From the Grimmer article:

The most consequential, and shocking, step we will take is to discard the order in which words

occur in documents (Jurafsky and Martin 2009). We will assume documents are a bag of words,

where order does not inform our analyses. While it is easy to construct sample sentences where

word order fundamentally changes the nature of the sentence, empirically these sentences are rare.

A simple list of words, which we call unigrams, is often sufficient to convey the general meaning of a

text. If this assumption is unpalatable, we can retain some word order by including bigrams (word

pairs) or trigrams (word triples) into our analysis (Jurafsky and Martin 2009). This allows us to

distinguish, for example, the “White House” from the color and the domicile. In practice, for

common tasks like measuring sentiment, topic modeling, or search, n-grams do little to enhance

performance (Manning, Raghavan, and Schu¨ tze 2008; Hopkins and King 2010).

**From Denny & Spiraling**

**n-gram Inclusion:** While it is most common to treat individual words as the unit of analysis,

some words have a highly ambiguous meaning when taken out of context. For example

the word “national” has substantially di\_erent interpretations when used in the multiword

expressions: “national defense”, and “national debt”. This has lead to a common practice of

including n-grams from documents where an n-gram is a contiguous sequence of tokens of

length n (Manning and Schütze 1999). For example, the multiword expression “a common

practice” from the previous sentencewould be referred to as a 3-gram or trigram (assuming

stopwordswere not removed). Extracting n-grams and adding them to the DTM can improve

the interpretability of bag-of-terms statistical analyses of text, but also tends to lead to

an explosion in the vocabulary size, due to the combinatorial nature of n-grams. Previous

research has tended to use 1-, 2-, and 3-grams combined, because this combination o\_ers

a reasonable compromise between catching longer multiword expressions and keeping the

vocabulary relatively smaller. A\_er extracting all n-grams from a document, a number of

approaches have been proposed to filter the resulting n-grams (Justeson and Katz 1995),

but herewe choose to focus only on the most basic case of considering all 1-, 2-, and 3-grams

together without any filtering. So, the decision of whether to include 2- and 3-grams (along

with unigrams, which are always included) is the sixth preprocessing choice we consider.

#### So lets try to pick out some important themes and Ngrams:

### Note I include n-grams considering that stop words would removed

Bill 1:

<http://custom.statenet.com/public/resources.cgi?id=ID:bill:NC2023000S749&cuiq=cebcefa4-252a-5dcb-aeb1-7fc87d570de0&client_md=721a624e-19bb-5264-b386-6d4f8e140f79>

Title: Senate Bill 749 Purpose: An Act to revise the structures of the North Carolina State Board of Elections and County Boards of Elections, and to revise the emergency powers of the Executive Director of the State Board of Elections.

**Relevant Topics and Classification:**

1. **Restructuring of Election Boards**
   * Bigrams/Trigrams: State Board of Elections, County Board of Elections, Legislative Appointment
   * Context: The bill changes the appointment process and structure of the State Board of Elections and County Boards of Elections, transferring some powers from the Governor to the General Assembly and other legislative authorities.
2. **Emergency Powers and Election Procedures**
   * Bigrams/Trigrams: Emergency Powers, Executive Director, Election Procedures
   * Context: The bill revises the emergency powers of the Executive Director of the State Board of Elections, restricting the ability to alter certain election procedures without legislative approval.

**Ideological Spin:**

* **Proponents' View:** The bill aims to create a more balanced and less partisan election oversight structure by distributing appointment powers across multiple legislative leaders. It seeks to prevent unilateral decisions during emergencies, ensuring more legislative oversight.
* **Critics' View:** Critics may argue that the bill centralizes power within the legislature, potentially undermining the independence of the State and County Boards of Elections. It could be seen as a move to politicize election administration further.

**Funding and Administrative Impact:**

* **Funded/Unfunded:** Unfunded. The bill does not provide specific appropriations for its implementation. It relies on existing administrative frameworks and resources to carry out the restructuring and procedural changes.
* **Administrative Impact:** High administrative impact. The bill requires significant changes in the appointment process and operational procedures of election boards. This includes coordination between various state and legislative bodies and adjustments to emergency powers and election management protocols.

