

Resolving Focus

0. Introduction: Desiderata for a theory of Focus and accentuation

Association with Focus:

- (1) A₁: John only introduced Sue to BILL.
A₂: John only introduced SUE to Bill.
Both might carry the same prosodic contour, e.g.: L+H* L L%
The difference is a question of **accentuation**.

Question/Answer Congruence:

- (2) A₁: She ate the PASTA.
A₂: She ATE the pasta.
- (3) What did Karen eat?
A₁: She ate the PASTA.
A₂: #She ATE the pasta.
- (4) What did Karen do with the pasta?
A₁: #She ate the PASTA.
A₂: She ATE the pasta.

Q/A congruence in association with focus:

- (12) Who did John introduce to Bill?
A₁: #John only introduced Sue to BILL.
A₂: John only introduced SUE to Bill.

Deaccentuation:

- (6) John drove Mary's red convertible. What did he drive before that?
A: he drove her [BLUE]_F convertible. Schwarzschild (1999)
- (7) a) John called Steve a Republican, and then he INSULTED him.
b) John called Steve a Republican, and then HE insulted HIM. (Lakoff)

Problem for Schwarzschild (1999), as noted by Kadmon (2000):

- (8) Who borrowed the book that Max had purchased?
(9a) MAX borrowed it
(9b) Max BORROWED it.
Kadmon:
(10) I'll answer your question: Max borrowed it.
(11) Ah, wait, but you know how Max really got this book? Max borrowed it.

- (12) A₁: She PRAISED him.
A₂: She praised HIM.
- (13) What did John_i's mother do?
A₁: She PRAISED him_i.
- (14) Who did John_i's mother praise?
A₂: She praised HIM_i.
A₁: #She PRAISED him_i.

Alternative felicitous nuclear accents:

- (15) John's mother saw Bill.
And then what happened?
(a) She saw HER mother.
(b) She saw her MOTHER.

Deaccentuation interacts with Association with Focus:

- (16) A: John's aunt Mary is wealthy and has lots of cars, so she often lets him drive one. Now that he's turned 21, sometimes John drives Mary's mini and other times he drives her red convertible.
B: What did he drive before?
A: He only drove her BLUE convertible.
Focus on *blue*:
 only (John drove Mary's x-colored convertible)
 (John drove Mary's blue convertible)
Focus on *her blue convertible*:
 only (John drove Mary's vehicle)
 (John drove Mary's blue convertible)

Pragmatic Expectability:

- (17) Q: What's on the Ed Sullivan show tonight?
A: Pavarotti's singing. (Kadmon 2000)
 PA* LL%

Pre-nuclear accents:

- (18) *Mary wrote a book about bats.* (Selkirk 1996)
 a) H* LL%
 b) H* !H* !H* LL%
- (19) [Sign on the London Underground:] Dogs must be carried.
 a) Dogs must be carried.
 b) Dogs must be carried. (Halliday 1967)

The deaccenting hypothesis:

“A neutral sentence. . . would be one in which *all* words, or at least all content words, carry an accent, and a non-neutral or marked sentence would be one in which one or more words have been deaccented. Putting it another way we can

say that the neutral sentence makes no assumptions about what can be played down because the hearer is supposed to know it already.” Bolinger (1986:100); crediting Bing (1979)

Embedded contrastive foci:

- (20) An AMERICAN farmer was talking to a CANADIAN farmer.
- (21) An AMERICAN farmer was talking to a CANADIAN farmer about the price of CORN.
- (22) Q: What do your friends like? (Féry & Samek-Lodovici)
 A: Ramon likes [CUBAN_f]_f and Malte prefers [ARGENTINIAN_f music]_f.

