Setting the stage:

Constituents, Meaning, and Architecture:
The Big Picture (and some details)

9 January 2019
OUR ROADMAP

- Refresher 1: Language as an instinct
- Refresher 2: Deep structure and surface structure
- Linguistic theory, syntax, and compositionality
- Overview of the X-bar skeleton
- The complicated relationship between structure, meaning, and morphology
Chomsky's fundamental contribution to the intellectual study of language was to challenge the idea that language should be examined within the context of behaviorism.

- Humans aren't mice in a maze when it comes to language.

Darwin: “an instinctive tendency to acquire an art” ...but not confined to humans [The Language Instinct, p. 7]

Pinker, building on William James: “The workings of language are as far from our awareness as the rationale for egg-laying is from the fly’s.” [p.8]
“...grammatical sophistication used to be nurtured in the schools, but sagging educational standards and the debasements of popular culture have led to a frightening decline in the ability of the average person to construct a grammatical sentence.”  

[The Language Instinct, p.5]

“A preschooler’s tacit knowledge of grammar is more sophisticated than the thickest style manual or the most state-of-the-art computer language system, and the same applies to all healthy human beings, even the notorious syntax-fracturing professional athlete and the, you know, like, inarticulate teenage skateboarder.”  

[The Language Instinct, p.6]
Some evidence of the instinct…

- Poverty of the input
  - Children absolutely do not hear every sentence that they produce.
  - Deaf children create signed languages.
  - Children “fill in” missing grammatical information.
    - The transition from pidgins to creoles.

- Rapid acquisition
  - E.g. - By 3.5, children use the –s agreement marker correctly 95% of the time. [The Language Instinct p.33]
  - It’s just as difficult to acquire sign languages after the critical period as it is to acquire spoken languages.
...and of underlying structure.

Speakers have clear intuitions about constituency.

- A unicorn that is eating a flower is in the garden.
  - Children correctly produce *Is a unicorn that is eating a flower in the garden?*
  - Children don’t form the question *Is a unicorn that eating a flower is in the garden?*
    - An innate sense of constituency

- Estimates vary greatly about the number of fluent speakers. [Tallerman, Ch.1, EX 38]
- It may harm your defense if you do not mention when questioned something which you may later rely on in court. [EX 41]
- What was that guy who retired last month’s name? [EX 55b]
- Cherlon ate in Philadelphia the most delightful salt-baked squid that she could have imagined.
But...

structure isn’t always so clear. For instance, do ditransitive pairs have the same or different deep structures?

MAYBE...

Indonesian

   Ali send-past letter the to Hasan.
   ‘Ali sent the letter to Hasan.’

   Ali send-past-promotion Hasan letter the
   ‘Ali sent Hasan the letter.’

[Tallerman, Chapter 1, EX 9&10]

- The b sentence in Indonesian has a morpheme which indicates that some movement operation has taken place, so maybe b is derived from a.
Icelandic

(i) Ritarinn sendi samningana til lögfræðinga.

secretary.the.nom sent contracts.the.acc to lawyers.the.gen

‘The secretary sent the contracts to the lawyers.’

(ii) Ritarinn sendi lögfræðingunum samningana.

secretary.the.nom sent lawyers.the.dat contracts.the.acc

‘The secretary sent the lawyers the contracts.’

- No marker on the verb. The case on the indirect object changes.

- English doesn’t have morphological markers on the nouns (or the verb). The words look the same in both constructions.
SYNTAX against the backdrop of linguistic theory

a. *The Key Components*

- Phrase Structure Rules
- Lexicon
- Deep Structure
- Transformations
- Surface Structure

b. *How Things Fit Together*

- Syntax
- Morphology
- Semantics
- Phonology

Semantic Interpretation
WHERE WE’RE HEADED: The X-bar skeleton

- The positions of heads and phrases can be switched. For instance, in a verb-final language, the verb comes after the object in the VP.
- The position of the bar-level can also be switched.
- The specifier provides a place for phrases of various types. A phrase can either be born in the specifier or it can move there.
  - **There is LOTS of movement to specifier positions! We’ll get there...**
Law of Compositionality:

If the meaning of a collection of formatives, $\alpha$, is derivable from the meanings of those formatives then $\alpha$’s meaning is compositional. The meaning of sentences is compositional.

[Johnson 2011, Ch2, EX 6]

Even though our trees will get increasingly complicated, we still want to adhere to the concept of the Law of Compositionality.

[Idioms (and some compounds) are an exception. These are briefly discussed at the beginning of Johnson, Ch.2.]
The law of compositionality still holds when we have deep structure – surface structure mismatches, or when the constituency is tricky...

1. The association that decided to honor the controversial director was dismantled by the oversight board.

2. Who has the duplicitous politician convinced his underling to steal money from?

3. A condo in that swanky new building, the cool downtown couple intends to buy.

4. Those parents should have taught their rude children how to eat at a restaurant.

5. The greedy agent let the athlete sign a bad deal.

6. Many federal employees have been furloughed.

7. The interviewer appears to have read every book by that author.

8. The reading that the professor has assigned will teach the students what the important aspects of syntactic theory are.

