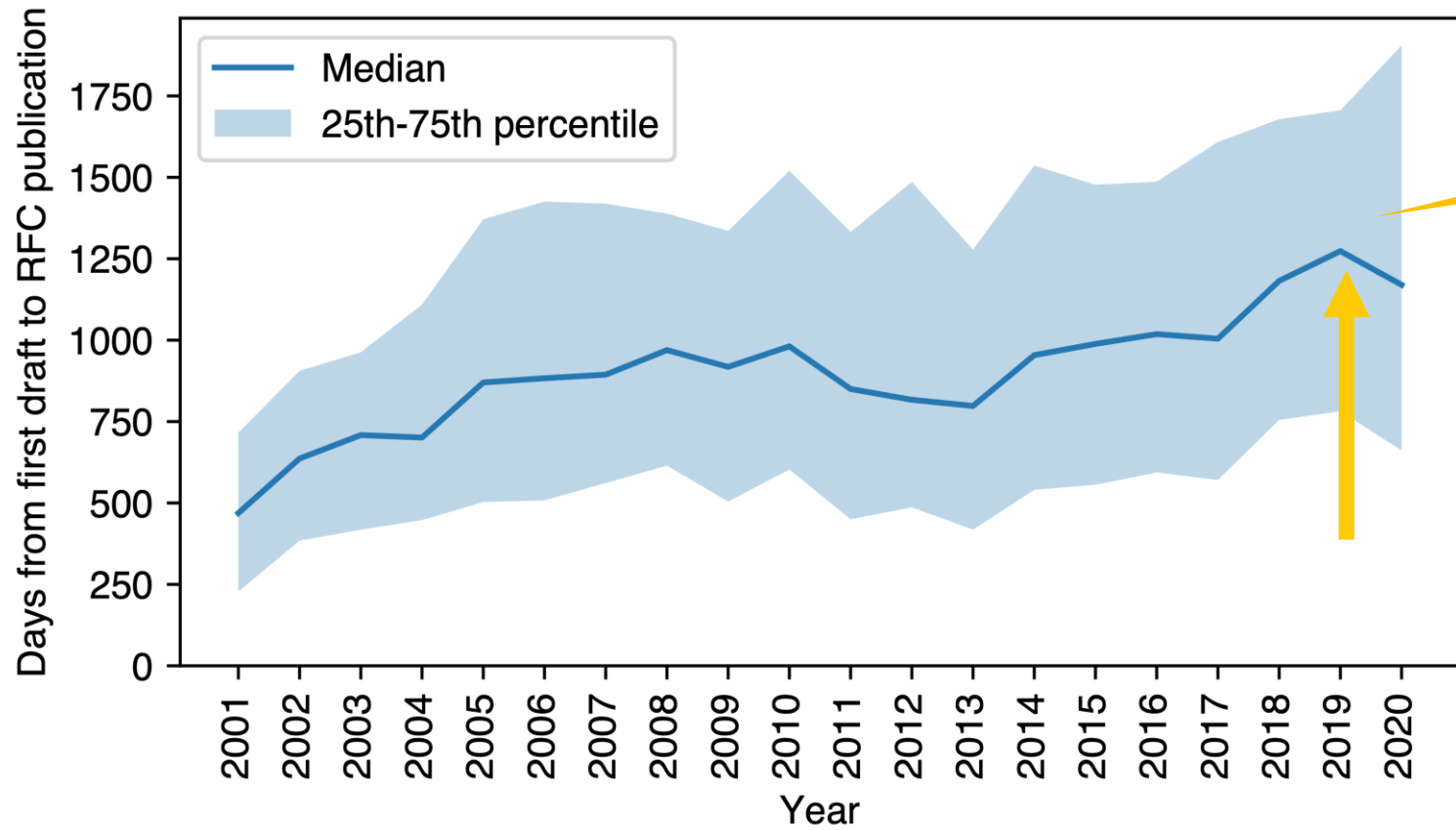
Influential minority

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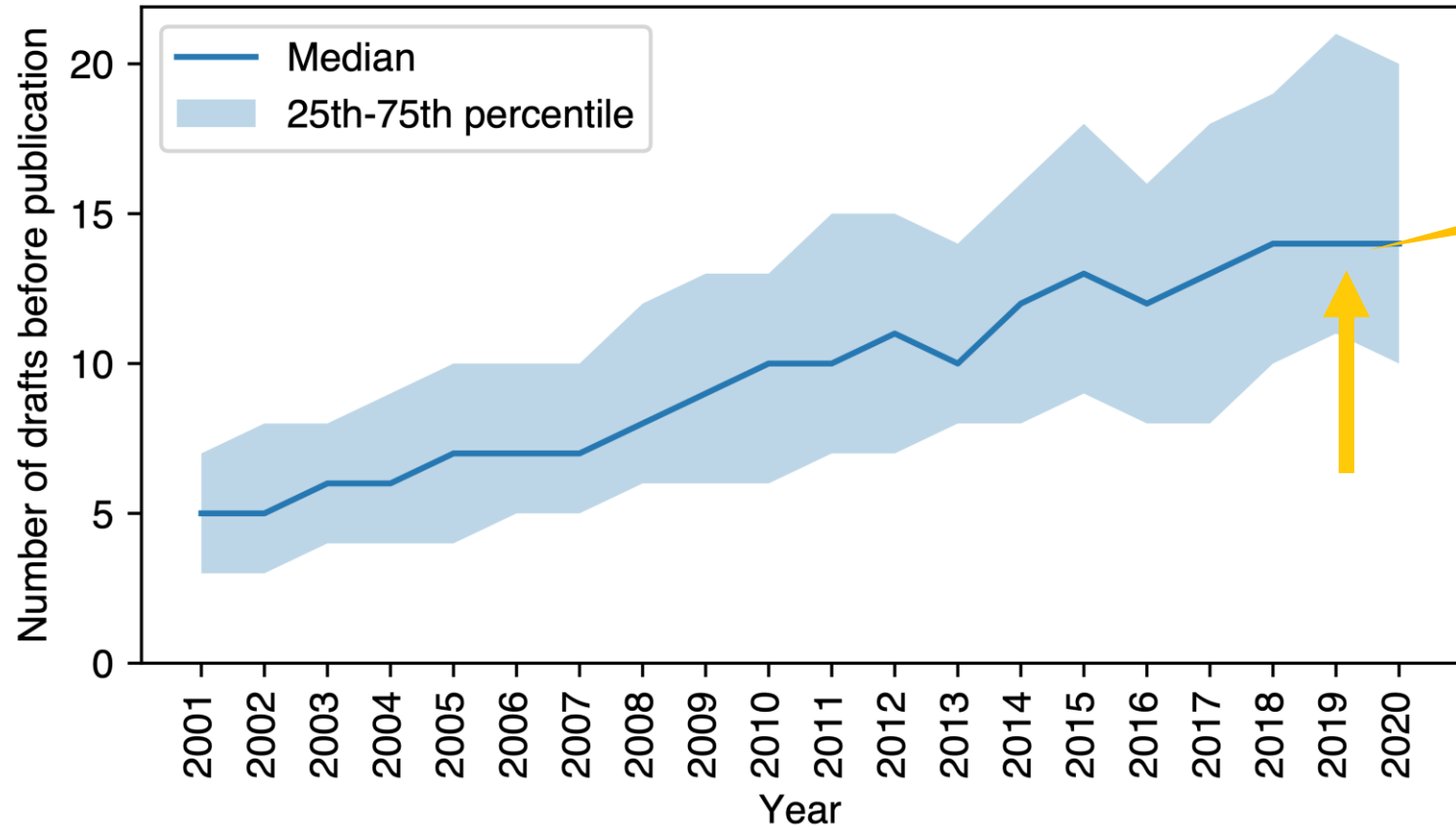
Complex discussions

