ELLIPSIS LICENSING BEYOND SYNTAX:

INTERPLAY BETWEEN SYNTAX-SEMANTICS-PROSODY

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1. Introduction

Ellipsis

o   a sentence shortening device: part of a clause not pronounced

(1) Lisa likes ellipsis, but her students don't   *like ellipsis.*

o   ellipsis is an **interface** phenomenon:

- affected by pronunciation (the lack thereof)
- constrained by discourse/semantic identity (antecedency)
- constrained by morpho-syntax

licensing: in which syntactic environments can ellipsis occur?
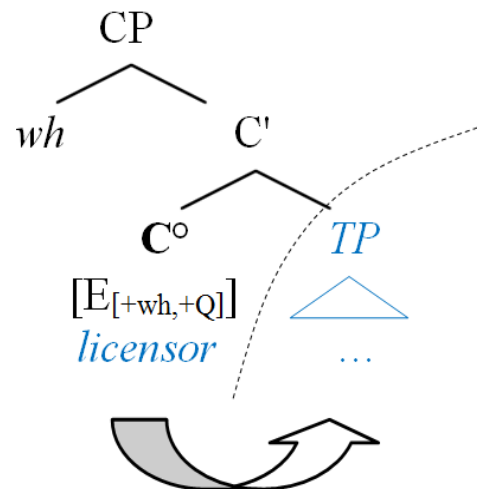
Ellipsis licensing: **sluicing**

(2) Someone stole my car, but I don't know who [_].

(3) * Someone stole my car, but I don't know the person who [_].

(van Riemsdijk 1987)

Difference due to lexical syntactic properties of licensor

(Merchant 2001, van Craenenbroeck & Lipták 2006, Aelbrecht 2010, but see Thoms 2010)

Ellipsis licensing: **sluicing**

(4)   Kòfí ná yró mè   ɖé ámón má   *nyón* [DP mè   ɖě wè [TP —]]
Kòfi FUT call person IND but   1SG-NEG know   person REL FOC
'Kofi will call someone but I don't know who.'

(*Gungbe*, Aboh & Lipták 2013)

(5)   Az   lopta   el   az   autót,   'aki   [TP _].
that   stole   pv   the   car.Acc   REL.who
lit. 'That (person) stole the car, who (did).'   (Hungarian, Lipták 2015)

o Sluicing in relative clauses is allowed.
o Its availability depends on the correct accentuation.

Ellipsis & Prosody

o Remnants of ellipsis must be assigned pitch accent.

(Hartmann 2000, Féry and Hartmann 2005, Winkler 2005)

(6) Only the ASSISTANT manager can talk to the MANAGER and the
MANAGER to the GENERAL manager. (Winkler 2005)
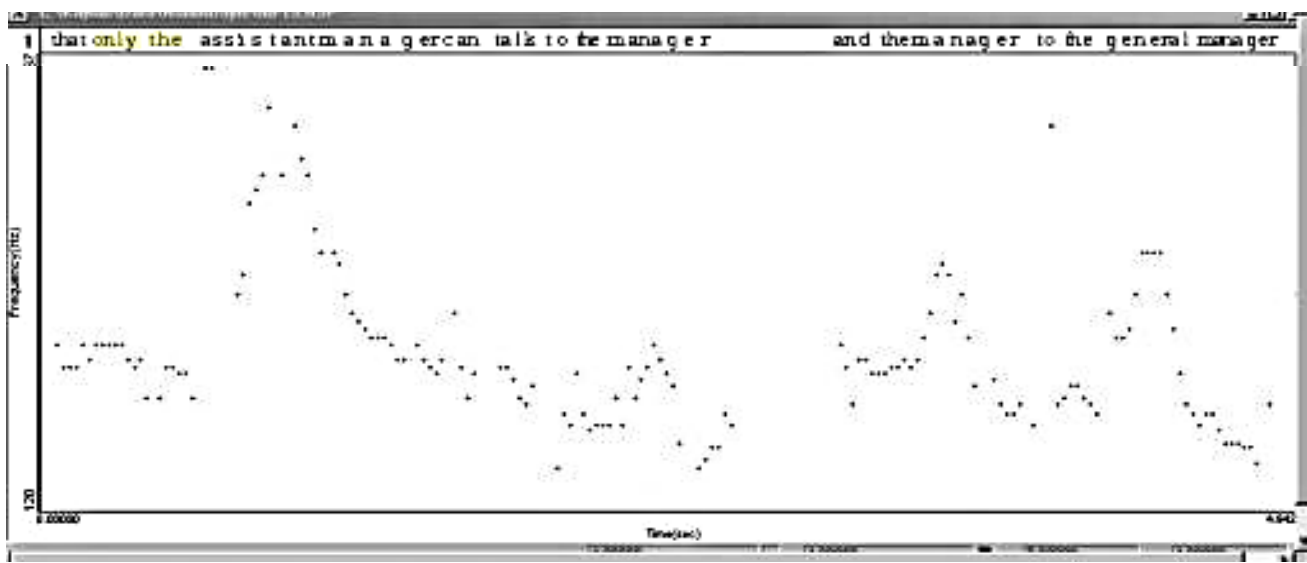
Ellipsis licensing: **predicate ellipsis**

o   Prosodically weak elements, like contracted auxiliaries cannot appear before gaps or ellipsis.

