Labour Unions in the News

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Abstract

Over the past several decades, union membership has dropped while the economic position of workers has also greatly worsened. One way to investigate the sentiment towards unions in light of such economic inequality is to look at news media. In this paper, a history of labour union action is constructed for the past decade, and some common themes and discourses that may affect public perception are extracted. In particular, much discussion is focused on the political nature of unions, strikes, and individual rights versus collective benefits.
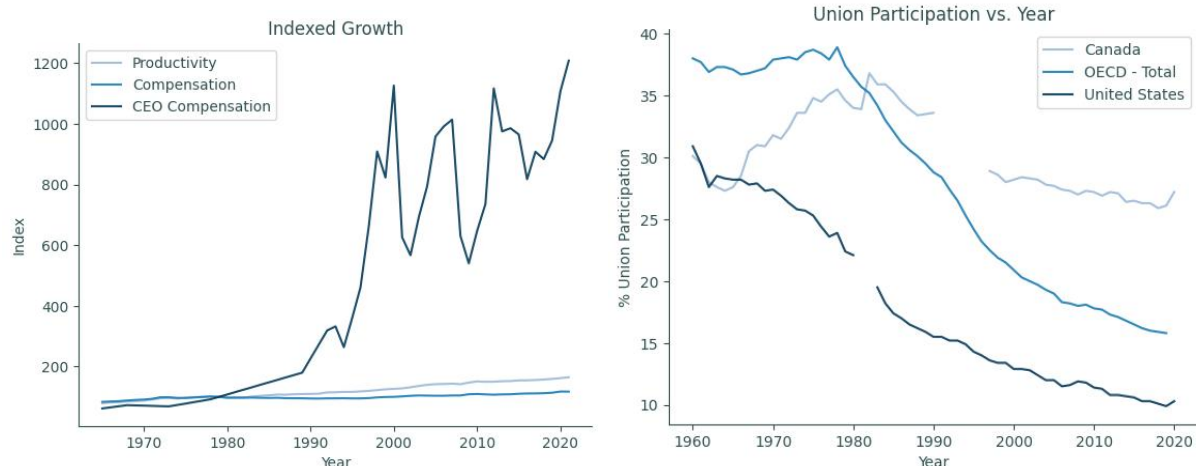
1 Introduction

Since the industrial revolution, labour unions have had a significant impact on workers' socioeconomic conditions and the economic stratification of society. Fighting for guarantees on work hours, wages, and working conditions, labour unions have attempted to improve the life of workers across industries. However, since the mid-late 20th century, union participation has drastically reduced across North America and the OECD nations in general (see Figure 1b). At the same time, the economic position of workers has potentially gotten worse. The increases in worker productivity have grown faster than increases in worker compensation, with both of these vastly outpaced by realized CEO compensation, as can be seen in Figure 1a. It is curious what the public sentiment is regarding labour unions in the face of such growing economic inequality.

An important voice in the sphere of public opinion is news media as it helps shape the opinion of the public who consume their content. The stance of news publishers then stands as a strong choice for an initial investigation into public opinion on a certain topic. Thus, this paper seeks to answer the research question: "how are unions discussed in news media?" This is operationalized by restricted to the following parameters: only consider unions in the Canadian Labour Congress (CLC) (Congress, 2023) and the AFL-CIO (AFL-CIO, 2023), only publishers found in (Mok et al., 2023) (Table 2), the time period 2008-2021, and articles shared on Reddit.

2 Related Work

(Bonikowski and Nelson, 2022) discusses a broad range of computational text analysis tools and, in particular, categorize unsupervised/supervised models as relevant to inductive/deductive reasoning respectively. Of particular note was the useage of unsupervised models being used to guide manual analysis. This project utilised Structural Topic Modeling (STM), first developed by (Roberts et al., 2016), to perform unsupervised categorization for later manual analysis. STM categorizes documents into topics, and allows document metadata as covariates. One concrete implementation of STM and topic modeling can be found in (Farrell, 2016) who analyzed how corporate funding correlated with ideological polarization in climate change broadcasts. They utilized STM by analyzing their corpus with organization funding as a covariate. Another concrete implementation of this idea can be found in (Karell and Freedman, 2019) who performed a computational abductive analysis via STM and close reading to analyze the prevalence of pre-identified radical rhetorical devices in radical Islamic texts (subversion and reversion). They utilized document metadata like authorship group, year published, and original language so that the result focused on the content of the article and not a style that can be attributed to the metadata.

