Introduction
We carry out an experimental comparison of:
- three syntactic dependency schemes;
- three data-driven dependency parsers;
- the influence of two different approaches to lexical category disambiguation.

Research Questions
- interactions between three aspects of parsing: dependency formats, parsers and approaches to PoS tagging;
- which configurations are easier to learn for a dependency parser.

Parsers
Malt: transition-based dependency parser with local learning and greedy search.
MST: graph-based dependency parser with global near-exhaustive search.

Structural differences

<table>
<thead>
<tr>
<th>SB</th>
<th>CD</th>
<th>DT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordination</td>
<td>![Diagram]</td>
<td>![Diagram]</td>
</tr>
<tr>
<td>Verb groups</td>
<td>![Diagram]</td>
<td>![Diagram]</td>
</tr>
<tr>
<td>Infinitive</td>
<td>![Diagram]</td>
<td>![Diagram]</td>
</tr>
</tbody>
</table>

Error analysis
Verbs
Highest error rates are over the following PoS:
- VBP: verb, non-3rd person singular present
- VBZ: verb, 3rd person singular present
- VBG: verb, gerund or present participle

These errors are related to:
- root errors
- complex sentences with several verbs
- presence of coordination

Coordination
It is harder to parse coordination headed by coord. conjunction (Schwartz et al., 2012).

Error rate over PoS tag CC
<table>
<thead>
<tr>
<th>SB</th>
<th>CD</th>
<th>DT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>2%</td>
<td>20%</td>
</tr>
</tbody>
</table>

SB and CD lack expressiveness:
- a) The fight is putting a tight squeeze on profits of many, threatening to drive the smallest ones out of business and straining relations between the national fast-food chains and their franchisees.
- b) Proceeds from the sale will be used for remodelling and refurbishing projects, as well as for the planned MGM Grand hotel/casino and theme park.

Parses
The Bohnet and Nivre (2012) parser performs better than Malt and MST.

Dependency formats:
- DT is more difficult for parsers than SB and CD;
- expressivity gained from the grammar theory (e.g., for coordination) is harder to learn;
- no sound evidence of correlation between structural similarity of CD and DT and their parsers' accuracies.

Tagsets:
- PTB tags are good for SB and CD, whereas supertags fit DT better;
- PTB tags and supertags are complementary;
- all three parsers benefit from being supplied with both types of tags.

Future work
- Experiments with predicted supertags
- Extrinsic comparison of SB, CD and DT (e.g., negation resolution, semantic role labeling)

Conclusion
Future work
- Experiments with predicted supertags
- Extrinsic comparison of SB, CD and DT (e.g., negation resolution, semantic role labeling)