(7)   You are happy in Leiden.   I am [_], too.

(8)   You are happy in Leiden.   * I'm [_], too.   (King 1970)

o   Prosodically dependent elements, like *to,* need a proper host.

(9)   You'd like to hear this talk. She would also like to [_].

(10)   You came to hear this talk. *She also came to [_].

(Zwicky 1982)

•   Prosodic properties of the remnants play a role in licensing.

Ellipsis & Prosody

o   Ellipsis sites are phonologically reduced: radically deaccented.

(Tancredi 1992, Chomsky & Lasnik 1993)

(11) Lisa likes ellipsis, but her students don't [__].

(11') Lisa likes ellipsis, but her students don't *like ellipsis.*

Chomsky & Lasnik 1993 (p. 564):

"… elliptical sentences are formed by a rule of the PF component that deletes the phonologically redundant information that is characterized by a distinguished low-flat intonation"

Ellipsis & Morphology

o   Ellipsis is only well-formed if it leaves no stranded affixes.

(12)   a.   Láttam   érdekes   könyv-**ek-et**.

   see.PST.1SG   interesting   book-PL-ACC

   'I saw interesting books.'

   b. Láttam   érdekes-**ek-et**
                        érdekes   [_]-**ek-et**

   see.PST.1SG   interesting   -PL-ACC

   'I saw interesting ones.'   (Saab and Lipták to appear)

o   Morpho-syntactic licensing should extend to morphological well-formedness.

Ellipsis licensing: **research questions**

- What are the syntactic licensing conditions on ellipsis?

- What are the prosodic licensing conditions on ellipsis?

- What are the morphological licensing conditions on ellipsis?

