Solutions for Introducing Syntax 1st Edition by Koeneman

Cambridge Introductions to Language and Linguistics

morpheme

adjunct

categories

merge

parameter

Introducing
Syntax

Olaf Koeneman | Hedde Zeijlstra

phase

specifier

agreement

arguments

c-command
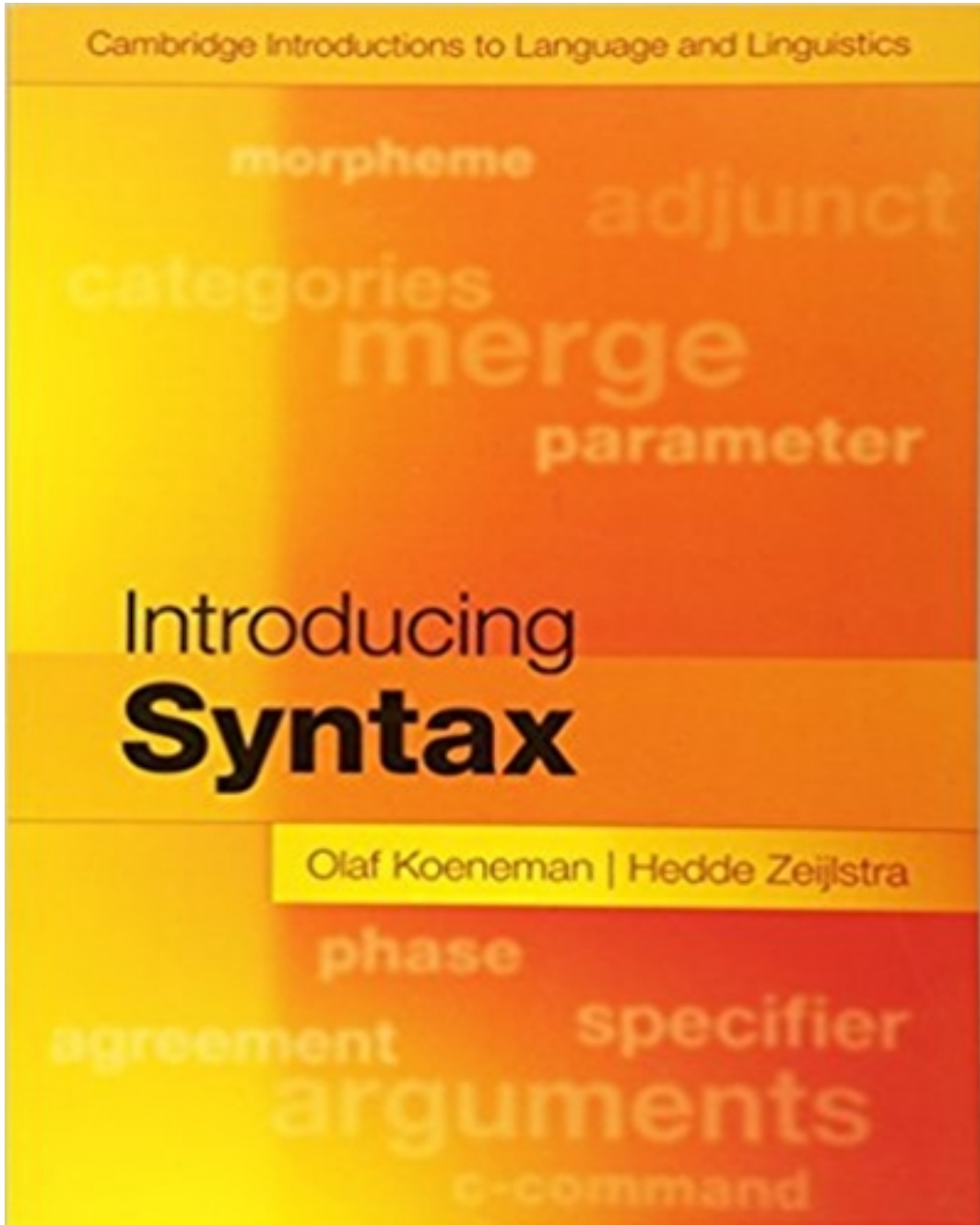
Solutions

2　Merge

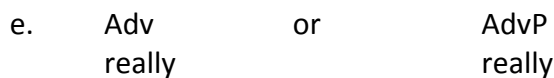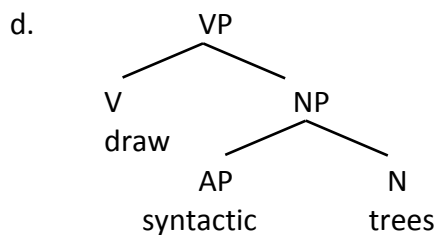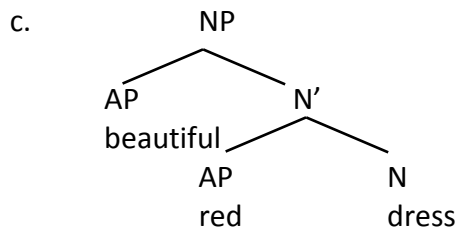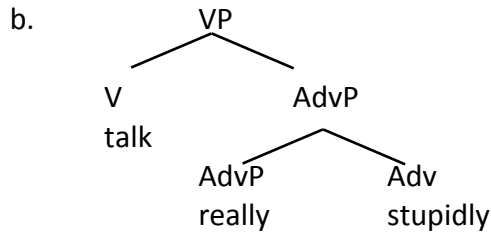### 2.1　The insight: syntax creates hierarchies

A1　a.　*Happy* is the head, as *happy* can appear in all environments in which *very happy with this news* can appear: *John is (very) happy (with this news)*.

　　b.　The same is true for *women*. Additionally, *most intelligent women on the planet* can be replaced by *they*, showing us that something nominal must be the head. This could be *women* or *planet*. Note, however, that when we make this constituent the subject of the sentence, *women* determines the agreement on the verb, not *planet*: *Most intelligent women on the planet know/*knows this*.

　　c.　The whole string can be replaced by *does*: *Tom probably likes such nonsense. Yes, Tom does*. Since *does* is verbal, *probably likes such nonsense* must be verbal too. Therefore, *likes* is the head, since it is the only verbal element in there. In addition, you can replace *probably likes such nonsense* by *sleeps*, underscoring the same analysis.

　　d.　*Ridiculously* is the head, as you can leave out *rather* more easily that *ridiculously* in the following example: *John talks ridiculously*, versus **John talks rather*.