Hard to publish





3x increase in time to publish



drafts pre-RFC publication has more than doubled



Influential minority

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- Longer time, more drafts
- More affiliations, areas, authors

Complex discussions

Hard to publish





Influential minority

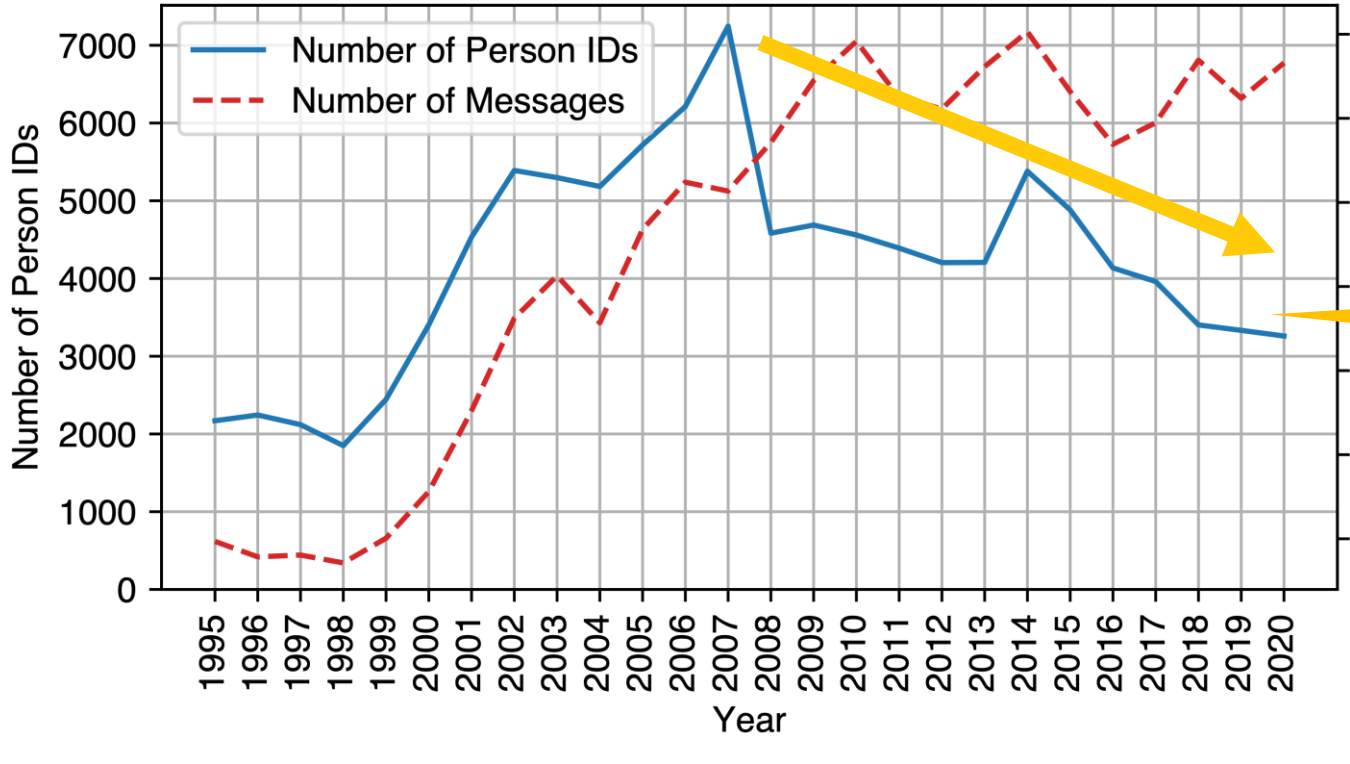
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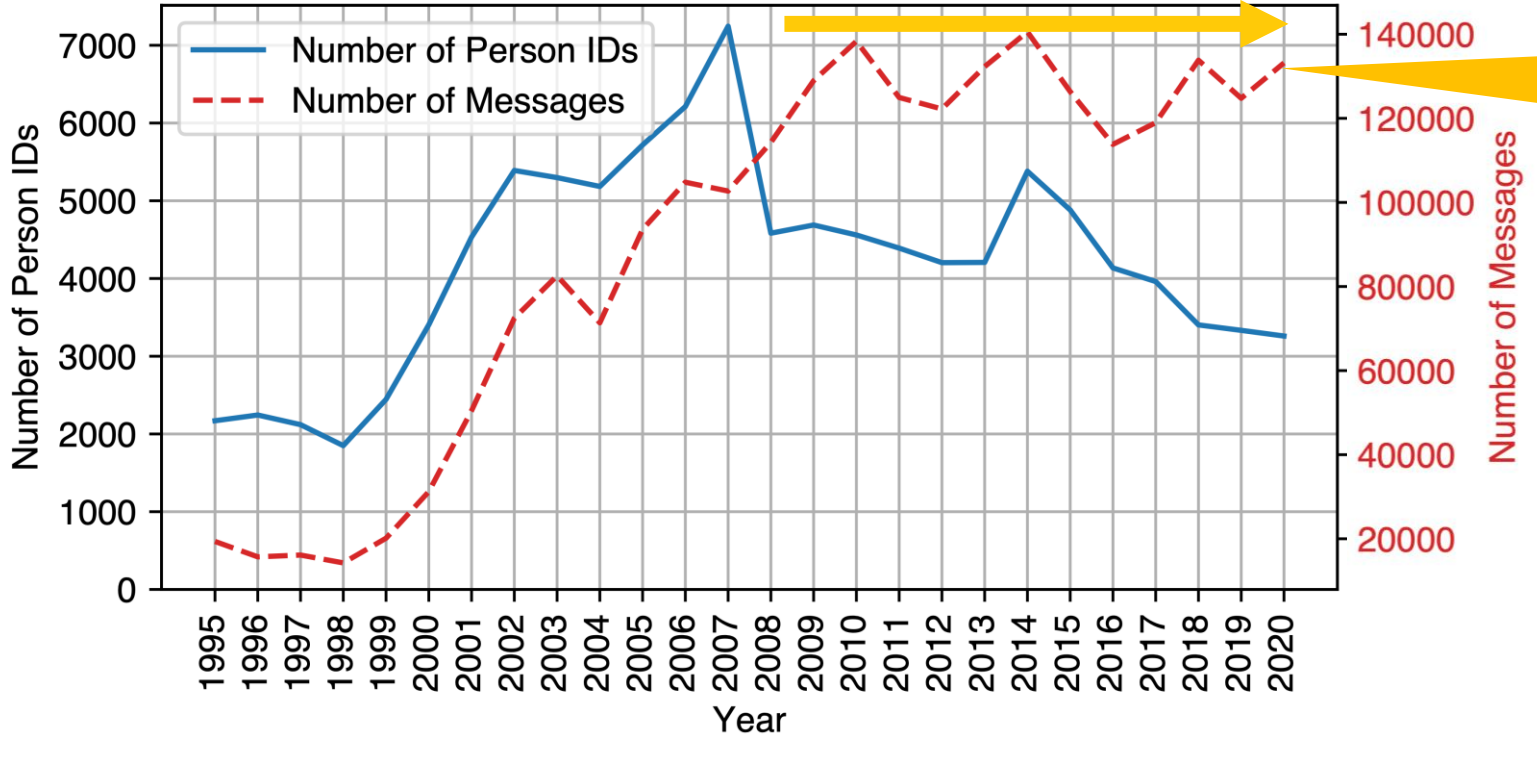
Complex discussions

