Focus

Lecture 1: Intonation, Focus, and F-marking

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OVA 2026 at Debreceni Egyetem

1 Intonation and interpretation

1.1 English

Overt morphology/syntax in English does not uniquely determine intonation: One and the same sentence can be produced with different intonation patterns.

Different intonation patterns seem to be associated with different interpretations.

Jackendoff 1972 talks about what he calls 'A and B accents' (following Bolinger 1958, who also postulates C accent):

(1)

(6.139)a. FRED doesn't write poetry in the garden.

b. FRED doesn't write poetry in the garden.

(Jackendoff 1972: p. 259)

B+A and A+B:

(2)

form *Who ate what?* and Speaker B is answering. For the first intonation pattern, A is asking person by person:

(6.145) A: Well, what about FRED? What did HE eat?
B: FRED ate the BEANS.

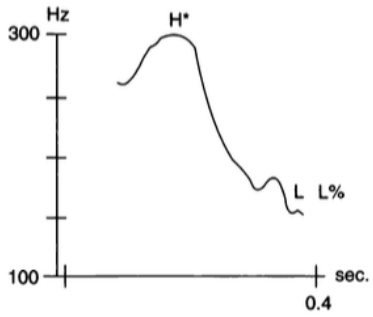
For the second pattern, A is asking by foods:

(6.146) A: Well, what about the BEANS? Who ate THEM?
B: FRED ate the BEANS.

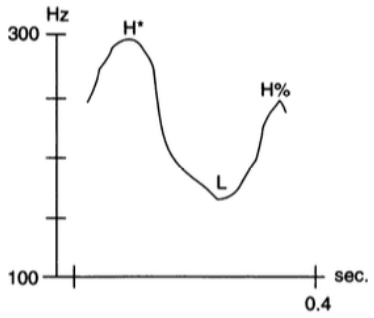
(Jackendoff 1972: p. 261)

Another set of examples from Kadmon 2001:

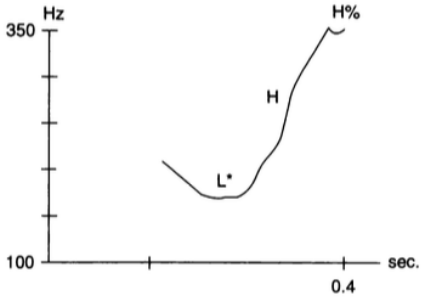
(3) a. Anna
H* L L%



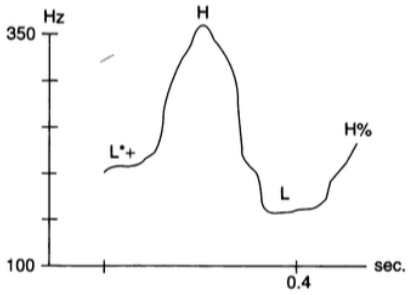
b. Anna
H* L H%



c. Anna
L* H H%



d. A nna
L*+H L H%



(Kadmon 2001: p. 233f)

- (3a) is typically used when the utterance is a (complete) answer to a question like *Who are you going to marry?*.
- (3b) is typically an incomplete answer to question, e.g. *Who shall we invite?*
- (3c) is a question intonation, meaning 'Is it (really) Anna?'.
- (3d) is used to express uncertainty.

1.2 Lexical accent vs. intonation

Intonation is a type of pitch fluctuation. It's often said that the best (though not the only) perceptual correlate of pitch is the fundamental frequency F0 (e.g., Beckman & Pierrehumbert 1986: §2.5; see also Beckman & Venditti 2011: §3.1).

Lexical accent also typically involves pitch fluctuation. NB: There are many terminological conventions in this domain, *accent*, *stress*, *tonality*, etc. (see, e.g., Ladd 1980, 2008, Büring 2016).

English is a stress accent language, where lexical accent is associated with a number of phonetic correlates: pitch, loudness, vowel length, vowel quality, etc.

Functional difference between lexical accent vs. intonation:

- Lexical accent distinguishes lexical items, e.g., *pérmit* vs. *permít*; *résearch* vs. *reséarch* (cf. their question intonations).
- Intonational meanings:
  - Statement vs. question

- Focus, topic, etc.
- New vs. given
- Politeness

  (4) How do I get to the Empire State Building?