(a) Pay, productivity, and CEO compensation, indexed from 1979, (Institute, October 2022) and (Michel and Kandra, 2021).

(b) Union participation in Canada, the United States, and all OECD nations. Data from (OECD, 2023).

Additionally, (Ziems et al., 2023) note that computational tools can be used to analyze historical event timelines and how those events affect discourse.

3 Data

The data used for this paper was generously provided by Lillio Mok and Ashton Anderson (Mok et al., 2023). It consists of articles shared on Reddit between 2008 and 2021 that have been passed through the following basic filter:

- Has 'union', 'labor', or 'labour' prefixing at least 2 words in first 10 sentences.

- Does not contain any of the following excluded strings anywhere in the body: "european union", "civil union", "rugby union", "customs union", "unionist", "banking union", "christian democratic union", "credit union", "transfer union", "fiscal union."

One benefit of having the articles be the ones shared on Reddit is that they will be the ones that have had enough of an effect on the sharer to be worthy of sharing. Thus, this set is closer to the ideal set of "articles that influenced public thought" than an arbitrary web scrape.

The total initial number of documents was 20, 821. These were passed through a custom filter that ensured the articles contained the name of a union in the CLC or the AFL-CIO, and removed articles with duplicate URLs. After passing the original data set through this filter, there were three groups of documents produced.

The first were the eliminated documents, which numbered 16, 905. These documents were not included, but they were passed to a topic model to verify the filter. The eliminated article topics can be found in Appendix C (robustness check). Of the 16 identified topics, two signalled some issue. The first was that other companies and industries appeared, with some discussion on their unions. One topic discussed the Amazon Labour Union (ALU) which is not part of the CLC or the AFL-CIO. This could cause big labour events that shape the narrative around unions be missed. The second example was the topic related to school and teaching, which included discussion of teacher unions. The issue with teacher unions is that the American Federation of Teachers (AFT) is composed of more than 3, 000 locals (of Teachers, 2023), and they are often referred to by their local names in news articles. No comprehensive list could be found, but a few were caught and included, like the Chicago Teachers Union (CTU).

The second group of documents were the full collection of articles that passed the filter, which contained 3, 916 articles. These will be called the *general data set*. The third group contains all articles coming from domains deemed "far" in (Mok et al., 2023). This data set will be called the *polarized data set* and contains 1, 466 documents.

Data Limitations and Reflections[1]

I think the data is the biggest issue with my experiment. One issue is that the data was skewed towards recent years and left-leaning publishers.

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[1] I'm including these reflection sections to share what I've learned.

For a full breakdown, see Appendix A but an example is: more than 2500 articles by left-leaning publishers but less than 1000 from right-leaning publishers.

Additionally, the further I got into the project, the more I realized that the vast number of topics related to the unions I chose would need a data set much larger than I had for any comprehensive analysis. I tried to find more articles, but many news sites blocked web scrapers and I was only able to extract around 300 articles for 2023. If I was to do this project again, or improve on it in the future, I would definitely search for, or construct, a larger data set.

4 Methodology

Originally, two analyses were going to be done. The first was a *frequency topic analysis* which was performed on the general data set. The second analysis was going to be a *rhetoric analysis*, to be performed on the polarized data set.