9. Which professor won second place at the Minnesota State Fair for her barbecue sauce?

10. The bossy traveler told the bellhop where to put the luggage.

11. The syntax professor seems to have particular contempt for cold weather.

12. The angry football fans ordered those lousy temporary referees to reverse the call.
“If every language learner is equipped with this X’ Theory, then they will converge on more or less the same $G_L$ when presented with the information that being in the environment of speakers of $L$ provides. If there are differences in the $G_L$s that learners converge on, these will trace back to different decisions these learners have made about the identity of $W, X, Y, \text{ and } Z$ or how their linear order is determined. If the rest of a model that incorporates these constraints is correct, then, it should allow any language learner to pick out a $G_L$ very close to the $G_L$ giving shape to the speech in that learner’s environment.” [Johnson, p.4]

The X-Bar model facilitates (a weaker stance) or makes possible (a stronger stance) the acquisition process by severely constraining the range of possible grammars.
The syntacticians’ task…

...is to figure out the minutiae that the X-Bar skeleton represents and to the best of our ability, use this model to account for a variety of phenomena.

While English is our base language, we’ll use cross-linguistic data to either make inferences about another language or to provide more concrete evidence in support of a hypothesis.
What are the XP categories in X-bar theory?

**Perhaps familiar phrases**

- Noun Phrase
- Verb Phrase
- Adjective Phrase
- Adverb Phrase
- Prepositional Phrase

**Perhaps less familiar phrases**

- Complementizer Phrase
- Tense Phrase/Inflectional Phrase
  - NOTE: In the Carnie reading, the node TP is initially presented without much discussion. We’ll cover TP in more detail.
- Determiner Phrase
How do we detect category membership?

The Novel Form Argument

(8)  
   a. If enough information is introduced with a novel word to enable the individual learning that word to recognize its category, then  
   b. The individual knows which arrangements it can grammatically combine in.  
   c. Hence, it must be category membership to which these processes refer.

(9) Many bloresnicks are grey.

(10)  
   a. It ran bloresnick the tree.  
   b. He removed the long bloresnick  
   c. She finds Sammy bloresnick.  
   d. He made his face bloresnick.

From Johnson 2011, Chapter 2

If 9 is good, then only 10b is.
Our ever-famous exemplar of the “Novel Form” argument

`Twas brillig, and the slithy toves
Did gyre and gimble in the wabe:
All mimsy were the borogoves,
And the mome raths outgrabe.
"Beware the Jabberwock, my son!
The jaws that bite, the claws that catch!
Beware the Jumbly bird, and shun
The frumious Bandersnatch!"
He took his vorpal sword in hand:
Long time the manxome foe he sought --
So rested he by the Tumtum tree,
And stood awhile in thought.
And, as in Uffish thought he stood,
The Jabberwock, with eyes of flame,
Came whiffling through the tulgey wood,
And burbled as it came!
One, two! One, two! And through and through
The vorpal blade went snicker-snack!
He left it dead, and with its head
He went galumphing back.
"And, has thou slain the Jabberwock?
Come to my arms, my beamish boy!
O frabjous day! Callooh! Callay!
He chortled in his joy.

(from Through the Looking-Glass and What Alice Found There, 1872)
The relationship between structure, meaning (and sometimes morphology) – Part 1

We’ll return to this throughout the term.
Colorless green ideas sleep furiously.

- “Grammatical” but uninterpretable.
  - Category-selection (c-selection) succeeds.
  - Semantic-selection (s-selection) fails.

- Heads require that their arguments have particular semantic properties.
- These properties are generally referred to as theta/thematic roles.
- Sleep requires an agent (some animate entity) that is doing the sleeping.
Some Theta Roles

- **Agent**
  The performer of an action.

- **Experiencer**
  Non-volitional participants of an action.

- **Theme/Patient**
  The person or thing that an action/activity is done to.

- **Source**
  The starting point for a movement or a transfer of possession.

- **Goal**
  The end point for a movement or a transfer of possession.

- **Location**
  The place where an action occurs.

- **Instrument**
  The thing used to accomplish an action.

- **Benefactor**
  The person or thing that benefits from someone else’s actions.

- **Proposition**
  A clausal argument.
Sometimes theta roles map to morphology

- The case of a noun may depend on factors such as agentivity or volitionality.

- Here, the datives are experiencers.

Hindi-Urdu
Tusaar kʰuš ḥuua.
Tushar.nom happy become
‘Tushar became happy.’

Tusaar-ko kʰuʃii huii.
Tushar-dat happiness happen
‘Happiness happened to Tushar.’

Japanese
Sensei-ni eigo-ga wakaru.
teacher-dat English-nom understands
‘The teacher understands English.’

Mary-ga eigo-ga yoku dekiru.
Mary-nom English-nom well do.can.pres
‘Mary can speak English well.’
But sometimes things are murky

(a) Við teljum frambjóðendurna vera frambærilega
   we.nom believe candidates.the.acc be pretty good.acc
   ‘We believe the candidates to be pretty good.’

(b) Einum dómara sýndist þessar athugasemdir vera óréttlátar.
    one.dat judge.dat understood these comments.nom be unfair.nom
    ‘One judge understood these comments to be unfair.’

Our friend Icelandic is sometimes/often murky. 😊
Do these sentences have different meanings???

The announcer handed the wrong actor the Oscar.

The announcer handed the Oscar to the wrong actor.
Compositionality guides structure-building.

Syntax is full of deep structure-surface structure mismatches.

X-Bar theory facilitates structure-building by narrowing the set of options.

Sometimes there is a relationship between morphology, structure, and meaning. But sometimes not.