Homework #2 Due Thursday September 29

## **1** Elaboration

In the interests of getting this out to you, I have not gone back to completely convince myself that Büring (2008) doesn't have some mechanism for handling the accent pattern in (2b). I may well have missed it. So, if you find it, mention it. If I find it, maybe I'll post something about it on the blog, or at least mention it in class. But at least in my first pass at (2b), the principles here seemed to predict too many pitch accents.

For Thursday Sep 29. Take the sentences from Beaver et al. (2007) below:

- (1) a. Both Sid and his accomplices should have been named in this morning's court session.
  - b. But the defendant only named Sid in court today.
  - c. Even the state prosecutor only named Sid in court today.
- (2) a. I heard that John only gave  $[a \text{ book}]_F$  to Mary.
  - b. True, but John only gave [a book]<sub>SOF</sub> to [many people]<sub>F</sub>.

For sentences (1c) and (2b), mark the focus domains (using matching subscripts between operator and focus, use  $\sim CC$  for free foci as in the paper.) Determine where the stress should fall, and describe how the principles apply (FocusProminence, Stress-to-accent rule, IP-head-right). Also, since both sentences will have  $\sim CC$ , say what constraint this puts on the context (that is, what must already be inferable from the conversation so far).

Note: the idea here to mark the *focus domains*, but in (2b), there are already some brackets marking the focus and second occurrence focus. Those brackets are *not* the focus *domains*. Those brackets are telling you where the focus is within the domain, but the domains themselves are bigger than that. Read on for more discussion.

Let me try to systematize what we will have from Büring's (2008) paper.

**Point 1. Marking the focus domains—first step.** Before actually "marking the focus domains," what you really need to start with is identifying the operators. For each focus domain, there is an operator (and for each operator, there is a focus domain). The operators are *only*, *even*, and the  $\sim CC$  operator.

**Point 2. Marking the focus domains–identifying the domains.** This could be understood a couple of different ways, but Büring (2008) does provide a specific definition of the focus domains. It is as follows:

(3) DOMAIN OF A FOCUS/AN OPERATOR P is the domain of a focus F and domain of its operator O iff P is the biggest constituent containing F, but excluding O.

That's what you should be using to identify the focus domains. The focus domain is a constituent, and the focus domain plus its operator will also be a constituent. To give you a transparently applicable example, the two constituents I just referred to in the sentence *John eats only haddock* would be *haddock* and *only haddock*. The first of those is the focus domain as defined in (3). The second of those is a constituent that contains both the operator and the focus domain.

Let me say (3) in a slightly different way: Once you find the operator, the focus domain for that operator will be just a little bit smaller than the smallest constituent that contains the operator. Specifically, it is the constituent you get by leaving out the operator.

Just so you don't feel the need to be doing constituency tests, the relevant potential constituents are: for (1c): *the state prosecutor, named Sid, Sid, only named Sid,* and *even the state prosecutor.* For (2b): *John, gave a book to many people, a book, to many people, many people, and only gave a book to many people.* I didn't include the modifiers (*in court, today*) as part of these constituents, though some of Büring's (2008) examples might suggest he would have included them. It shouldn't make a difference.

Since I didn't ask you to analyze (1b), let me give as an example how this would work here:

(4) But the defendant only  $_{I}$  [d1 named Sid $_{FI}$ ] in court today.

So, *only* is an operator (which we have given the subscript "1"), and its domain is *named Sid* (assuming *only named Sid* is a constituent that contains the operator, *named Sid* is the biggest constituent inside there that doesn't contain the operator *only*). I annotated the domain by using a d and an index on the left bracket of the domain, and I marked the focus (within the domain) using an F and an index on the right bracket (or, here, on the word, since the brackets are kind of unnecessary if the focus is a single word).

There is no corrective contrast or question/answer focus here, so there is no  $\sim CC$  operator. On this, let me quote what Büring (2008) said on this (p. 7): "It seems plausible for the case of Q/A-focus as well as for correction and contrastive focus (i.e. all free foci)

that their domain should be the entire sentence. I represent this as [the  $\sim CC$  attached to the whole sentence]..."

I think perhaps a slightly more precise way to think about this is to think about what  $\sim CC$  does—it adds the requirement that its domain, when you replace the focus with x, is available (given) in the context for some x. So, you pretty much automatically get a  $\sim CC$  whenever the whole sentence is given but for something you could replace with x. For example,

- (5) a. The food last night was terrible.
  - b. Pat only ate salad.
  - c. In fact, even CHRIS only ate salad.