- How do prosody and morpho-syntax interact in licensing?
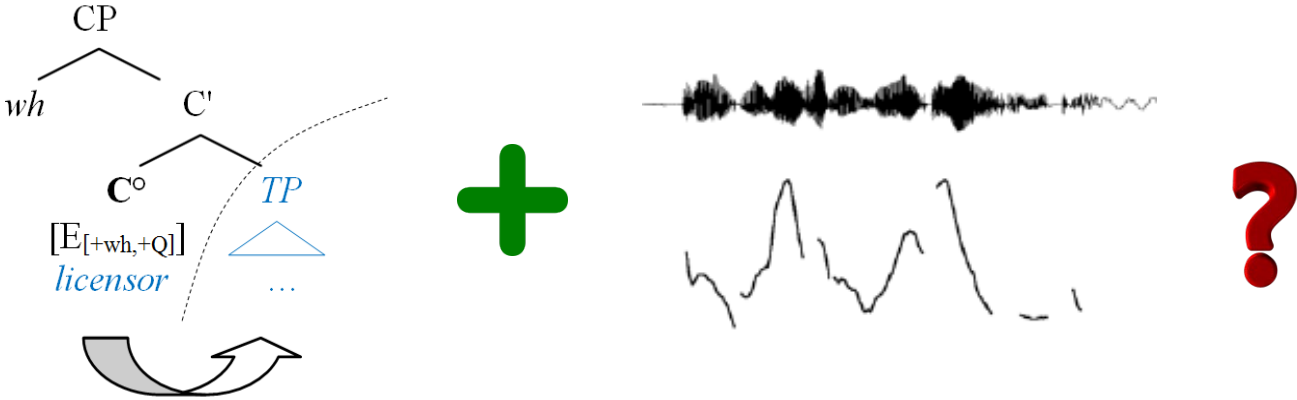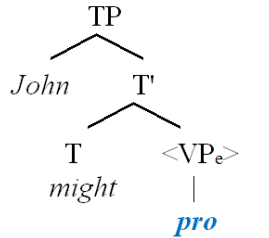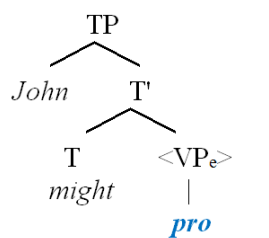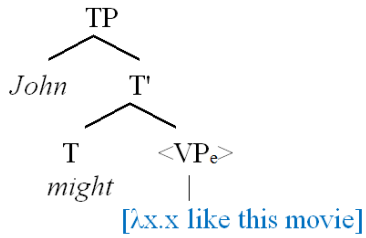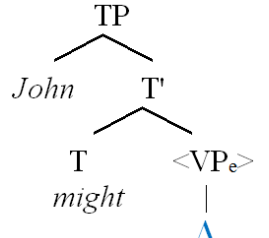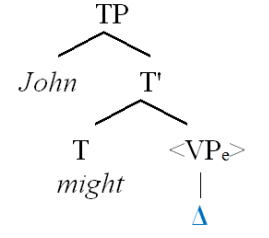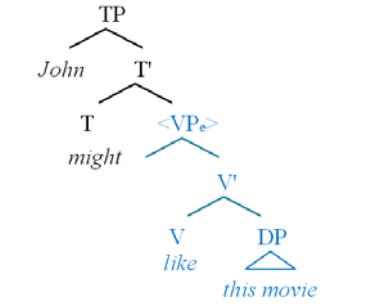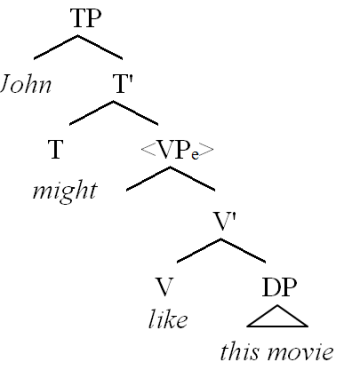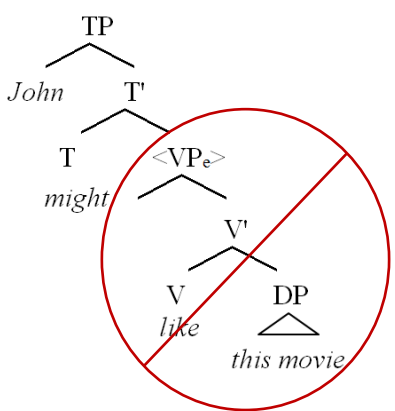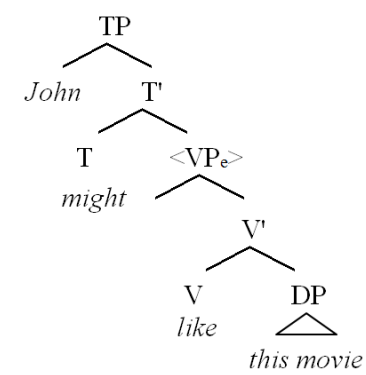
Ellipsis in the grammar: **where does ellipsis apply?**
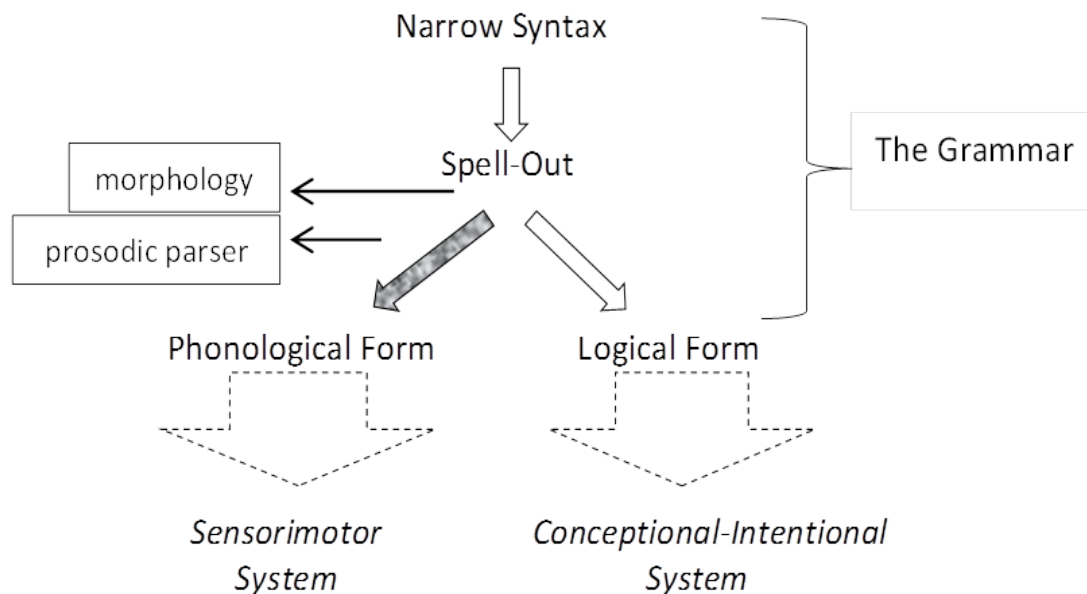
The answer given partly depends on how elliptical material is represented:
- null proform / LF copying / PF deletion theories of ellipsis

(13)   Bill will like this movie, and John might [_], too.

representation approaches	syntax	PF	LF
null proform (Hardt 1993, 1999, non-structual approaches cf. Ginzburg & Sag 2000, Culicover & Jackendoff 2005)	TP [John, T' [T *might*, <VP$_e$> | **pro**]]	TP [John, T' [T *might*, <VP$_e$> | **pro**]]	TP [John, T' [T *might*, <VP$_e$> | [λx.x like this movie]]]
LF-copying (Williams 1977, Chung et al 1995, 2010, Sakamoto 2015)	TP [John, T' [T *might*, <VP$_e$> | **Δ**]]	TP [John, T' [T *might*, <VP$_e$> | **Δ**]]	TP [John, T' [T *might*, <VP$_e$> [V' [V *like*, DP *this movie*]]]]
PF-deletion (abstract structure) (Ross 1967, Sag 1976, Tancredi 1992, Merchant 2001, Johnson 2001)	TP [John, T' [T *might*, <VP$_e$> [V' [V *like*, DP *this movie*]]]]	TP [John, T' [T *might*, ~~<VP$_e$> [V' [V *like*, DP *this movie*]]~~]]	TP [John, T' [T *might*, <VP$_e$> [V' [V *like*, DP *this movie*]]]]

