

THE HISTORY OF THE CONCEPT OF THE PHRASE

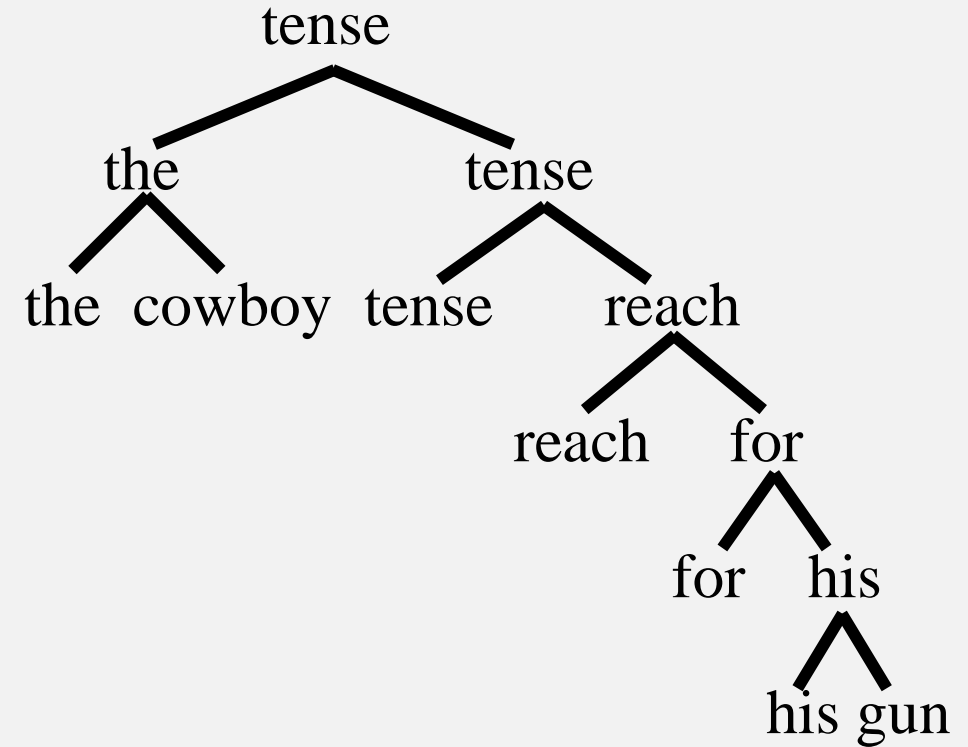
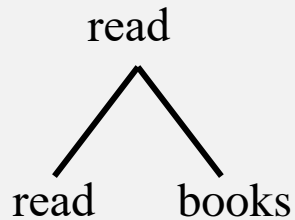
*Part II: From today until its
discovery*



THE DECADES OF MINIMALISM (1990 – PRESENT)

- The Minimalist Programme (Noam Chomsky)
 - Aims to minimalise grammatical principles to the bare minimum
 - To maximise explanation
- Minimalist Principles for structure: Bare Phrase Structure

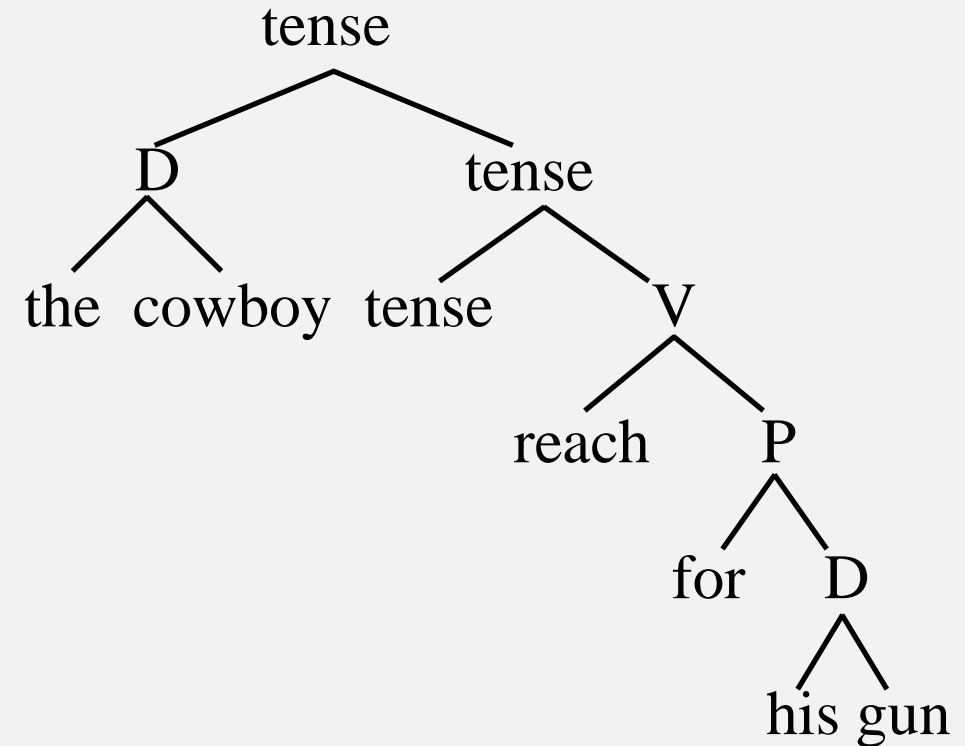
- a Structures are built out of lexical elements and add nothing more.
- b The structure building process is as follows:
 - i) take two elements (lexical items or structures already built)
 - ii) put them together to form a new element
 - iii) choose one to be the label



