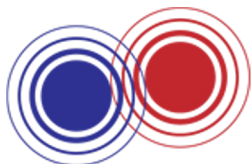


Locating the Asymmetry in Information Flow between Local and National Media on Transgender Discourses

Alyssa Smith, Sagar Kumar, Yukun Yang, & Pranav Goel



Lazer Lab



CoMM Lab



What I Hope You Remember



We used transfer entropy, a measure of influence, to quantify how information flows between local and national news collections.

A lot of the time, the influence doesn't go directly from national → local. Instead, one state mediates the diffusion process.

We suggest two interventions to improve the state of trans news coverage based on qualitative case studies.

What I Hope You Remember



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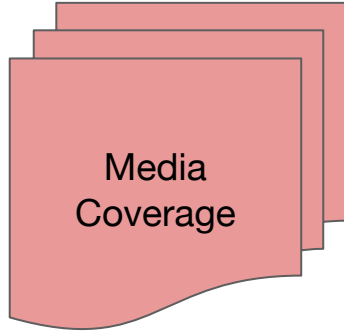


Setting the Scene: Trans Life and News Coverage in the U.S.

Trans Life & News Coverage in the U.S.



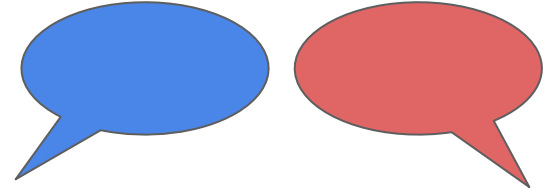
With respect to
transgender
issues...



influences



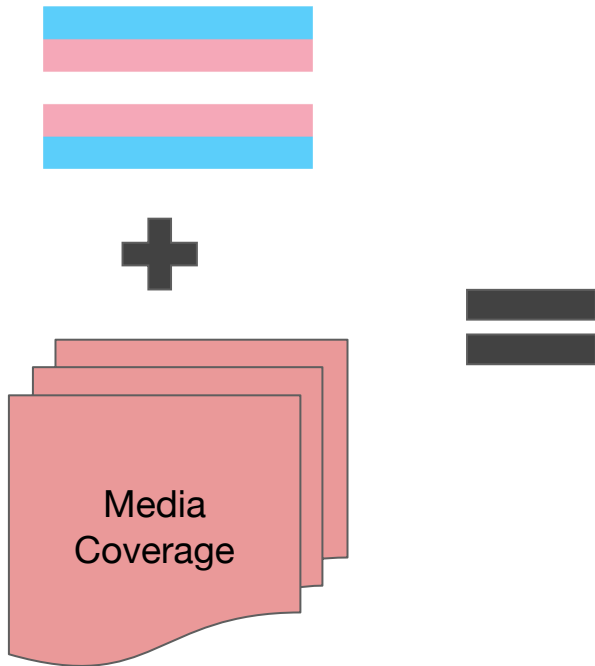
State-level legislation



Public opinion:
Floating signifiers
(Ciszek, 2020)

Trans Life & News Coverage in the U.S.

What we already know:



Origins of anti-trans coverage (Billard 2023, 2024)

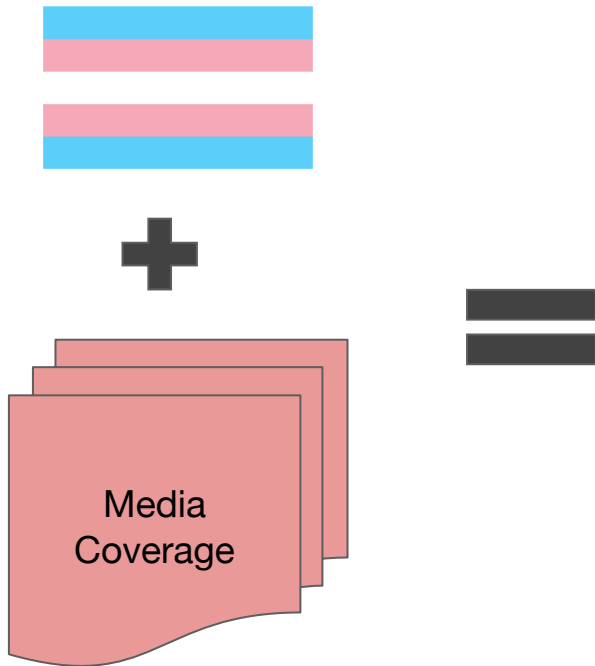
Transformative power of local reporting

Opportunities to push back against hegemonic narratives

Differences in local & national framing

Trans Life & News Coverage in the U.S.

What we already know:



Origins of anti-trans coverage

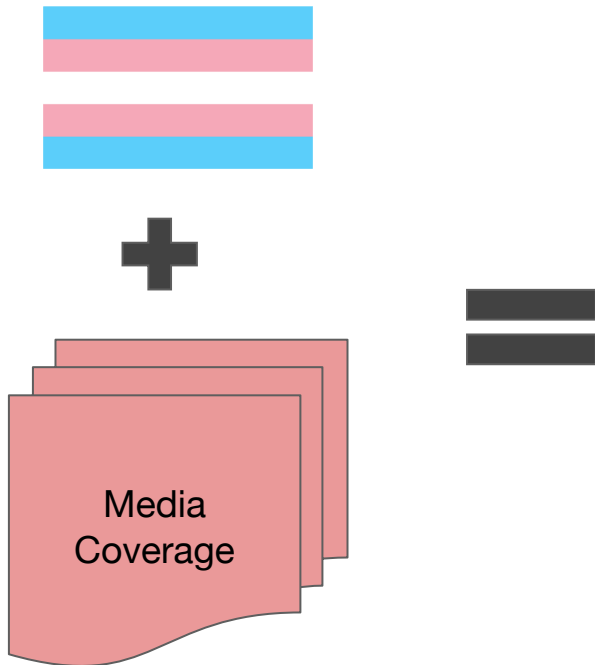
Transformative power of local reporting (Michelson & Harrison 2020)

Opportunities to push back against hegemonic narratives

Differences in local & national framing

Trans Life & News Coverage in the U.S.

What we already know:



Origins of anti-trans coverage

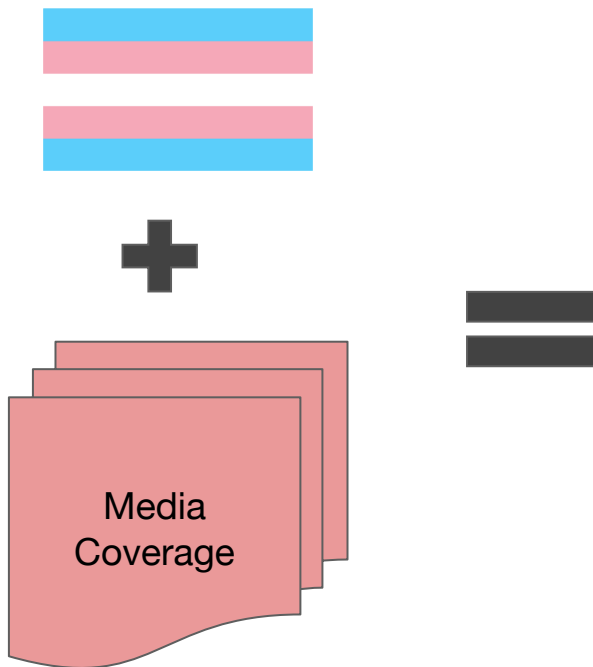
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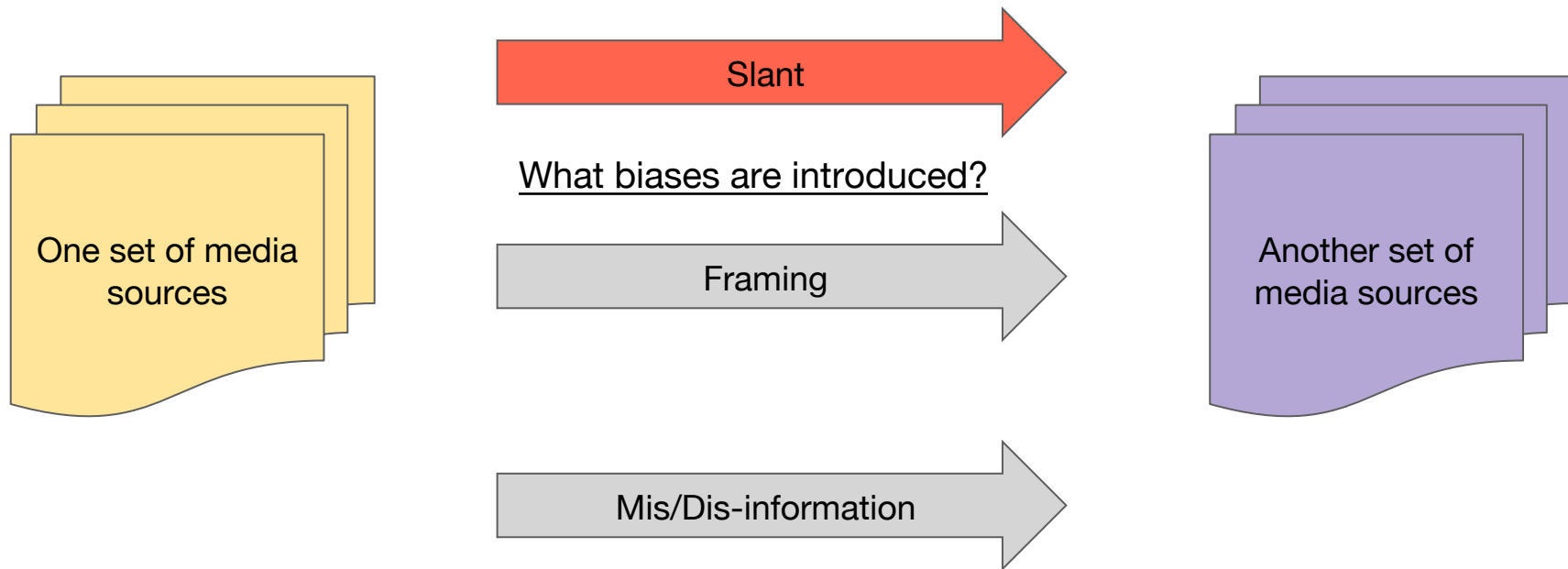
Opportunities to push back against hegemonic narratives