Ellipsis in the grammar: **variation in PF-deletion theories**

o **Ellipsis is induced in the PF component.**

- as non-pronunciation of a syntactic constituent   (Merchant 2001)
- as phonological deletion of non-constituents   (Napoli 1982, Weir 2012)
- as radical deaccentuation   (Tancredi 1992, Chomsky-Lasnik 1993)

o **Ellipsis is induced in narrow syntax.**   (Aelbrecht 2010, Baltin 2012)

o **Ellipsis is induced in the postsyntactic (morphological) component.**

- as the lack of vocabulary insertion   (Bartos 2001, Kornfeld & Saab 2004)
- deletion of features / impoverishment   (Murphy 2015)

Ellipsis in the grammar: **research questions**

o Where does ellipsis apply?

o Can it apply in different modules (distributed ellipsis)
    such as:
    (i) narrow syntax (with an effect on PF)
    (ii) post-syntactic component (before or after linearization)

o Are there different types of ellipsis showing different properties?

Our project: **Ellipsis Licensing Beyond Syntax**

The scope

The morphological & prosodic licensors of ellipsis

The structures

Clausal ellipsis, predicate ellipsis, noun phrase ellipsis

The main languages of study

Hungarian, Irish, Russian, English, Dutch, Romanian, Finnish

Our project: **Ellipsis Licensing Beyond Syntax**

Main Questions

What we want to know about ellipsis:

1. **a.** In which ways does prosody determine the well-formedness of ellipsis?

    b. In which ways do rules of word formation determine the well-formedness of ellipsis?

What we can learn from ellipsis:

2. **a.** What do prosodic/morphological constraints reveal about the timing of operations such as ellipsis?

    b. What does ellipsis reveal about the mechanisms of word formation?

Subprojects

Project 1 *Güliz Güneş*	**Project 2** Nastya Ionova	**Project 3** *Anikó Lipták*
Ellipsis and de-accentuation	Ellipsis and prosodic phrasing /cliticization	Morphological licensing of ellipsis
Do domains of deaccentuation coincide with the domains of ellipsis across languages?	To what extent are ellipsis remnants constrained by prosodic phrasing /cliticization?	To what extent are ellipsis remnants constrained by the morphological constraint known as the stranded affix filter?
Hungarian, Romanian, Finnish, Dutch, English, Russian, Irish	English, Serbian, Slovene, Irish, Russian	Hungarian, Turkish, English, Spanish

Project 1: *Ellipsis and (de)accentuation (Güliz Güneş)*

The effects of information and prosodic structure related accentuation on the licensing clausal and predicate ellipsis.

Prosodic parallelism

mismatches: antecedent vs. elliptical clauses

Prosodic typology and ellipsis

cross-linguistic variation in ellipsis / prosodic typology

Project 1: *Ellipsis and (de)accentuation (Güliz Güneş)*

Prosodic typology and ellipsis: an illustration

Phrase languages: Information structure conveyed syntactically/via prosodic phrasing
Intonation languages: Information structure conveyed via accentuation

Correlations between prosodic typology and ellipsis							
	English	**Dutch**	**Irish**	**Romanian**	**Hungarian**	**Russian**	**Finnish**
Prosodic typology	Intonation	Intonation	Intonation?	?	Phrase	Phrase	Phrase
clausal ellipsis (E-feature)	$E_{[+wh]}$	$E_{[+wh]}$	$E_{[+wh]}$	$E_{[+foc]}$	$E_{[+foc]}$	$E_{[+foc]}$	?
pred. ellipsis (stranded item)	Aux	Aux	Verb	?	Verb	Verb	Verb

Project 2: *Ellipsis & prosodic phrasing/cliticization (Nastya Ionova)*

The effects of prosodic phrasing on ellipsis, interaction with accenting and the timing of ellipsis.

Prosodic rephrasing of the weak function words

- Are "prosodically bound" function words licit remnants?

- If not, to what extent can rephrasing/accenting help avoid such morpho-prosodic anomalies?

The timing of ellipsis

Is ellipsis the elimination of features in syntax or the blocking of vocabulary insertion at PF?

Project 2: *Ellipsis & prosodic phrasing/cliticization (Nastya Ionova)*

Prosodic phrasing of function words as remnants: an illustration

pre-gap *to* (to-infinitive as an argument)

(14) Mary wants to hear Fred's story and I also ($_\varphi$ want to [_])

pre-gap *to* (as an adjunct)

(15) * Mary came to hear Fred's story and I also ($_\varphi$ came) ($_\varphi$ to [_])

Project 3: *Morphological licensing of ellipsis (Anikó Lipták)*

The morphological constraints on ellipsis licensing and the place of word formation in the grammar.

The stranded affix filter

To what extent is ellipsis constrained by the stranded affix filter?

Conditions on rescuing stranded affixes

- What strategies do languages use to provide stranded affixes with a host (alternative attachment, dummy material, affix deletion)?

- What determines whether a stranded affix can be rescued?

- Is the responsible factor morpho-syntactic or morpho-phonological?

2. Swiping with *the hell* & accentuation

Swiping : **properties**

Swiping = sluicing with '*wh*-phrase + preposition' order

(Merchant 2002)

(16) John fixed the car, but I don't know what with.

(17)   A: John fixed the car.