**Associated N-grams:**

* High Administrative Impact: State Board of Elections, County Board of Elections, Legislative Appointment, Emergency Powers, Executive Director

Bill 2: Very simple

<https://custom.statenet.com/public/resources.cgi?mode=show_text&id=ID:bill:AR2023000S258&verid=AR2023000S258_20230321_0_E&>

**Bill Text Summary:**

Title: Act 353 (Senate Bill 258) Purpose: An Act to amend the method of voting absentee and to prohibit the use of absentee ballot drop boxes.

**Relevant Topics and Classification:**

1. **Prohibition of Absentee Ballot Drop Boxes**
   * Bigrams/Trigrams: Absentee Ballot, Drop Box, Public Use
   * Context: The bill defines "drop box" and prohibits the establishment or use of drop boxes for collecting absentee ballots. It mandates that all absentee ballots not delivered by mail must be hand-delivered inside the physical office of the county clerk.

**Ideological Spin:**

* **Proponents' View:** The bill aims to enhance election security by ensuring absentee ballots are hand-delivered to county clerks' offices, reducing the risk of tampering or fraudulent collection.
* **Critics' View:** Critics argue that prohibiting drop boxes may reduce voting accessibility and convenience, particularly for those who rely on drop boxes due to mobility or transportation issues.

**Funding and Administrative Impact:**

* **Funded/Unfunded:** Unfunded. The bill does not allocate specific funds for its implementation. It requires county clerks and election officials to manage absentee ballots without additional financial resources.
* **Administrative Impact:** Medium administrative impact. The bill necessitates adjustments in the handling and delivery of absentee ballots, which may require additional oversight and resources from county clerks' offices to ensure compliance.

Bill 3:

http://custom.statenet.com/public/resources.cgi?id=ID:bill:UT2023000S17&cuiq=cebcefa4-252a-5dcb-aeb1-7fc87d570de0&client\_md=f55535817548c6542f4e8104db56f1a1&mode=current\_text

Title: Senate Bill 17 Purpose: An Act amending elections provisions, including residency provisions for voting and running for office, and provisions relating to uniformed and overseas voters.

**Relevant Topics and Classification:**

1. **Residency Determination for Voting**
   * Bigrams/Trigrams: Principal Place of Residence, Voting Precinct, Election Official
   * Context: The bill amends and clarifies the standards and requirements for determining residency for voting purposes, including factors like family location, employment, and property ownership. It also outlines evidence and challenges to residency.
2. **Provisions for Uniformed and Overseas Voters**
   * Bigrams/Trigrams: Uniformed Service Voter, Overseas Voter, Military-overseas Ballot
   * Context: The bill modifies provisions related to uniformed and overseas voters to comply with federal law, clarifying the races and ballot types they may vote in, and ensuring the use of electronic transmission systems for voter registration and ballot requests.

**Ideological Spin:**

* **Proponents' View:** The bill provides clarity and uniformity in determining voter residency, enhancing the accuracy of voter rolls. It also ensures compliance with federal standards for overseas and military voters, facilitating their participation in elections.
* **Critics' View:** Critics may argue that the stringent residency verification process could disenfranchise voters, particularly those with non-traditional living situations or those frequently moving. Additionally, the reliance on electronic systems might pose accessibility issues for some voters.

**Funding and Administrative Impact:**

* **Funded/Unfunded:** Unfunded. The bill does not allocate specific funds for its implementation. Election officials and other relevant bodies must manage these changes within their existing budgets.
* **Administrative Impact:** Medium to high administrative impact. The bill requires election officials to implement and verify new residency standards, manage additional documentation, and ensure compliance with the updated provisions for uniformed and overseas voters.