4.1 Frequency Topic Analysis

The goal of this analysis was to determine what the important labour union related topics were to news publishers and Reddit users. To do this, the general data set was passed to a structural topic model with the following formula,

$$Y \sim \text{domain} + \text{leaning} + s(\text{day}) \qquad (1)$$

The $s(\text{day})$ lets us treat `day` as a continuous variable. The ideal number of topics determined by the `stm` package was actually 92, but that was far too many for analysis. So, the number 16 was chosen as it gave decent results and is a number of topics that can be manually analyzed. After running the model, the general theme of each topic was determined by reading the 2-10 most highly associated articles with that topic. Then, two "frequency with respect to" properties were investigated:

- Leaning: topical focuses for each side of the political aisle.

- Time: constructed a rough history of labour topics. Both global document proportion at a given date, and individual topic histogram spikes, were looked at for this.

4.2 Rhetoric Analysis

Initially, I was going to try and see how unions were discussed from both extremes of the political spectrum. However, there were barely enough documents to compare each side on a single event, even after doing some web scraping, so this was omitted. To do this, the polarized data set would be given to a structural topic model with the formula $Y \sim \text{leaning}$.

Methodology Limitations and Reflections

To learn how to implement the STM, I mostly followed the vignette provided by (Roberts et al., October 2019) and the tutorial (Warin, n.d.). The fact that their example also utilized political leaning and date was an unintended but convenient fact. Doing STM to direct manual analysis provides the big benefit of categorizing the data into a manageable number of categories before manual labelling is done. The limitation of this is that the STM may not be able to detect differences between some topics, and end up grouping them together. Thus, some important topics could be lost during the analysis. Additionally, a big issue here was how small my data was. Since the topic/data ratio was so high, it's hard to draw general conclusions from the results. If I had a larger and more specific data set, perhaps this could be mitigated.

5 Results

Applying STM to the general data set yielded the topics found in Appendix B (looking at Appendix B isn't needed). Topics will be denoted by Tx. The first most discussed topic was: T11 - unions and the DNC, which mainly discussed how unions were relating to the Democratic party. For example, presidential endorsements. The second most was: T2 - auto unions, which mainly discussed strike actions taken by the UAW. The third was: T10 - teacher unions, which was split into CTU strikes and return to in-person policies. The general themes of the topics include: political relations of unions, strikes, social policies, and worker standards.

5.1 Leaning Variance

Overall, the leaning variance was not statistically significant. In general, the both sides discussed each topic with a fairly similar frequency. The only slight outliers, which were still not statistically significant, were:

- Left discussed more than right: Amazon labour union, DNC relations

- Right discussed more than left: Janus vs. AFSCME.

5.2 Time Variance

The goal of this section was to construct a history of labour events over the past decade that were focused on by the media. As mentioned, history was constructed by analyzing global topic proportion on a given date, and spikes in each topic-specific histogram of the 200 most associated documents per year. Years with no clear events were omitted.

2008

In 2008, the main topic of interest was T11, which discussed union relations with the Democrats. Since this was around the time of the 2008 presidential election, this was potentially due to union endorsements and Democrats courting unions.

2011

In 2011, two topics stood out. The first was T1 which discussed legal battles surrounding union membership. There was a bill in Ohio that prohibited unions "from bargaining over health benefits and pensions, while also eliminating the right to strike" (Maher and Merrick, March 3, 2011). Additionally, there was a similar situation in Wisconsin where the government was trying to reduce union bargaining rights of public workers in Wisconsin (Condon, February 22, 2011). The second topic that stood out was T7. There seemed to be a surge in anti-rich sentiments with titles such as "The 99% Versus Wall Street [. . .]" in 2011 and "How to Get People to Go After Bankers and Financiers and Stop Attacking Public Employees" in 2012. One potential reason for this could be due to the 2011 Occupy Wall Street protest, which indeed some of the articles talked about. Alternatively, it may be possible it was used as a way to focus the discussion of T1 away from the unions and to the corporations.