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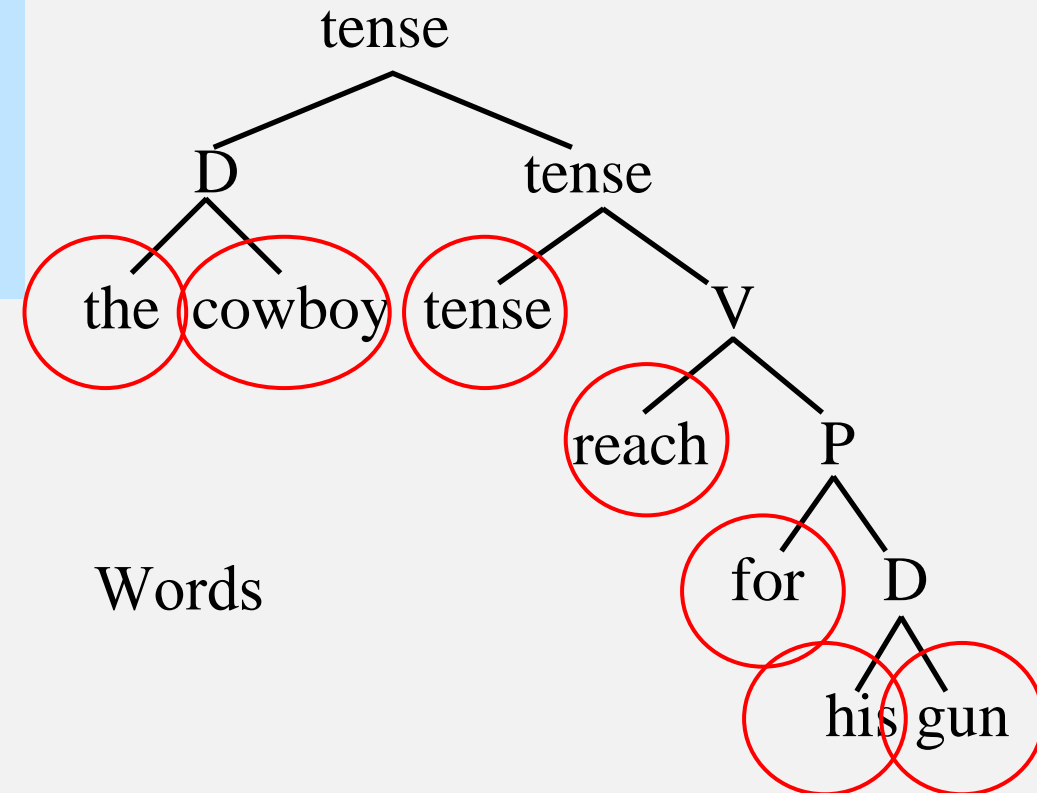
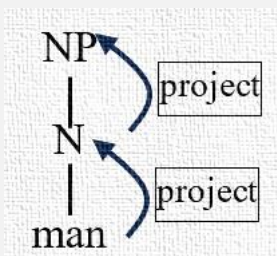


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- Contextual Interpretation of Elements

- a a word is something which is not projected.
- b a phrase is something which does not project.

