The MetaNet metaphor repository

Formalized representation and analysis of conceptual metaphor networks

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Presentation outline

- Why construct a metaphor repository?
- What does a metaphor repository need to model?
- The benefits of formalized metaphor analysis



What we had before MetaNet: Prose descriptions and lists of metaphors

Example: Corruption erodes public trust in government

Analysis: CORRUPTION IS EROSION

Corruption in Government is an Eroding Process Public Trust is a Physical Entity Loss of Public Trust is Loss of Physical Integrity



What we had before MetaNet: Prose descriptions and lists of metaphors

Example: The government is infected throughout with corruption.

Analysis:

CORRUPTION IS A DISEASE

Corruption <-- Infection
Government <-- Infected Entity
Impaired Government Functionality <-- Impaired Health



What we had before MetaNet: Prose descriptions and lists of metaphors

Example: The city is infected with crime.

Analysis:

CRIME IS A DISEASE

Criminal Activity

City

Loss of Functional

Society

Infection

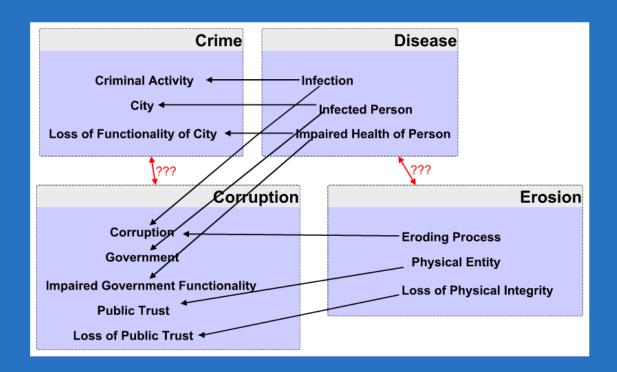
Impaired Person

Impaired Health



What we had before MetaNet: Prose descriptions and lists of metaphors

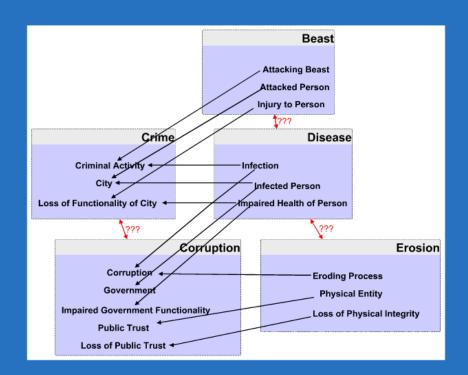
How do we connect these analyses together?





What we had before MetaNet: Prose descriptions and lists of metaphors

New example: Crime is a beast ravaging the city.





Potential benefits

- Searchable interconnected database in Wiki format
- Allows for local analysis and broader cross-metaphor analysis
- Brings metaphor analysis up-to-date with neural theory of language and cascade theory
- Integrated conceptual network posited by cascade theory, not just list of isolated metaphors
- Formal representation of metaphors at different levels of specificity and complexity



What needs to be formalized?

- Develop formalized representations of schemas and metaphors
- Internal structure within schemas/metaphors
- Relations between schemas/metaphors



Schema structure beyond FrameNet

- Use of FrameNet where possible
- Additional information beyond FrameNet
 - x-schemas
 - Cogs
 - Image schemas
- Schema relations
- Multiple inheritance and levels of specificity
- Inferential structure within schemas



Internal structure of schemas

Schema1 schema

R1: schema_role_1

R2: schema_role_2

R3: schema_role_3

R4: x-schema

LUs: lexeme1, lexeme2, lexeme3...



