Focus projection, givenness, second occurrence focus
A more systematic look at focus projection (Selkirk 1996), givenness (Schwarzschild 1999), and second occurrence focus (Büring 2008).

Continuing the discussion from last time from where we left off, more or less. . .

1 Büring and second occurrence focus

(1) (Everyone already knew that Mary only eats vegetables.)
    If even PAUL$_F$ knew that Mary only eats vegetables$_F$, then he should have suggested a different restaurant.

The intuition Büring tries to work with here is that it seems like 2OF is somehow contained inside the primary focus. So, we work on "contained" and "inside."

(2) Domain theory of primacy
    Among two foci in a sentence, the primary focus is the focus whose domain contains the domain of the other.

Primary focus gets the main pitch accent.

The kind of default domain is the whole sentence. The usual kinds of focus (answer to a question, corrective contrast) would be foci whose domain is the whole sentence. The ones with smaller domains will be those that have a focus-sensitive operator (like *only*) acting on the focus.

(3) John only$_1$ eats TOFU$_{F1}$.

Maybe something like this: the focus gets "captured" and used by *only*, outside of which, as far as the rest of the sentence is concerned, there is no focus. So, the domain is more or less the place beyond which the effects of a focus don't reach.

(4) John [only$_1$ eats TOFU$_{F1}$].

Büring supposes that *all* foci need to be "interpreted" by some kind of operator. *Only* and *even* and other focus-sensitive items count as a way to interpret focus, but if there is no obvious one, then it is assumed that there is one at the top of the tree, attached to the sentence. Büring writes it in two pieces, $\sim$ and CONTEXTCONNECT: $\sim$ CC. This takes care of the "free" foci (those unassociated with any other focus-sensitive item). $\sim CC$ connects the focus to the domain to the context in the following way. (CC is CONTEXTCONNECT): There must be a salient antecedent in the context whose meaning is an element of the set of propositions introduced by $\sim$.

(5) a. Bill drinks Tang.

   b. JOHN drinks Tang (too).

(6) a. Bill drinks Tang.

   b. BILL drinks sangria (too).

(7) a. Lots of poeple drink lots of stuff.

   b. JOHN drinks TANG.

Now, we get this (1 contains 2, so 1 is primary, hence accent on first *faculty*).

(8) a. Out grad students only quote the faculty.

   b. No, [the FACulty$_1$ [only$_2$ quote the faculty$_{F2}$]]$\sim_1$ CC.

For this one, neither 1 nor 2 contain the other, but yet *John* must get the accent.

(9) a. Many people only drank juice at John's party.

   b. [[Even$_1$ JOHN$_{F1}$] [only$_2$ drank juice$_{F2}$ at his party]].

The reason for this is that it's the "cheapest" way to match up with the context. So, the one that associates with the $\sim$ is *John*. Then, it's contained, and gets the accent.

(10) a. Someone only drank juice at John's party.

   b.   # Even John only drank something/juice at his party.

(11) a. [[Even$_1$ JOHN$_{F1,3}$] [only$_2$ drank juice$_{F2}$ at his party]]$\sim_3$ CC

2   Prosody vs. syntax

Büring tries to make the case that it may not in fact be syntactic constituents that make the difference here, but rather prosodic constituents.

   Prosodic constituents?

   It came to my attention yesterday that it might not be so obvious what is being discussed in this later part of the paper, due to having never seen metrical structure before. I had a couple of notes about this in the homework statement, but let's take a look at it more directly. Again, this discussion mostly comes from Selkirk (1996).

   A sentence has a syntactic structure, which we're more or less familiar with. Constituents, etc., including the subject, the VP (containing the verb and the object). This is a hierarchical structure, with things inside other things.

   Prosody also seems to have a hierarchical structure, which is often similar to the syntactic structure, but not completely. The pronunciation of a sentence is broken up into

phrases (more or less like "phrasings" in music, for example). The names of these constituents are things like "feet," "major phrases," "intonational phrases." And the phonology is in some cases sensitive to whether things are contained within the same phrase, or at the boundary of phrases—there are a number of tests we can use to find where the phrase boundaries are. You can probably learn lots more about this in the Prosody course.