Differences in local & national framing (Oliveira-Araujo 2023)



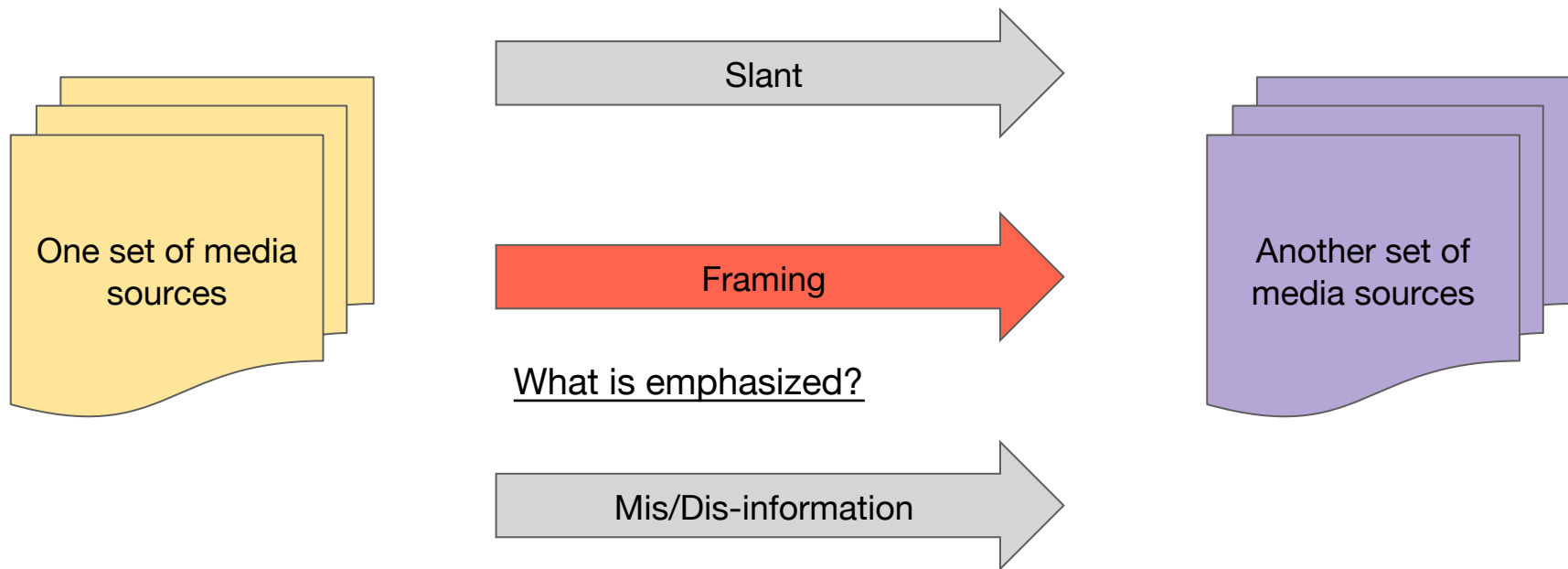
Background: Intermedia Agenda-Setting Theory

Intermedia Agenda-Setting Theory



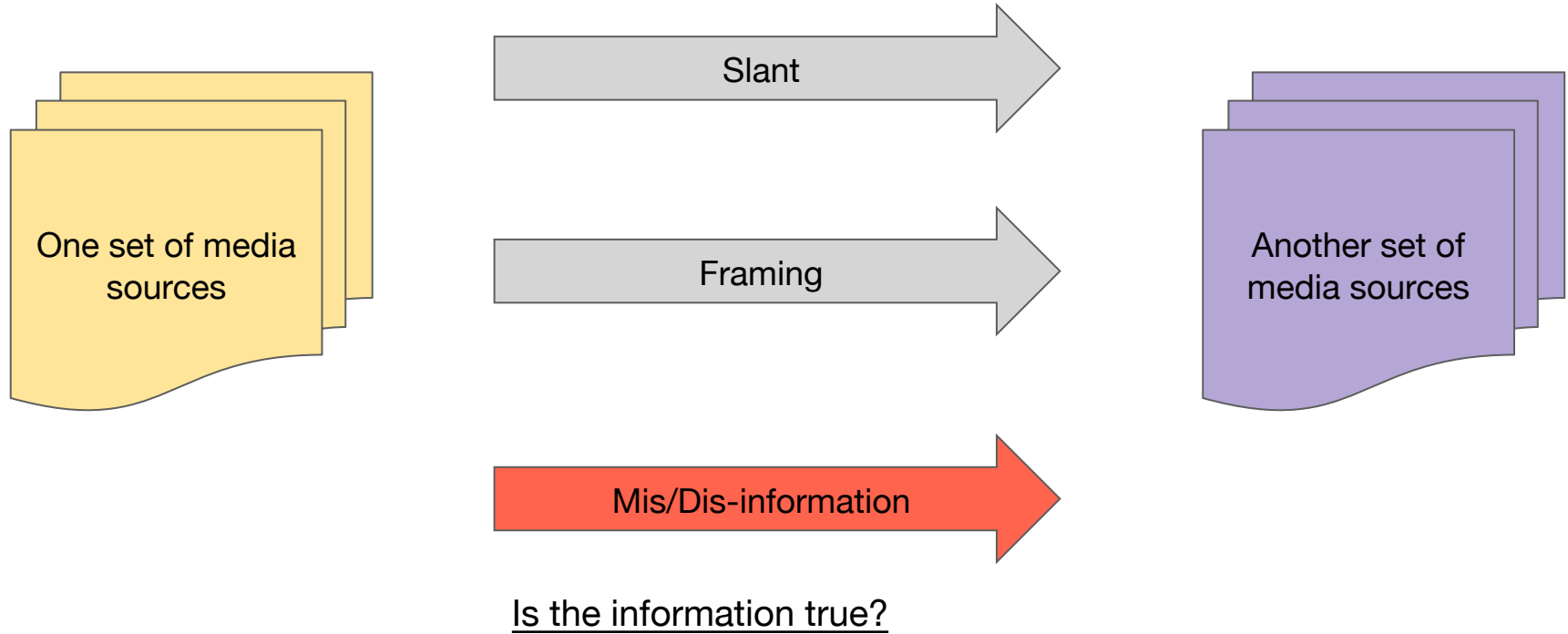
(Widmer, Galletta, and Ash 2023)

Intermedia Agenda-Setting Theory



(Simon and Xenos 2000)

Intermedia Agenda-Setting Theory



(Guo and Vargo 2020; Tsfaty et al. 2020)

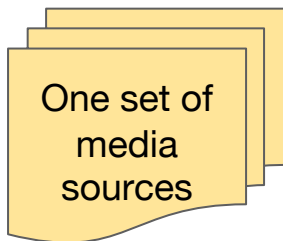
Intermedia Agenda-Setting Theory



National outlets often
set an agenda...