**Associated N-grams:**

* Medium to High Administrative Impact: Principal Place of Residence, Voting Precinct, Uniformed Service Voter, Military-overseas Ballot, Election Official

Notes: The bill's amendments to residency definitions and voting procedures for overseas voters can be viewed as efforts to clarify and streamline voter eligibility and participation, potentially seen as enhancing the integrity and accessibility of the voting process. Proponents might argue that these changes ensure a more accurate voter registry and compliance with federal laws, thereby improving election security. Critics might suggest that stringent residency requirements could disenfranchise some voters, particularly those who move frequently or have non-traditional living arrangements. According to the VLR summary though, this is actually represents an easing of restriction. This highlights the difficulty in trying to understand if a law is restive/expansive by looking at only the law itself. It would be much easier to also look at the status quo.

Bill 4:

<http://custom.statenet.com/public/resources.cgi?id=ID:bill:LA2021000H167&cuiq=cebcefa4-252a-5dcb-aeb1-7fc87d570de0&client_md=f1010c261f04a68911f9dd3d782b66b2&mode=current_text>

Title: Act No. 364 (House Bill 167) Purpose: An Act to amend voter registration rolls, specifically the removal of deceased persons from these rolls.

**Relevant Topics and Classification:**

1. **Voter Registration Maintenance**
   * Bigrams/Trigrams: Voter Registration Rolls, Deceased Persons, Registrar of Voters
   * Context: The bill mandates the removal of deceased persons from voter registration rolls within 30 days after receipt of a death certificate or report. It outlines the responsibilities of the parish health officer, the Department of Health, and the registrar of voters in maintaining accurate voter rolls.

**Ideological Spin:**

* **Proponents' View:** The bill improves the accuracy and integrity of voter registration rolls by ensuring timely removal of deceased individuals, thereby reducing the potential for voter fraud.
* **Critics' View:** Critics might argue that the bill imposes additional administrative burdens on local officials without providing extra resources or support.

**Funding and Administrative Impact:**

* **Funded/Unfunded:** Unfunded. The bill does not allocate specific funds for its implementation. It requires existing resources and staff to manage the updates to voter rolls.
* **Administrative Impact:** Medium administrative impact. The bill necessitates coordination between multiple state and local entities and timely updates to the voter registration system to ensure compliance.

**Associated N-grams:**

* Medium Administrative Impact: Voter Registration Rolls, Deceased Persons, Registrar of Voters, Department of Health

This very well might relate to Trump’s claim of deceased voters voting for Hillary.

Bill 5:

**Summary of the Bill**

**http://custom.statenet.com/public/resources.cgi?id=ID:bill:NV2021000S84&cuiq=cebcefa4-252a-5dcb-aeb1-7fc87d570de0&client\_md=004aeee2cc05efe6fbbb021f602d1e31&mode=current\_text**

Title: Senate Bill No. 84 - Chapter 159 Purpose: An Act to change the maximum number of active registered voters that may be included within an election precinct.

**Relevant Topics and Classification:**

1. **Election Precinct Size Adjustment**
   * Bigrams/Trigrams: Election Precincts, Registered Voters, County Clerk
   * Context: The bill increases the maximum number of active registered voters allowed in an election precinct from 3,000 to 5,000, facilitating more efficient precinct management and potentially reducing the number of precincts needed.

**Ideological Spin:**

* **Proponents' View:** The bill promotes efficiency and cost-effectiveness in managing election precincts by allowing more voters per precinct, thereby reducing administrative overhead and simplifying the election process.
* **Critics' View:** Critics might argue that increasing the number of voters per precinct could lead to overcrowded polling stations and longer wait times, potentially discouraging voter participation.

**Funding and Administrative Impact:**

* **Funded/Unfunded:** Unfunded. The bill does not allocate specific funds for its implementation. Adjustments to precinct sizes must be managed within existing budgets.
* **Administrative Impact:** Medium administrative impact. The bill requires election officials to adjust precinct boundaries and manage larger voter populations within each precinct, necessitating updates to precinct management procedures.