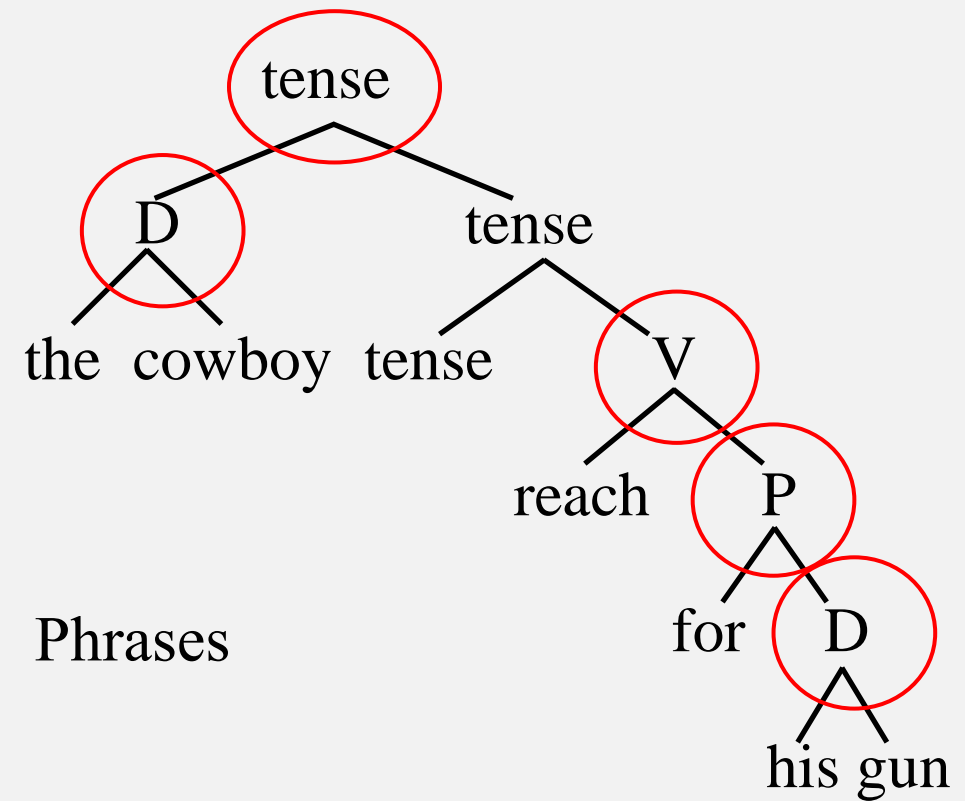
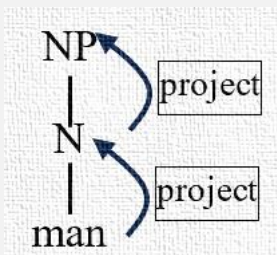