B: Oh, what with?

o   Swiping is only allowed in sluicing.

(18) * John fixed the car, but I don't know what with he fixed the car.

Swiping : **properties**

complex vs. simplex wh-phrase

o   Swiping requires simplex *wh*-phrases.   (Merchant 2002)

(19)   John fixed the car, but I don't know what with.

(20) * John fixed the car, but I don't know which wrench with.

Swiping : **properties**

givenness / newness of preposition

o Swiping requires that the preposition is new when it is part of an argument or a predicate, but not when it is part of an adjunct.

<div align="right">(Merchant 2002)</div>

(21) * Sue got involved in something, but I don't know what in.

(22) Sue fixed the car with something, but I don't know what with.

Swiping : **properties**

stress pattern

o   Swiping requires stress on the preposition.

(23) John fixed the car, but I don't know what **WITH**.

(24) * John fixed the car, but I don't know **WHAT** with.

(25) * John fixed the car, but I don't know **WITH** what.

o   The stress is not that of contrast.   (Hartmann and Ai 2009)

(26) ???/* The senator voted **FOR** the tax cut, but I don't know what
            AGAINST.

Swiping and *the hell* (Sprouse 2006)

o   Sluicing with *the hell* (non-D-linked items) is ungrammatical.

(27) * John fixed the car, but I don't know with what **the hell**.

o   Swiping with *the hell* (non-D-linked items) is fine.

(28) John fixed the car, but I don't know what **the hell** WITH.

Q: Why is *the hell* allowed in swiping but not in sluicing?
     Is is due to semantics, morpho-syntax or prosody?

The problem of *the hell*: **semantic licensing?**

- The problem is not the licensing of the polarity item *the hell.*

- *The hell* is a polarity item licensed by matrix negation.

(Den Dikken & Giannakidou 2002)

(29) John fixed the car, but I do**n't** know with what **the hell** he fixed it.

- The licensor is also present in sluicing.

(30) * John fixed the car, but I do**n't** know with what **the hell**.

The problem of *the hell*: **semantic licensing?**

- The problem with *the hell* in sluicing is not semantic, as *the hell* can occur in sluicing in some languages:

(31) Valaki   ellopta a kocsit,   de nem tudom,   ki   a bánat.

someone stole   the car.Acc but not   know.1sg   who the sorrow

'Someone fixed the car, but I don't know who the hell.'

The problem of *the hell*: **syntactic licensing?**

- In both sluicing and swiping, the *wh-the-hell* undergoes movement. (<small>Sprouse 2006</small>)

(32) * John fixed the car, but I don't know with what **the hell**.

(33) John fixed the car, but I don't know what **the hell** <small>WITH</small>.

(34) * Who **the hell** fixed what **the hell**?

Swiping & *the hell*: A case study

Following the literature on swiping (and the use of *the hell* in swipes), we investigated the potential effects of:

- Complex *wh*-item vs. simplex *wh*-item
- Givenness vs. newness
- Contrastive P vs. non-contrastive P
- Sentence final P vs. non-sentence final P

across the speakers of British English and American English

Swiping & *the hell*: A case study – The Data

		simplex		complex	
		given	new	given	new
−contr.	−final	John was talking about someone, …who the hell about exactly.	John was talking, …who the hell about exactly.	John was talking about some girl, …what girl the hell about exactly.	John was talking, …what girl the hell about exactly.
	+final	John was talking about someone, …who the hell about.	John was talking, …who the hell about.	John was talking about a girl,…what girl the hell about.	John was talking, …what girl the hell about.
+contr.	−final	John was talking about someone and although I know who TO, I still don't know who the hell ABOUT exactly.	John was talking and although I know who TO, I still don't know who the hell ABOUT exactly.	John was talking about someone and although I know what man TO, I still don't know what girl the hell ABOUT exactly.	John was talking and although I know who TO, I still don't know what girl the hell ABOUT exactly.
	+final	John was talking about someone and although I know who TO, I still don't know who the hell ABOUT.	John was talking and I know who TO, but I still don't know who the hell ABOUT.	John was talking about someone and although I know which guy TO, I still don't know which girl the hell ABOUT.	John was talking and although I know who TO, I still don't know what girl the hell ABOUT.

Swiping & *the hell*: A case study – The Data

All speakers		simplex		complex	
		given	new	given	new
-contr.	**-final**	John was talking about someone, …who the hell about exactly.	John was talking, …who the hell about exactly.	John was talking about some girl, …what girl the hell about exactly.	John was talking, …what girl the hell about exactly.
	+final	John was talking about someone, …who the hell about.	John was talking, …who the hell about.	John was talking about a girl,…what girl the hell about.	John was talking, …what girl the hell about.
+contr.	**-final**	John was talking about someone and although I know who TO, I still don't know who the hell ABOUT exactly.	John was talking and although I know who TO, I still don't know who the hell ABOUT exactly.	John was talking about someone and although I know what man TO, I still don't know what girl the hell ABOUT exactly.	John was talking and although I know who TO, I still don't know what girl the hell ABOUT exactly.
	+final	John was talking about someone and although I know who TO, I still don't know who the hell ABOUT.	John was talking and I know who TO, but I still don't know who the hell ABOUT.	John was talking about someone and although I know which guy TO, I still don't know which girl the hell ABOUT.	John was talking and although I know who TO, I still don't know what girl the hell ABOUT.