　　e.　*Men* is the head, as you can leave out *that don't know how to shave*. In addition, the whole constituent can be replaced by *they*, showing you it has to share a categorial feature with the pronoun.

　　f.　*Is* is the head since the rest can be left out. Remember: *Fatima* should be ignored. As in c, the whole string can be replaced by *sleeps*.

　　g.　*In* is the head. This is a tricky one because it is not the case that everything but *in* can be left out. *Right* can be left out, but not *the middle*: *John sat (right) in *(the middle)*. This is generally the case with prepositions: they need something nominal following it. The 'leaving stuff out test' therefore does not work flawlessly. Finally, note that the constituent cannot be nominal, as it cannot be combined with a determiner: **the right in the middle*.

B2　You can leave out either adverb and check if the result is still grammatical. This worked for *rather ridiculously* in the previous exercise: *John talks ridiculously/*John talks rather*. It also works for *really stupidly*: *John talks stupidly/?*really*. This does not always work. Take the sentence *Aaron is quite seriously attached to his cat*. Here you can leave out either *quite* or *seriously*. You have to go by meaning. If Aaron is quite seriously attached to his cat, the attachment is serious, not quite. *Quite* modifies *seriously*, denoting the degree of seriousness, and not vice versa. This makes *seriously* the head of *quite seriously.*