Hard to publish



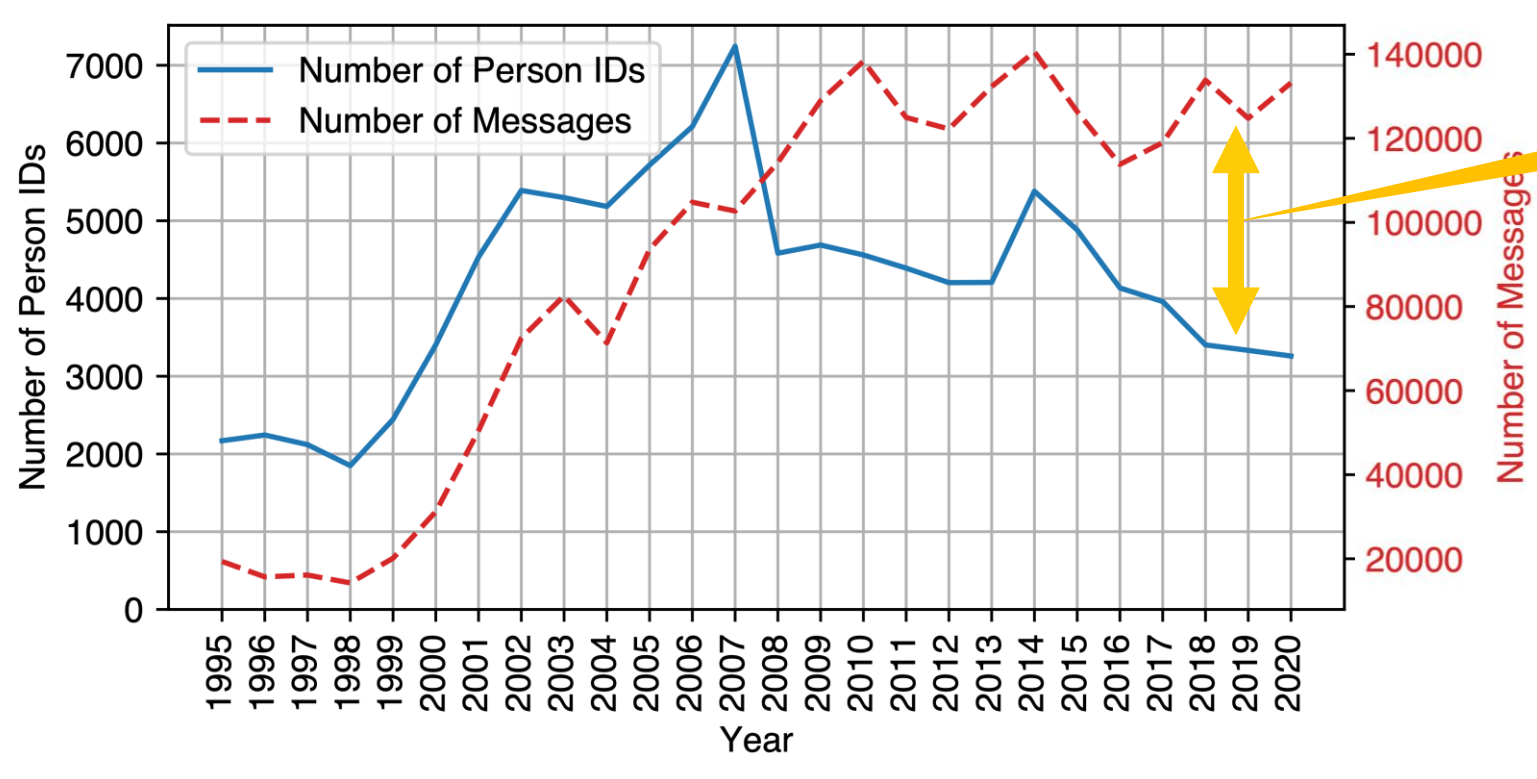


Decreasing number of email participants

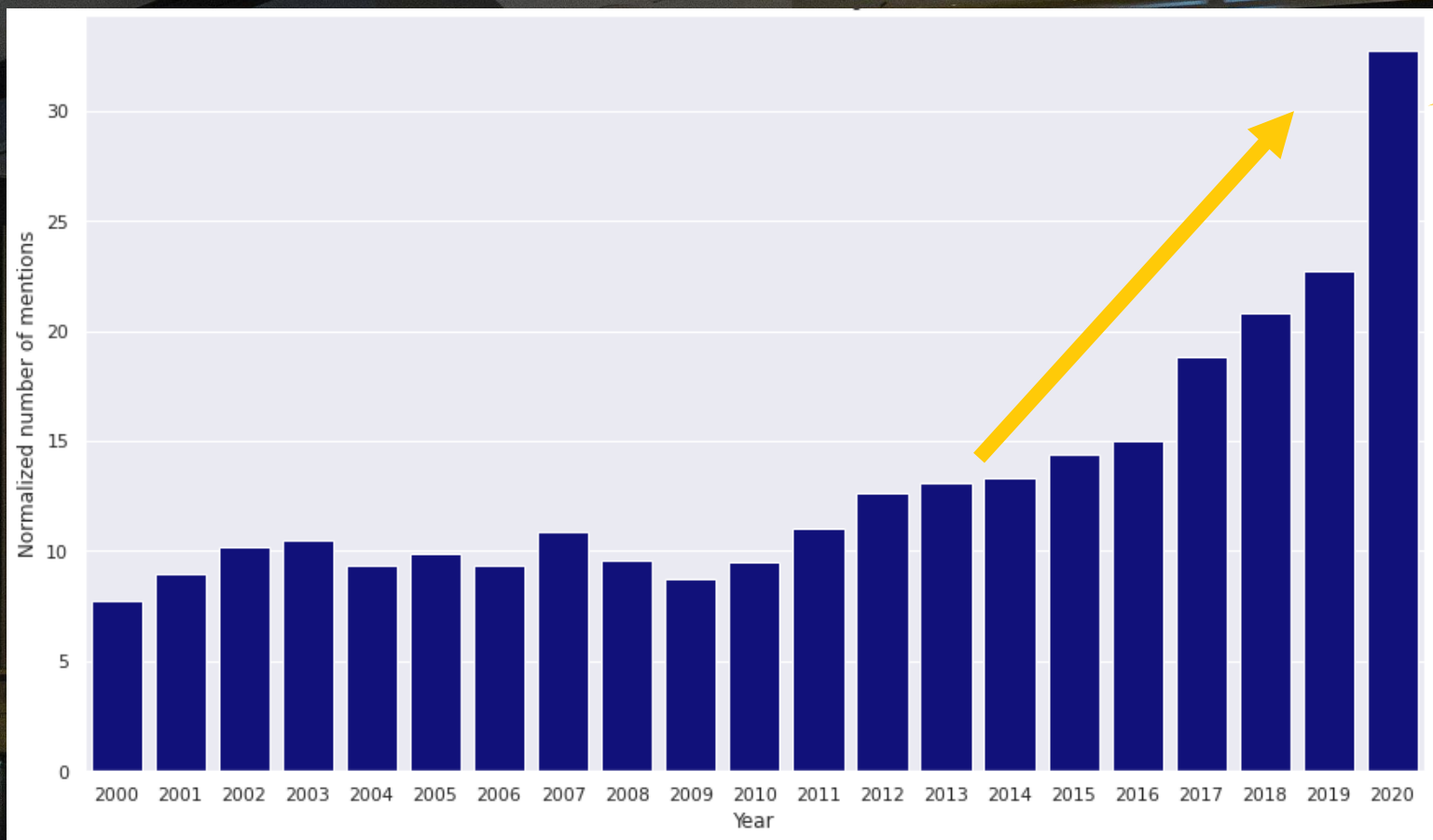


Stable number of emails

Increasingly “chatty”