2012

In 2012, T1 again had a large spike in activity. This time, the focus was on Right to Work legislation. The Right to Work legislation battles in the U.S. looked at whether employees of unionized workplaces should be forced to join unions or pay union dues (to Work Legal Defense and Foundation, 2023). Investigation of highly associated articles revealed that there was a battle over this kind of policy in Michigan at the end of 2012, with titles such as "Obama Expected To Weigh In On Michigan Right-To-Work Battle In Detroit Speech." There was also a continued elevation in

discussions on T7. Finally, T10 had a spike due to the Chicago Teachers Union voting to strike (Ahern, June 11, 2012). Curiously, despite a presidential election, T11 was not discussed as much.

2013

There were spikes in both T6 and T15 in this year. T6 roughly contained articles on "low-skill" work like fast-food, factories, and minimum wage. It looked like a large amount of New York fast food workers attempted to form a private union, the Fast Food Workers Committee, in late 2012 (Jaffe, November 29, 2012) and it's possible this spurred a larger union discussion in 2013. T15 discussed public services and things like health insurance. Some of the labour unions had an issue with how specific coverage offered by the Affordable Care Act wouldn't apply to some of their members (Roy and Apothecary, August 30, 2013).

2014

In 2014, there was a spike in T13 which discussed unions in the context of healthcare workers and epidemiological situations, which seemed to correlate with the Ebola outbreak in West Africa (Organization, n.d.). This spurred the AFA-CWA to pressure governments to implement better policies to reduce disease spread (Goglia, October 8, 2014). T15 continued to be discussed, it seems for the same reasons as in 2013.

2015

Due to being a lead-up year to an election, T11 had lots of discussion in late 2015, particularly regarding which unions were endorsing Bernie Sanders. For whatever reason, it seems that the unions endorsing Clinton signalled this later, in 2016. Additionally, in 2015 the Los Angeles City Council committed to raising the minimum wage to $15 by 2020 which seemed to be discussed a decent amount.

2016

In 2016, the main topic of interest was T11, which discussed union relations with the Democrats. Again, this was an election year so its possible that this was due to the election. The comparatively large bump relative to previous election years could be due to the more polarized election environment due to Trump. There seemed to also be a spike in T9 which discussed funding, but nothing specific could be gleaned from the highly associated articles.

2018

In 2018, Janus vs. AFSCME was decided on (Rushe, June 27, 2018) which declared that public employees in unionized positions cannot be forced to pay fees (Rushe, June 27, 2018). This was a frequently debated topic that seems to continue the Right to Work battles of 2012. In the same year, Trump signed an executive order that, among other things limiting to unions, would "reduce the timeframe for firing poor performers" (Blumberg, May 25, 2018). Additionally, the Green New Deal started to be discussed (Kaufman, December 18, 2018). Such policies would have huge impacts on trade workers in fossil fuel and development industries. T16, which had highly associated headlines mostly discussing the topic of transit strikes, also had a large bump but no cause could be found.

2019

A lot of events happened in 2019. First, due to being the year before an election, T11 had a decent amount of documents discussing union endorsements. Additionally, T2 had a spike due to a strike at GM (Carey and Klayman, September 15, 2019). In 2019, there was also union and legal kickback to Trump's executive order mentioned earlier (Davidson, July 9, 2019). Additionally, there was a government shutdown in early 2019 that threatened public employees with working without pay which was protested against by unions (Bonn, January 2, 2019).

2020-2021

The most popular topic in 2020 was T13 which discussed policies around COVID-19 and healthcare workers. In 2021, this leaked into discussions on T10 where there was a debate on return to in-person work policies for teachers in the CTU (Zanotti, January 24, 2021). In 2020, there was some discussion around unions endorsing Sanders, Biden, or Trump in the presidential election. In 2021, Amazon defeated a unionization effort at one of its warehouses (Ray, April 9, 2021) which seemed to have a lot of news coverage.

6 Discussion

The rough history constructed in Section 5.2 suggests the following topical focuses of news media: political nature of unions, strikes, policies that affect the well-being of workers, and laws around union membership.