2.2　*The implementation: the operation Merge*

A3　a.
```
        AdvP
       /    \
   AdvP      Adv
   really    stupidly
```

b.
```
            VP
          /    \
        V       AdvP
        talk    /   \
             AdvP     Adv
             really   stupidly
```

c.
```
            NP
          /    \
        AP       N'
     beautiful  /   \
             AP       N
             red      dress
```

d.
```
            VP
          /    \
        V       NP
        draw   /   \
             AP      N
          syntactic  trees
```

e.   Adv   or   AdvP
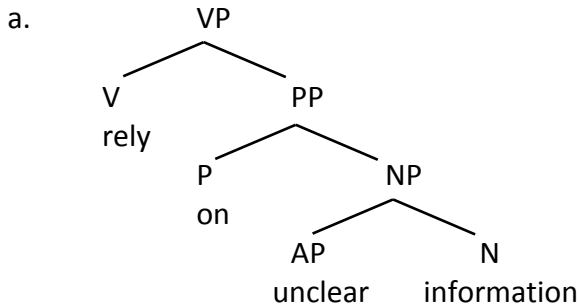   really   really

In isolation, there is no tree, just a word with a categorial feature. It is also possible to think of *really* as a syntactic structure, ready to be included in a bigger structure. In that case, it is an AdvP.

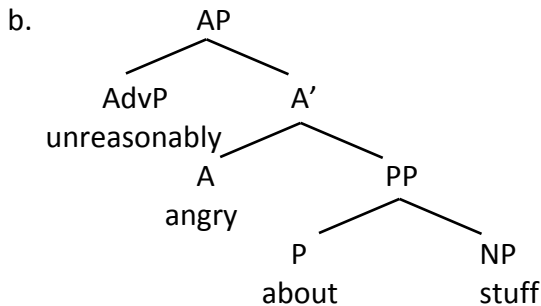### 2.3   *Consequences: testing the predictions of Merge*

A4   a.   No. If you substitute the string by *them* (*Esther bought them*), the way of paying is no longer part of the meaning. In addition, the string cannot be fronted: **Three bottles with her credit card, Esther bought*.

       b.   No, the string cannot be fronted: **Endlessly about his uncle, Peter talked* (whereas both *Endlessly, Peter talked about his uncle* and *About his uncle, Peter talked endlessly* are fine).

       c.   Yes: *About his uncle Peter talked endlessly*.

       d.   Yes: *His uncle, Peter talked endlessly about*. It can also be substituted by *him*: *About him*.

       e.   No: **Me a new computer, Santa Clause sent*.

       f.   Yes: you can substitute it for *it* or *that*. *It/That was E.T.*

       g.   Yes, it can be substituted by *did*: *Tommy read this book last month and I did last week*.

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h.   No, as fronting fails: *This book last week, I read* (whereas both *This book, I read last week* and *Last week, I read this book* are fine).

B5   a.

```
            VP
          /    \
         V      PP
        rely   /  \
              P    NP
              on  /   \
                 AP     N
              unclear  information
```
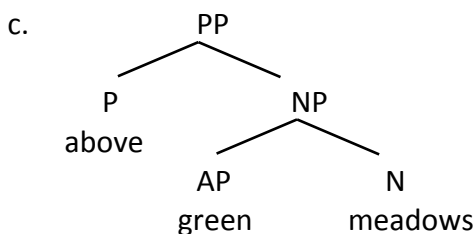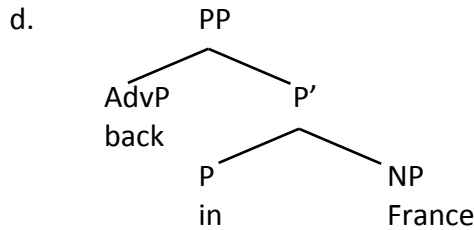
Note that *on unclear information* forms a constituent, as it can be fronted: *On unclear information one should never rely*. The fact that you can also front *unclear information* (*Unclear information, one should never rely on*) only shows that *unclear information* is a constituent (as is the case in the tree above), but crucially does not show that *rely on* is a constituent. Therefore, a tree in which *rely on* forms a constituent to the exclusion of *unclear information* is ill-motivated.

b.

```
            AP
          /    \
       AdvP     A'
    unreasonably /  \
                A    PP
              angry  /  \
                    P    NP
                  about  stuff
```

Angry about stuff forms a constituent to the exclusion of *unreasonably* because you can substitute it with *so*: *John is moderately angry about stuff, but Mary is unreasonably so*. The same test does not really produce a good outcome when we try to substitute for *unreasonably angry*: **John is unreasonably angry about politicians, and Mary is so about stuff* (where *so* refers back to *unreasonably angry*). This motivates a structure in which AdvP sits higher than PP, and not the other way round.