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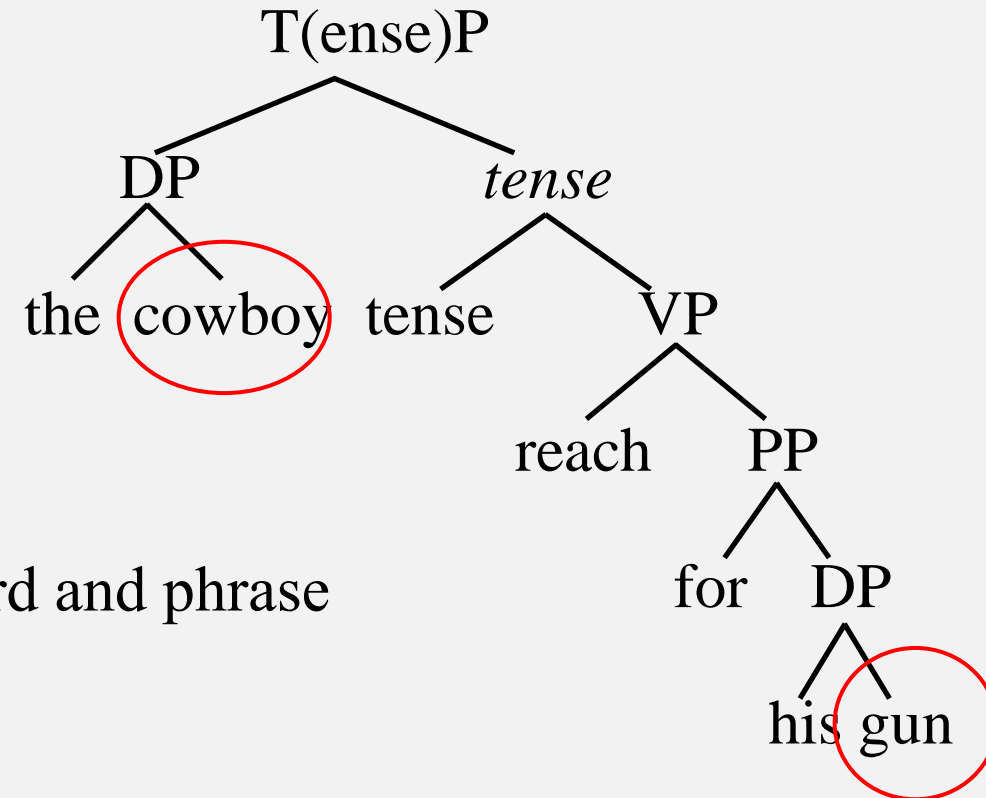
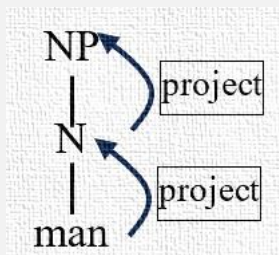
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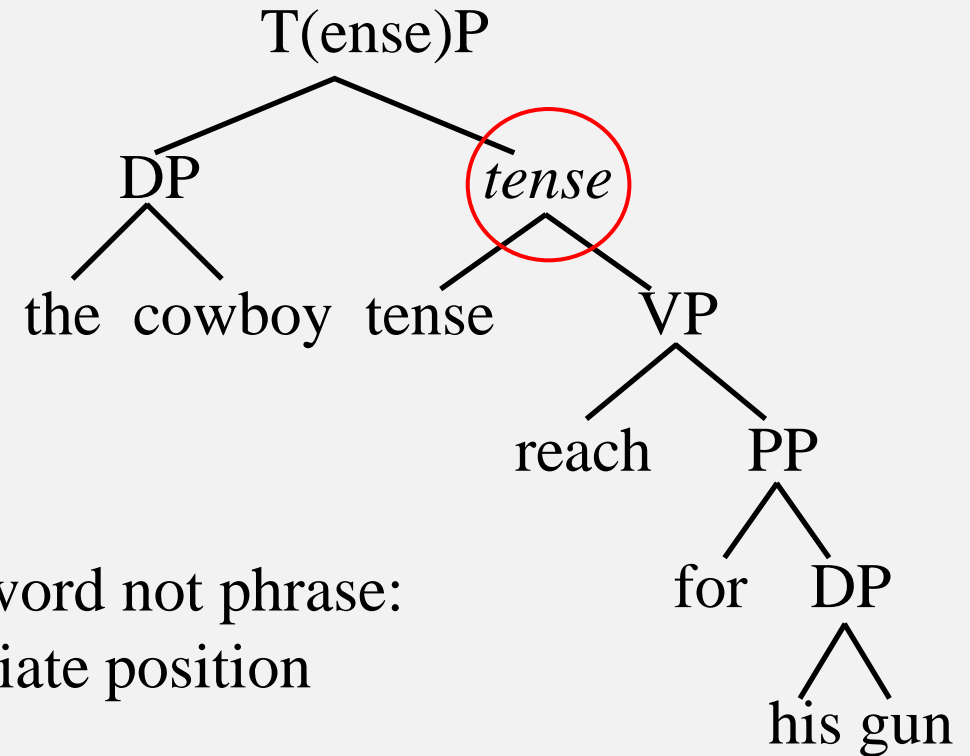
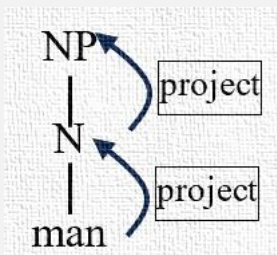
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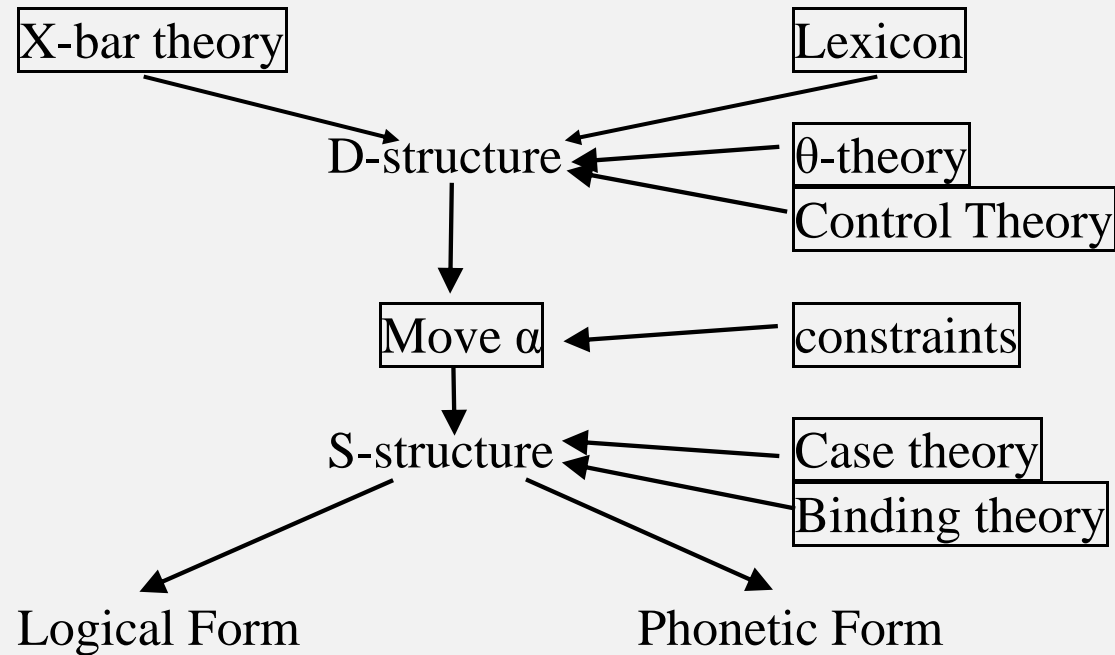
- a a word is something which is not projected.
- b a phrase is something which does not project.