**Associated N-grams:**

* Medium Administrative Impact: Election Precincts, Registered Voters, County Clerk, Precinct Management

**Bill 6:**

**https://custom.statenet.com/public/resources.cgi?id=ID:bill:IN2022000S134&cuiq=cebcefa4-252a-5dcb-aeb1-7fc87d570de0&client\_md=f9a5a12dd9e46485d7e7b35f49ae8f33&mode=current\_text**

Title: Senate Enrolled Act No. 134

**Relevant Topics and Classification:**

**N-grams and Contextual Explanation:**

1. **Voter Registration Expenses:**
   * Bigrams/Trigrams: Voter Registration, Election Supplies, County Treasury
   * Context: These terms indicate the allocation of funds from the county treasury to cover voter registration and election-related expenses.
2. **Prohibition on Private Funding:**
   * Bigrams/Trigrams: Private Money Donations, State Funds, Federal Government
   * Context: This highlights the prohibition of private donations for election purposes, emphasizing reliance on state or federal funding.
3. **Transparency in Government:**
   * Bigrams/Trigrams: State Agencies, Donated Money, Budget Agency
   * Context: These terms reflect the requirement for state agencies to report any salaries funded by donated money, ensuring transparency.
4. **Administrative Reporting:**
   * Bigrams/Trigrams: Annual Report, State Employees, Public Transparency
   * Context: These n-grams pertain to the mandatory annual reporting of employee salaries funded by donations and the publication of these reports for public access.

**Ideological Spin:**

* **Proponents' View:** The bill enhances election integrity by prohibiting private funding, ensuring that elections are solely state or federally funded, which reduces potential conflicts of interest and increases transparency.
* **Critics' View:** The prohibition on private funding might restrict additional resources that could be used to improve election administration and voter registration processes.

**Funding and Administrative Impact:**

* **Funded/Unfunded:** Unfunded, as the bill restricts private funding sources.
* **Administrative Impact:** High administrative impact due to the extensive reporting requirements for state and local agencies. The bill necessitates annual reports on donated money used for salaries and mandates public accessibility of these reports.

Bill 7:

<http://custom.statenet.com/public/resources.cgi?id=ID:bill:NY2021000S7806&cuiq=cebcefa4-252a-5dcb-aeb1-7fc87d570de0&client_md=0d434fdb4600815e30473955b26fe6fc&mode=current_text>

Summary: This is a very short bill. It just changes the effective date of other laws:

I don’t think the unfunded or funded applied. If I had to say it would be unfunded.

 **Election Administration**

* Topic: Canvassing of Absentee, Military, and Special Ballots
* Bigrams/Trigrams: Absentee Ballots, Military Ballots, Special Ballots, Affidavit Envelopes

 **Effective Dates Adjustment**

* Topic: Changes to Effective Dates
* Bigrams/Trigrams: Effective Date, Election Law, Legislative Bills, January 1, April 1

Bill 8:

Title: Laws of New York, Chapter 746 Purpose: An Act to amend the election law to establish an electronic absentee ballot application transmittal system.

http://custom.statenet.com/public/resources.cgi?id=ID:bill:NY2021000A6970&cuiq=cebcefa4-252a-5dcb-aeb1-7fc87d570de0&client\_md=fec5e23c67f9c9b404777c250d78ef6b&mode=current\_text

1. **Electronic Absentee Ballot System:**
   * Bigrams/Trigrams: Electronic Absentee Ballot, Application Transmittal System, Online Absentee Ballot
   * Context: These terms highlight the establishment of an online system that allows voters to apply for absentee ballots electronically, making the process more accessible and efficient.
2. **Application Process and Requirements:**
   * Bigrams/Trigrams: Absentee Ballot Application, Electronic Signature, Personal Online Voter Registration
   * Context: These terms refer to the procedures for applying for an absentee ballot online, including the use of electronic signatures and personal voter registration details.
3. **Accessibility and Accommodations:**
   * Bigrams/Trigrams: Accessibility Assistance Tools, Persons with Disabilities, Reasonable Accommodations
   * Context: The bill mandates that the online absentee ballot application process must be accessible to individuals with disabilities, providing necessary accommodations and compatibility with standard accessibility tools.
4. **Regulatory Compliance:**
   * Bigrams/Trigrams: State Board of Elections, Promulgate Rules, Absentee Ballot Registration
   * Context: These terms pertain to the responsibilities of the state board of elections to establish rules and regulations for the administration of the electronic absentee ballot application system.