...that local outlets
then pick up

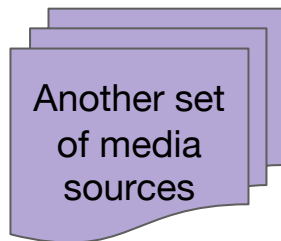


One set of
media
sources

Slant

Framing

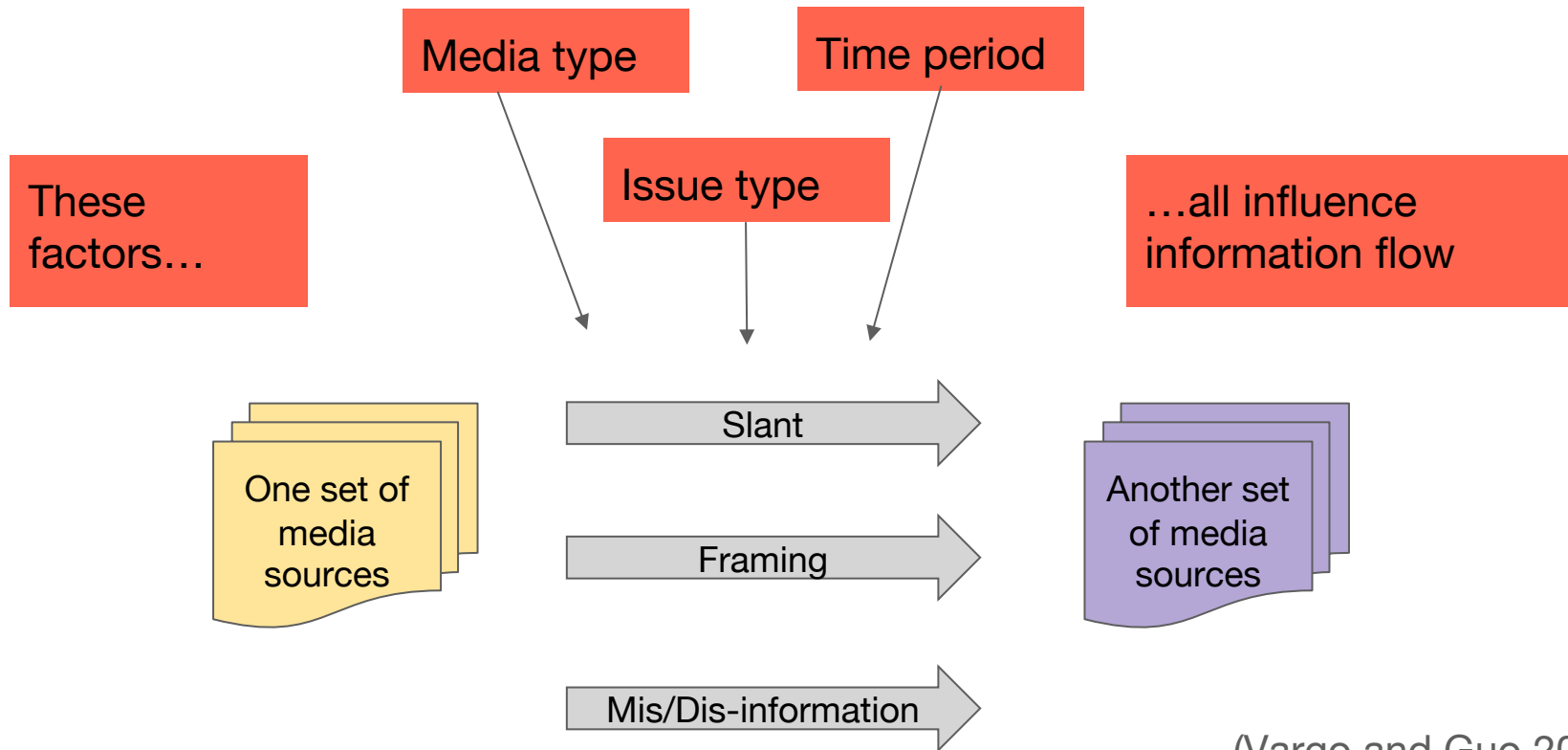
Mis/Dis-information



Another set
of media
sources

(Buzzelli and Towery 2021;
Oliveira-Araujo 2023)

Intermedia Agenda-Setting Theory

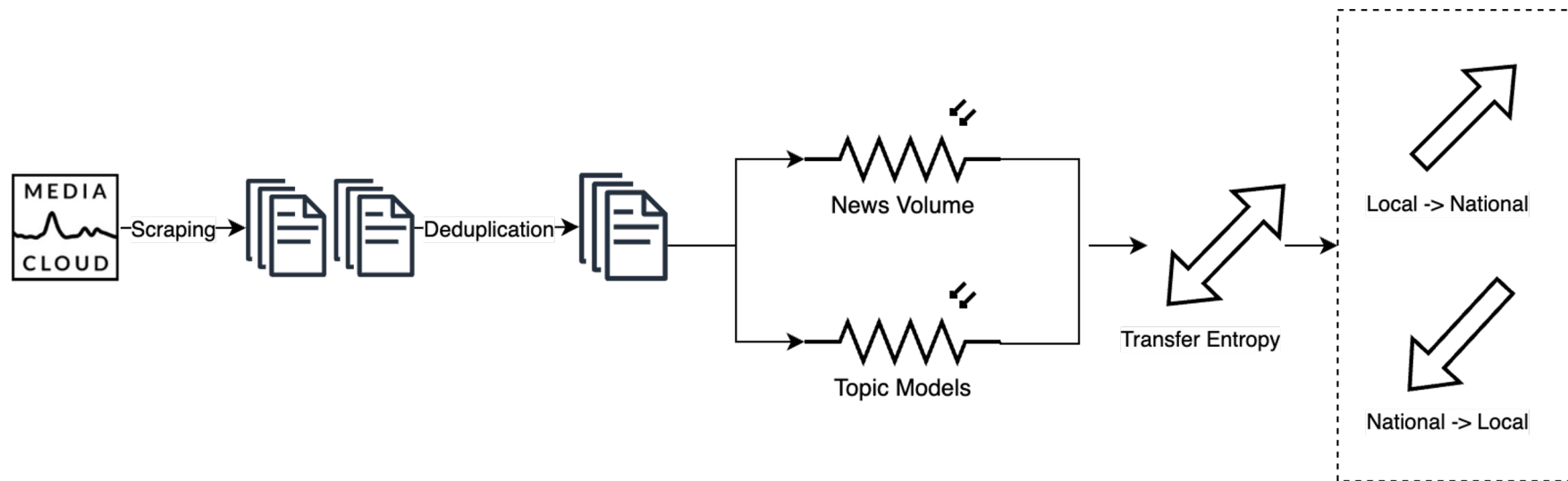


(Vargo and Guo 2017)