Neither word nor phrase:
Intermediate position

DECADE OF GENERALISATION (1980s)

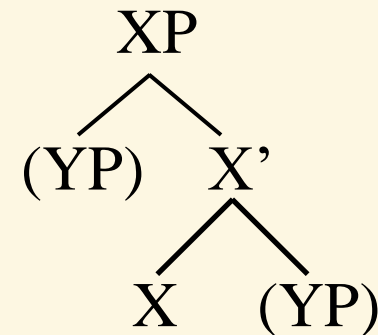
- Modular Grammar
 - Modules: small number of simple phenomena specific rules



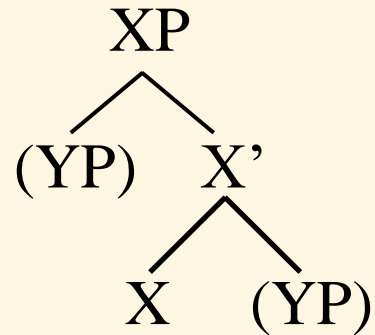
Modules are simple.
Complexity is achieved through
module interaction

X-bar theory

$XP \rightarrow (YP) X'$
 $X' \rightarrow X (YP)$



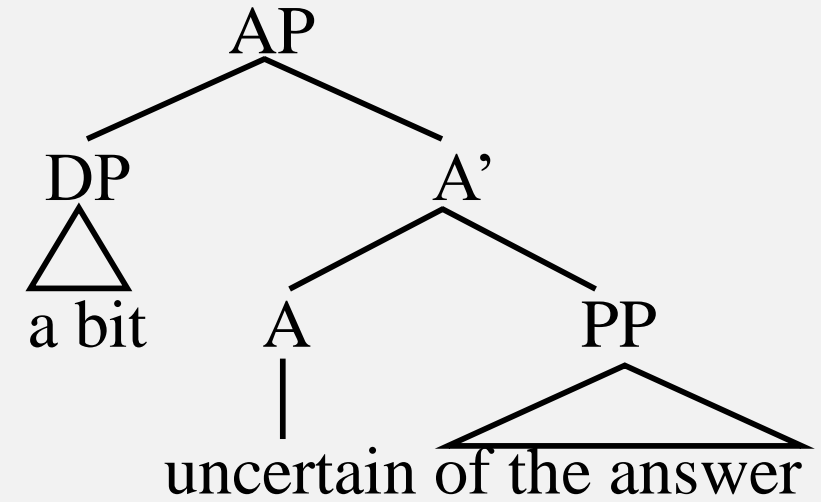
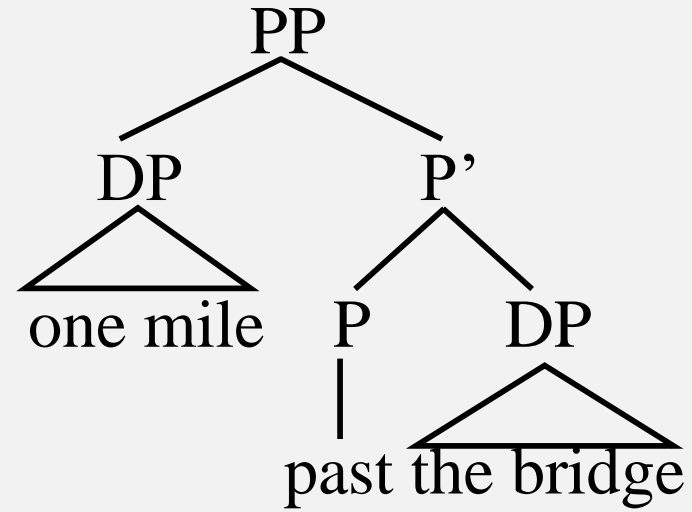
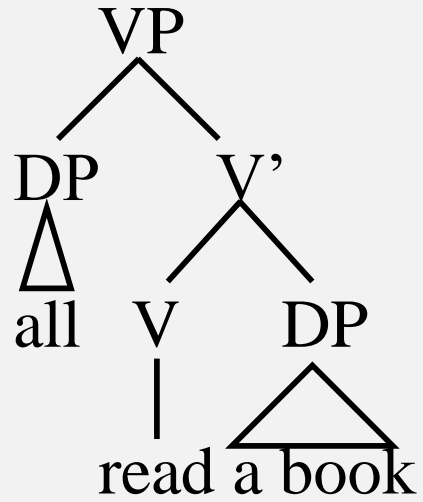
X-BAR THEORY