**Ideological Spin:**

* **Proponents' View:** The bill enhances voter accessibility and convenience by providing an electronic means to apply for absentee ballots, thus promoting higher voter participation and modernizing the election process.
* **Critics' View:** Some may argue that implementing an electronic system without additional funding could strain existing resources and that reliance on electronic systems might pose cybersecurity risks.

**Funding and Administrative Impact:**

* **Funded/Unfunded:** Unfunded, as the bill does not allocate specific funds for the development or maintenance of the electronic absentee ballot application transmittal system.
* **Administrative Impact:** High administrative impact due to the need to establish, integrate, and maintain the electronic absentee ballot application system across state and local boards of elections. Additionally, ensuring accessibility and compliance with regulatory requirements will require significant administrative effort.

**Associated N-grams:**

* High Administrative Impact: Electronic Absentee Ballot, Application Transmittal System, State Board of Elections, Accessibility Assistance Tools

Bill 9:

https://custom.statenet.com/public/resources.cgi?id=ID:bill:MD2021000H222&cuiq=cebcefa4-252a-5dcb-aeb1-7fc87d570de0&client\_md=d1c25ca8c05d024a1e3683bb50407108&mode=current\_text

**Bill Text Summary:**

Title: Chapter 734 (House Bill 222) Purpose: An Act concerning voter registration and voting in correctional facilities.

**Relevant Topics and Classification:**

1. **Voter Registration and Voting Access**
   * Bigrams/Trigrams: Voter Registration Application, Correctional Facility, Released Individual
   * Context: The bill mandates that individuals released from correctional facilities receive voter registration applications and information that their voting rights have been restored. Correctional facilities must provide secure drop boxes for election-related materials, and the State Board must establish a program to inform incarcerated voters about their rights and upcoming elections.
2. **Administrative Coordination and Compliance**
   * Bigrams/Trigrams: State Board, Local Boards, Correctional Facility
   * Context: Each correctional facility must designate a point of contact to coordinate with the State Board and local boards to implement the Act's provisions. The State Board must engage nonpartisan community organizations to facilitate voting and provide a toll-free hotline for incarcerated individuals to receive voting information and report violations.
3. **Signage and Public Information**
   * Bigrams/Trigrams: Display Sign, Conspicuous Location, Voting Rights
   * Context: Correctional facilities and parole offices must display signs informing individuals that they have the right to vote upon release. Notices must also be posted on the Department's website.

**Ideological Spin:**

* **Proponents' View:** The bill enhances democratic participation by ensuring that individuals in correctional facilities are informed about their voting rights and have the necessary resources to vote. This is seen as a step towards re-enfranchising marginalized populations and promoting civic engagement.
* **Critics' View:** Some may argue that the bill imposes additional administrative burdens on correctional facilities and the State Board of Elections without providing specific funding, potentially straining resources.

**Funding and Administrative Impact:**

* **Funded/Unfunded:** Unfunded, as the bill does not allocate specific funds for its implementation. It requires correctional facilities and the State Board of Elections to undertake new tasks and establish new systems within existing budgets.
* **Administrative Impact:** High administrative impact due to the requirements for voter registration materials, signage, secure drop boxes, liaison officers, an information program for incarcerated voters, and the establishment of a voter hotline. This will necessitate significant coordination and effort from multiple entities.