How We Measure What's Going On: Data & Methods

Data Processing



Dataset

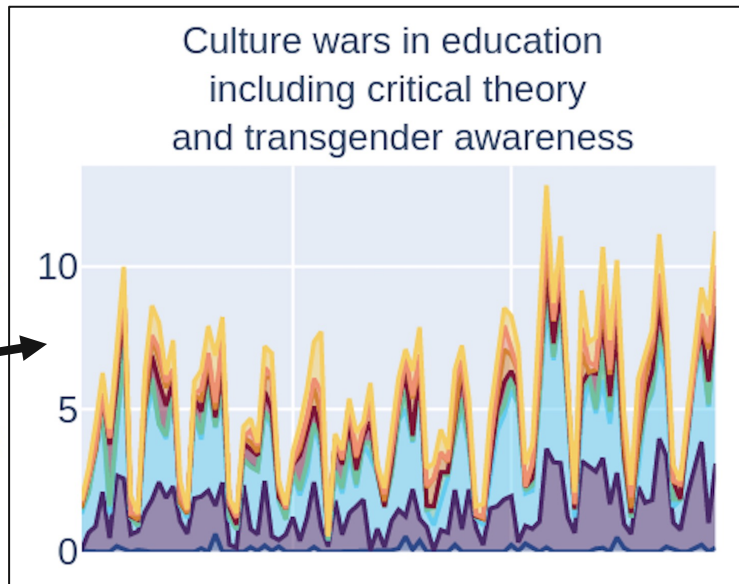
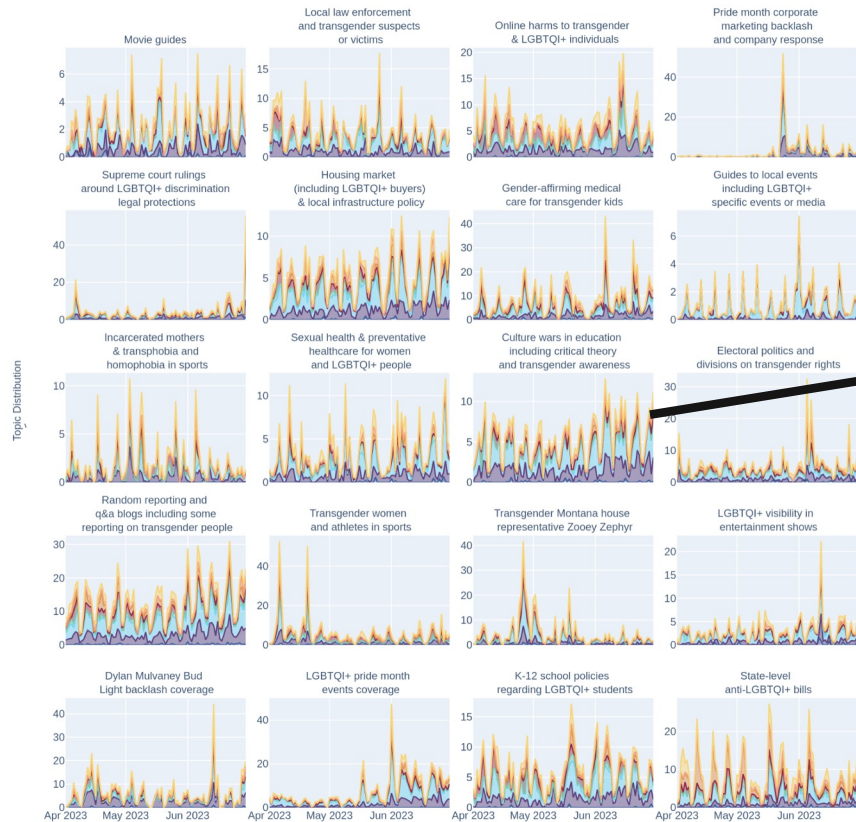
Level	Collection	# of Articles	# of Unique Outlets
National	<i>New York Times</i>	98	1
	<i>Fox News</i>	1,120	1
State (Dem)	New York	2,125	109
	California	3,171	266
	Illinois	547	61
State (Rep)	Florida	1,090	65
	Texas	1,534	85
	Ohio	525	41

Methods: Topic Identification

We use topic distributions to generate time series representing the threads of discourse in our dataset.

1. 20-topic MALLET (McCallum, 2002) LDA topic model (trained on article content including headlines)
2. Label each topic using representative words & articles

Methods: Topic Identification



Publication



Methods: Transfer Entropy

At a high level: A measure of how much one thing causes another.



Zoomed in more: The amount of information gained by learning the past states of a coupled process, Y , given that we know the present and past states of a stochastic process, X .

Methods: Transfer Entropy

At a high level: A measure of how much one thing causes another.

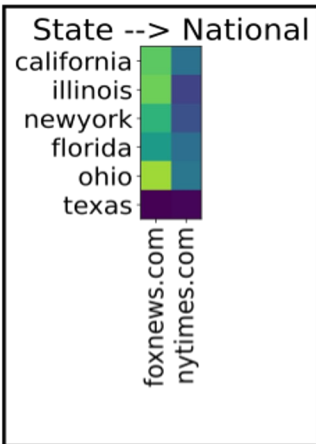
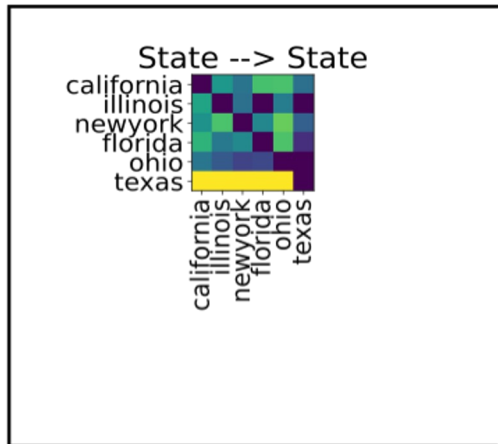


Zoomed in more: The amount of information gained by learning the past states of a coupled process, Y , given that we know the present and past states of a stochastic process, X .

Methods: Transfer Entropy

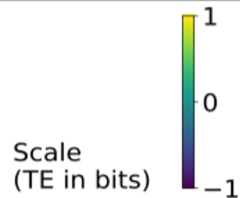
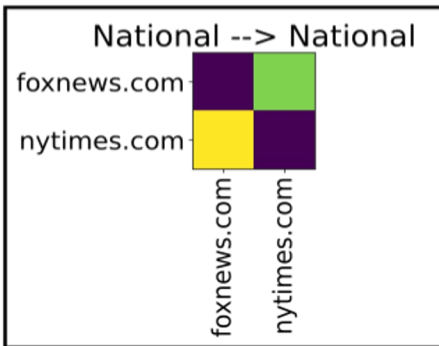
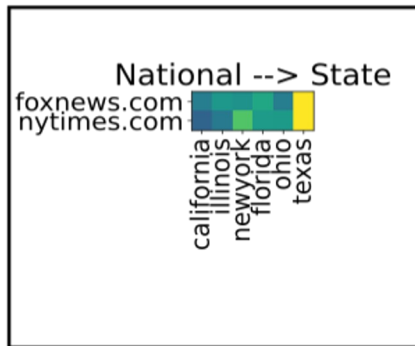
1. One of the best measures we have to proxy “**causality**” or, at the very least, how much one thing “influences” another thing
2. It is *directional* and it is *temporal*
3. If there are any more coarse-grained patterns, the process of calculating it tells us a lot about those for free when we zoom out

How Does Information Flow?



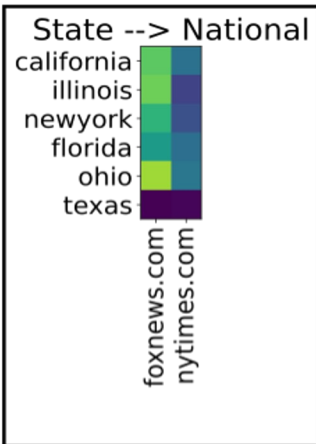
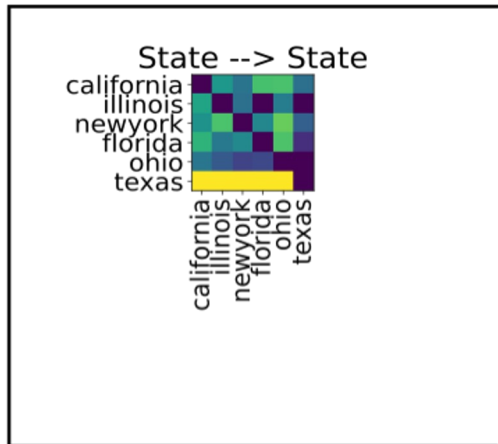
Flow Pattern:
Two-Step Flow
Mediated by TX

Topic 1:
“Local law enforcement
and transgender
suspects or victims”



LEGEND

How Does Information Flow?