Results: Summary

Givenness vs. newness

No effect   (British & American: ☺)

(against Den Dikken & Giannakidou 2002, Merchant 2002, Sprouse 2006)

Contrast vs. non-contrast

No effect   (British & American: ☺)

(against Hartman & Ai 2009, supporting Radford & Iwasaki 2015)

Sentence final vs. non-sentence final

No effect   (British & American: ☺)

Complex vs. simplex *wh*-item + *the hell*

Complex *wh*-items are de-graded   (British: 😐, American: ☹)

→ *the hell* attaches to the wh-word (head) (in support of Merchant 2002)

Preliminary account

Q: Why is *the hell* allowed in swiping but not in sluicing?

Is it due to semantics, morpho-syntax or prosody?

THE CLAIM:

Lexical properties of *the hell* interacts with the semantic and prosodic consequences of clausal ellipsis.

Morpho-syntactic properties of *the hell*:

• Always attaches to moved *wh*-items.

Lexical semantic properties of *the hell*:

• As a polarity item, it needs to be in a non-veridical context.

(e.g. matrix negation, C head of question, modality)

(Den Dikken & Giannakidou 2002)

Preliminary account

Prosodic properties of *the hell*

(i) Requirement on its host: *The hell* cannot modify in-situ *wh*-items.

Multiple *wh*-interrogative

(35) * Who kissed WHO the hell at the party?

Echo *wh*-interrogative

(36) * John kissed WHO the hell?   (with echo reading)

→ In-situ *wh*-items are accentually marked (Truckenbrodt 2013)

The hell requires a *wh*-phrase to its left that is **accentually unmarked**.

Unmarked: moved *wh*-phrases (Truckenbrodt 2013) or items without nuclear stress

Preliminary account

Prosodic properties of *the hell*:

(ii) Two intonational patterns of *the hell*

The hell may exhibit;

i. A tune (a certain sequence of tones– L*LH*) – call it **The-Hell-Tune**;

- The **rhetorical interpretation** of surprise / disbelief,
- not compatible with the presupposition of existence

ii. Or no tune (no accent on the *wh*-item or *the hell*)

- The **ordinary information question** interpretation**,**
- compatible with the presupposition of existence (with a negative attitude)

The-Hell-Tune: **rhetorical interpretation (disbelief)**

What on	EARTH did you do	THAT for, Peter
low	high	High Fall

A sample of the rhetorical "what on earth" with the annotation of the British school.   (O'Connor & Arnold 1973)

The-Hell-Tune: **rhetorical interpretation (disbelief)**

(37) A:Had you eaten at Grandma's, you wouldn't be hungry now.

B: What the hell could I have eaten there!?
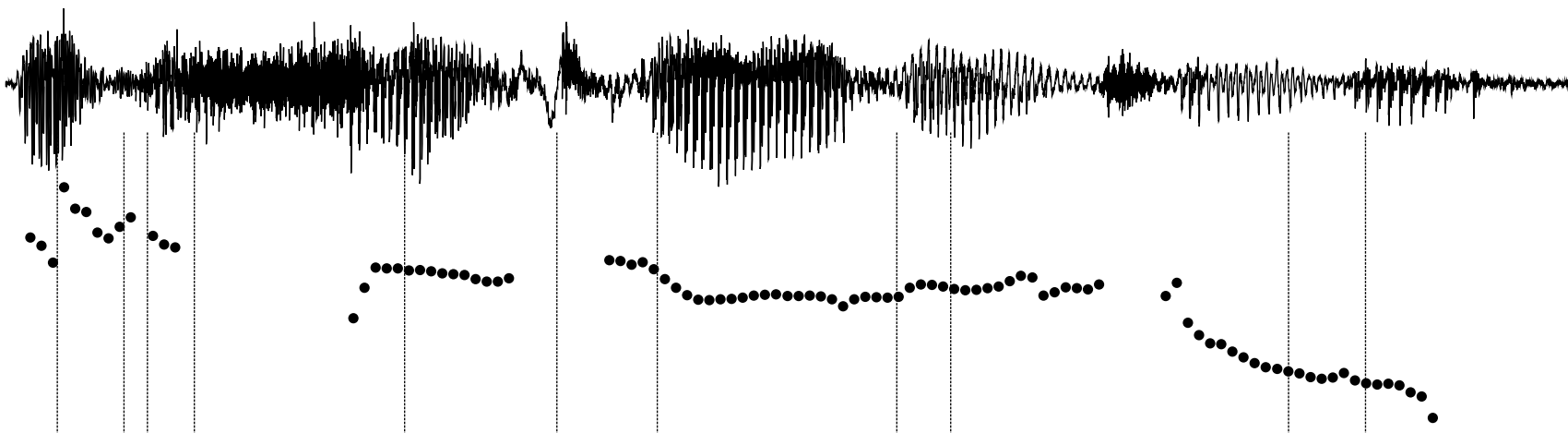
L*	L	H*		!H*	L-L%
what	the	hell	could	I've	eaten	there

| What the hell could I've eaten there!? |

No tune: **ordinary information question**

(38) A: I feel sick after eating in that dirty restaurant.