Internal structure of schemas

Erosion schema

R1: eroding_process

R2: eroded_entity

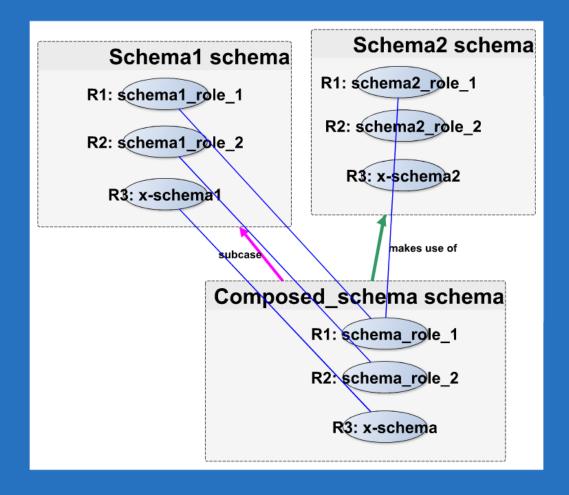
R3: eroding_effect

R4: x-schema: progressive, slow, ongoing

LUs: erode, erosion

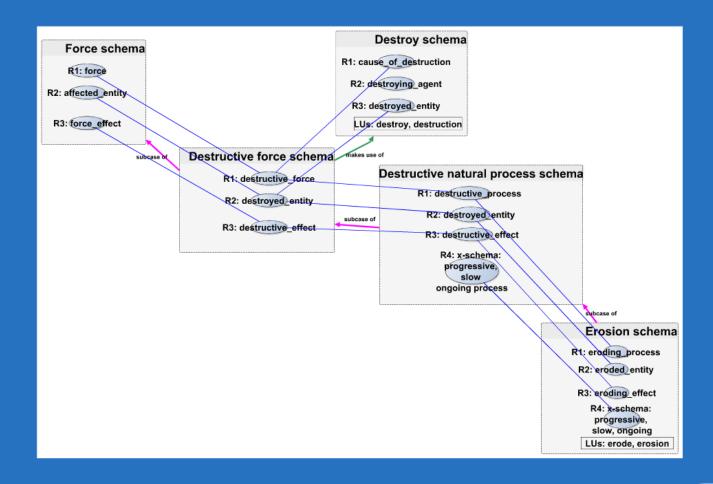


Structure between schemas





Structure between schemas





Internal structure of metaphors

TARGET1 IS SOURCE1

Target1 schema

R1: target1_role1

R2: target1_role2

R3: target1_role3

R4: target1_x-schema

Source1 schema

R1: source1_role1

R2: source1_role2

R3: source1_role3

R4: target1_x-schema



Internal structure of metaphors

CORRUPTION IS EROSION

Corruption schema

R1: corrupt_activities

R2: corruption affectee

R3: corrupting effect