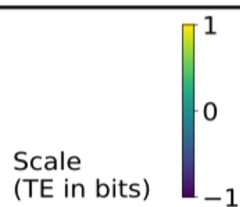
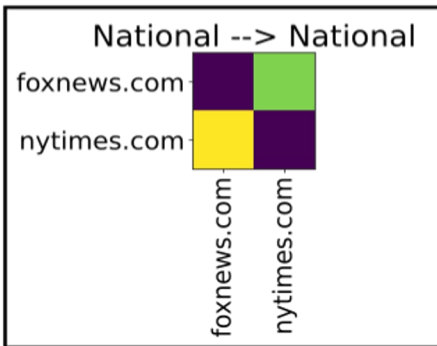
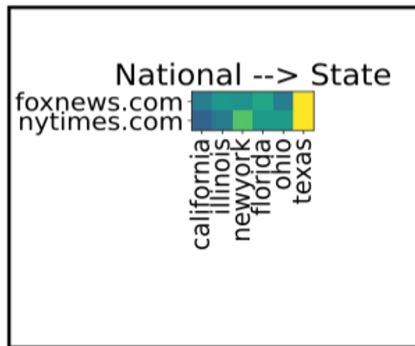


Flow Pattern:
Two-Step Flow
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Topic 1:

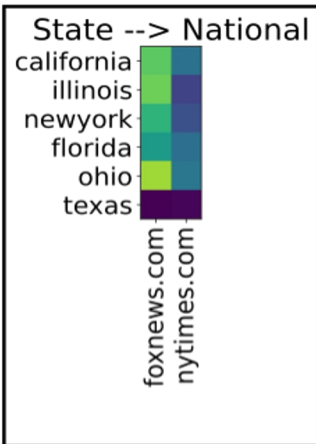
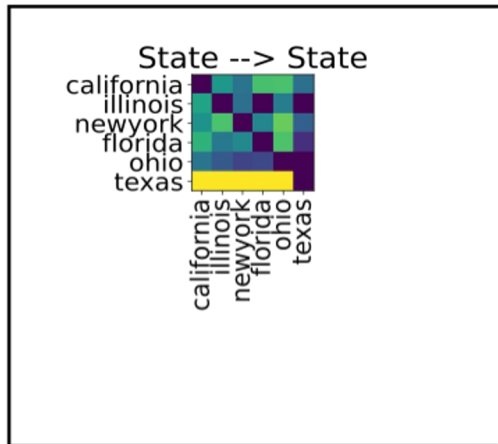
“Local law enforcement
and transgender
suspects or victims”

Mediation of national
→ local information
flow by a single state



LEGEND

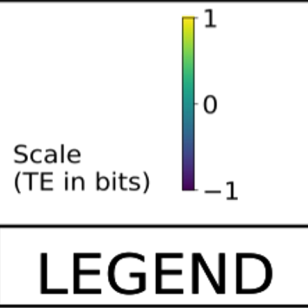
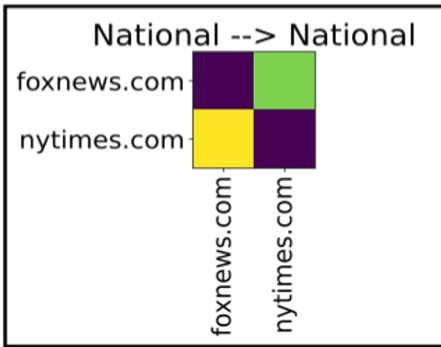
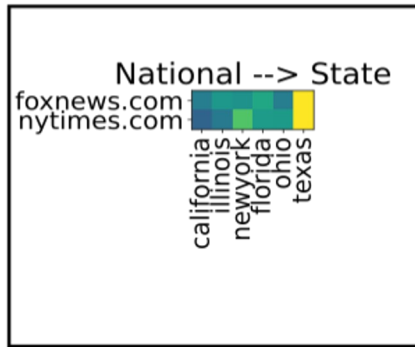
How Does Information Flow?



Flow Pattern:
Two-Step Flow
Mediated by TX

Topic 1:
“Local law enforcement
and transgender
suspects or victims”

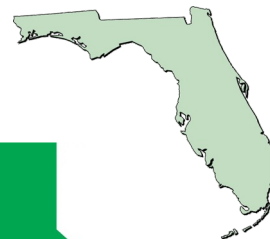
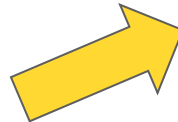
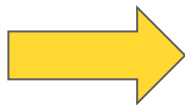
Mediation of national
→ local information
flow by a single state



Neither broadcast nor
virality, but somewhere in
between (S.Goel et al.,
2015)

How Does Information Flow?

We see this pattern a lot:



National Outlets

An Intermediary State

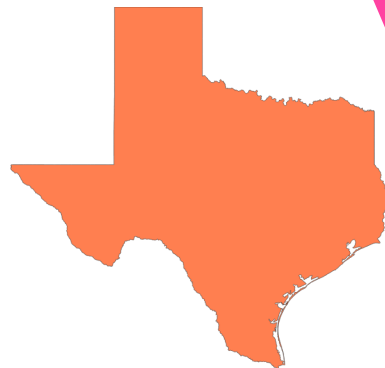
Other States

How Does Information Flow?

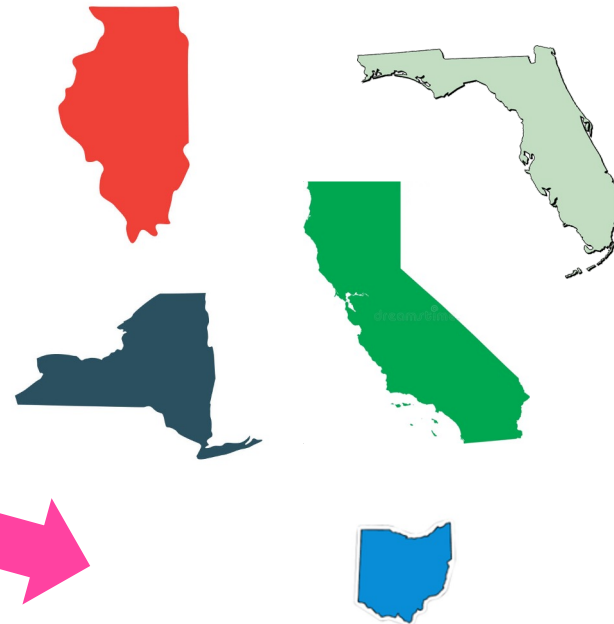
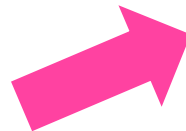
But what exactly
is flowing here??



