Discovering classes of attitude verbs using subcategorization frame distributions

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Abstract
We address two questions: (1) how informative is an attitude verb’s syntactic distribution about its semantics?; and (2) given a semantic classification, what features are most associated with each class?

Experiments
Idealized syntactic distributions

Acceptability judgment task
*Aim*: measure of compatibility between verb and syntactic feature
• 30 verbs
• 34 syntactic frames
• For each possible pair of verb and frame, 3 different sentences

Semantic similarity

Triad task
*Aim*: measure of semantic similarity between verbs
• Find every 3-combination of verbs
• “Choose the verb least like the others in meaning”
• Increment dissimilarity (distance) between chosen verb others

Analysis
Hierarchical clustering on:
• Acceptability judgments
• Semantic similarities
MaxEnt Classifier fit:
Semantic clusters against acceptability judgments

Feature Weights

Selected References

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Significant Spearman Rank Correlation
Mantel Test: .28 (p=.01)