- X and Y are category variables (stand for any category)
- X is a word = head
- XP is a phrase
- X' is bigger than a word, smaller than a phrase (intermediate)
- Brackets indicate option
- YP inside X' is complement
- YP inside XP is specifier

- Every phrase conforms to this pattern
- Every phrase has a head
- Every word is a head

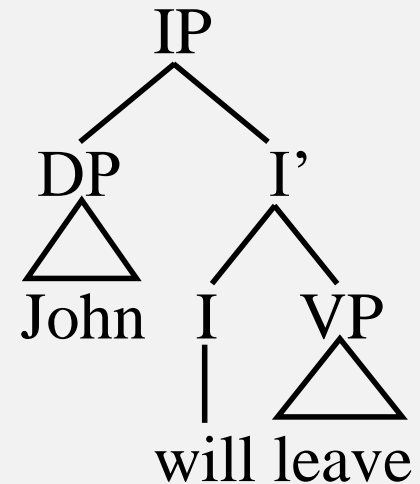
EVERY PHRASE CONFORMS TO THE PATTERN



EVERY PHRASE HAS A HEAD

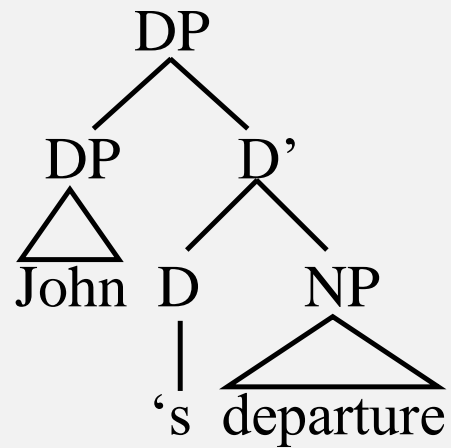
- Sentences have heads
 - Every sentence contains either
 - A modal
 - An infinitive ‘to’
 - A tense
 - These are in complementary distribution
 - They belong to a single category: ‘inflection’ (INFL, I)
 - The inflection determines what kind of sentence it is: finite or non-finite
 - Heads determine the properties of the phrase
 - Inflection is the head of the sentence

- a * John can left.
- b * I want John to can leave.
- c * I want John to can left.