National Outlets

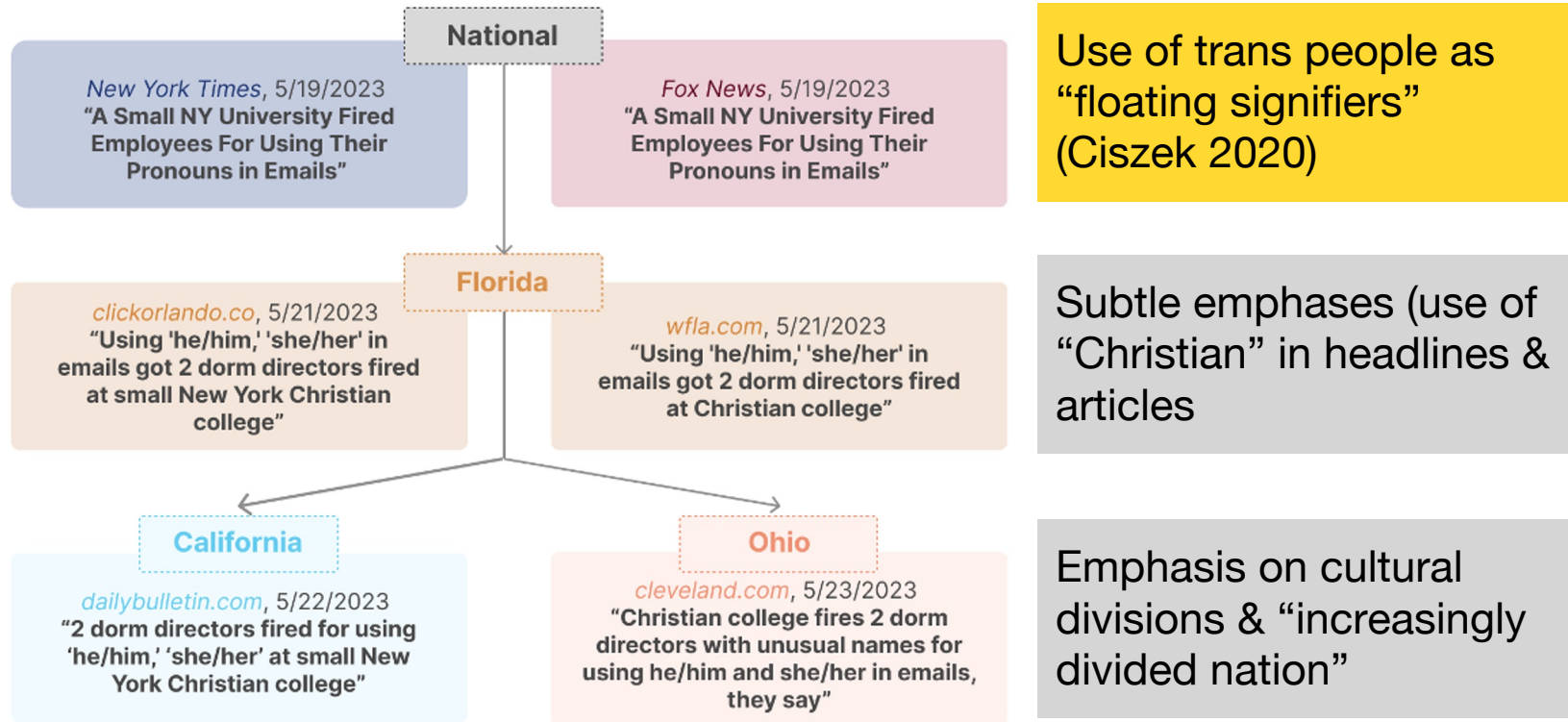


An Intermediary State

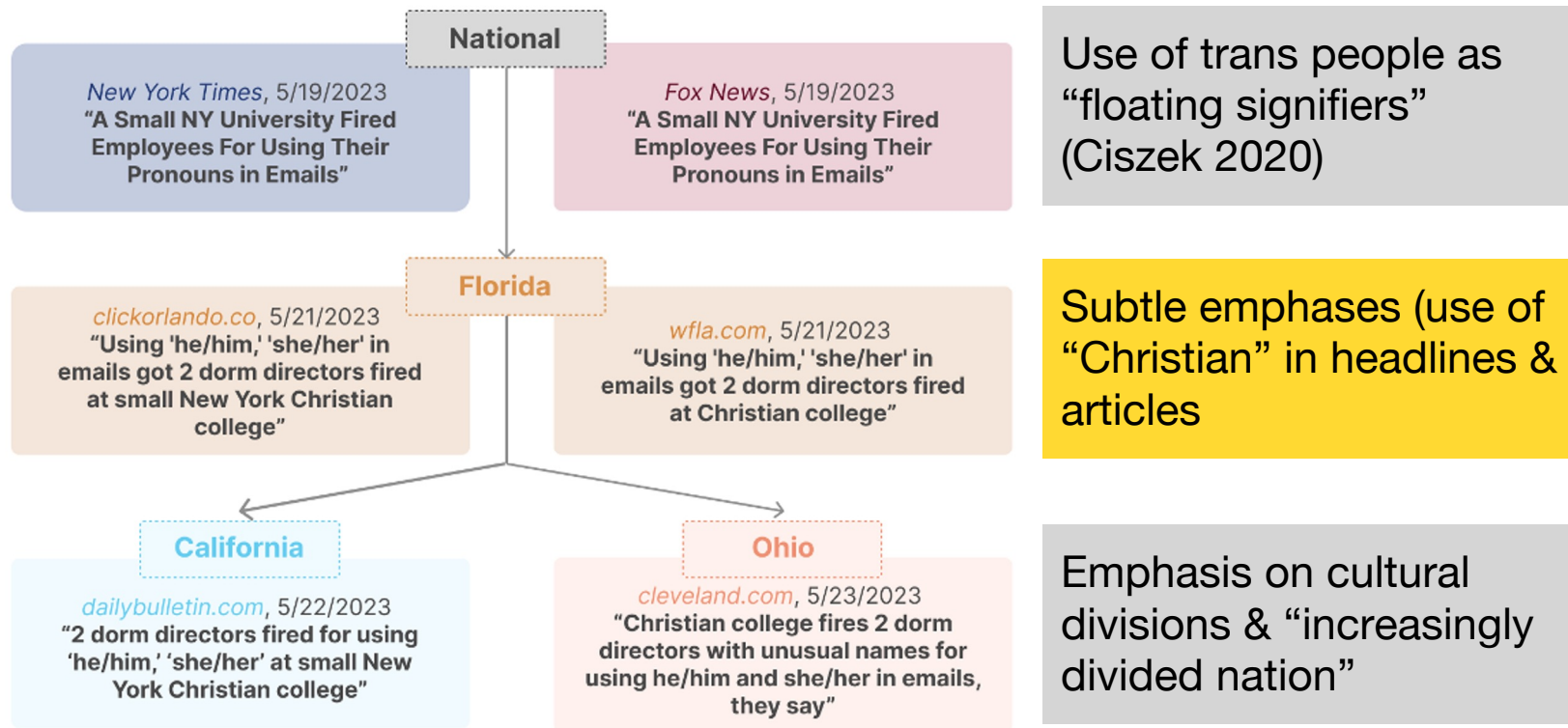


Other States

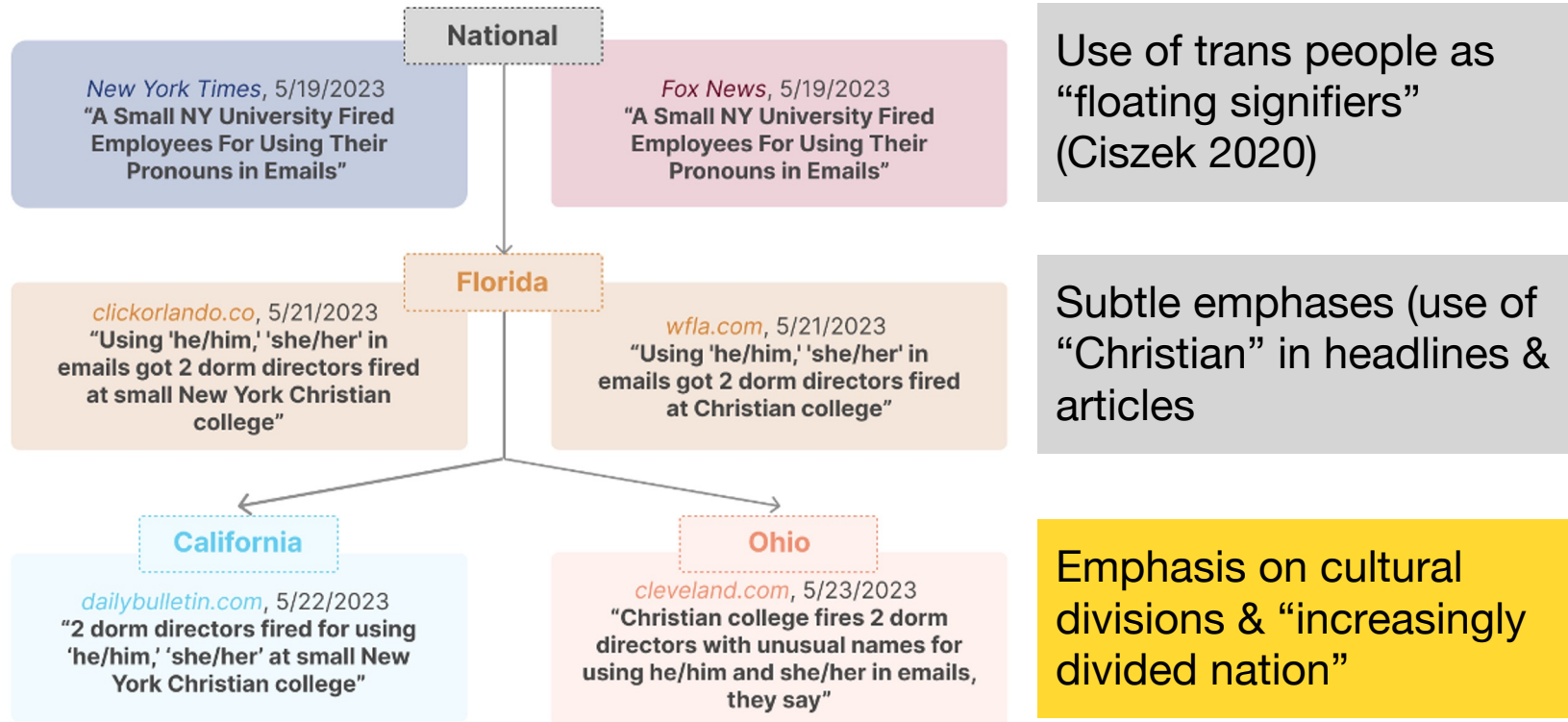
Two-Step Flow: K-12 school policies regarding LGBTQI+ students



