Linguistics 101
Theoretical Syntax
Theoretical Syntax

• When constructing sentences, our brains do a lot of work ‘behind the scenes’.

• Syntactic theories attempt to discover these hidden processes.

• While languages differ a lot on the surface, they are very similar in what goes on ‘behind the scenes’.

• The following slides will introduce the type of work done in theoretical syntax.
Theoretical Syntax

• Recall: English has:
  • VP (verb phrase) with a V head.
  • PP (prepositional phrase) with a P head.
  • NP (noun phrase) with a N head.
  • CP (complementizer phrase) with a C head.

• I will show that English also has TP (tense phrase) with a T head.

• I will also show that morphemes can ‘move’ from one position to another.
Tense

- Tense is sometimes shown on the main verb.
  - I walk, he walks (present)
  - I walked (past)
Tense

- Tense is sometimes shown as a separate word.
  - I will walk (future)
  - I don’t walk (present with negation)
  - I didn’t walk (past with negation)
  - I do walk (present with emphasis)
  - I did walk (past with emphasis)
  - I am walking (present progressive)
  - I was walking (past progressive)
  - Did you walk (past question)
  - Do you walk (present question)
Tense

• In many languages, ‘tense’ is always in the same position.

• Could English ‘tense’ also always be in the same position?
Tense Phrase

‘He walked.’
Tense Phrase

- The verb gets tense by ‘moving’.
Tense Phrase

`He will walk.'

- ‘will’ indicates a tense, so it can start in T.

```
S
   /\       
  /   \     
 NP   TP    
     /\     
    /   \    
   He    T   VP
          /\     
         /   \    
        will V   
           /    
          walk 
```
Evidence

• Is there any evidence supporting a ‘tense’ phrase and movement of the verb into ‘tense’?
  • negation
  • yes/no questions

• We will also see further evidence that things ‘move’.
  • ‘have’
  • subject-verb agreement
  • wh-questions
Negation

• Tense must precede negation (in English)
  
  I will not go  (future)
  *I not will go
  cf. I will go

  I did not go  (past)
  *I not did go
  *I not went
  cf. I went

  He does not go  (present)
  *He not goes
  cf. He goes
Negation

- Negation appears between the ‘tense’ and the main verb.

```
S
  NP  TP
    He  T
         NegP
            Neg
               not
               VP
                 V
                  walk
```
Negation

- Why doesn’t the verb just move to get tense?

- Negation blocks this movement.
Negation

- How do we get tense when there is negation?

Affirmative sentence

NP
| He

TP
| [past]
| walk

T
| V

VP

Solution: insert dummy verb ‘do’ to show tense

Negative sentence (movement blocked)

NP
| He

TP
| [past]
| Neg
| not
| V

VP
| walk

T
| Neg
| not
| V

VP
| walk
Negation

• Present progressive (be + Ving)
  ‘He is walking’ / ‘He was walking’
Yes/no questions

- Yes/No Questions

- What are the yes/no question form for each?

‘He walked’ before movement
Yes/no questions

1. He is walking  → Is he walking?
2. He was walking → Was he walking?
3. He will walk  → Will he walk?
4. He walked    → Did he walk?
5. He walks     → Does he walk?
Yes/no questions

Is/Was he walking?

Did he walk?
Yes/no questions

Does he walk?

Will he walk?
’have’

• There are actually more than one verb ‘have’
  • Main verb generally meaning ‘to possess’
    ‘I have a book.’

  • Helping/auxiliary verb (for tense/aspect purposes)
    ‘I have gone to France.’

• The main verb ‘have’ and the auxiliary ‘have’ behave differently.
‘have’

• Main verb: does not precede negation
  I have a book.
  *I have not a book.
  I do not have a book

• Helping verb: precedes negation
  I have gone to France
  I have not gone to France
  *I do not have gone to France
‘have’

• Main verb: no subject-aux inversion
  I have a book.
  *Have you a book?
  Do you have a book?

• Helping verb: undergoes subject-aux inversion
  I have gone to France.
  Have you gone to France?
  *Do you have gone to France?
What is T?

- ‘be’, ‘have’ and the dummy ‘do’ appear in T. What else?