   B: What the hell did you eat there?
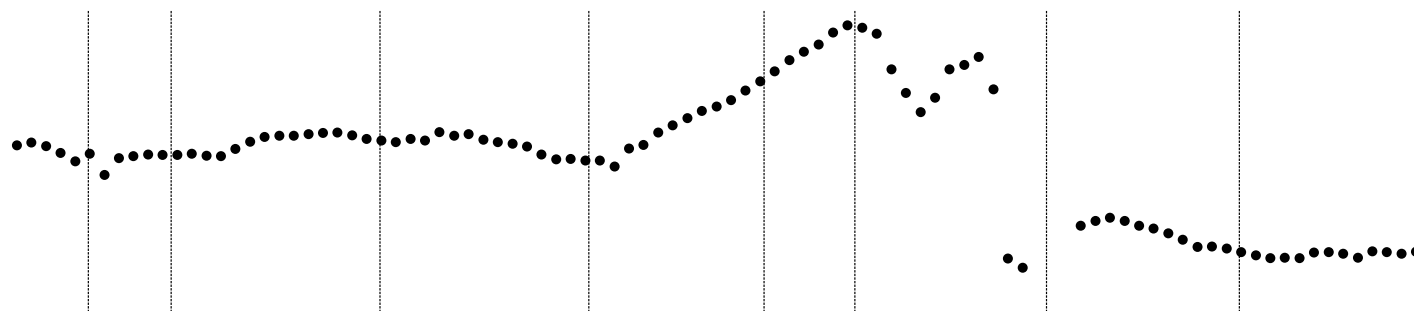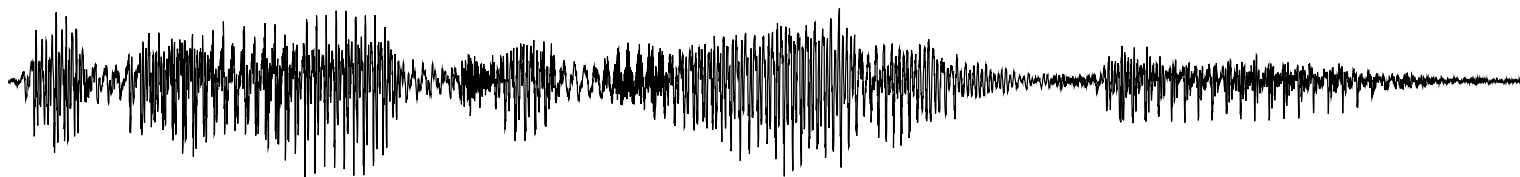
					H*	L-L%
what	the	hell	did	you	eat	there
What the hell did you eat there?						

general properties of sluicing

o   Semantically, sluicing requires the presupposition of existence.

(39) John fixed his car (with *something*), but I don't know with what.

∃x (John fixed his car with x)

something: specific indefinite, highest existential scope

with what: refers to the same indefinite

general properties of sluicing

Nuclear stress assignment in clausal ellipsis:

o Similar to the non-elliptical clauses (Cinque 1993, Ahn 2015),

the most syntactically embedded phrase of the pronounced material receives the **NUCLEAR STRESS**.

(40) John kissed somebody, but [$_{CP}$I don't know [$_{CP}$ [$_{DP}$**WHO**]]].

(41) John kissed somebody, but [$_{CP}$I don't know [$_{CP}$[$_{DP}$**WHO**]], exactly].

the main idea

- Nuclear stress assignment on *the hell* in clausal ellipsis invokes a rhetorical interpretation.

- Semantic requirements of clausal ellipsis clashes with the semantic properties of *the hell* that bears a rhetorical interpretation.

sluicing and *the hell*

A minimal pair:

(42) John fixed his car (with something),

   but [$_{CP}$I don't know [$_{CP}$[$_{PP}$with [$_{DP}$**WHAT**]]]].

(43)*John fixed his car (with something),

   but [$_{CP}$I don't know [$_{PP}$with [$_{DP}$what [the **HELL**]]]]!

- *The hell* receives nuclear stress, (and so rhetorical interpretation)

sluicing and *the hell*

o   Sluicing requires the presupposition of existence.

o   Clash with the semantics of clausal ellipsis.

(42) John fixed his car (with *something*), but I don't know with WHAT.

∃x (John fixed his car with x)

something: specific indefinite, highest existential scope

with what: refers to the same indefinite

(43)*John fixed his car (with *something*),but I don't know with what the HELL!

∃x (John fixed his car with x)

something: specific indefinite, highest existential scope

with what the HELL: **incompatible**

sluicing/swiping and *the hell*

A minimal pair:

(43) * John fixed his car (with something),

but [$_{CP}$I don't know [$_{CP}$[$_{PP}$with [$_{DP}$what [the **HELL**]]]]]!

(44)   John fixed his car (with something),

but [$_{CP}$I don't know [$_{CP}$[$_{DP}$what [the hell]] … [**WITH**]]].

- In (44), *the hell* does not receive nuclear stress, *with* receives nuclear stress.
- No rhetorical meaning, no clash with the semantics of clausal ellipsis.

how it works

Multiple *wh*-sluicing: *The hell* can only modify the higher *wh*-item.