Growth in the number of draft mentions in the emails





Influential minority

- “Chatty”
- Multi-area discussions
- More drafts discussed

Complex discussions

Hard to publish



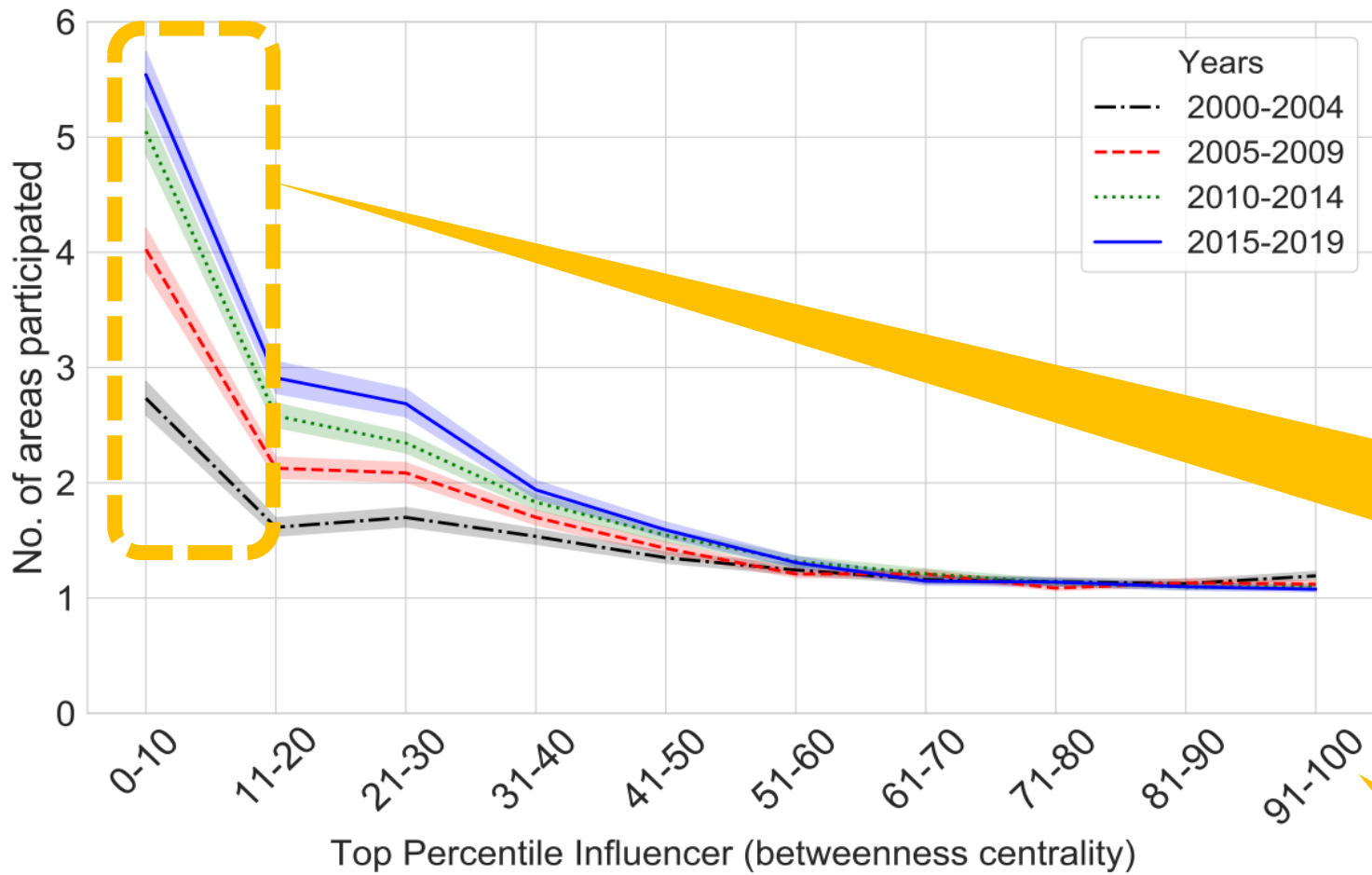


