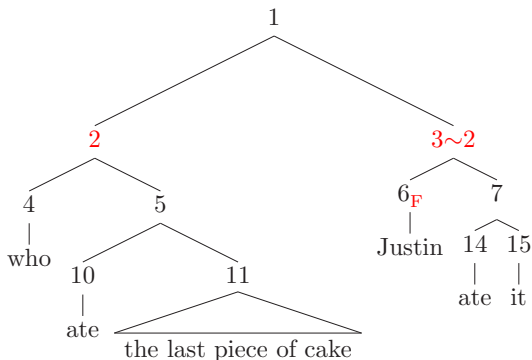


Representing Focus Scoping over New

Mats Rooth
Cornell University

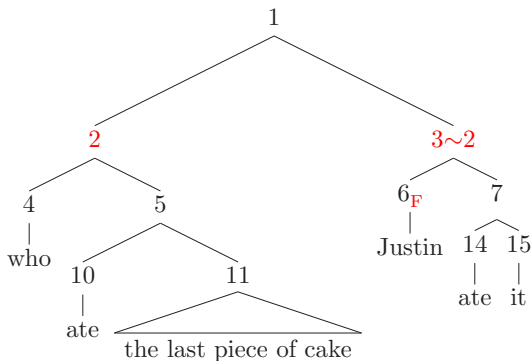
NELS 45
MIT
Oct. 31 – Nov. 2, 2014

Alternative semantics

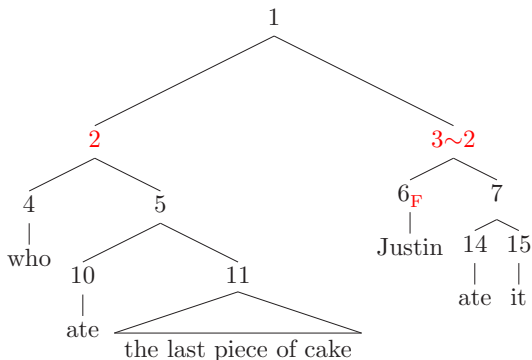


3 ~ 2 licensed by: **Justin ate the last piece of cake** being a proposition of the form **y ate the last piece of cake**.

~/F marks the locus, scope and antecedent for focus

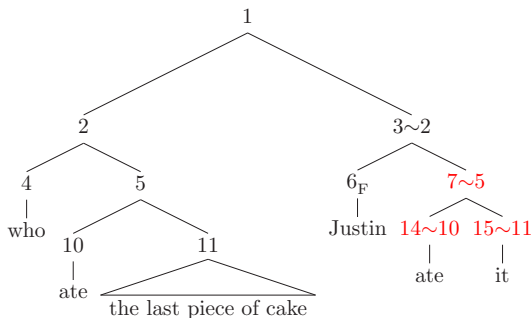


Entailment semantics/Givenness semantics



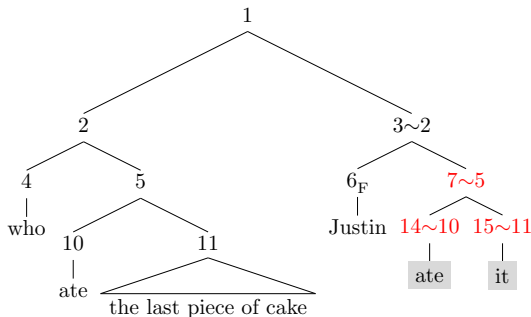
3 ~ 2 licensed by: **somebody ate the last piece of cake** entails **some entity ate the last piece of cake.**

~ not scoping over F



7 ~ 5 licensed by: **ate the last piece of cake** = ate the last piece of cake (alternative semantics) or somebody ate the last piece of cake entails some entity ate the last piece of cake (entailment semantics).

Phrases with \sim not scoping over F ...



... often surface as reduced/destressed. This is part of the focus system.