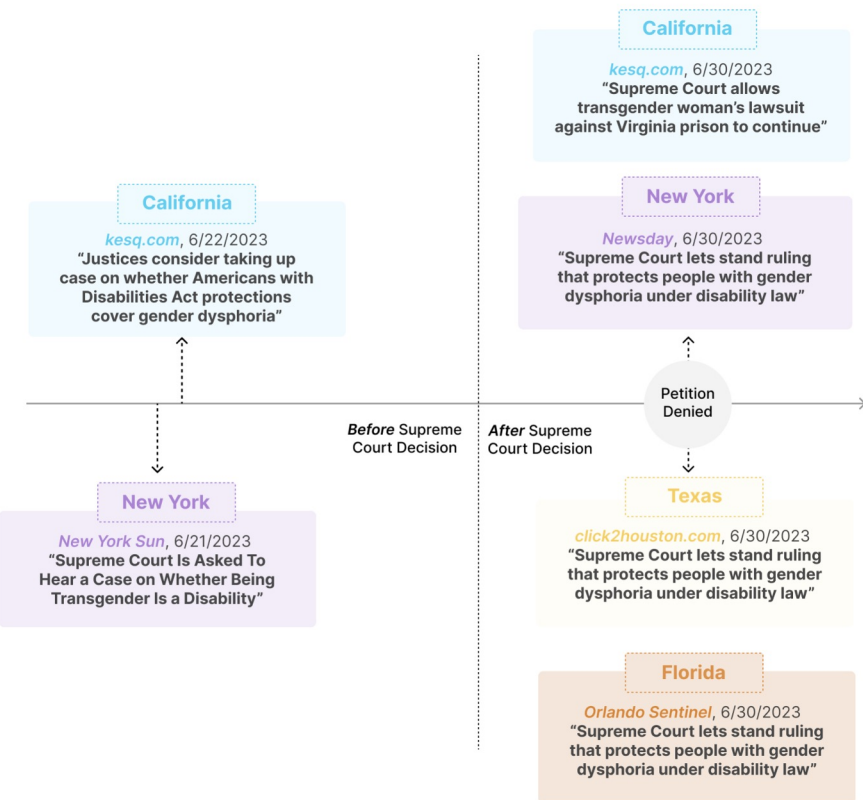
Two-Step Flow: K-12 school policies regarding LGBTQI+ students



Two-Step Flow: K-12 school policies regarding LGBTQI+ students



Partisan Block Flow: Supreme Court rulings around LGBTQI+ discrimination legal protections

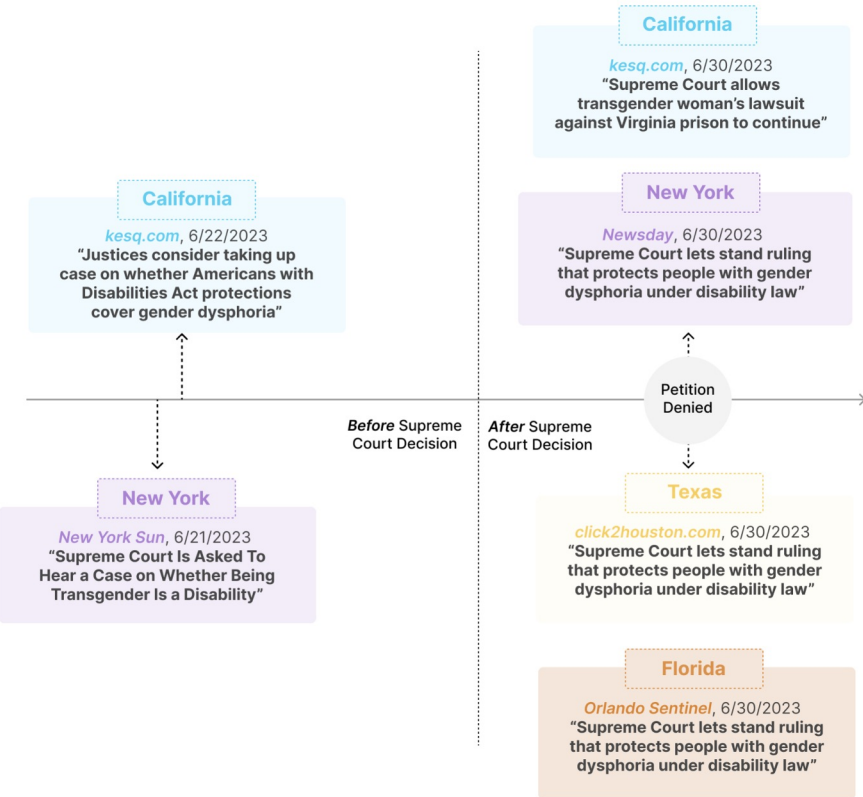


Coverage tends to foreground the upcoming election and conservative dissents

Framing is episodic - the harms Kesha Williams experienced are not contextualized

Carceral violence against trans people is not discussed as a systemic problem

Partisan Block Flow: Supreme Court rulings around LGBTQI+ discrimination legal protections

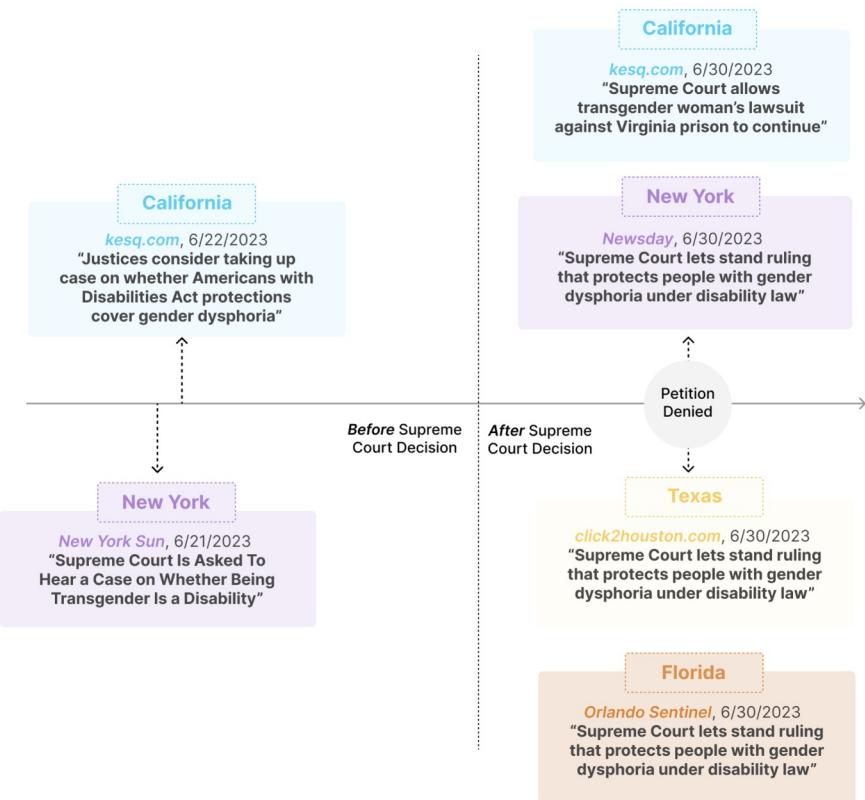


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Intervening in the News Ecosystem

- **Intervention 1:** An evidence-based style guide for reporting on trans issues
 - Raise awareness of the effects subtle emphases have
 - Encourage discussion of the broader context