Influential minority



Complex discussions — — — Hard to publish

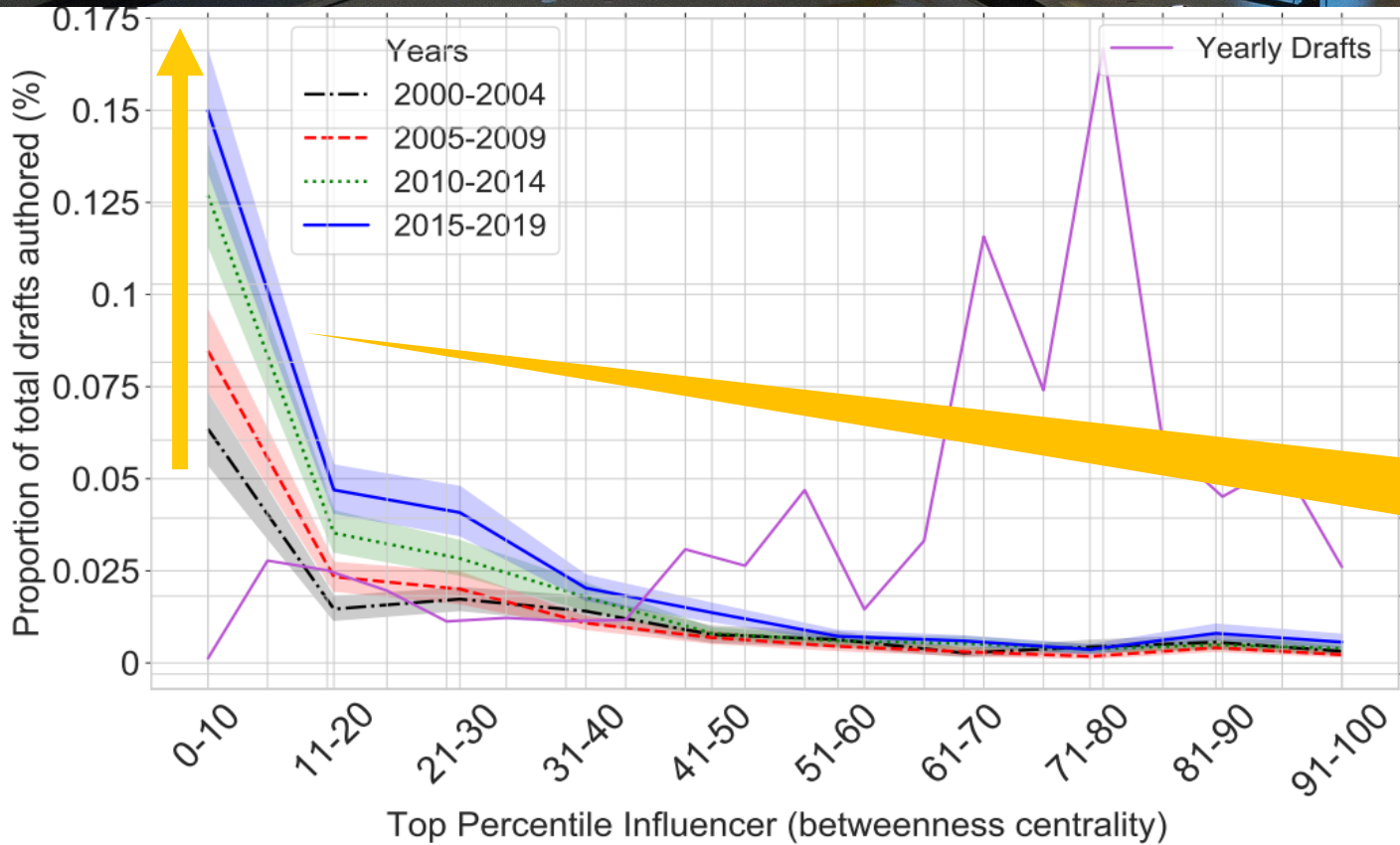




- More areas discussed
- Influential participants discuss more areas

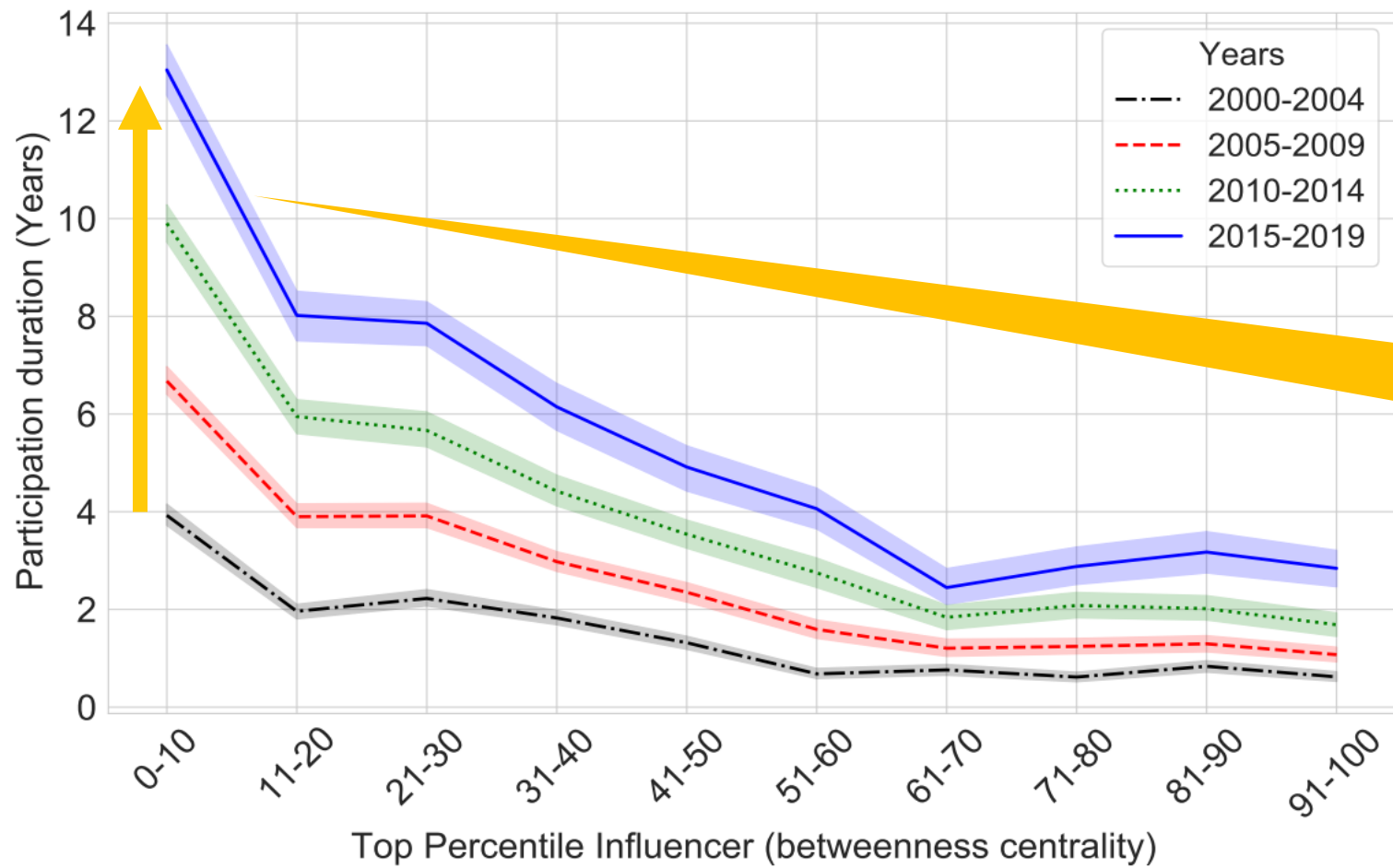