c.

```
            PP
          /    \
         P      NP
       above   /  \
              AP    N
            green  meadows
```

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d.
```
              PP
          ┌────┴────┐
        AdvP        P'
        back     ┌──┴──┐
                 P     NP
                 in    France
```
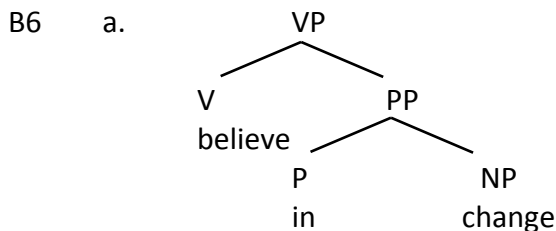
In France is a constituent to the exclusion of *back*, because you can substitute *in France* with *there*: *This happened back in France/This happened back there*. Substitution by *there* only works with locational PPs (just like substitution by *then* only works for temporal PPs). We generally conclude from these facts that the structure of PPs like *almost in doubt* and *clearly under suspicion* is similar, despite the fact that for these cases substitution by *there* and *then* is useless for semantic reasons: *in doubt* and *under suspicion* are not locational or temporal PPs.

e.
```
               VP
           ┌───┴────┐
          V'        AdvP
       ┌──┴──┐      slowly
       V     PP
      talk  ┌─┴──┐
            P    NP
            to   me
```
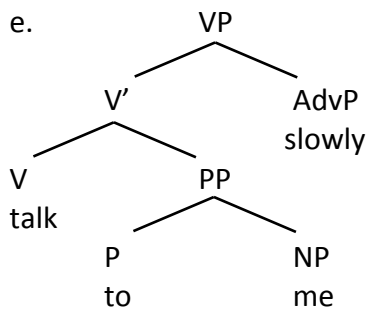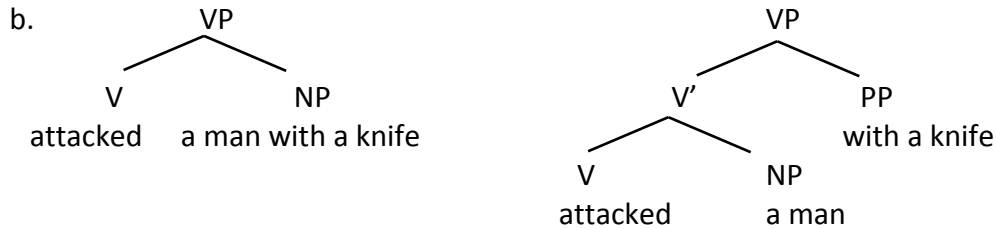
To me slowly cannot be fronted (**To me slowly, he talked*) so that cannot be a constituent. *Talk to me* is a constituent, which can be motivated by *do*-substitution: *At that time, John hardly talked to me slowly but Harry did constantly*. Also fronting works: *Talk to me, he did slowly*.

B6   a.
```
              VP
          ┌───┴────┐
          V        PP
       believe   ┌──┴───┐
                 P      NP
                 in    change
```

b.   VP (*believe in change*), PP (*in change*), V (*believe*), P (*in*) and NP (*change*).
c.   It looks like there is one constituent less, namely the PP *in change*. At the same time, the sentence means the same and the NP *change* is merged with the preposition *in*; it is just fronted. So, despite appearances, the PP *in change* is still a constituent of this sentence.
d.   It is a constituent of which the parts are not linearly next to each other. *In change* is a continuous constituent in (i) but a discontinuous constituent in (ii) as it is broken up by *you*.

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e.   Yes, the VP *believe in change* is a constituent and its parts are not next to each other, because *in change* has been fronted.

B7   a.   Either the man that is attacked is carrying a knife, or the knife is the instrument with which our neighbour attacks a man.

b.

```
            VP                                           VP
          /    \                                       /    \
        V        NP                                  V'       PP
    attacked  a man with a knife                   /    \   with a knife
                                                  V        NP
                                              attacked    a man
```

c.   If you front *a man with a knife*, then you lose the interpretation in which the knife is the weapon of the neighbour, as for that meaning (corresponding to the second tree), *a man with a knife* is not a constituent, and fronted elements must always be constituents.