**Associated N-grams:**

* High Administrative Impact: Voter Registration Application, Correctional Facility, Secure Drop Box, State Board, Display Sign

Top of Form

Bottom of Form

Bill 10:

https://custom.statenet.com/public/resources.cgi?id=ID:bill:AZ2021000H2181&cuiq=cebcefa4-252a-5dcb-aeb1-7fc87d570de0&client\_md=e1438dad6d34b2ce00df810611ca653e&mode=current\_text

**Bill Analysis:**

**Bill Text Summary:**

Title: House Bill 2181 - Chapter 318 Purpose: An Act amending sections 16-312 and 16-550 of the Arizona Revised Statutes, relating to election procedures.

**Relevant Topics and Classification:**

1. **Candidate Filing Requirements**
   * Bigrams/Trigrams: Write-in Candidate, Nomination Paper, Residency Requirement
   * Context: The bill mandates that write-in candidates must be qualified electors and residents of the county or district they wish to represent for at least 120 days before the election. It also specifies the deadlines for filing nomination papers and the conditions under which a candidate cannot file.
2. **Early Ballot Handling and Signature Verification**
   * Bigrams/Trigrams: Early Ballot, Signature Verification, Cure Period
   * Context: The bill outlines procedures for verifying early ballot signatures, allowing voters to correct inconsistent signatures, and specifies timelines for ballot handling and tallying. It permits the tallying of ballots immediately after processing and before election day.

**Ideological Spin:**

* **Proponents' View:** The bill strengthens election integrity by ensuring that write-in candidates meet specific residency requirements and by improving the accuracy and timeliness of early ballot processing.
* **Critics' View:** Critics may argue that the residency requirement for write-in candidates is restrictive and that the early tallying of ballots could raise security concerns.

**Funding and Administrative Impact:**

* **Funded/Unfunded:** Unfunded, as the bill does not allocate specific funds for its implementation. It relies on existing resources for election procedure adjustments.
* **Administrative Impact:** Medium administrative impact due to the enforcement of new residency requirements for candidates and the procedural changes for early ballot verification and tallying.

**Associated N-grams:**

* Medium Administrative Impact: Write-in Candidate, Early Ballot, Signature Verification, Nomination Paper, Residency Requirement

### Broad Topic Categories and Associated N-grams

#### 1. **Election Administration and Procedures**

* **N-grams:**
  + State Board of Elections
  + County Board of Elections
  + Election Procedures
  + Early Ballot
  + Signature Verification
  + Absentee Ballot
  + Online Absentee Ballot
  + Election Precincts
  + Registered Voters

#### 2. **Voter Registration and Maintenance**

* **N-grams:**
  + Voter Registration Rolls
  + Deceased Persons
  + Registrar of Voters
  + Voter Registration Application
  + Correctional Facility
  + Released Individual
  + Principal Place of Residence
  + Voting Precinct

#### 3. **Residency and Candidacy Requirements**

* **N-grams:**
  + Residency Requirement
  + Write-in Candidate
  + Nomination Paper
  + Qualified Elector

#### 4. **Election Security and Integrity**

* **N-grams:**
  + Absentee Ballot
  + Drop Box
  + Private Money Donations
  + State Funds
  + Federal Government
  + Transparency
  + Reporting Requirements

### Impact Categories and Associated N-grams

#### Low Impact

* **N-grams:**
  + Effective Date
  + Election Law
  + Legislative Bills
  + January 1
  + April 1

#### Medium Impact

* **N-grams:**
  + Voter Registration Rolls
  + Deceased Persons
  + Registrar of Voters
  + Early Ballot
  + Signature Verification
  + Nomination Paper
  + Residency Requirement
  + Election Precincts
  + Registered Voters
  + County Clerk
  + Precinct Management

#### High Impact

* **N-grams:**
  + State Board of Elections
  + County Board of Elections
  + Legislative Appointment
  + Emergency Powers
  + Executive Director
  + Election Procedures
  + Online Absentee Ballot
  + Application Transmittal System
  + State Board of Elections
  + Accessibility Assistance Tools
  + Secure Drop Box
  + Voter Registration Application
  + State Board

Notes:

Sometimes it is difficult to know in what direction a law change. It would certainly add a lot to the automation process, but looking at the repealed law. The summary plus the coding by the voting rights would seem to reliably provide a lot of this information.