- Graph (email participants)
- Betweenness ~ influence
- Influence percentiles (+ → -)

More influence -----> less influence



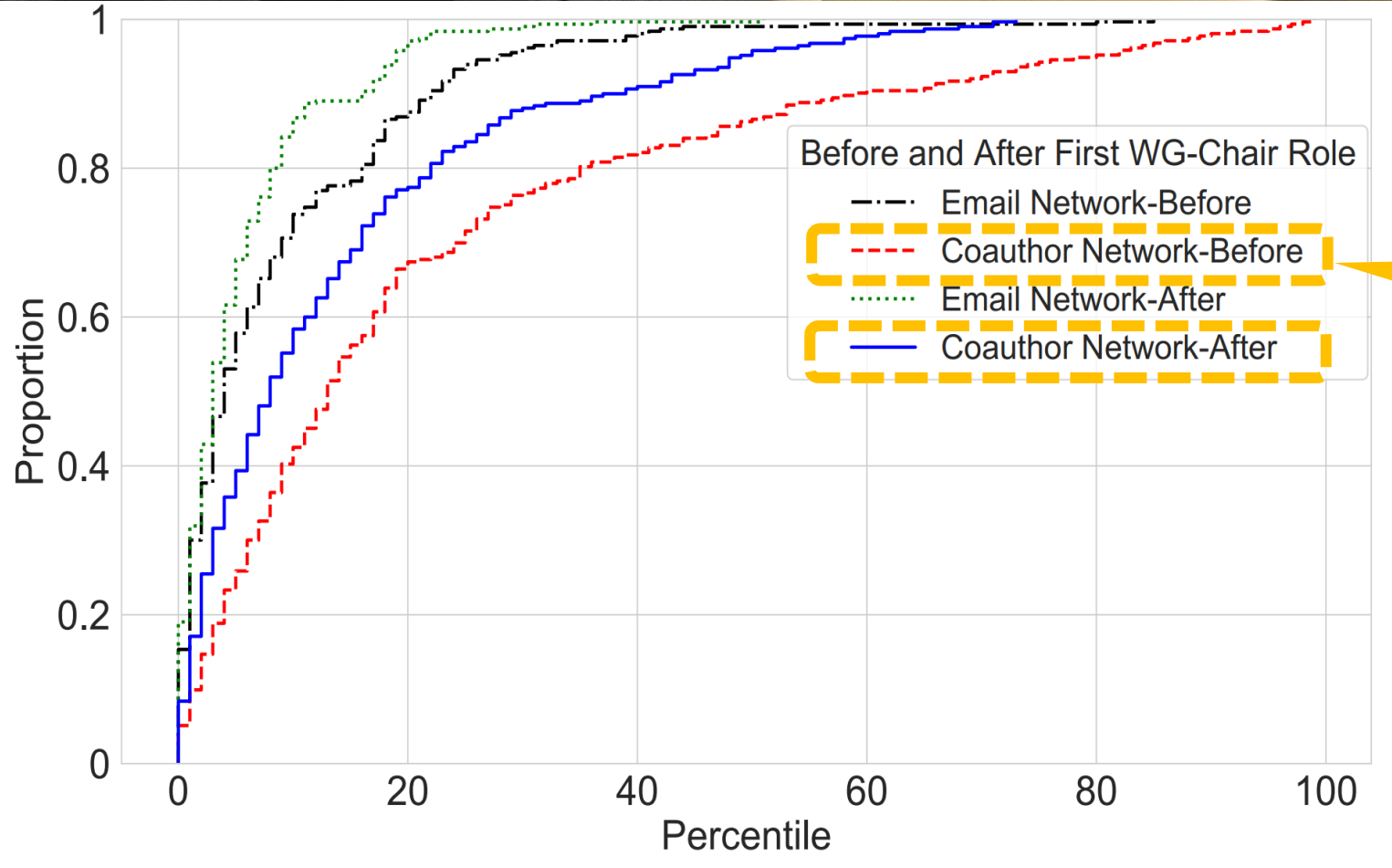
Influential authors increasingly dominate draft creation

