NAACL HLT 2015

The Third Workshop on Metaphor in NLP

Proceedings of the Workshop

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Introduction

Characteristic to all areas of human activity (from poetic to ordinary to scientific) and, thus, to all types of discourse, metaphor becomes an important problem for natural language processing. Its ubiquity in language has been established in a number of corpus studies and the role it plays in human reasoning has been confirmed in psychological experiments. This makes metaphor an important research area for computational and cognitive linguistics, and its automatic identification and interpretation indispensable for any semantics-oriented NLP application.

This year's workshop is the third Metaphor in NLP workshop, following the first workshop held at NAACL 2013 and the second workshop held at ACL 2014. In 2013, accepted papers dealt with metaphor annotation, features for metaphor identification, and with generalization of the techniques across languages. These themes were also represented in the 2014 workshop, along with interpretation, applications, and relationships with related phenomena. In 2015, prominent themes include creation and utilization of semantic resources for metaphor identification and interpretation; features for metaphor identification that capture properties of concepts such as concreteness, imageability, affect, and sensorial modalities; relationships between social dynamic and individual history and metaphor use; and metaphor generation. We received 13 submissions and accepted 10, based on detailed and careful reviews by members of the Program Committee.

Creation and utilization of semantic resources to support metaphor identification is a recurrent theme in the 2015 workshop. An invited talk by Prof. Martha Palmer and Dr. Susan Brown about metaphor in VerbNet was followed by a number of contributions describing the creation of resources in support of metaphor identification and analysis. Li, Bai ,Yin, and Xu describe the construction of a resource where salient properties of concepts expressed by thousands of Chinese verbs and nouns are collected. Dodge, Hong, and Stickles describe MetaNet, a system combining a repository of metaphors and frames, and a metaphor detection component that utilizes the repository. Gordon, Jobbs, May, and Morbini describe an enhancement to their knowledge-based metaphor identification system that infers lexical axioms – rules which encode information about what words or phrases trigger particular source and target concepts.

Gordon, Hobbs, May, Mohler, Morbini, Rink, Tomlinson, and Wertheim describe their ontology of commonly used source domains and release a corpus of manually validated annotations of linguistic metaphors about governance, economy, and gun control with source and target domains, as well as specific roles (slots) that support the interpretation of the metaphor. For example, according to the ontology, a metaphor drawing on the source domain of JOURNEY can be annotated with elements such as source, target, agent, goal, facilitator, barrier, change, and type of change (increase or decrease). The goal of the dataset is to support the analysis of ways in which a person or a group conceives of a target concept.

A similar goal is a starting point of the contribution by Shaikh, Strzalkowski, Taylor, Lien, Liu, Broadwell, Feldman, Yarrom, Cho, and Peshkova. The authors exemplify the use of their system for detection of linguistic metaphors and their source-target interpretation to analyze the metaphorical content of a specific debate (gun control in the U.S.). Having identified documents on both sides of the debate and the main points of disagreement, they show that the two sides use different metaphors to argue their cause. In conjunction with measures of influence and centrality, the authors show that the

kinds of metaphors used and their variety can help to determine the dominant side in the debate. Moving from social to personal, Jang, Wen, and Rose shed light on the relationship between the personal history of a participant in an online discussion forum and their use of metaphor.

Beigman Klebanov, Leong, and Flor describe supervised learning experiments aimed at identifying all content-word linguistic metaphors in a corpus of argumentative essays and in the VU Amsterdam corpus, addressing specifically the impact of features related to concreteness. Concreteness, imageability and affective meanings are also modeled in the contribution by Gargett and Barnden. Tekiroglu, Ozbal, and Strapparava evaluate sensorial features for predicting metaphoricity of adjective-noun constructions, deriving their features from Senticon – a lexicon of words annotated for their association with different sensorial modalities, such as taste or smell.

The contribution by T. Veale presents an automated system for generating metaphors; the evaluation shows that people found about half the metaphors to be highly novel, and about 15% – worthy of sharing with other people.

We wish to thank everyone who showed interest and submitted a paper, all of the authors for their contributions, the members of the Program Committee for their thoughtful reviews, the invited speaker and panelists for sharing their perspectives on the topic, and all the attendees of the workshop. All of these factors contribute to a truly enriching event!

Workshop co-chairs:
Ekaterina Shutova, University of Cambridge, UK
Beata Beigman Klebanov, Educational Testing Service, USA
Patricia Lichtenstein, University of California, Merced, USA

Organizers:

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Yulia Tsvetkov, Carnegie Mellon University, USA
Peter Turney, National Research Council Canada, Canada
Tony Veale, University College Dublin, Ireland
Aline Villavicencio, Federal University of Rio Grande do Sul, Brazil
Andreas Vlachos, University College London, UK

Invited Speakers:

Martha Palmer, University of Colorado, Boulder, USA
Susan Windisch Brown, University of Colorado, Boulder, USA
James Martin, University of Colorado, Boulder, USA

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Conference Program

Friday, June 5, 2015

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+   *Opening remarks*

9:05–10:05

+   *Invited talk: Martha Palmer, Susan Brown and Jim Martin "Metaphor in lexical resources"*

10:05–10:30

Effects of Situational Factors on Metaphor Detection in an Online Discussion Forum
Hyeju Jang, Miaomiao Wen and Carolyn Rose

10:30–11:00

+   *Coffee break*

11:00–11:25

Supervised Word-Level Metaphor Detection: Experiments with Concreteness and Reweighting of Examples
Beata Beigman Klebanov, Chee Wee Leong and Michael Flor

Friday, June 5, 2015 (continued)

11:25–11:50

Modeling the interaction between sensory and affective meanings for detecting metaphor
Andrew Gargett and John Barnden

11:50–12:15

Exploring Sensorial Features for Metaphor Identification
Serra Sinem Tekiroglu, Gözde Özbal and Carlo Strapparava

12:15–12:40

MetaNet: Deep semantic automatic metaphor analysis
Ellen Dodge, Jisup Hong and Elise Stickles

12:40–14:15

+ *Lunch*

14:15–14:40

High-Precision Abductive Mapping of Multilingual Metaphors
Jonathan Gordon, Jerry Hobbs, Jonathan May and Fabrizio Morbini

Friday, June 5, 2015 (continued)

14:40–15:05

A Corpus of Rich Metaphor Annotation
Jonathan Gordon, Jerry Hobbs, Jonathan May, Michael Mohler, Fabrizio Morbini,
Bryan Rink, Marc Tomlinson and Suzanne Wertheim

15:05–15:30

Understanding Cultural Conflicts using Metaphors and Sociolinguistic Measures of Influence
Samira Shaikh, Tomek Strzalkowski, Sarah Taylor, John Lien, Ting Liu, George
Aaron Broadwell, Laurie Feldman, Boris Yamrom, Kit Cho and Yuliya Peshkova

15:30–16:00

+   *Coffee break*

16:00–16:25

Chinese CogBank: Where to See the Cognitive Features of Chinese Words
Bin Li, Xiaopeng Bai, Siqi Yin and Jie Xu

16:25–16:50

Fighting Words and Antagonistic Worlds
Tony Veale