  According to (Ladd 1980: §6.2), (4) with a falling intonation sounds 'abrupt', while (4) with a fall-rise intonation sounds more polite.
- Reference

  (5) a. John washed the car. I was afraid that someone ELSE would do it.
  b. John washed the car. I was aFRAID someone else would do it. (Akmajian & Jackendoff 1970: p. 124)

  (5a) means that I was afraid that someone who's not John would wash the car. (5b) means that I was afraid that someone who's not me would wash the car.
- Anger, surprise, frustration, etc. ('paralinguistic' messages; see Ladd 1980: Ch. V, Ladd 2008: §1.4.1 and references therein).

Some of these notions are not defined clearly. It's also unclear how many relevant categories there are.

1.3 Non-stress accent languages

1.3.1 Mandarin Chinese

- Tone language
- Four main tones
  1. high level tone
  2. mid-to-high rise
  3. low-to-extra-low fall (+rise) (+ creaky voice)
  4. high-to-low fall

  + neutral tone (qīngshēng)
- Intonation is independent form the lexical tones, e.g., statement vs. question intonation:

(6)

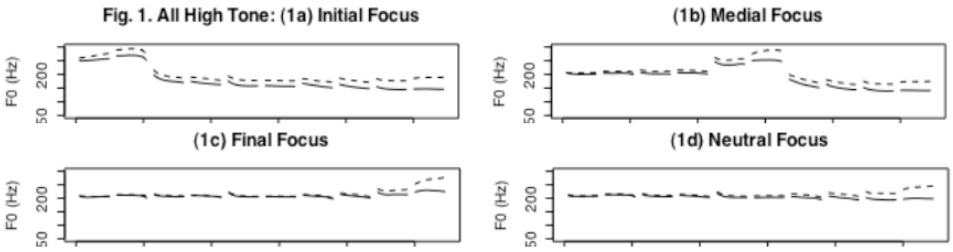
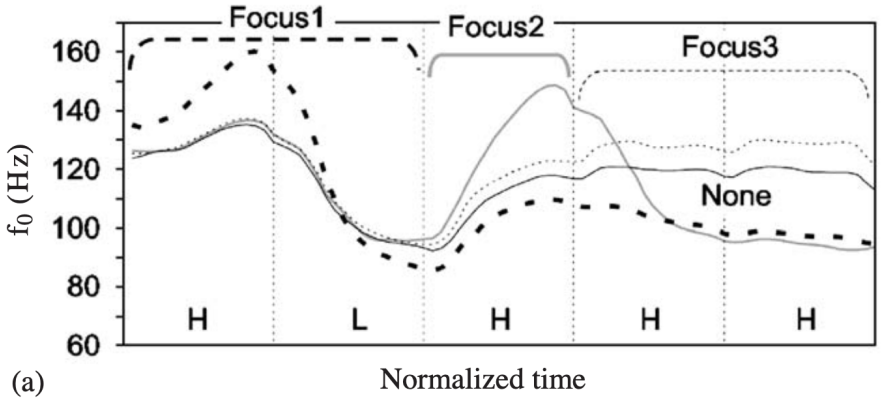


Figure 1: *Time normalized statement (——) vs. question (- - - -) with all High tones under initial, medial, final and neutral focus (ZhāngWēi dānxīn XiāoYīng kāichē fāyūn [ZhangWei worries that XiaoYing will get dizzy while driving]). F_0 contours in each plot were averaged across 40 repetitions by 8 subjects.*

(Liu, Surendran & Xu 2006: Fig. 1)

- Focus enhances the pitch range of the focussed syllable, and compresses that of the post focal syllables.

(7)



(Xu & Xu 2005: p. 163, based on Xu 1999)

1.3.2 *(Tokyo) Japanese*

- Pitch accent language
- Each mora (either a nucleus or a coda consonant) bears either a high tone (H) or a low tone (L).

(8) *a.me*
   a. HL 'rain'
   b. LH 'candy'

(9) *shi.bu.ya*
   a. LHH (place name)
   b. HLL (surname)

- Lexical accent is realized as a pitch fall over a HL sequence (rather than an H alone or L alone).
  - Each word may contain at most one accent (=HL sequence), and at most one LH sequence.
  - The first two morae of a word must bear different tones.
  - Some words 'have no accent', i.e., contain no HL sequence.