1. Background: Basic notions and terms

Utterance: an ordered pair: <<Text,Tune,Association>,Context>, where
Text is some string of words under a hierarchical syntactic analysis,
Tune is a prosodic contour with its own hierarchical structure, and
Association maps all elements in the Tune to elements in the Text; and
Context is an organization of information containing (at least):
 the interlocutors’ **Common Ground** (CG), a set of propositions to whose truth they are committed, and
 an ordered set of **Questions under Discussion** (QUD), where a question is a set of propositions—the possible answers to the question, with logical constraints on both the relations between the questions in the QUD and their relations to the CG.
 (See Bar-Hillel 1971; Roberts 1996, 2004)

1.1. Background: Prosodic Accentuation

- (23) **The Grammar of Tunes:** See (Pierrehumbert 1980, Beckman & Ayers 1994)
 Pitch Accent (PA) ∈ {H*, L*, H+L*, L*+H, L+H*, !H*}
 Intermediate Phrase(ip): PA* T where T ∈ {H, L}
 Intonation Phrase (IP): ip* T% where T ∈ {H, L}
 Tune: IP* *: Kleene star

Texts are syntactic structures generated by a standard grammar (Phrase Structure, categorial, LFG, whatever), with associated lexical items.

- (24) **English Tune-to-Text Alignment**
 - (a) Align ips, IPs to constituents. See Steedman (2000).
 - (b) ACCENTUATION: Freely align pitch accents (within an ip) with words (within the corresponding syntactic constituent).
 - (c) PROSODIC PROMINENCE CONSTRAINT: The rightmost pitch accent in an IP (*nuclear accent*) must receive the strongest stress in that prosodic constituent. This will be perceived as the prosodic peak of prominence in the IP.

- (12) A₁: She PRAISED him.
 A₂: She praised HIM.

She praised him.	She praised him.	She praised him..
H* LL%	H* LL%	L* HH%

I do not address the interpretive reflexes of phenomena like:

- phrasing. the alignment of phrases in the tune to constituents in the text. See Bing, Selkirk, Steedman.
- choice of tune. Includes choice of accent, phrase accent, and boundary tone. Bolinger (1986), Ladd (1980), Ward & Hirschberg (1985,1988), Pierrehumbert & Hirschberg (1990), Hirschberg & Ward (1995), Ladd (1999), Steedman (2000)
- pitch range. (cf. Japanese use to mark focus. Beckman 1996)
- stress and rhythm. Selkirk (1984); cf. so-called *Second Occurrence Focus*.

1.2. Background: An Alternative Pragmatics

- (25) **RELEVANCE** (Roberts 1996)

An utterance is RELEVANT in the context of utterance just in case it addresses the question under discussion in that context.

An utterance *u* addresses a question *q*, iff *u* either contextually entails a partial answer to *q* (*u* is an assertion) or is part of a strategy to answer *q* (*u* is a sub-question of *q* or an imperative whose realization would help to answer *q*).

The QUD at any given time: the set of maximally salient alternatives. N.B.: Not always made explicit via an interrogative utterance.

1.3. Background: Saliency

Intentions direct attention.

Goals and commitments involve firm intentions, so our goals and commitments direct our attention.

RELEVANCE requires that interlocutors always address the QUD, hence this entails an intention on the part of cooperative interlocutors to do so. Thus the QUD itself will be foremost among those entities being attended to.

So the QUD, a set of propositions, will always be maximally salient, and in fact more salient than any other alternative set of the same type.

Terken & Hirschberg (1994): Recency of mention doesn't suffice to trigger de-accenting:

Our findings show that simple GIVENness, operationally defined as mere mention of an item in the immediate context, is not a sufficient condition for deaccentuation. Instead, additional factors, the persistence of surface position and the persistence of grammatical function from the context to the current utterance, play an important role. If an expression has the same grammatical role and surface position as its antecedent expression in the immediate context ("persistence of grammatical function and surface position"), it is likely to be deaccented. If an expression has a different grammatical function than the antecedent expression but occupies the same surface position ("persistence of surface position"), it is also likely to be deaccented, but less likely than in the former condition; in addition, the results suggest that speakers may employ different strategies

in this situation. If there is a change in both grammatical function and surface position from one utterance to the next, a GIVEN expression is in fact likely to be accented – as likely as a NEW expression. (p.140)

Dahan, Tanenhaus & Chambers (2002); Venditti & Hirshberg (2003): evidence that even relevance to the QUD and maximal recency don't suffice to license de-accentuation.

- (26) Put the candle above the necklace.
Now put the CANDLE above the square.
- (26') Now [put the CANDLE above the SQUARE]~.