C8

```
              NP                                        NP
            /    \                                    /     \
         AP        N'                               N'        PP
     expensive   /    \                           /   \      /   \
               N       PP                       AP      N   P      NP
             shoes   /    \                  expensive shoes from  Italy
                    P      NP
                  from    Italy
```
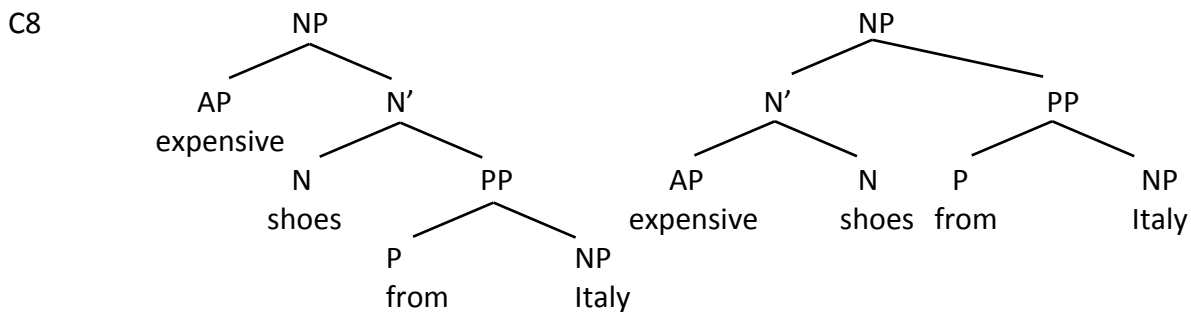
One-substitution tells us that *shoes from Italy* is a constituent (*Tommy loves cheap shoes from Italy, and Andrew loves expensive ones* (where *ones* can refer back to *shoes from Italy*). This is an argument for the existence the tree on the left because *shoes from Italy* needs to be a constituent for substitution with *ones* to work, and *shoes from Italy* is not a constituent in the tree on the right. The same test reveals that a tree in which the PP is hierarchically higher than the AP should also exist: *My wife likes expensive shoes from Spain, but I like ones from Italy*. This is an argument for the existence of the tree on the right. So this example is compatible with two different trees.

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3 Theta theory

3.1 The insight: Merge and the meaning of verbs and nouns

A1   a.   *To fall* has one argument (*John fell*).
          b.   *To give* has three (*Ali gave Mary the book*).
          c.   *To call* has two (*I called her*).
          d.   *To eat* has two (*she ate a sandwich*).
          e.   *To cry* has one (*Bill cried*).
          f.   *To send* has three (*I sent Peter the* bill).
          g.   *To marry* has two (*Peter married Charles*, but also: *the priest married Bill and Suzanne*).
          h.   *To promise* has three (*I promised her a better life*).

A2   a.   Intransitive.
          b.   Ditransitive.
          c.   Transitive.
          d.   Transitive.
          e.   Intransitive.
          f.   Ditransitive.
          g.   Transitive.
          h.   Ditransitive.

(Note: every verb with one argument is intransitive; every verb with two arguments is transitive; and every verb with three arguments is ditransitive).

B3   Every intransitive verb (a, e) does. Some transitive verbs (c, d) may easily drop one argument (*I call*, *I eat*), for others (g) it is harder (*I marry* sounds weird). Ditransitive verbs (b, f, h) can generally also drop one argument (*I gave a book, I sent a message, I promised a better life*). Realise, though, that when a verb does not take one of its arguments (or two: "But you promised!") we still mentally reconstruct the missing arguments, and verbs with missing arguments usually occur in contexts in which the missing arguments can be reconstructed. You cannot start a conversation with "You promised" or "You promised me". There are some verbs, however, that can leave an argument unrealised and they can occur at the start of a conversation. *Eat* is an example, discussed in 3.2.2.

3.2 The implementation: Theta theory

A4   Arguments: a, b, c, e, g, h. Adverbials: d, f, i. All the adverbials can easily be removed (*John read*, *Mary sleeps*, *Peter ate*). The other arguments can only be removed if the verb allows argument drop in the first place. For a, b, c, g this is possible, for e not (**I want to know* is weird to say out of the blue). Hence we need to establish independently that a, b, c and g involve arguments. But the verb meanings come to help here: a meal is what is cooked (a);