(10) a. *tampopo* (HLLL) 'dandelion'
b. *animeishon* (LHHLLL) 'animation'
c. *omiyamairi* (LHHHLL) 'shrine-visit'
d. *okonomiyaki* (LHHHHH) 'okonomiyaki (pancake)'

- A word can lose a lexical accent in a larger phrase:

(11)

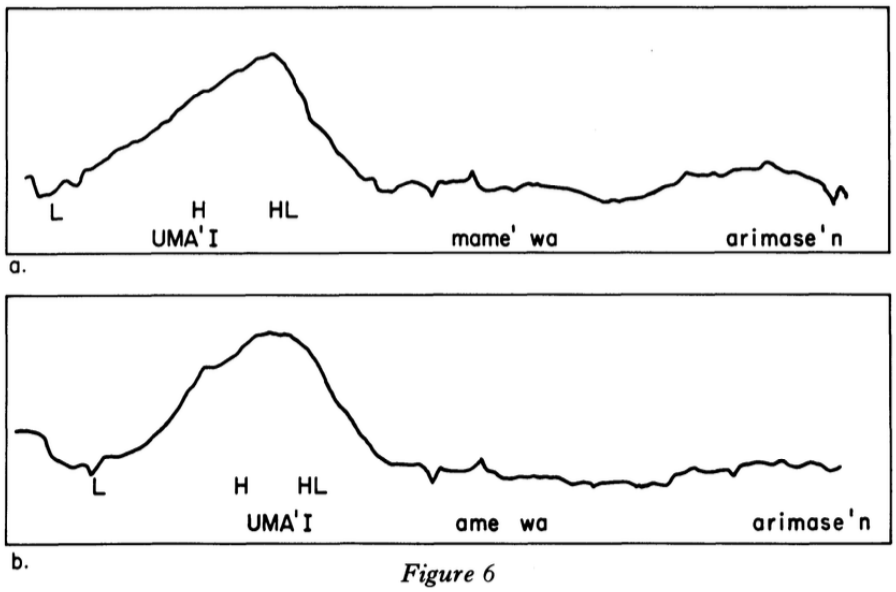


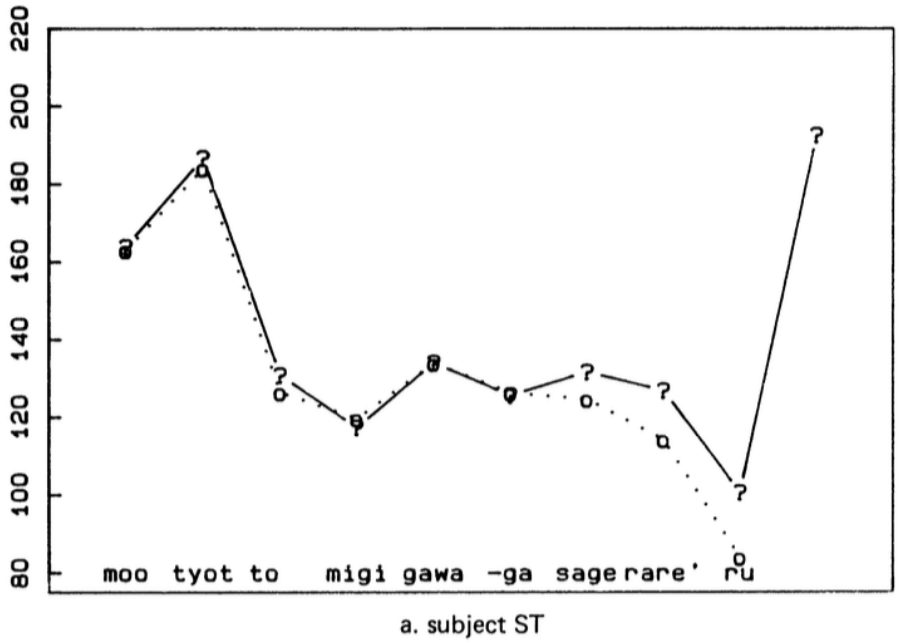
Figure 6

Utterances (a) *uma'i mame'-wa arimasen* and (b) *uma'i ame-wa arimasen*, with the nouns *mame'* or *ame* grouped together in the same accentual phrase with the preceding accented adjective *uma'i*. The tonal contours are identical because the grouping has deleted the lexical accent in *mame'* in (a).

(Beckman & Pierrehumbert 1986: p. 265)

- Intonation is independent of lexically specified tones, e.g., statement vs. question intonation.