- What evidence do you have?
Agreement

- English has agreement between the verb and the subject:
  - 3rd person singular -s (present tense)

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st person</td>
<td>I walk</td>
<td>we walk</td>
</tr>
<tr>
<td>2nd person</td>
<td>you walk</td>
<td>you walk</td>
</tr>
<tr>
<td>3rd person</td>
<td>he walks</td>
<td>they walk</td>
</tr>
<tr>
<td></td>
<td>she walks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>it walks</td>
<td></td>
</tr>
</tbody>
</table>
Agreement

• ‘have’ also shows this agreement with a subject.

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1(^{st}) person</td>
<td>I have</td>
<td>we have</td>
</tr>
<tr>
<td>2(^{nd}) person</td>
<td>you have</td>
<td>you have</td>
</tr>
<tr>
<td>3(^{rd}) person</td>
<td>he has, she has</td>
<td>they have</td>
</tr>
<tr>
<td></td>
<td>it has</td>
<td></td>
</tr>
</tbody>
</table>
Agreement

- Tense and agreement appear in the same position.

<table>
<thead>
<tr>
<th></th>
<th>You...</th>
<th>He...</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>walk</strong></td>
<td>You walk.</td>
<td>He walks.</td>
</tr>
<tr>
<td></td>
<td>You do not walk.</td>
<td>He does not walk.</td>
</tr>
<tr>
<td></td>
<td>Do you walk?</td>
<td>Does he walk?</td>
</tr>
<tr>
<td><strong>have</strong></td>
<td>You have a book.</td>
<td>He has a book.</td>
</tr>
<tr>
<td><strong>poss</strong></td>
<td>You do not have a book.</td>
<td>He does not have a book.</td>
</tr>
<tr>
<td></td>
<td>Do you have a book?</td>
<td>Does he have a book?</td>
</tr>
<tr>
<td><strong>have</strong></td>
<td>You have gone.</td>
<td>He has gone.</td>
</tr>
<tr>
<td><strong>aux</strong></td>
<td>You have not gone.</td>
<td>He has not gone.</td>
</tr>
<tr>
<td></td>
<td>Have you gone?</td>
<td>Has he gone?</td>
</tr>
</tbody>
</table>
**Wh-questions**

- In *wh*-questions, *wh*-words move to the front of a clause.
  - *wh*-words include: who, what, when, where, why, how...

He bought a book.
He bought what? → What did he buy?
He went to the store.
He went where? → Where did he go?
He went by bike.
He went how? → How did he go?
**Wh-questions**

- Below is a theory of what happens in *wh*-questions.
Wh-questions

• Concerning wh-questions, we see three kinds of languages:
  • Those which move them (e.g. English, German, Czech)
  • Those which don’t (e.g. Japanese, Korean, Swahili)
  • Those which optionally move them (e.g. French, Malay)

• Importantly, when moved, languages always move the wh-word to the same position (to CP)
**Wh-questions**

- When we have two clauses, *wh*-words move to the beginning of the sentence in *wh*-questions.

  \[ \textbf{What} \text{ did you say [ that John bought ___]}? \]

  \[ \begin{array}{c}
  \text{clause 2} \\
  \text{clause 1}
  \end{array} \]

- In ‘concealed’ *wh*-questions, *wh*-words move to the beginning of their clause only.

  \[ \text{John asked [ \textbf{what} \text{ Tom bought ___ }]}. \]

  \[ \begin{array}{c}
  \text{clause 2} \\
  \text{clause 1}
  \end{array} \]
Wh-questions

• In some dialects of German, moved wh-words can be pronounced more than once...but always at the beginning of a clause!

\[
\text{[ Wen glaubst du [ wen sie ___ liebt]]?}
\]

\[
\text{clause 2}
\]

\[
\text{clause 1}
\]

Wen  glaubst du wen  sie  liebt?
Whom believe you whom she loves
‘Whom do you believe she loves ___?’
Conclusion

• The main purpose of these slides was to:
  • demonstrate that there is more to language than what appears on the surface
  • give you an idea of the type of work theoretical syntacticians do
  • show that syntax also has ‘rules’, just like the other components of the grammar