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
Why construct a metaphor repository?

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
Why construct a metaphor repository?

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
Why construct a metaphor repository?

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 ← Infection
City ← Infected Person
Loss of Functional ← Impaired Health
Society
Why construct a metaphor repository?

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

How do we connect these analyses together?
Why construct a metaphor repository?

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

New example: Crime is a beast ravaging the city.
Why construct a metaphor repository?

**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 does a metaphor repository need to model?

What needs to be formalized?

- Develop formalized representations of schemas and metaphors
- Internal structure within schemas/metaphors
- Relations between schemas/metaphors
What does a metaphor repository need to model?

**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
What does a metaphor repository need to model?

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...
What does a metaphor repository need to model?

Internal structure of schemas

Erosion schema

R1: eroding_process
R2: eroded_entity
R3: eroding_effect
R4: x-schema: progressive, slow, ongoing

LUs: erode, erosion
What does a metaphor repository need to model?

**Structure between schemas**
What does a metaphor repository need to model?

Structure between schemas
What does a metaphor repository need to model?

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
What does a metaphor repository need to model?

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, slow, ongoing
What does a metaphor repository need to model?

Structure across metaphors
What does a metaphor repository need to model?

Structure across metaphors
The benefits of formalized metaphor analysis

- Easy to use wiki

The MetaNet Wiki: A collaborative online resource for metaphor and image schema analysis

Wednesday 6-26-13 at 8:55am
The benefits of formalized metaphor analysis

- Easy to use wiki (The MetaNet Wiki: Wednesday at 8:55am)
- Visualizations
The benefits of formalized metaphor analysis

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

`NYC voters say Big Apple is rotted by government corruption`
The benefits of formalized metaphor analysis

- 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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