



Thesis Proposal

GHC 4405 | Thursday, October 4, 2018 | 10:30 am



Diving Deep Into Event Semantics

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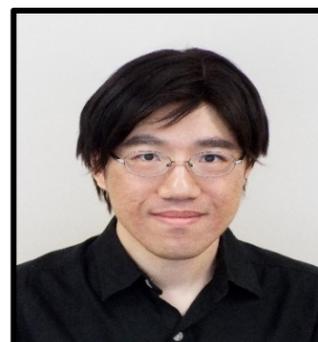
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Abstract

Among various discourse elements (DEs) in natural language discourse, events are important due to their rich structure. They are often connected with other DEs, including participants, time, and location. Multiple events can form larger structures such as coreference clusters and scripts. Prior work exploiting event structures normally treats DEs such as entities and events as holistic units: the entire denotation of a DE is assumed for producing the interpretation. However, in real-world usage, people often intend to emphasize different parts of the denotation at various times and ignore others. Even if two DEs are technically coreferent, only partial intended information may be identical. For example, “The White House’s announcement” and “The president’s announcement” could refer to the same event, but the two entities “The White House” and “The president” have different sets of denotation. Yet the fact that they share the “authority” aspect, allows us to establish proper event and entity coreference links. Ignoring this decomposition of DEs risks inaccurate inference and unintended interpretations. To address the problem, we propose a linguistic framework featuring a facet-based representation. Facets are smaller semantic units that constitute the DEs. Our proposed solution emphasizes the active facets — the ones that are relevant to the communication purpose. Based on the framework, we propose hypotheses from both static and dynamic perspectives. The static hypothesis claims that active facets of DEs can be inferred from the context and that coreference linking should be done on these active facets (e.g. the “authority” facet between “the president” and “the White House”). The dynamic hypothesis considers state changes. We treat events as functions of the active facets of the entities and hypothesize only part of the facets are required for analyzing state changes (e.g. state modeling for “burning a paper” should focus on the “flammable” related facets).

https://hunterhector.github.io/files/thesis/proposal_draft.pdf