More influence -----> less influence



Longer time to gain influence

More influence -----> less influence



- Draft authorship graph
- Co-authorship == link
- Betweenness ~ influence

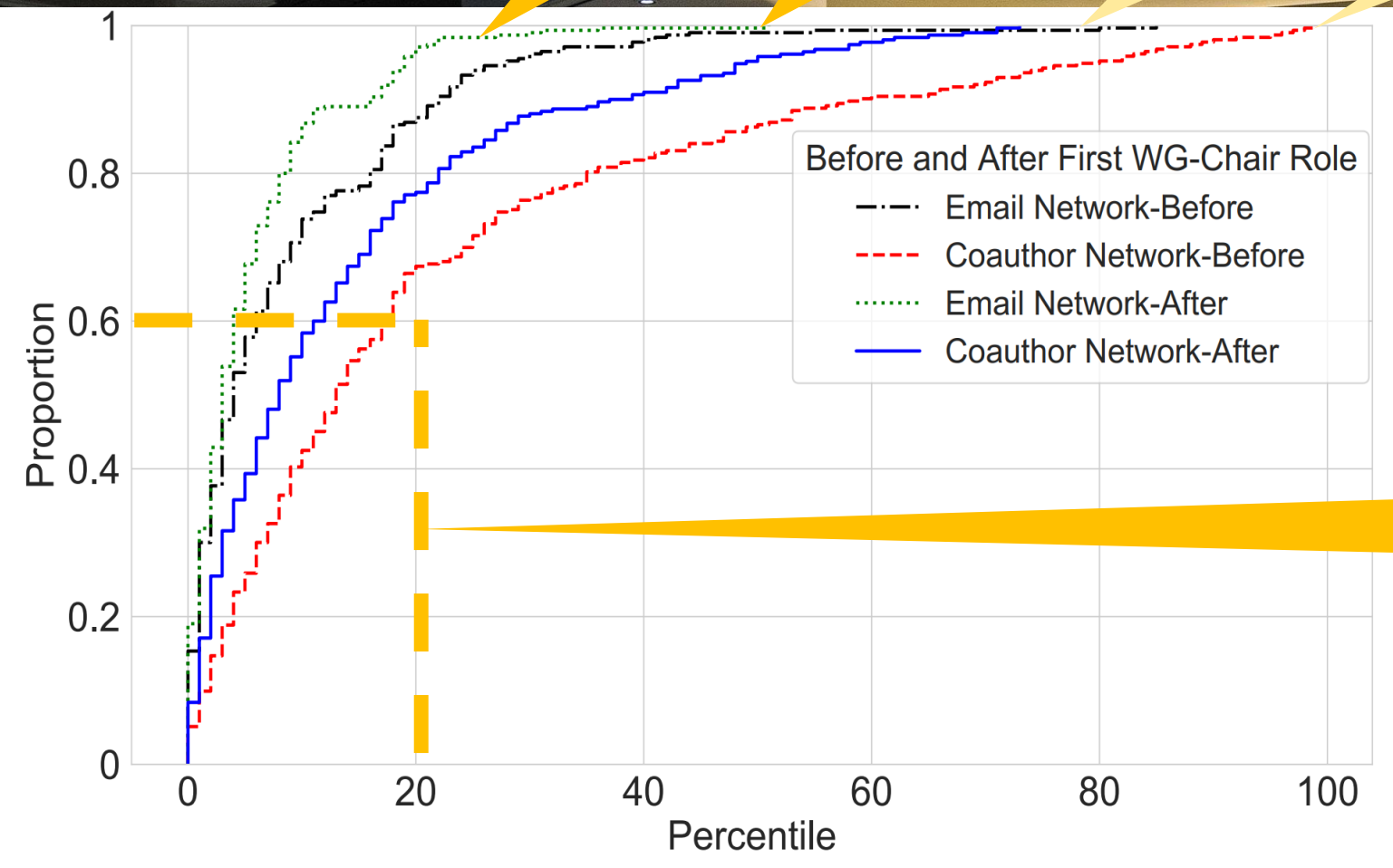
More influence -----> less influence

Email after

Email before

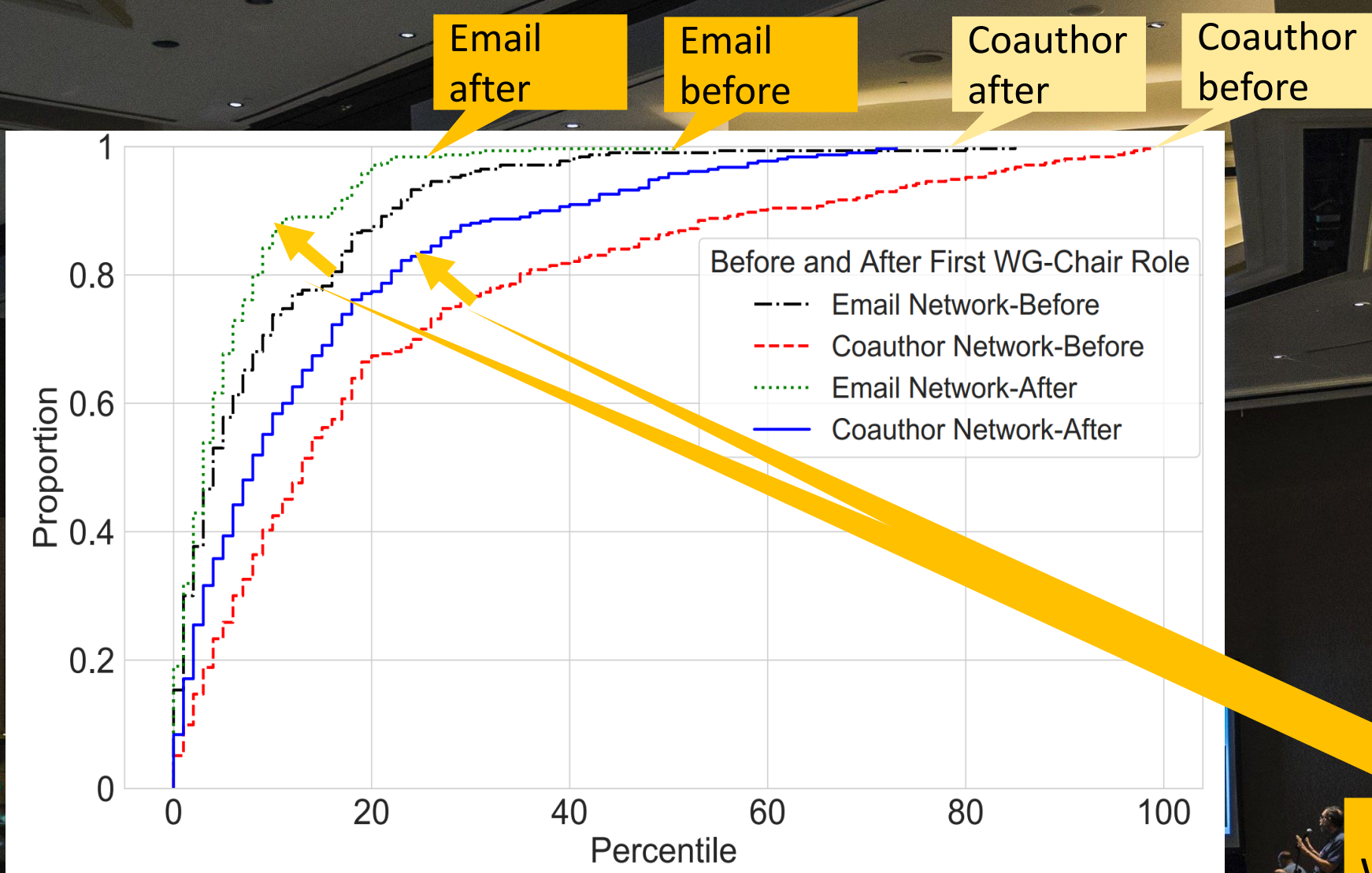
Coauthor after

Coauthor before



WG chairs are influential participants/authors

More influence -----> less influence



WG chairs gain influence

More influence -----> less influence



Influential minority

Sherpas of IETF complexities?

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Complex discussions — — — Hard to publish

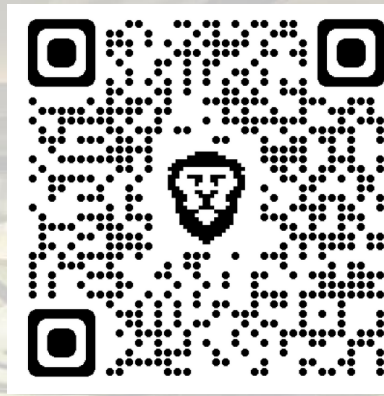




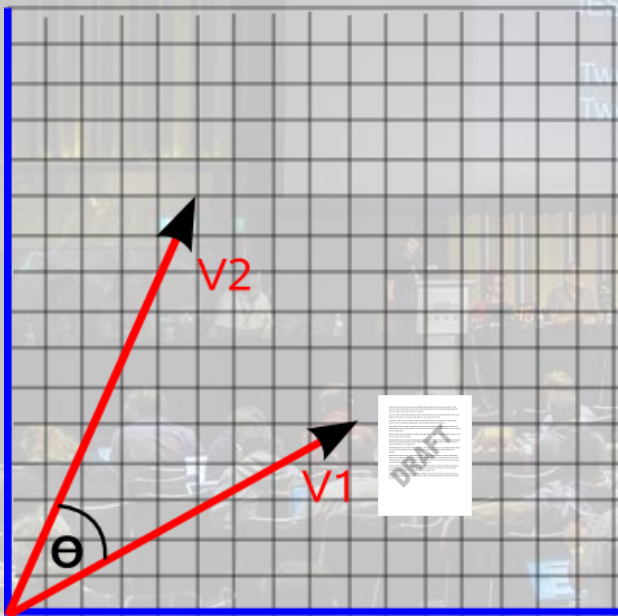
- Groundtruth-ing:
 - Conversation annotation
 - Survey: deployment
 - Survey: reviewer recommendation engine



Reviewer recommendation engine



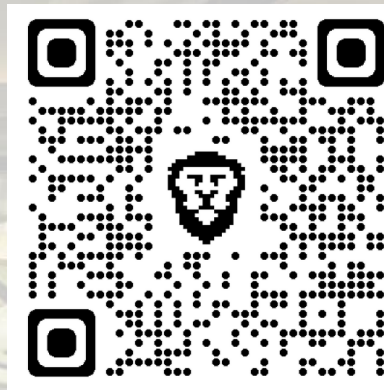