Intervening in the News Ecosystem

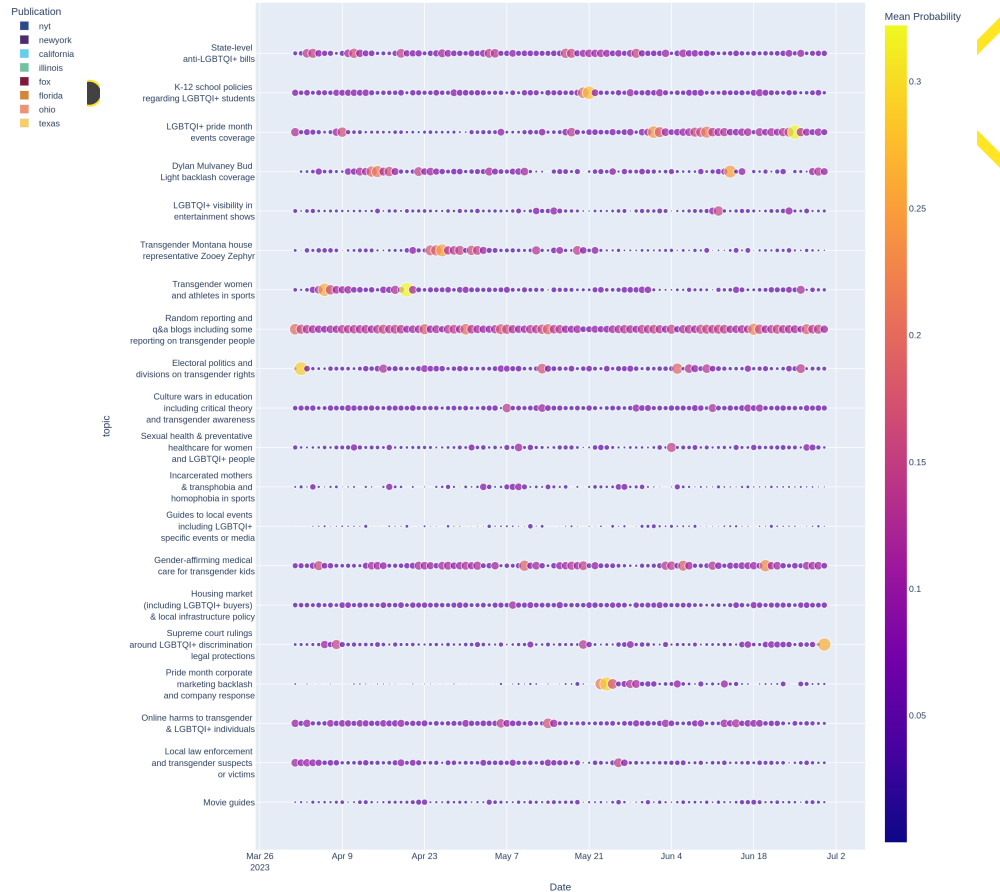
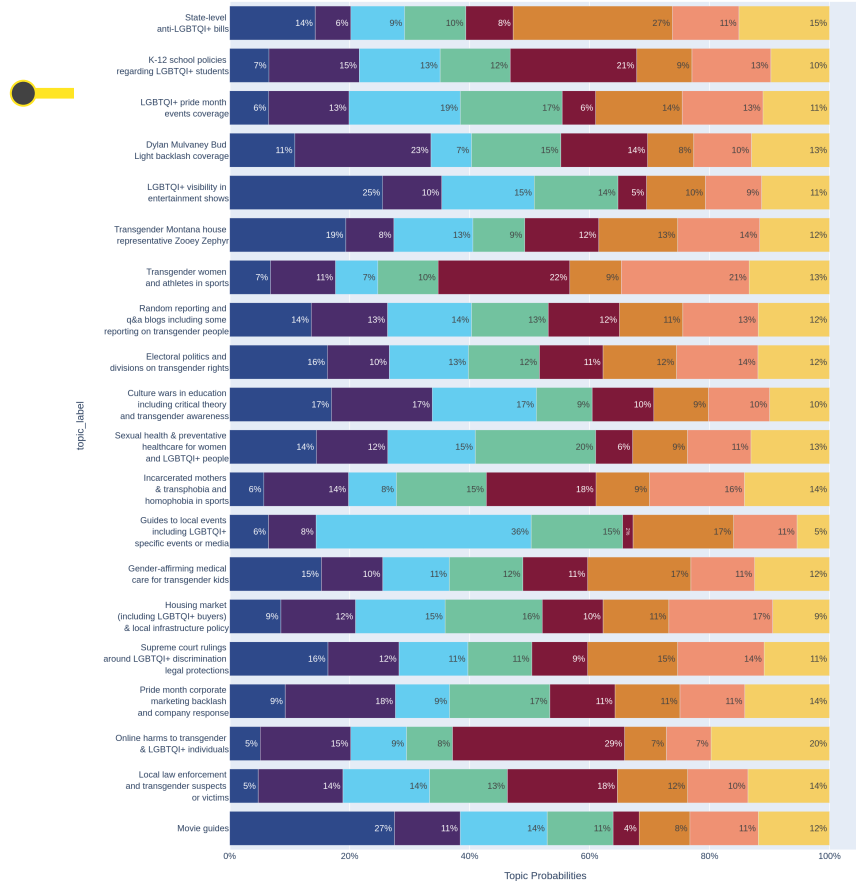
- **Intervention 1:** An evidence-based style guide for reporting on trans issues
 - Raise awareness of the effects subtle emphases have
 - Encourage discussion of the broader context
- **Intervention 2:** National trans news syndicate centering reporting by trans reporters
 - Make it easier for local outlets to initiate and sustain coverage of relevant events
 - Leverage potential for transformative discussions

Future Work

- Contrast agenda-setting dynamics in transgender news with results for other topics
- Produce a high-quality annotated dataset with a human-generated taxonomy of labels (see DELUGE by Bragg et al., 2013) **(this is in progress!)**
- Explore interactions between online news and social media pertaining to transgender issues



Thank you!



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Topic	Top Words	Proposed Label
0	film, new, book, series, documentary, world, story, life, movie, theaters	Movie guides
1	said, police, shooting, brown, school, year, transgender, nashville, three, security	Local law enforcement and transgender suspects or victims
2	twitter, news, fox, media, said, transgender, social, speech, video, musk	Online harms to transgender & LGBTQI+ individuals
3	target, pride, lgbtq, said, company, month, stores, backlash, companies, year	Pride month corporate marketing backlash and company response
4	court, law, rights, case, supreme, judge, said, lawsuit, federal, legal	Supreme court rulings around LGBTQI+ discrimination legal protections
5	new, state, city, million, year, public, california, york, program, housing	Housing market (including LGBTQI+ buyers) & local infrastructure policy
6	gender, care, transgender, affirming, medical, children, health, said, state, minors	Gender-affirming medical care for transgender kids
7	www, https, org, com, june, art, center, may, music, free	Guides to local events including LGBTQI+ specific events or media
8	said, women, year, old, time, race, new, world, university, team	Incarcerated mothers & transphobia and homophobia in sports
9	health, people, hate, said, percent, mental, anti, crimes, women, report	Sexual health & preventative healthcare for women and LGBTQI+ people

10	people, right, anti, american, new, political, black, rights, one, left	Culture wars in education including critical theory and transgender awareness
11	trump, president, biden, desantis, said, republican, former, campaign, house, republicans	Electoral politics and divisions on transgender rights
12	people, like, said, one, know, think, trans, going, time, want	Random reporting and q&a blogs including some reporting on transgender people
13	women, transgender, sports, athletes, trans, said, girls, would, female, gender	Transgender women and athletes in sports
14	abortion, said, house, state, zephyr, bill, montana, lawmakers, republicans, republican	Transgender Montana house representative Zooey Zephyr
15	drag, show, also, music, year, first, new, one, LGBTQI+, best	LGBTQI+ visibility in entertainment shows
16	light, bud, mulvaney, beer, busch, anheuser, said, company, sales, dylan	Dylan Mulvaney Bud Light backlash coverage
17	lgbtq, pride, community, said, people, gay, city, transgender, rights, mont	LGBTQI+ pride month events coverage
18	school, students, said, parents, board, schools, student, district, gender, education	K-12 school policies regarding LGBTQI+ students
19	bill, state, florida, law, texas, lgbtq, would, desantis, said, bills	State-level anti-LGBTQI+ bills