From these, some specific, high-level discourses that surround unions can be identified. One of these is how unions should behave politically since a large amount of the discussions were on who the unions were endorsing, and how each political party reacted to it. It could be possible that Republican workers, who may only see labour unions brought up around elections, are antagonized by unions being Democrat-leaning and thus decrease their support for them. Such reaction may not even be labour-related. On the other side, it's possible that such political action could bolster support from Democrat workers. Further work could investigate this hypothesis, and unions can decide how they want to approach this situation.

Another discourse is the one surrounding individual rights versus collective benefits. A large amount of discussion was focused on who should be required to join/pay for union membership, as in the Right-to-Work topic and the Janus vs. AFSCME topic. These were very focused on an individual's right to not have to forcefully pay or join a union. These are contrasted with the many topics that discussed unions demanding better treatment for their workers, as with the Ebola outbreak and COVID-19, which may not always be a priority for an individual worker. This seems like a fundamental disagreement integral to the existence of unions. Further work could narrow down what specific points of contention there are.

One notable subset of the above is the frequent discussion of strikes. Strikes can both be scary, with a loss of pay for striking workers and potential damage on the economy, but also lead to more benefits and safeguards for workers. Thus, how strikes are portrayed in news can have a significant effect on how the public reacts to such events. Further work could investigate how these events are portrayed and what their effects are.

7 Conclusion

A rough history of labour-union topics in news media has been identified. From these, specific discourses have been highlighted. Further work can investigate the specific content of these discourses and their impact.

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A Data

	Left	Centre	Right	
Alternet	ABC News	Associated Press	The Epoch Times	The Blaze
Buzzfeed	The Atlantic	Axios	New York Post	Breitbart News
CNN	Bloomber	The BBC	Newsmax	The Daily Caller
The Daily Beast	CBS News	CS Monitor	Reason	The Daily Mail
Democracy Now	The Economist	Forbes	Washington Examiner	The Daily Wire
HuffPost	The Guardian	The Hill	Washington Times	The Federalist
The Intercept	NBC News	Newsweek	Fox News	Fox News Insider
Jacobin	The New York Times	NPR	National Review	Our America News
Mother Jones	Politico	Reuters	The Spectator	
MSN	Time	Wall Street Journal		
The New Yorker	USA Today			
Slate	Washington Post			
Vox				

Figure 2: News sources and their classifications. Data from (Mok et al., 2023).

(a) Number of articles per year.

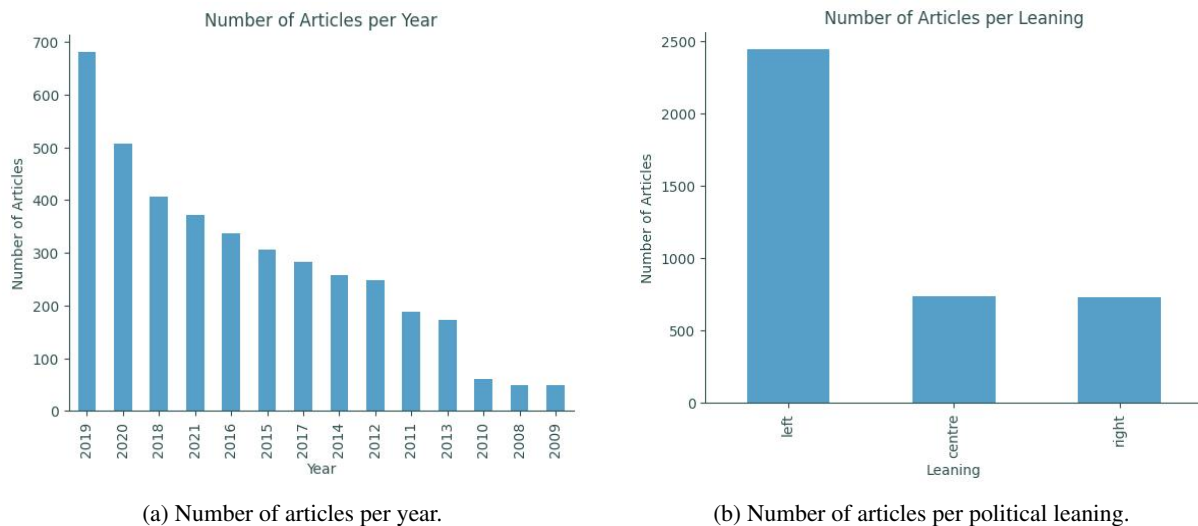(b) Number of articles per political leaning.