Wagner (2006):

- (27) John's aunt, who is incredibly rich and owns a bicycle factory came to his wedding. I wonder what she brought as a present.
- a. Guess what: She brought a used BICYCLE.
 - b. Guess what: She brought a USED bicycle.
- (28)
- a. Guess what: She brought a brand new BICYCLE.
 - b. Guess what: #She brought a BRAND NEW bicycle.
- (29) **Salience:** An entity is salient at a given point in a discourse context to the degree that it is evident to anyone paying attention to that context.
- RELEVANCE to the current purposes of the interlocutors, including the QUD, is an absolute constraint on maximal salience.
 - Surface similarities in immediately preceding utterance may also prime salience, including parallelism in surface order and grammatical relations.

2. The Semantics and Pragmatics of Accentuation: an explication of Focus

- (30) a **Prosodic Focus** of an utterance u : a syntactic entity, a sub-constituent of Text_u which under Association_u contains the prosodic peak of prominence within its associated ip in Tune_u . It conventionally presupposes an antecedent alternative set, though it does not by itself indicate the type of the alternative set; i.e., it triggers a radically underspecified presupposition.
This corresponds roughly with Rooth's maximal F-marked constituent.
- (31) a **Pragmatic Focal Domain** of an utterance u : a sub-constituent of Text_u whose denotation (an individual, property, proposition, etc.) is a member of a non-singleton set of maximally salient alternatives in Context_u .
This corresponds with the constituent which marks the scope of F in Rooth's theory, the constituent marked with his \sim operator. It is the denotation of the pragmatic Focal Domain that is at play in Association with Focus.

(32) **The Pragmatic Presupposition of Prosodic Focus:** Prosodic Focus is anaphoric, presupposing an antecedent which serves as the focal alternative set for some containing Pragmatic Focal Domain.

(33) **The Focus Felicity Constraint:** (follows from the above)
A Pragmatic Focus must contain a Prosodic Focus, and a Prosodic Focus must be a sub-constituent of a Pragmatic Focus.

Cf. Schwarzschild's (1999) FOC, Féry & Samek-Lodovici's (2006) STRESS-FOCUS (SF)

(8) Who borrowed the book that Max had purchased?

(9a) [MAX_F borrowed it]~c

antecedent for *c*: Set of salient (hence Relevant) propositions of the form
x borrowed the book, x an individual..

This is the actual QUD (8). The utterance is hence congruent with that maximally salient question, and hence is felicitous.

(9b) [Max BORROWED_F it]~c

antecedent for *c*: Set of salient (hence Relevant) propositions of the form
Max R-ed the book, R a relation between individuals.

This addresses a question whose answer is presupposed by the actual QUD (8). Hence, it calls that presumption into question, and here gives an alternative answer. It is a legitimate move because it effectively rejects the actual question posed, due to its failed presupposition.

(18) *Mary wrote a book about bats.* (Selkirk 1996)

a) H* LL%

b) H* !H* !H* LL%

possible prosodic foci, pragmatic focal domains:

bats

book about bats

a book about bats

wrote a book about bats

Mary wrote a book about bats

(18') [[Mary wrote a book about bats]_F]~c

antecedent of *c*: The set of all propositions, the Big Question

(34) **Salience Presupposition of Deaccentuation:**

If a contentful constituent bears no accent, then its denotation is presupposed to be maximally salient.

cf. Schwarzschild/Féry & S-L's GIVEN, Kadmon's EXPECTED

don't need Wagner's Relative Givenness, because that is captured by the focal presuppositions

(35) **Novelty Implicature of Accentuation** (Quantity 2, cancelable):

If a constituent bears an accent, then its denotation is not maximally salient.

cf. Schwarzschild's AVOIDFOCUS Féry & Samek-Lodovici's Destress Given (DG)

This is cancelable, needn't be ordered relative to other principles. But get the effect of ordering stipulated by F & S-L: SF >> DG.