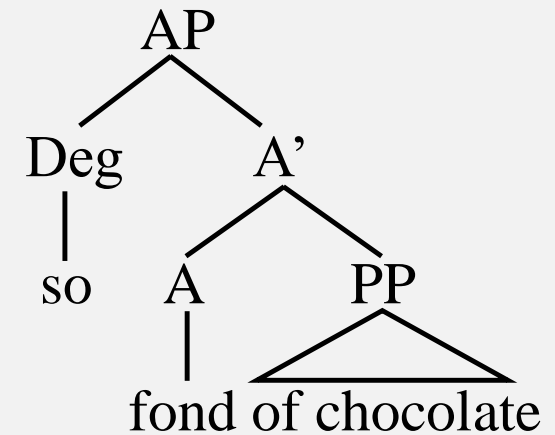
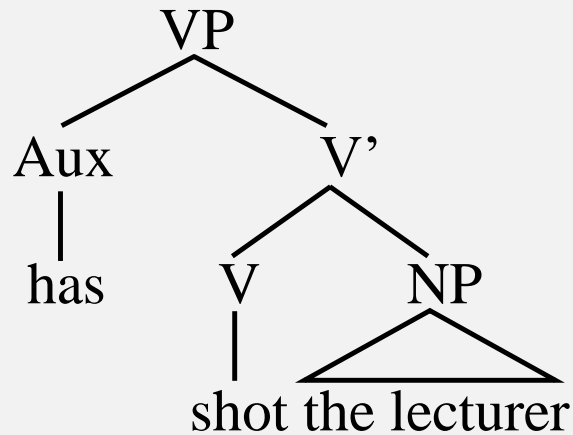
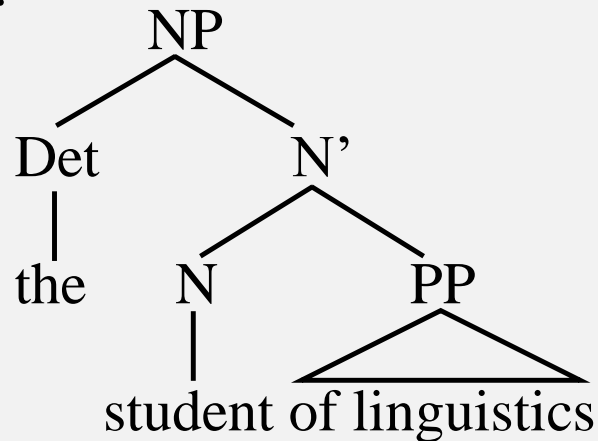
EVERY WORD IS A HEAD

- Determiners must head DPs
 - The DP hypothesis (Abney 1886)



DECADE OF CONSTRAINT (1970s)

- Grammatical Theory of the 1960s had been experimental with new ideas applied.
- But by the 70s there was concern that it was becoming too free
 - Too much freedom loses explanation
- So, we needed constraints.
- X-bar theory was a limited theory of phrase structure (only two rules)
- It was proposed by Chomsky (1970) to capture similarities across phrases (PP added later):



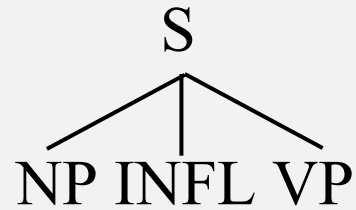
LIMITS OF X-BAR THEORY

- X-bar theory was a theory of phrases
 - It did not extend to sentences
 - There were words (determiners, auxiliaries, etc.) which were excluded
- There were two types of phrase structure rule, therefore:

a $S \rightarrow NP\ INFL\ VP$

b $XP \rightarrow Spec\ X'$

$X' \rightarrow X\ Comp$



ORIGINS OF PHRASE STRUCTURE GRAMMAR (1950s-1960s)

- 1957 *Syntactic Structures* (Chomsky)
 - Small book on how to argue for one grammar over another
 - Looked at 3 kinds of syntactic rules
 - Linear rules (rejected)
 - Phrase structure rules alone (rejected)
 - Phrase structure rules plus transformational rules
 - Phrase structure rules were Chomsky's attempt to represent ideas of the preceding half century
 - He wanted to show their inadequacies
 - But they had not been formalised
 - Because they had no underlying theory
 - It is hard to show that something is wrong if it makes no predictions

THE FIRST PHRASE STRUCTURE RULES

- Chomsky proposed a set of phrase structure rules (a fragment of the grammar)
 - These rules were language and construction specific

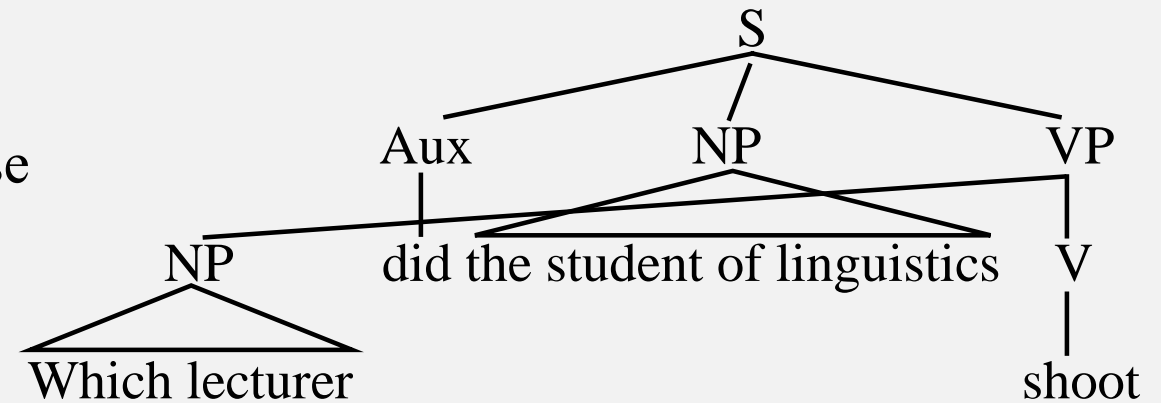
S → NP VP
VP → V
VP → V NP
VP → Aux V NP
...
NP → N
NP → Det N
NP → Det A N
...