Figure 3: Some statistics on the data set used.

B Prevalence Topics

- Topic 1: Right-to-Work legislation
    - Highest probability words: state, republican, bill, union, legisl
    - FREX Words: walker, wisconsin, capitol, snyder, lans
    - Highly associated headlines:
        * "Obama Expected To Weigh In On Michigan Right-To-Work Battle In Detroit Speech"
        * "Jon Stewart Knocks 'Right To Work' In Michigan: 'It's Really A Right To Work AROUND The Unions' (VIDEO)"

- Topic 2: Autoworker unions
    - Highest probability words: worker, said, uaw, union, plant
    - FREX Words: automak, chrysler, chattanooga, gms, ford

- Highly associated headlines:
  * "The Latest: GM, UAW to resume talks; strike still planned"
  * "UAW GM strike kicks off"

- Topic 3: Sport player unions
  - Highest probability words: player, said, leagu, nfl, union
  - FREX Words: nfl, nflpa, goodel, mlb, ufc
  - Highly associated headlines:
    * "MLB to Start Testing for Opioids and Cocaine, Removes Marijuana From Drug Abuse List"
    * "Steelers... Art Rooney says informal discipline reform talks underway; changes to Goodell...s role tied to a CBA extension"

- Topic 4: Janus v AFSCME
  - Highest probability words: union, court, state, worker, public
  - FREX Words: janus, abood, nonmemb, alito, non-memb
  - Highly associated headlines:
    * "The Trump administration declares war on public sector unions."
    * "Supreme Court deals blow to unions, rules against forced fees for government workers"

- Topic 5: Amazon Labour Union
  - Highest probability words: union, worker, amazon, said, walmart
  - FREX Words: amazon, bessem, rwdsu, amazon..., walmart
  - Highly associated headlines:
    * "Amazon has won a historic warehouse union election. But the battle is not over."
    * "Amazon takes early lead as union vote count gets underway"

- Topic 6: "Low-Skill" Work
  - Highest probability words: worker, wage, labor, job, union
  - FREX Words: fast-food, mcdonald..., minimum, low-wag, mcdonald
  - Highly associated headlines:
    * "When the next recession comes, the robots will be ready."
    * "Falling Wages at Factories Squeeze the Middle Class"
    * "How much is an hour worth? The war over the minimum wage"

- Topic 7: organizing and anti-rich sentiments
  - Highest probability words: peopl, say, like, union, one
  - FREX Words: goodman, ami, there, that, realli
  - Highly associated headlines:
    * "How Organizing for Change Is Very Different Than Winning Elections"
    * "How to Get People to Go After Bankers and Financiers and Stop Attacking Public Employees"
    * "The 99% Versus Wall Street: Stephen Lerner on How We Can Mobilize To Be the Greedy 1%'s Worst Nightmare"

- Topic 8: a Trump order that reduced the security of federal employees
  - Highest probability words: feder, employe, said, union, administr
  - FREX Words: afg, tsa, cox, epa, shutdown

– Highly associated headlines:
  * "Trump issues sweeping order for tens of thousands of career federal employees to lose civil service protections"

- **Topic 9: funding**

  – Highest probability words: group, democrat, campaign, new, polit
  – FREX Words: ocasio-cortez, pac, pipelin, climat, ellison
  – Highly associated headlines:
    * "Green New Deal Backers Go Head-To-Head With Koch Money In Texas Congressional Race"
    * "Billionaires give big to new 'super PACS'"