- NLP methods to create (vector) representations of
 - Drafts: using the text of the draft
 - Published between 2019 and Jun 1st 2020



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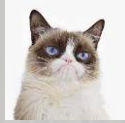
Reviewer recommendation engine



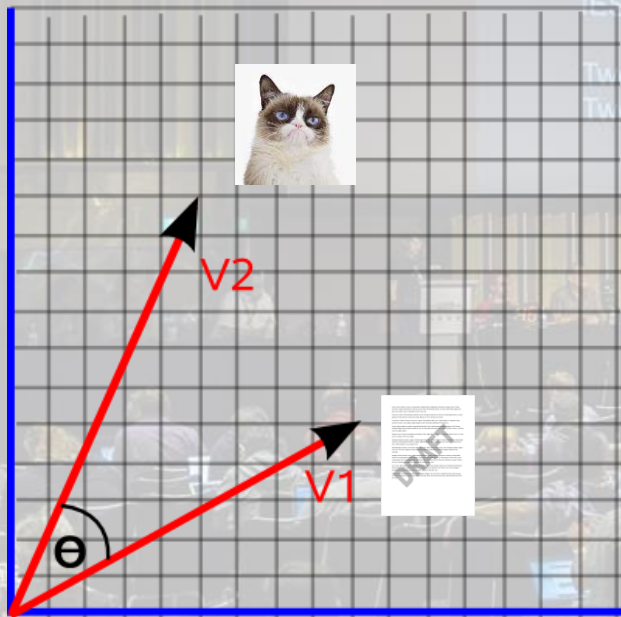
- NLP methods to create (vector) representations of



- Drafts: using the text of the draft
 - Published between 2019 and Jun 1st 2020



- Reviewers: using the text of their email messages
 - Members who joined before 2019

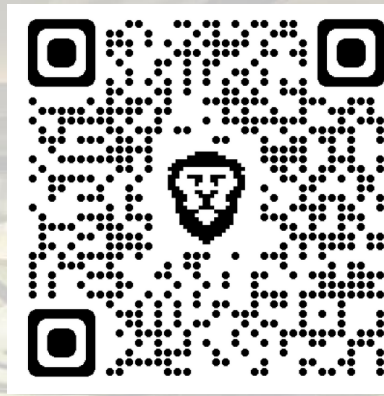


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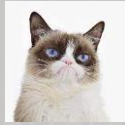
Reviewer recommendation engine



- NLP methods to create (vector) representations of



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- Reviewers: using the text of their email messages
 - Members who joined before 2019

↓ ↓

For each draft,
top 50 reviewers
for annotation