(12)



(Beckman & Pierrehumbert 1986: p. 301)

An accented syllable in English can bear a high or low pitch, depending on the overall into-

nation, e.g., (3). There is no such variation in Mandarin Chinese and Japanese.

1.4 Other ways of expressing intonational meanings

Both intra- and cross-linguistically intonational meanings are often also expressed by word order and particles (potentially together with intonation).

- English uses auxiliary inversion + intonation for questions, and (optional) phrasal movement + intonation for topic and focus.
- Question particles in Mandarin Chinese, Japanese, Russian, Hungarian, etc.
- Pre-verbal position in Hungarian, Japanese, etc. often associated with focus/new.
- Focus particles, e.g., Bùlì (data from Assmann et al. 2023: p. 1356):

(13) A: Who ate a mango?
B: (ká) Àtìm **alè** dè mángó.
(FOC) Atim FOC ate mango
'Atim ate a mango.'

(14) A: What did Atim do?
B: wá dè **ká** mángó.
3SG ate FOC mango
'He ate a mango.' (or 'He ate a mango.')

(15) A: Why are you angry?
B: (ká) Àtìm **alè** dè n mangó.
(FOC) Atim FOC ate 1SG.POSS mango
'Atim ate my mango.'

- Italian puts answer foci to the right.[1]

(16) Gianni ha riso.
Gianni has laughed
'Gianni laughed.'

(17) Who laughed?
a. Ha riso GIANni.
has laughed Gianni
'GIANNI laughed.'
b. *GIANni ha riso

(adapted from Büring 2016: p. 190)

[1] Corrective foci can (though need not) be on the left (see Büring 2016: §8.1 and references therein).

(i) A: Chi di voi due ha rotto il vaso?
who of you two has broken the vase
'Who of you two broke the vase?'
B: MARIA ha rotto il vaso.
Maria has broken the vase
'Maria has broken the vase.' (Büring 2016: p. 197)

2 Focus

In this course, we are primarily interested in **focus**.

In English the following types of simple foci are marked by a **pitch accent**, which is typically realized as the intonational pattern described as H*L-L% in ToBI (Pierrehumbert 1980, Beckman & Pierrehumbert 1986).

- Answer foci

(18) A: What did Chomsky eat?
B: He ate sushi.

(19) A: Who ate sushi?
B: Chomsky ate sushi.

- Corrective foci

(20) A: Chomsky ate pasta.
B: No, he ate sushi.

(21) A: Mary ate sushi.
B: No, Chomsky ate sushi.

The A-sentence in each example above puts restrictions on where the focus can fall.

(22) A: Who ate sushi?
B: #Chomsky ate sushi.

(23) A: What did Chomsky eat?
B: #He ate sushi.

(24) A: Chomsky ate a hamburger.
B: #No, he ate sushi.

(25) A: Mary ate sushi.
B: #No, Chomsky ate sushi.

These cases are sometimes called **free focus**.

The same intonational pattern is used to indicate **association with focus**: Different focus placement results in different truth-conditions/presuppositions.

(26) a. He only ate sushi.
b. He only ate sushi.

(27) a. He even ate sushi.
b. He even ate sushi.

These sentences seem to have different truth-conditions/presuppositions with different foci (unlike the case of free foci).

Items like *only* and *even* are called **focus-sensitive particles**.

2.1 Narrow and broad focus

If the semantic scope of a focus is a single word (or below a word level), we say it's a *narrow focus* (descriptively).

The semantic scope can be broader:

(28) VP focus
A: What did Chomsky do then?
B: He [ate sushi].

Importantly, the pronunciation of (28B) is/can be the same as the following example with a narrow focus.

(29) Object focus
A: What did Chomsky eat?
B: He ate [sushi].

Compare this to the following, whose only available interpretation involves a narrow focus.

(30) a. [Chomsky] ate sushi.
b. Chomsky [ate] sushi.

A sentential focus may involve multiple pitch accents.

(31) Sentential focus
A: What happened?
B: [Chomsky ate sushi].

- The verb *ate* could be stressed but does not receive a pitch accent in (31B).
- The pitch accent on *su* is more prominent than that on *Chom*, as indicated by the double-underline.