- **Topic 10: teacher unions (with big focus on the Chicago Teachers Union)**

  – Highest probability words: school, teacher, educ, union, student
  – FREX Words: ctu, lightfoot, cps, charter, classroom
  – Highly associated headlines:
    * "Watch: Chicago Teachers Union members perform interpretive dance in protest of teacher return policy"
    * "Chicago teachers vote for strike in battle over pay, longer school days"

- **Topic 11: Unions and the DNC**

  – Highest probability words: union, said, democrat, sander, presid
  – FREX Words: clinton, hillari, sander, tpp, endors
  – Highly associated headlines:
    * "Bernie Sanders gets nurses union endorsement"
    * "Biden to join labor boss at Labor Day event"

- **Topic 12: this topic was more of a jumble of many topics. Though, on reading the most highly associated headlines, they weren't really labour union specific.**

  – Highest probability words: polic, said, offic, union, report
  – FREX Words: dougherti, domingo, verita, agma, opera
  – Highly associated headlines:
    * "AP: US opera union probe finds Placido Domingo abused power"
    * "A US-born citizen was held in immigration detention for three weeks"
    * "Forensics blunder 'may endanger convictions'"

- **Topic 13: COVID-19**

  – Highest probability words: said, nurs, health, worker, coronavirus
  – FREX Words: airlin, coronavirus, flight, mask, cdc
  – Highly associated headlines:
    * "United Airlines flight attendants raise alarm on crew quarantine protocols"
    * "COVID-19 Has Killed Close To 300 U.S. Health Care Workers, New Data From CDC Shows"

- **Topic 14: union organizing and corporate union-busing**

  – Highest probability words: union, worker, labor, employe, organ
  – FREX Words: tesla, musk, googl, boe, robb
  – Highly associated headlines:

* ”Kickstarter Has Fired Two Union Organizers in Eight Days”
* ”Al Jazeera America becomes the latest new media organization to unionize”

- Topic 15: social services, and union relations to them

  – Highest probability words: health, plan, care, union, said
  – FREX Words: postal, insur, pension, obamacar, medicar
  – Highly associated headlines:
    * ”House Democrats Want Taxpayers to Save Union Pension Funds From Collapse”
    * ”USPS reports $1.5B loss”
    * ”Union: Obamacare will slash wages by up to $5 an hour”

- Topic 16: transit strikes

  – Highest probability words: said, strike, union, worker, citi
  – FREX Words: metro, driver, uber, port, bus
  – Highly associated headlines:
    * ”75 hotel workers arrested at Labor Day protest in California”
    * ”S.F. transit strike talks continue; BART still runs”

C Eliminated Topics

Topic 1: DNC	Topic 2: Other Unions[1]	Topic 3: Spanish	Topic 4: Covid
Sander	Uber	Que	Lab
Sanders…	Lyft	Para	Virology
Bernie	Airline	Por	Pathogen
Puzder (U.S. Attorney)	Amazon	Não	Infection
Clinton	Besser (U.S. town)	Com	Anthrax

Topic 5: Police and Crime	Topic 6: Lawmaking	Topic 7: School	Topic 8:
NYPD	Walker (governor)	Classroom	Korea
Ranier (cult leader)	Walker…	Pupil	Qatar
FOP (police organization)	Right--Work	Students…	Pyongyang
NXIVM (cult)	Gorsuch (U.S. justice)	Student	Warmbier (American in NK)
PBA (police unions)	−sex (same-sex marriages)	School	Bae (American in NK)

Topic 9: Economy	Topic 10: China	Topic 11: Other	Topic 12: EU
Yellen (U.S. sec. of treasury)	Xinjiang	Yeah	Macron (President of France)
Jobless	Cocoa	Seeger	Scottish
Nonfarm (cat.of workers)	Tomato	Imagin	France…
H−b	Uyghur	Colbert	Merkel (ex-Chancellor of DE)
Fed…	Polysilicon	Capitalist	Macron…

Figure 4: The labelled topics generated by the structural topic model on the eliminated data.