Alternative Focus vs. New according to Katz and Selkirk 2011

... for instance, they mostly store mines_F in Idaho.

[speech/katz/07aMPc12.wav](#)

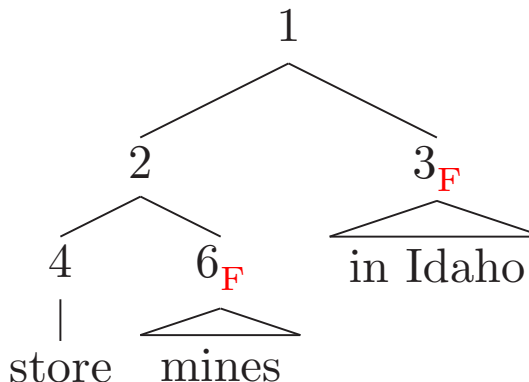
... for instance, they mostly store mines in Idaho_F.

[speech/katz/07bMPc21.wav](#)

Katz and Selkirk (2011): F gets realized differently than new, with greater pitch range and duration.

Data from Jonah Katz and Lisa Selkirk

Since all nodes are new ...



... projecting F is not distinguished.

Prosody of farmer sentences

[Canadian_F farmers]₁~2 admire [American_F farmers]₂~1.

Roberts 1996/2012

The two tokens of farmer sound different, with the first one prosodically subordinate to Canadian, but not reduced. So the first F is not alternative-focus at all.

Scott Hollis

That was Phil Woods on the alto_F saxophone.

Hope to see you again next_F Friday.

Focus and reduction in comparatives

[I_F dance the tango] better than
[you_F dance the tango]

As in former sentences:

[I_F dance the tango]_{2~3} better than
[you_F dance the tango]_{3~2}

With preceding antecedent ...

I'm an expert at [dancing tango]₁.

Hah! I bet [_F [_{VP} dance the tango]_{~1}] better than you!

[speech/tango/tango1.wav](#)

The gray part is reduced because it is redundant relative to the first VP, as expressed by _{~1}.

[speech/tango/tango1.wav](#)

Out of the blue ...

I should do the next part.

Why? [I_F [$_{VP}$ dance the tango] ~ 1] better than you!

speech/tango/tango1.wav

Without a preceding antecedent, destressing of VP *dance the tango* seems not to be licensed, even though focus on the main-clause subject is licensed.

default: speech/tango/tango1.wav

destressed: speech/tango/tango1.wav

Focus/new vs. Focus/given in Japanese

M. Sugahara (2003)

Dialogue FN: Word 1 = FOC, Word 2 = new

Experimenter: nani?
"What?"

Focus/new ~~scope~~
unclear

Speaker: *Tookyoo-ya Oosaka-no yoona hanzai-no tahatsusuru tóshi-dewanaku,*
Tokyo-and Osaka like high crime rate city-Not,

tian-no yóikotode sirareru, ano [YOKOHAMA-NO]_{wa1} T.
safety-Gen good known, that YOKOHAMA-GEN,

[yunyuu-daikooya-de]_{wa2} maneejaa-no
importing-agency-at manager-Gen

yuujin-ga moderu-ni mayaku-o uttarasiiyo.
friend-Nom model-to marijuana-Acc sold-I heard.

"I've heard that in an (office of) importing agency of YOKOHAMA, the city known to be safe unlike those cities like Osaka or Tokyo, which are notorious for their high crime rate, a friend of the manager (of that importing agency) sold marijuana to a model."

While it is Tokyo and Osaka that are known for crime, this week the manager of a [Yokohama_F [importing agency]] was arrested for selling marijuana to a model.

Recursive alternative semantics

Let h be the ordinary semantic operation for a node of the form $[\alpha\beta]$, e.g. leftward function application or rightward function application.