A common approach to this involves layers of intonational phrasing (Autosegmental Metrical Theory):

(32)
```
[                  x   ]      (intonational phrase)
[                  x   ]      (intermediate phrase)
[  x     ] [       x   ]
[  x     ] [x  ] [ x   ]      (prosodic word)
 Chomsky    ate    sushi
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The additional layer of phrasing is called *phonological phrases* by Truckenbrodt 1995, 1999, 2006, 2007 and *major phrases* by Kratzer & Selkirk 2007 (who postulate *minor phrases* as well).

Note that different authors postulate different numbers of layers and also use different names.

In English, the 'head' of each level above the prosodic word tends to be the right most one, as in (32) (cf. the Nuclear Stress Rule of Chomsky & Halle 1968; also Halliday 1967, Jackendoff 1972).

This tendency is observed with all sorts of non-narrow foci.

(33) A: Who ate my sushi?
B1: [Chomsky] ate it.
B2: [My officemate] ate it.
B3: [The guy who's talking to Chomsky] ate it.

In other words, any deviation from this pattern tends to indicate narrow(er) focus.

But there are many cases where that is not the case.

- Function words like *something* and *it* tend to not receive a nuclear pitch accent, unlike content words.

(34) A: What's happening?
B: Chomsky's reading a book.

(35) A: What's happening?
B: Chomsky's reading something.

(36) A: What's the matter?
B: I hear something.

(37) A: What's the matter?
B: Do you hear it?

- Argument vs. adjunct

(38) A: What does he do now?
B1: He [teaches English].
B2: He [teaches in France].

But there are some cases where a focus on an adjunct is interpreted broadly:

(39) a. [My geranium plant] is almost dead.
b. She's just finished [a wonderful series of sketches].
(Kadmon 2001: p. 279)

- For intransitive sentences, something like unergative vs. unaccusative matters

(40) a. My mother is coming.
b. My mother is singing. (Kadmon 2001: p. 268f)

(41) a. Your mother called.
b. The pipes are rusty.
c. John is yodeling.
d. Her fans worry. (Büring 2016: p. 211)

But it's not so simple (cf. Hirsch & Wagner 2011).

(42) A: What happened?
B: My parents called.

(43) Why did the coach look so concerned?
a. A player tripped.
b. A player limped. (Hirsch & Wagner 2011)

(44) A: What happened after you took the medication?
B: A rash faded. (Hirsch & Wagner 2011)

(45) What happened?
a. The prisoners have escaped!
b. #*Ev*erybody has escaped!
c. #Every *pri*soner has escaped! (Büring 2016: p. 211)

- Other puzzling cases:

(46) a. I have a point to emphasize.
b. I have a point to make. (Bolinger 1972: p. 633)

(47) a. Some burglars broke into my shop last night.
b. Some burglars broke into my shop last night. (Bolinger 1972: p. 639)

- 'Given' elements do not receive a nuclear pitch accent, although it's often not clear what counts as given.

(48) A: Has John read Slaughterhouse-Five?
B: No, John doesn't read books. (Ladd 1980: §4.3)

But:

(49) A: Why don't you go and give her a compliment?
B: Sorry, I can't. I don't give compliments. It's a strict policy.
(Kadmon 2001: p. 281)

(50) A: Maybe we ought to call your parents and tell them.
B: My parents called. They already know. (Ladd 1980: §4.4)

(51) (Context: We're at the school of music. It's part of your general knowledge that my mother is a well-known singer. People seem to be moving towards the auditorium.)
A: What's happening?
B: My mother is singing. (Kadmon 2001: p. 270)

(52) A: The opposition wants to impeach the president.
B: I hate politics. (Büring 2016: p. 18)

(53) (Seeing someone's new pack of cigarettes)
I thought you quit smoking. (Büring 2016: p. 18)

(54) a. I found a fly in my soup.
b. I found a piccolo in my mailbox. (Ladd 1980: §4.4)

(55) a. This is the doctor I was telling you about.
b. This is the doctor I was telling you about.
(Ladd 1980: §4.4, attributed to Schmerling 1976)

According to Schmerling 1976, (55b) is more normal in the context of a hospital or medical convention (where *doctor* is contextually given).

In the same section, Ladd 1980 discusses the following example:

(56) A: What's his dissertation about?
B: Something to do with language acquisition.

Linguists tend to focus *acquisition*; non-linguists tend to focus *language* (whcih is a normal compound accent in English).

2.2 F-marking

There are many theories of nuclear pitch accent assignment (see Kadmon 2001, Truckenbrodt 2006, 2007, Ladd 2008, Selkirk 2011, Büring 2016 for overviews).

We certainly do not have a perfect theory of intonation mapping yet, but it is widely accepted that syntax, in addition to morphophonology and context, matters for intonation.

There are also a lot of cross-linguistic work as well.

(57) a. It's [the shoes he wears].
b. Sono [le scarpe che porta].
are [the shoes that wears]
'It's the shoes he wears.'
(Kadmon 2001: p. 274, attributed to Ladd 1990)

We will not be concerned with theories of the syntax-intonation mapping in this course, but we make some theoretical assumptions:

- Following Jackendoff 1972, we assume that syntax introduces F-marking on a constituent that is in focus.
- F-marking has consequences at PF, as well as at LF.

F-marking arguably deviates from the Minimalist ideal, but as long as we assume the architecture of grammar where Syntax sits between Phonology and Semantics, it seems necessary.

2.3 'Anti-pied piping'

Some languages mark focus with a focus particle and/or focus movement.

(58) Hanako-wa hon-**mo** kat-ta.
Hanako-TOP book-also buy-PAST
'Hanako also bought [a book]$_F$.'
(Japanese; Branan & Erlewine 2023: p. 604)

(59) A házigazda [Katinak]$_F$ mutatta be Jánost ____.
the host Kati.DAT show VM János.ACC
'The host introduced János [to Kati]$_F$.'
(Hungarian; Branan & Erlewine 2023: p. 603)

These can trigger 'pied-piping' in the sense that the target of suffixation/movement can be larger than the semantic focus.

(60) Hanako-wa [[hon]$_F$-o kai]-**mo** shi-ta.
Hanako-TOP book-ACC buy]-also do-PAST
'Hanako also bought [books]$_F$ (in addition to pens).' (Japanese)

(61) Anna [a [használt]$_F$ autót] adta el. ____
Anna the used car.ACC sold VM
'It's the [used]$_F$ car that Anna sold (not the new one).'
(Hungarian; Branan & Erlewine 2023: p. 604)

Furthermore, the target of suffixation/movement can be smaller than the semantic focus, which Branan & Erlewine 2023 call *anti-pied-piping*.

(62) Kaze-ga fui-tei-ta. sorekara [ame-**mo** furi hajime-ta]$_F$.
wind-NOM blow-PROG-PAST. then rain-**also** fall-NML begin-PAST
'The wind was blowing. Then it started to rain.' (Japanese)

(63) Péter [a Hamletet] [olvasta fel ____ a kertben]$_F$, nem pedig [úszott]$_F$.
Péter the Hamlet.ACC read VM the garden.INE not rather swim

'Peter read Hamlet in the garden, rather than swim.'
(Hungarian; Branan & Erlewine 2023: p. 605)

Idioms:

(64) Taro-wa [michi-kusa] -**mo** kut-ta.
Taro-TOP road-grass -also ate
'Taro also [loitered on the way]$_F$.'
(Japanese; Branan & Erlewine 2023: p. 627, attributed to Ohno 2003)

(65) Nem [a lóbőt] húzza ____, hanem keményen dolgozik.
not the horsehide.ACC scrapes but hard works
'He's not [sleeping]$_F$, but is working hard.'
(Hungarian; Branan & Erlewine 2023: p. 628, attributed to Kenesei 1998)

Branan & Erlewine 2023 report such cases of anti-piped-piping in many languages from different language families.

(66) Tā liàn [tòufa] dōu bù shū ____.
3SG even hair DOU NEG comb
a. 'He doesn't even comb [his hair]$_F$.'
b. 'He doesn't even [comb his hair]$_F$.'
(Mandarin Chinese; Branan & Erlewine 2023: p. 616)

(67) C'est [maman] qui ____ me bat.
it=is mom who 1SG hit
'[Mom's hitting me]$_F$.' (French; Branan & Erlewine 2023: p. 616)

To account for anti-pied piping, Branan & Erlewine 2023 propose that association with focus universally involves two ingredients, an operator (which is interpreted) and a particle (which is not interpreted).

- An overt particle in Japanese may appear within an F-marked constituent.
- Hungarian has a covert particle that triggers focus movement. It also can appear within an F-marked constituent.
- Pre-VP *only* is an overt operator; Pre-DP *only* is an overt particle.

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