War of Words II
Enriched Models of Law-Making Processes

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Peer Production Systems
Law-Making is Peer-Production

European Law Making
European Parliament (EP)

Research Questions
Can we predict amendment acceptance?
What factors are correlated with amendment acceptance? Can we quantify their influence?

Skills of law-makers and controversy of laws?
Text inserted or deleted?
Nationality or political group of the authors?
...etc.

Data
Scraped from EP website
Extensive & rich dataset
Both metadata and amendment text
2 legislatures
10 years
~200,000 amendments

Conflicting Edits Model
At most 1 edit accepted per conflict

Prediction Results
WoW(XLT) Model of Edit Acceptance

\[ p(\alpha \text{ accepted}) = \frac{\exp(s_{\alpha}^{T} W_{E} + x_{\alpha}^{T} y_{i} + r_{\alpha}^{T} w_{T})}{\sum_{c} \exp(s_{c}^{T} W_{E} + x_{c}^{T} y_{i} + r_{c}^{T} w_{T}) + \exp(d_{I}^{T} W_{D} + r_{I}^{T} w_{T} + b)} \]

X – eXplicit features, L – Latent features, T – Text features

Interpretation of Feature Weights

eXplicit Features
Higher Chance of Acceptance for

Female MEPs
Latvian MEPs
Rapporteur’s Edits
Short insertions
Edits with Justification

Text Features
Acceptance
Title: “customs”, “fisheries”, “general budget”
“any other” → Ø
“human rights” → Ø
“should” → Ø
“inserted” → Ø
“positive”

Rejection
Title: “market”, “framework”, “greenhouse gas”
“firearms”, “terrorist”, “fingerprint”
“must” → Ø
“deleted” → Ø
“negative”

Latent Features

Environment and Communications
Defense and Protection
Business and Innovation
Investment and Development

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