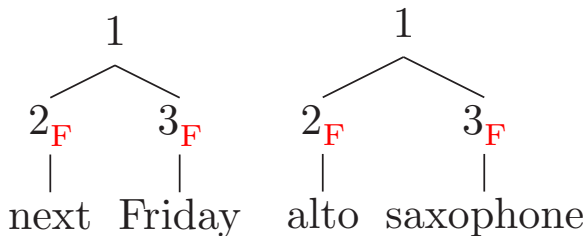
$$\llbracket[\alpha\beta]\rrbracket^f = \{h(a, b) \mid a \in \llbracket\alpha\rrbracket^f \wedge b \in \llbracket\beta\rrbracket^f\}$$

Hamblin 1973

Rooth 1985

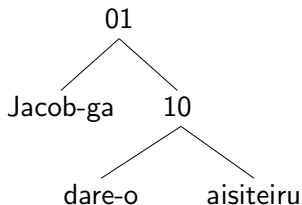
Alternatives project automatically, independent of syntactic features.

The problem again



The focus syntax doesn't express that the F on *next* projects while the F on *Friday* doesn't.

Local information-structural operators



Project alternatives only along a “spine” of 1’s.

These 1’s also have a phonological interpretation of relative prominence—a local Stress-F.

M. Rooth and H. Dong (application to in situ WH and second occurrence focus).

Semantic interpretation of information-structural operators

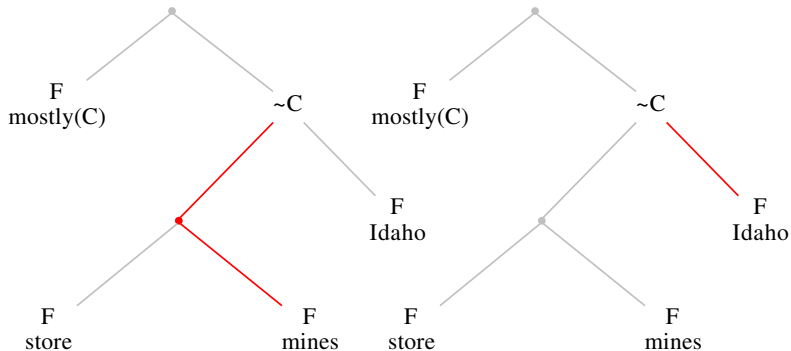
Let h be the ordinary semantic operation for a node of the form $[\pi_\sigma \alpha \beta]$, e.g. leftward function application or rightward function application.

$$\begin{aligned} \llbracket [_{10} \alpha \beta] \rrbracket^f &= \{h(a, \llbracket \beta \rrbracket^o) \mid a \in \llbracket \alpha \rrbracket^f\} \\ \llbracket [_{01} \alpha \beta] \rrbracket^f &= \{h(\llbracket \alpha \rrbracket^o, b) \mid b \in \llbracket \beta \rrbracket^f\} \\ \llbracket [_{11} \alpha \beta] \rrbracket^f &= \{h(a, b) \mid a \in \llbracket \alpha \rrbracket^f \wedge b \in \llbracket \beta \rrbracket^f\} \\ \llbracket [_{00} \alpha \beta] \rrbracket^f &= \{h(\llbracket \alpha \rrbracket^o, \llbracket \beta \rrbracket^o)\} \end{aligned}$$

$$\llbracket [\pi_\sigma \alpha \beta] \rrbracket^o = h(\llbracket \alpha \rrbracket^o, \llbracket \beta \rrbracket^o)$$

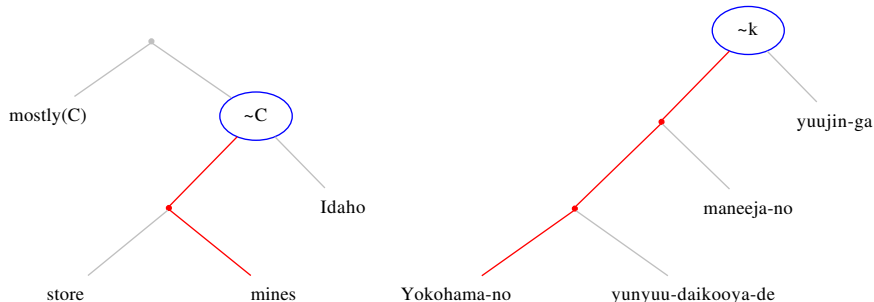
Difference from Hamblin: when branch is marked 0, ordinary semantic value is plugged in, instead of selecting an element from the alternative set.