Here, the sentence in (5b) tells us that Pat only ate salad. When we get to (5c), this means that *x* only ate salad is true for some *x* (specifically, Pat), and that means that if we make *Chris* a free focus, then the context conditions for  $\sim CC$  are met. (Note: This is what I meant by "the constraint that  $\sim CC$  puts on the context" in the problem statement.) Therefore, we need to make *Chris* a free focus. Evidence that we have to do this when we can just comes from the fact that it would sound quite weird *not* to give *Chris* a pitch accent in (5c). So, we might notate this as follows (using the notation that I'll describe more later, and where "F13" means a focus with both 1 and 3 as its subscripts.)

(6)  $[_{d3} \text{ even}_{I} [ CHRIS_{FI3} ] \text{ only}_{2} [_{d2} \text{ ate salad}_{F2} ] ] \sim CC_{3}$ 

The example above is basically the form in which I am aiming to have your answers in (along with some short prose about how you came to your answer, based on Büring's (2008) principles).

**Point 3. Determining where stress should fall.** The idea here is to use the principles Büring (2008) outlined to predict where the stress and accents should fall. The relevant principles are:

- (7) FOCUSPROMINENCE
  If P is the domain of a focus sensitive operator O, the most prominent element in P is a focus of O.
- (8) PRIMARY FOCUS Among two foci in a sentence, the primary focus is the focus whose domain contains the domain of the other.
- (9) STRESS-TO-ACCENT-RULE Assign a pitch accent to the strongest/nuclear stress and to every metrically strong syllable preceding it.
- (10) IP-HEAD-RIGHT The head of the intonational phrase is the rightmost stress (at the next lower level) within IP.

After having found the operators and the focus domains, you can apply FOCUSPROMI-NENCE—the most prominent element in each domain you found is a focus of the operator (that is, it shares a subscript with the operator). In (4), this means that the most prominent element in *named Sid* is *Sid*. Note, though, that this is about *stress* and not about *pitch accent*.

(11) But the defendant only  $_{I}$  [ $_{d1}$  named **Sid**<sub>F1</sub> ] in court today.

Here, the determination of primary focus via PRIMARY FOCUS doesn't apply, since there is only one domain (and not two, one containing the other, which is the situation PRIMARY FOCUS is concerned with).

Moving on the STRESS-TO-ACCENT-RULE, we assign a pitch accent to the strongest stress, and to every metrically strong syllable preceding it. We have identified *Sid* in (11) as being the most prominent in its domain, and let's assume that this is stronger than whatever might have been the default location of stress in the absence of any operators.

Determining what the metrically strong syllables are is not something this paper prepared us to do, it's just something that is assumed to be determinable. Let me try this as a possible way of determining where the stresses are. Imagine yourself making a speech and banging on the podium for emphasis as you say the sentence below (our same sentence, but without *only*, as if uttered out of the blue).

(12) The deféndant named Síd in cóurt todáy.

I think the podium would be struck at the middle syllable of *defendant*, at *Sid*, *court*, and on the second syllable of *today*. So, suppose that those are automatically the strong syllables, the ones that get a kind of baseline level of stress.

When you add *only* and its associated focus on *Sid*, the result from FOCUSPROMI-NENCE in (11) was that *Sid* is the most prominent element in the domain of *only*. Let's assume that means essentially that we add some additional stress to *Sid*, making it the strongest stress.

Now, the STRESS-TO-ACCENT-RULE will pick out *Sid* for the pitch accent, as well as *fen* in *defendant*. Below I set the locations of pitch accent in caps. This is basically the style that you'd want to present the answers in.

(13) But the deFENdant only  $_{I}$  [d1 named **SID**<sub>FI</sub>] in court today.

**On to the actual sentences.** So, now, the idea is for you to do that same thing, but for the more complex cases of (1c) and (2b). Assume that in both cases, there *is* a contrastive focus—that is, there is a free focus, and there *will* be a  $\sim CC$  operator that needs to be associated with a focus. The domain of the  $\sim CC$  operator will be the whole sentence (as in Büring's (2008) examples), and that domain will properly contain any other focus domains, which means that—according to PRIMARY FOCUS—the focus of the bigger focus domain will trump that of the smaller ones contained within it, and may result in the focus of one of the smaller domains not being strong enough to receive the pitch accent via the STRESS-TO-ACCENT-RULE.

## References

- Beaver, David, Brady Zack Clark, Edward Flemming, T. Florian Jaeger & Maria Wolters. 2007. When semantics meets phonetics: Acoustical studies of second-occurrence focus. *Language* 83(2): 245–276.
- Büring, Daniel. 2008. Been there, marked that: A theory of second-occurrence focus. Ms., UCLA.