(18'') [Mary wrote a book about [bats]_F]~c
 antecedent of c: The set of all salient propositions of the form *Mary wrote a book about x, x an entity*

(21)
 [[A CANADIAN_F farmer]~c was talking to [an AMERICAN_F farmer]~c' about the price of corn]_F~c''
 pa (pa) (pa) pa pa pa

(36) **Principle of Full Focal Interpretation:** All constituents within an utterance must fall within a Pragmatic Focal Domain.
 Effectively contradicts Rooth's Closure Condition on Focus interpretation, in (37).

(37) Rooth's Closure Condition on Focus Interpretation: $\|\phi \sim \nu\|^f = \{\|\phi\|^o\}$

(38) John only saw [MARC]_F

(39) A: Who did John see at the conference?

B₁: He saw [MARC]_F at the conference and in fact, he didn't see anyone else there.

B₂: He saw [MARC]_F at the conference and that was the first and only time he ever saw Marc.

B₃: He only saw [MARC]_F at the conference.

B₄: He only saw Marc [at the CONFERENCE]_F.

"The crucial fact is that the answer in B₄ is anomalous and it is the focus that causes this since the semantically equivalent answer in B₂ is fine. The reason is that the focus anaphor evoked by B₄ is not licensed in the discourse. The fact that *only* associates with this focus seems to have no effect on the pragmatic force of the focus."
 Von Stechow (1989), Roberts 1996, 1998

(40) now follows from (36):

(40) **Prosodic Presupposition of Relevance in an utterance β:** (Roberts 1996)
 β is prosodically congruent to the question under discussion at the time of its utterance.

(41) Move β is **prosodically congruent** to a question ?α iff β has a prosodic Focus which denotes a member of the set of Q-alternatives determined by ?α.
 [cf. von Stechow (1989), Roberts 1996, 1998]

(6) He drove Mary's BLUE convertible.
blue
blue convertible
Mary's blue convertible
drove Mary's blue convertible
He drove Mary's BLUE convertible

- (16') John only [drove her BLUE_F convertible]~c.
 Prosodic Focus: *blue*, with antecedent *c*
 Antecedent for *c*: set of salient (hence Relevant) properties describable by *drove her P convertible*, *P* a set of properties suitably contrastive with *blue*.
 Incorrectly presupposes that the set of John's aunt's convertibles is maximally salient. It is a superset, the set of all her cars, which is maximally salient.
- (16'') John only [drove [her BLUE convertible]_F]~c
 Prosodic Focus: *her blue convertible*, with antecedent *c*
 Alternative set for *c*: set of salient (hence Relevant) properties of the form *drove x*.
 Deaccentuation of *convertible*, while felicitous, doesn't play a role in delimiting the alternative set.
- (16''') John only drove [her BLUE convertible]_F
 [He only [drove [her BLUE convertible]_F]~c]~c'
 Antecedent for *c'*: the set of salient propositions of the form *he drove x*.
 In the context, this will be the QUD, a partitioning of the CG of the Context on the basis of the maximal set of Mary's cars that John drove in the era in question.
 Only one Prosodic Focus, as above, but two Focal Domains, two antecedents, *c* and *c'*, of two different types (a set of properties, and a set of propositions).

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Scorecard: Theories of Accentuation:

	Rooth ¹ (1996)	Schwarzschild (1999)	Kadmon (2000)	Féry & Samek -Lodovici (2006)	Roberts (2008)
Properties:					
+F projection in syntax	Yes	No	no	no	No
Accent Focus	Yes	Yes FOC	yes Exp ↔ ¬acc	yes SF	yes Focus Congruence
De-accenting	No	Yes GIVEN	yes EXPECTABLE	yes GIVEN	Yes SALIENCE
Predictions:					
Q/A congruence	#	#	√	#	√
Pre-nuclear accents	#	#	√	#	√
Embedded contrastive foci	√	#	#	√	√
Association with focus	#	#	#	#	√
Pronoun accent unaccented:	N/A	√	#	√	√
rhematic:	N/A	√	√	√	√
contrastive:	√	#	√	#	√
Pragmatic expectability	N/A	# ?	√	# ?	√

¹Rooth does not aim to account for accentuation in general, but only for how accentuation plays a role in indicating focus. Hence, it isn't really fair to judge him on the criteria marked N/A. In fact, his theory doesn't predict Givenness de-accentuation.