Today

HW#2 due tomorrow

• Evidence for phrases, cont’d
  Conclude Pronominalization
  Coordination
    – Conjunctions
    – What can be coordinated
    – Constraints on coordination

Reading: pp. 61-68
Pronominalization

Because they substitute for phrases, proforms can also undergo movement

The large rhino chased the frightened villagers.

Pronominaliz.: It chased them.

Passive: They were chased by it.

(Note that pronouns can be inflected for number, person, case, gender)
Pronominalization

Because they substitute for phrases, proforms can also undergo movement

The leprechaun gave a pot of gold to the townsfolk.

Pronominaliz.: He gave it to them.

Indirect Obj. movement: He gave them it.
Pronominalization

Interrogative proforms: used in WH-questions

– Pronouns: who(m), what, whose, which
– Proforms: when, where, why, how

The world-record holder for hot dog eating is coming to campus today.

Who is coming to campus today?
Pronominalization

Question formation involves WH-movement

They saw the world-record holder for hot dog eating.
They saw who(m)? (pronominalization)

Who(m) did they see ___? (WH-movement)
Pronominalization

Question formation involves WH-movement

She parked the bus in the underground parking lot.

She parked the bus where?

Where did she park the bus ___?

Where did she park the bus ___?
Summary: Pronominalization

• Proforms act as syntactic placeholders for entire phrases
• Every proform has an antecedent.
• They can undergo movement, like the phrases they substitute for
Coordination (a.k.a. Conjunction)

When words or phrases are syntactically linked to form a larger unit of the same category.
Coordination

Phrases are coordinated with words from the **grammatical category** called **conjunctions**:

*for, and, nor, but, or, yet, so* (= FANBOYS)
Coordination

What can be coordinated?

Two or more “like” categories:

Sentences
Phrases
Words
...

LING 100 -- McGarrity
Coordinating Conjunctions

Examples:

NP: These cats and those dogs are furry.
VP: You must surrender or die!
PP: Out of the frying pan and into the fire.
S: You can run but you can’t hide.
S: The child was hungry, for the cupboard was bare.
Coordination

\([\text{NP}_1 \text{NP}_{\text{these cats}} \text{ and } \text{NP}_{\text{those dogs}}]\]

\[
\begin{array}{c}
\text{NP} \\
\text{NP} \quad \text{and} \quad \text{NP} \\
\text{DET} \quad \text{N} \\
\text{these cats} \\
\text{DET} \quad \text{N} \\
\text{those dogs} \\
\end{array}
\]

\[
\text{NP} \rightarrow \text{NP \ conj \ NP} \\
\text{NP} \rightarrow \text{DET \ N}
\]
Coordination

\[ [\text{NP} \text{[NP these cats]} \text{ and [NP those dogs]]}] \]

\[ [\text{VP} \text{[VP surrender]} \text{ or [VP die]}]] \]

\[
\text{NP} \rightarrow \text{NP conj NP}
\text{NP} \rightarrow \text{DET N}
\]

\[
\text{VP} \rightarrow \text{VP conj VP}
\text{VP} \rightarrow \text{V}
\]
Coordination

[_[s Melvin likes cake] so [_[s he baked a cake]].
Coordination of heads

This bus goes on or near campus.
Coordination of heads

This bus goes [\text{pp on or near} \text{ campus}].
Coordination of grammatical categories

Pigs have eight or nine piglets in a litter.
Coordination of grammatical categories

Pigs have \[\text{[NP [NUM eight or nine] piglets]}\] in a litter.

```
S
  NP
    N
      Pigs
  VP
    NP
      Y
      have
    NP
      NUM
      piglets
      in
      DET
      N
        a
        litter
```
Constraints on Coordination

**Parallelism** constraint:
You can’t coordinate ‘unlike’ categories.

Laura went to the store.
Laura went crazy.
*Laura went [to the store] and [crazy].

(These two phrases are not *syntactically parallel.*)
Constraints on Coordination

Parallelism constraint:
You can’t coordinate ‘unlike’ categories.

Laura went to the store.
Laura went off her rocker.
*Laura went [to the store] and [off her rocker].

(These two phrases are not semantically parallel.)
Coordination and Ambiguity

Ambiguity:

I like big dogs and cats.

... \([_{NP}NP \text{big dogs}] \text{ and } [_{NP}cats]]\)

... \([_{NP} \text{big } [_{N} \text{dogs and cats}]]\)
Coordination and Ambiguity

\[
\begin{align*}
\text{[NP[NP big dogs] and [NP cats]]} & \quad \text{[NP big [N dogs and cats]]} \\
\end{align*}
\]
Coordination and Pronominalization

Pronouns can replace individual NPs…

I saw \([_{NP}Jim]\). I saw \([_{NP}Jane]\).
I saw \([_{NP}_{NP}him and ]_{NP}her]\).

…as well as coordinated NPs
Many people own \([_{NP}dirty ]_{N}cats and dogs\)].
I wash them.

(them = dirty cats and dogs)
Coordination and Pronominalization

Many people own cats and dogs. I wash them.
Unlike pronominalization, movement can only occur with the entire coordinated phrase.

Many people like \([\text{NP}\text{NP babies} \text{ and NP puppies}]\)?

\([\text{NP What}] \text{ do many people like } \underline{\text{________}}? \) (babies and puppies)

*\([\text{NP What}] \text{ do people like } \underline{\text{NP [NP __ ]}} \text{ and NP puppies}]\)? (b*abies)
Coordination and Movement

Many people like babies and puppies.

What = babies

*What = puppies
Summary: Coordination

• Constituents can be linked using **conjunctions**
• Sentences, phrases and words can be coordinated
• Only “like” constituents can be coordinated
Practice: Coordination

What type of category is being coordinated?

I like hot soup and cold sandwiches.
Can I borrow two or three bucks?
She drives to work but takes the bus to school.
They live over the hill and around the corner.
The climber got frostbite on his fingers and toes.
Practice: Coordination

What type of category is being coordinated?

I like hot soup and cold sandwiches.
Can I borrow two or three bucks?
She drives to work but takes the bus to school.
They live over the hill and around the corner.
The climber got frostbite on his fingers and toes.
Practice: Movement

Identify the type of Movement:

The sheriff sent a search party out to find the kids.

Dora made her mother a birthday card.

The poison was eaten by the rat.
Practice: Movement

Identify the type of Movement:

The sheriff sent a search party out to find the kids.

(sent out a search party) = Particle shift

Dora made her mother a birthday card.

(… made a birthday card for her mother) = IO

The poison was eaten by the rat.

(The rat ate the poison.) = Passive
Practice: Pronominalization

Identify the antecedents of the proforms:

I thought the 3D movie was showing at the IMAX, but it wasn’t showing there after all.

My son can tie his shoes. I told everyone he can do so.
Practice: Pronominalization

Identify the antecedents of the proforms:

I thought the 3D movie was showing at the IMAX, but it wasn’t showing there after all.

\[ \text{it} = [\text{NP} \text{ the 3D movie}] \]
\[ \text{there} = [\text{AP} \text{ at the IMAX}] \]

My son can tie his shoes. I told everyone he can do so.

\[ \text{he} = [\text{NP} \text{ my son}] \]
\[ \text{do so} = [\text{VP} \text{ tie his shoes}] \]