For now, let's consider this in terms of the "metrical grid." The metrical grid provides a way to find/describe where stress goes in a sentence. In *Volunteer firemen save lives*, we can detect several levels of stress, which we might describe in a kind of "graph" like this:

```
                                      x
              x                       x
  x           x           x           x
 Vol  un  teer    fire  men    save    lives
```

Generally, stress has a "rhythmic" quality—alternating strong and weak syllables. The pattern in *Volunteer firemen save lives* shows two levels of "weak-strong": *Volunteer fíremen* and *save líves* exhibiting one level, but then grouping those two, the whole *volunteer firemen* phrase is weaker than the whole *save lives* phrase. Things can be grouped into hierarchical prosodic constituents, in which the most prominent element is generally the one on the right (all else being equal—placement of a pitch accent can override the default rightmost placement).

```
                                      x
              (x                      x)
  (x           x    )      (x         x)
 Vol  un  teer    fire  men    save    lives
```

```
                      x
              x       x
  These eggs are   hard   boiled
```

```
                         x
          (x             x)
          (x       x)    (x)
  These are   hard   boiled   eggs
```

(12)   Green bamboo tables

3   Back to Büring

Büring proposes a number of constraints on focus realization:

(13)   FocusProminence
       if P is the domain of a focus sensitive operator O [i.e. focus-sensitive particles
       and $\sim$CC], the most prominent element in P is a focus of O.

(14)   Domain of a focus/an Operator
       P is the domain of a focus F and the domain of its operator O iff P is the biggest
       constituent containing F, but excluding O.

(15)   Stress-to-Accent-rule
       Assign a pitch accent to the strongest/nuclear stress and to every metrically strong
       syllable preceding it.

(16)   IP-head-right
       The head of the intonational phrase is the rightmost stress (at the next lower level)
       within IP.

(17)   Many people only drank water.

(18)   Even John only drank water.

The domain of *only* in (18) is the VP *only drank water*, and *water* has a F-mark.
So by FocusProminence, *water* needs to contain the strongest syllable in the domain.
Similarly, in *even John*, *John* has an F-mark and needs to contain the strongest syllable
in the domain. But if *John* is also a free focus (focus of $\sim$CC, which has a domain of the
whole sentence), then *John* also needs to be the most prominent element in the whole
sentence.

The pitch accent comes from the Stress-to-Accent-rule, which finds the strongest
stress and assigns a pitch accent to it, and to all preceding metrically strong syllables.
Though here, there are no preceding syllables.

(19)   Frederick the Great spoke French to his family, and...

(20)   [...German$_{F1}$ to his HORSES$_{F1}$]$\sim$ $_1$CC.

The location of the pitch accent is observably not optional, but is not determined by
FocusProminence and Stress-to-Accent, so we need one further constraint, which says
that the strongest is the rightmost.

Ineffability: What goes wrong here? (Why can't *Paris* be 2OF?)

(21)   What did John only eat in PARIS?

    a.   # John only ate crêpes in PARis.

    b.   # John only ate CRÊpes in Paris.

    c.   [John only$_1$ ate crêpes$_{F2}$ in Paris$_{F1}$]$\sim {}_2$CC

    d.   CRÊpes, John only eats in Paris.

The most prominent element of *only*'s domain is *Paris*? The most prominent element of ∼'s domain is *crêpes*? But we already know it's less prominent than *Paris*. Wait. (Conclusion: free focus must precede the whole domain of the associated focus.)

(22)   (She scrubbed the front steps, but) she only SWEPT the KITCHen.

Why is this ok? Why not as bad as *crêpes in Paris*? Check out the pause. Prosody. Not syntax.

References

Büring, Daniel. 2008. Been there, marked that: A theory of second-occurrence focus. Ms., UCLA.

Schwarzschild, Roger. 1999. GIVENness, AvoidF and other constraints on the placement of accent. *Natural Language Semantics* 7: 141–177.

Selkirk, Elisabeth. 1996. Sentence prosody: intonation, stress, and phrasing. In John A. Goldsmith (ed.) *The handbook of phonological theory*, 550–569. Cambridge, MA: Blackwell.