Projecting F in all new

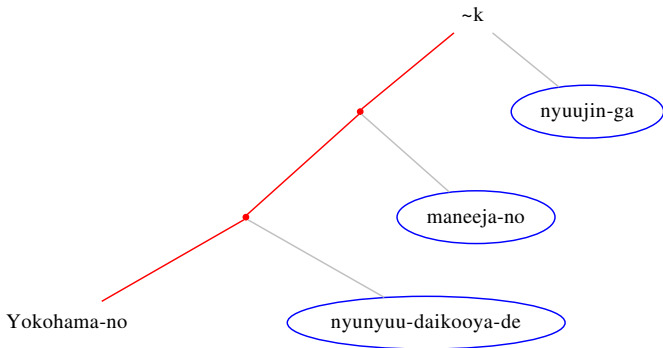


Each F projection path has an antecedent at the top,

$\sim k$

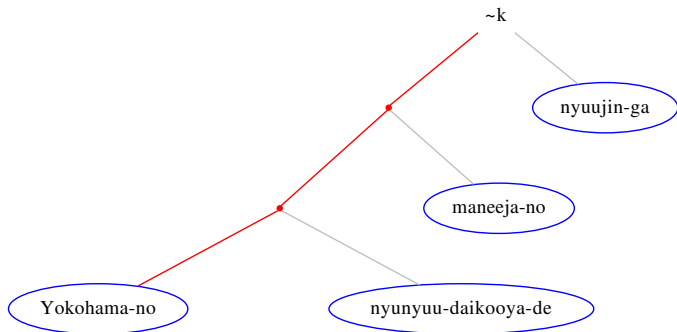


Remaining vertices are non-projecting F



Focus over new

Formally no F



... at the base of F-projection paths, or on novelty F.

Local stress F

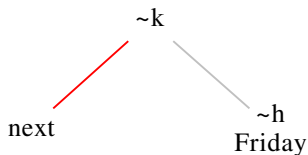
Given a vertex with children a, b where a is marked for F-projection and b is not, some grid column in the realization of a exceeds every grid column in the realization of b

Incremental improvement over standard stress F

Given a vertex with children a, b where a is marked for F-projection and b is not, some grid column in the realization of a exceeds every grid column in the realization of b . Let β be an F-marked phrase with scope ϕ . Then the strongest stress in the phonological realization of ϕ falls within the realization of β .

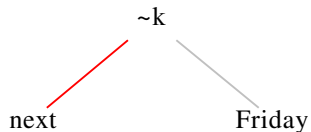
... because there's no global reference to F-marked phrase, the corresponding F scope, and their phonological realizations.

Both of these obey local stress F



x
x x
x x x
next Fri day

focus over given



x
x x
x x x
next Fri day

focus over new

Phrase F

X is bears \sim , or the realization of X dominates an accentual phrase.

*Accentual phrase

Lower-ranked *Accentual phrase provides pressure towards de-phrasing for $\sim k$.

Summary

1. $\sim k$ with an optional projection tail replaces the $\sim k/F$ grammar for focus.
2. Alternatives project only along projection paths, they don't project by default.
3. Licensing of $\sim k$ using alternative semantics or entailment semantics.
4. Anaphoric de-stressing is in the same system as projecting focus.
5. Phonology uses local Stress F, plus Phrase F and *Accentual phrase.