R4: corrupting x-schema

R5: harmed_entity

R6: corrupting_actor

Erosion schema

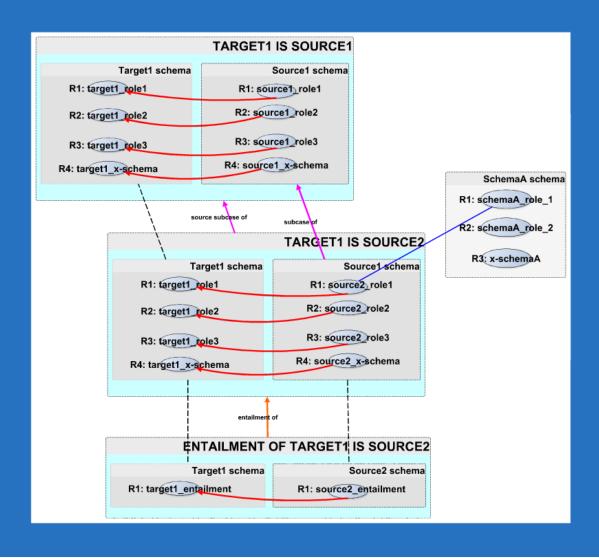
R1: eroding_process

R2: eroded_entity

R3: eroding_effect

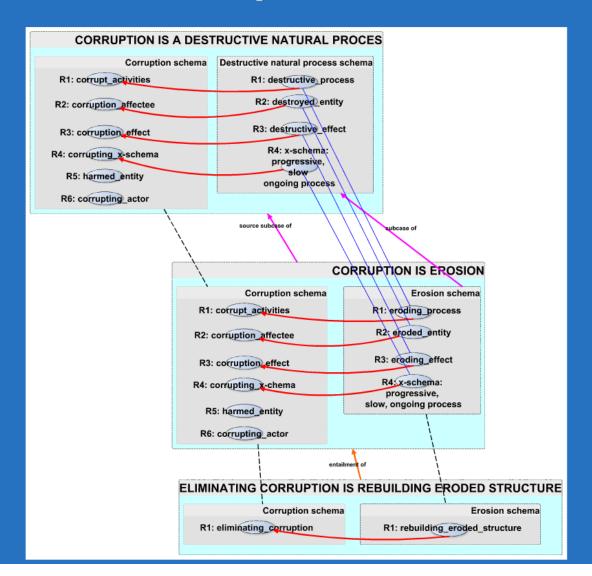
R4: x-schema:progressive,

Structure across metaphors





Structure across metaphors



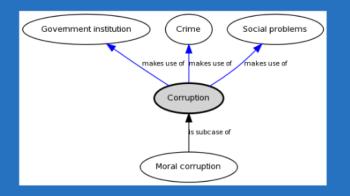


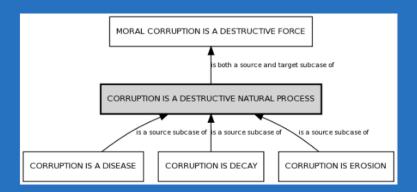
Easy to use wiki

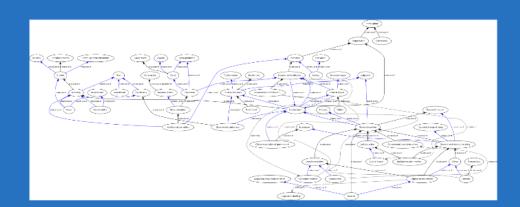
The MetaNet Wiki: A collaborative online resource for metaphor and image schema analysis Wednesday 6-26-13 at 8:55am



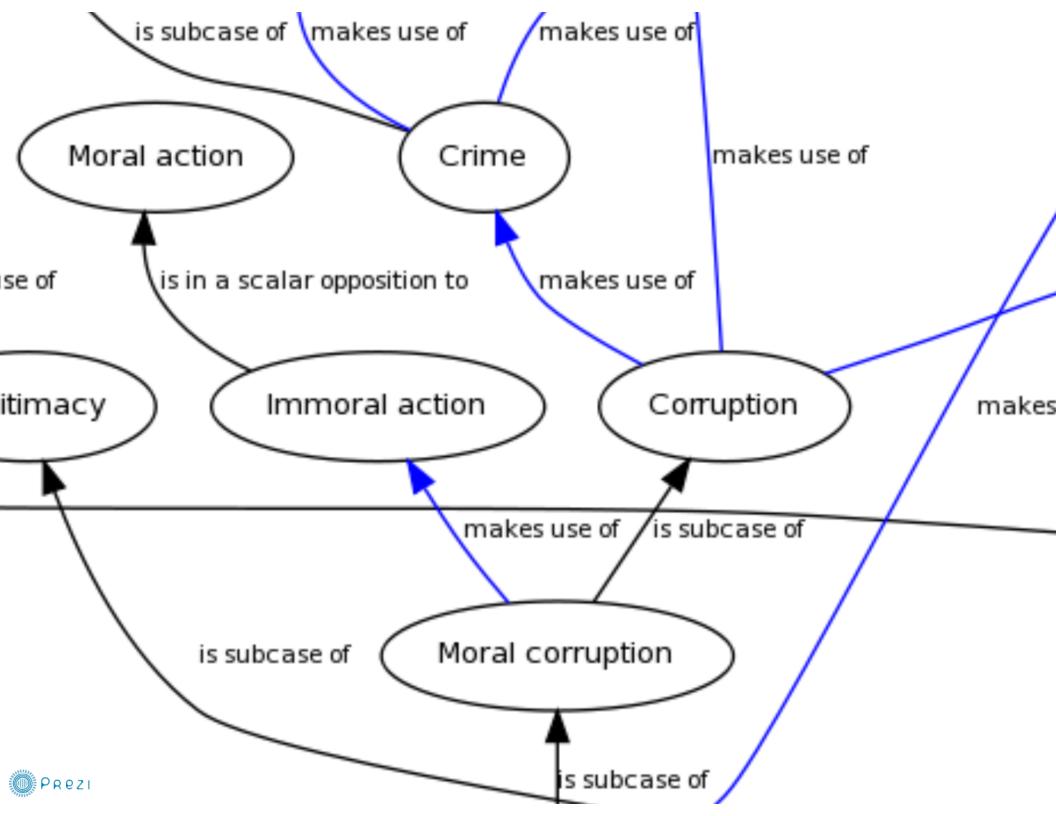
- Easy to use wiki (The MetaNet Wiki: Wednesday at 8:55am)
- Visualizations