WHAT'S WRONG WITH PHRASE STRUCTURE RULES?

- Phrase structure rules cannot cope with Discontinuous Constituents

Which lecturer did the student of linguistics shoot?

- Phrase structure rules cannot do this:
 - The rules can order two things inside a phrase
 - But only with respect to each other



- The other option is to have a new S rule:

$S \rightarrow NP \text{ Aux } NP \text{ VP}$

- The problem here is that this rule requires the VP to lack an object ($VP \rightarrow V$):

* Which lecturer did the student of linguistics shoot the professor?

- But the grammar has no way for the choice of one rule to determine the choice of another.

IMMEDIATE CONSTITUENT ANALYSIS 1940s-1950s

- School of American Structuralism
 - Main school of linguistics in America at the time
 - Founded by Leonard Bloomfield in the early 1900s
 - Main proponents at the time:
 - Zellig Harris – Chomsky’s teacher (invented the ‘bar’ notation – but not for syntax)
 - Charles Hockett – Developed Immediate Constituent Analysis and representation (Chinese boxes)

HOCKETT'S CHINESE BOXES

- Immediate Constituent Analysis
 - Take a sentence and split it into its immediate parts (= constituents)
 - Take them and split them into their immediate parts
 - Until you get to the words

- Hockett's representation:

- Note: no labels for constituents

She	is	running	the	car

- Hockett could represent discontinuous constituents

- But, Hockett could represent anything
- And that was the problem
- There is no theory and no restrictions behind this representation

Is	John	going	with	you

BLOOMFIELD EARLY 1900s-1940

- Bloomfield founded American Structuralism and was the main linguist in America at the time
- He wrote two very influential textbooks, both setting out the current status of the subject
 - 1914 *Introduction to the Study of Language*
 - Mentions ‘phrase’ three times – all referring to ‘idioms’
 - 1933 *Language*
 - Has a chapter on Syntax based on Immediate Constituent Analysis
- So the phrase was discovered at some point between.
 - Earliest paper which mentions the phrase I can find is
 - 1926 *A set of postulates for the Science of Language*

12. Def. A non-minimum free form is a *phrase*.

E.g., *the book*, or *The man beat the dog*; but not, e.g. *book on* (as in *Lay the book on the table*), for this is meaningless, hence not a form; and not *blackbird*, which is a minimum free form.

HOW COME BLOOMFIELD DID WHAT 2500 YEARS OF LINGUISTS DIDN'T?

- Bloomfield's influences:
 - Franz Boas
 - Wilhelm Wundt
 - Behaviourism

BOAS

- Anthropologist interested in Native American culture and language
 - These are rapidly diminishing due to oppression and confiscation of lands
 - Needs a way of recording grammars quickly, without having to learn all the languages
- Discovery Procedures
 - A set of tests that a field linguist can apply by asking questions of a native speaker
 - Mainly based on the notion of distribution
 - E.g. Minimal pair test

WILHELM WUNDT

- German psychologist
- Father of Experimental Psychology
- Wanted to make Psychology a science

BEHAVIOURISM

- Extreme empiricist stance: operationalism
 - A theory cannot propose something for which there is no direct evidence
- In psychology, that means the mind
- The only things which are directly observable are
 - Human behaviour
 - The external conditions in which that behaviour takes place
- Described behaviour as a set of learned *Responses* to external *Stimuli*

BLOOMFIELD'S DISCOVERY OF THE PHRASE

- From Wundt Bloomfield developed the desire to make Linguistics a Science
- From Behaviourism he developed a hierarchy of linguistic phenomena
 - Phonetics → Phonology → Morphology → Syntax
 - Phones are the only part of language which is observable
- But using Boas's distributional tests we can discover the units of the other areas:
 - The distribution of phones gives us phonemes
 - The distribution of phonemes gives us morphemes
 - The distribution of morphemes gives us words
- The natural question to ask following this, is what does the distribution of words give us?
 - The answer is not sentences
 - Thus, the phrase was eventually discovered

CONCLUSION

- There were a very specific set of ideas which led to the discovery of the phrase
- Prior to that, the first languages which were studied quite successfully hid the phrase in complex morphology and free word order
- Subsequent linguists based their work on these initial ideas and therefore tended not to see phrases, even if the language they were concerned with provided evidence for them.