“Freedom”

a case study for diachronic semantic shift and encoding values in law
Diachronic Semantic Shift

- Words change in meaning (cultural, technological, linguistic shifts)
- Examples:
  - Gay: carefree $\rightarrow$ homosexual
  - Nice: ignorant/foolish $\rightarrow$ pleasant
  - Boy or Girl: apprentice or child $\rightarrow$ male child or female child
  - Slurs: descriptors $\rightarrow$ derogatory $\rightarrow$ reclamation(?)
  - Cell: chamber $\rightarrow$ microorganism $\rightarrow$ phone
- Some words that don’t tend to change:
  - Function words (the, an, a, two, first)
  - Referential words: family (mother, father, sister, son), time (June, tomorrow, morning), established nominals (apple, dog)
Diachronic Semantic Shift: An expectation problem

- High stakes
- Power imbalance
- Broad application

Legal texts!

Also biblical texts, values, mission statements...
Crowdsourcing: how would you define “freedom?”
Two Freedoms

NEGATIVE FREEDOM

- Unshackled
- Unincarcerated
- Cruel & unusual punishment

The absence of obstacles or others' interference. This involves acting without coercion or oppression.

POSITIVE FREEDOM

- Ability
- Opportunity
- Bearing arms

The ability to achieve your goals and fulfill your potential. This involves having access to the resources and opportunities that you need in order to develop and grow.
Free Speech (a case study)

- Positive freedom
  - You can say anything you want!

- Negative freedom
  - Government can’t jail, penalize, prohibit you from saying what you want

- Both? Neither?
Other Meanings

- Hammurabi’s Code (c. 1780 BCE)
  - Individual autonomy, protection from arbitrary authority
- Declaration of Independence (1776 CE)
  - Self governance, justice, equity
- Civil Rights Movement (1960s CE)
  - Equity, protection from arbitrary authority
- Jan. 6 Insurrection (2020 CE)
  - (Charitably) individual autonomy, speech, extreme self governance (protection from any authority)
- Next
  - ?
<table>
<thead>
<tr>
<th>SEARCH</th>
<th>FREQUENCY</th>
<th>CONTEXT</th>
<th>OVERVIEW</th>
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‘Freedom’ followers

- punctuation, ‘and’: a new clause
- ‘is’: copular predicate (definition, value statement...)
- ‘to’: infinitival
Hypothesis

- Content (established)
- Sentiment (novel, intuitive?)
- Date of production (novel, attested?)
- Argument type (novel)
Content

- Definitions

The absence of obstacles or others' interference. This involves acting without coercion or oppression.

- Framing

The ability to achieve your goals and fulfill your potential. This involves having access to the resources and opportunities that you need in order to develop and grow.
Sentiment

- Inherent in ‘positive’/‘negative’?
- Reversed?
Sentiment Experiment

Sentiment analysis

- Valence
- Arousal
- Dominance?
History

- Revolutions → negative freedoms
  - Founding era, civil rights era
- Traditionalism → positive freedoms
  - Red scare, reconstruction, cold war
Figure 3: Comparisons among the cosine similarity embeddings of ‘freedom’ in the context of ‘freedom of’ (green), and uncontextualized ‘freedom’ (blue) between each corpus (News on the Web, Corpus of Founding Era American English legal and non-legal, and Corpus of Supreme Court Opinions of the United States since 1973).

<table>
<thead>
<tr>
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<th>NOW</th>
<th>COFEA (non-legal)</th>
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Figure 4: Comparisons among the cosine similarity embeddings of ‘freedom’ in the context of ‘freedom to’ (yellow), and ‘freedom from’ (red) between each corpus (News on the Web, Corpus of Founding Era American English legal and non-legal, and Corpus of Supreme Court Opinions of the United States since 1973).

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Grammatical Argument

- ‘From’ vs. ‘to’

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- Freedom to pursue opportunities

- Freedom from bad actors, prison...
Grammatical Argument Experiment

Please type the 2-4 words that most naturally follow the quotation below.

Once I'm airborne, the kite responds like a parachute, slowing my descent. I glide for a few seconds before landing on a feathery cushion of waist-deep joy. But most liberating is the sheer freedom...

Now, considering the sentence with your addition, is this an example of:

- Opportunity Freedom
- Obstacle Freedom
- Neither
- Both

Done

Continue
Predictions from findings

- **Content:**
  - obstacle reference → negative freedom
  - opportunity reference → positive freedom

- **Date of production:**
  - revolutionary eras → negative freedom
  - traditionalist eras → positive freedom

- **Sentiment (novel, attested?)**
  - lower valence (higher arousal) → negative freedom
  - higher valence (lower arousal) → positive freedom

- **Argument type (novel)**
  - ‘from’ → negative freedom
  - ‘to’ → positive freedom
Legal Takeaways

- More stable legal meanings
- Interpretability could suffer
- Threats
  - Curbing
  - Broadening
  - Redefining (shifting)
    - Importance of stare decisis...
Questions?
Sources