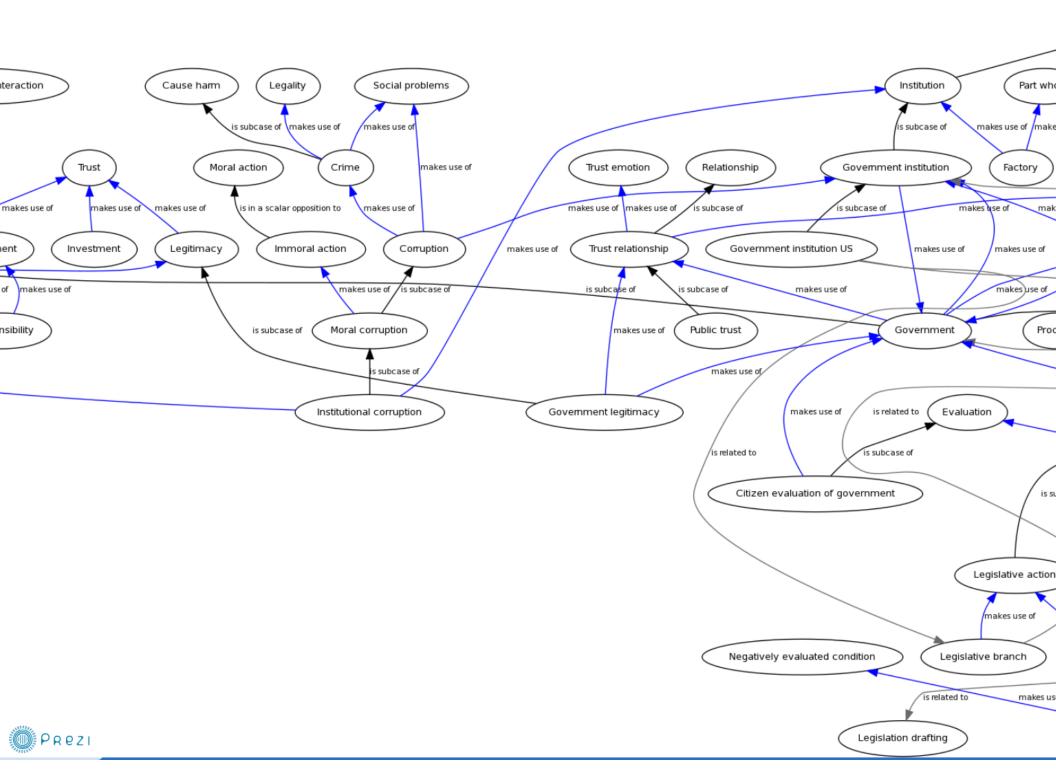


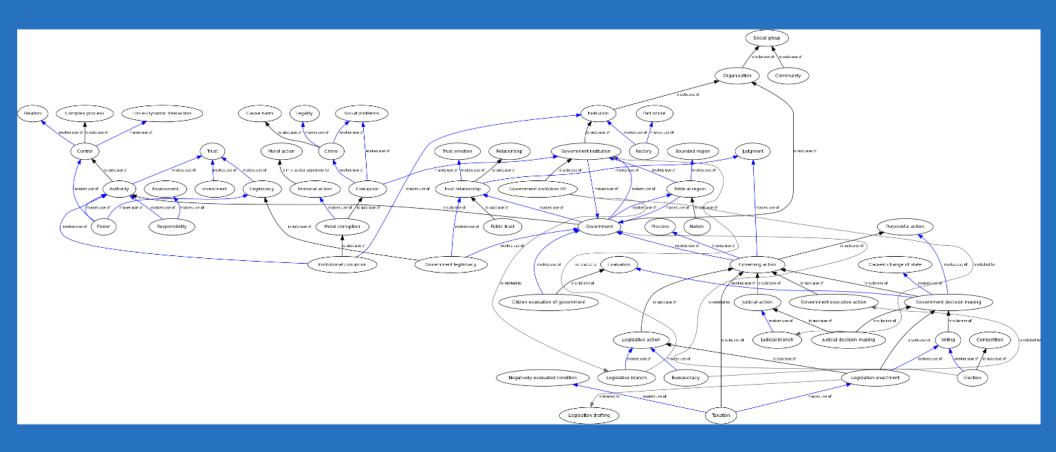














- Easy to use wiki (The MetaNet Wiki: Wednesday at 8:55am)
- Visualizations
- Predictive power

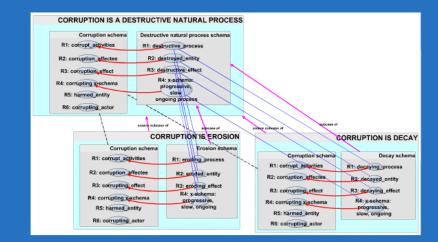
Decay schema

R1: decaying process

R2: decayed_entity

R3: decaying_effect

R4: x-schema: progressive, slow, ongoing



`NYC voters say Big Apple is rotted by government corruption'



- Easy to use wiki (The MetaNet Wiki: Wednesday at 8:55am)
- Visualizations
- Predictive power
- Automation and computational applications
 - Generation of predicted metaphors
 - Metaphor extraction
 - Next talk in this theme panel
- https://metanet.icsi.berkeley.edu



References

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