(Richards 2001)

(47)   a. ✓ I don't know [$_{CP}$ who the hell to [$_{PP}$ about **WHAT**]].

      b. *I don't know [$_{CP}$ who to [$_{PP}$ about [$_{DP}$what [the **HELL**]]]]!

Fragments: *The hell* as a PI is licenced by the Q in both B and B'.

(48)   A: John fixed the car.

      B: Oh, [[$_{DP}$what the hell] [**WITH**]]?

      B': *[$_{PP}$ With [$_{DP}$what [the **HELL**]]]!?

      B'':*[$_{DP}$What [the **HELL**]] [with]]!?

> Only in B the rhetorical meaning is not invoked.

Swiping & *the hell*: **summary & conclusion**

The hell has lexical properties which clash with the semantic and prosodic characteristics of clausal ellipsis.

○ *The hell* cannot attach to in-situ *wh*-items because they are accentually marked.

○ A particular tune that spreads onto the WH-THE-HELL complex is employed to invoke rhetorical meaning (of disbelief).

○ Clausal ellipsis requires the presupposition of existence of its antecent, and this clashes with the rhetorical reading of the *wh-the-hell* tune.

Swiping & *the hell*: **summary & conclusion**

Q: Why is *the hell* allowed in swiping but not in sluicing? Is it due to semantics, morpho-syntax or prosody?

A: ALL OF THEM!

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what PF is made of
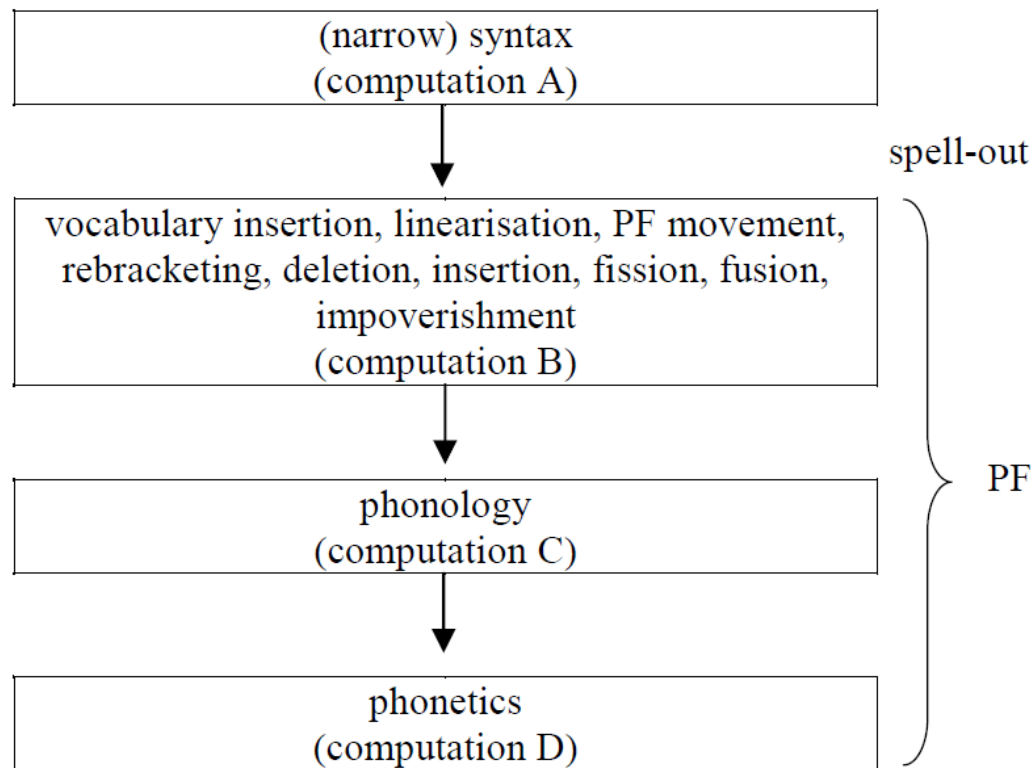
Swiping & *the hell*: A case study – British English

British speakers		simplex		complex	
		given	new	given	new
-contr.	**-final**	John was talking about someone, …who the hell about exactly.	John was talking, …who the hell about exactly.	John was talking about some girl, …what girl the hell about exactly.	John was talking, …what girl the hell about exactly.
	+final	John was talking about someone, …who the hell about.	John was talking, …who the hell about.	John was talking about a girl,…what girl the hell about.	John was talking, …what girl the hell about.
+contr.	**-final**	John was talking about someone and although I know who TO, I still don't know who the hell ABOUT exactly.	John was talking and although I know who TO, I still don't know who the hell ABOUT exactly.	John was talking about someone and although I know what man TO, I still don't know what girl the hell ABOUT exactly.	John was talking and although I know who TO, I still don't know what girl the hell ABOUT exactly.
	+final	John was talking about someone and although I know who TO, I still don't know who the hell ABOUT.	John was talking and I know who TO, but I still don't know who the hell ABOUT.	John was talking about someone and although I know which guy TO, I still don't know which girl the hell ABOUT.	John was talking and although I know who TO, I still don't know what girl the hell ABOUT.

Swiping & *the hell*: A case study – American English

American speakers		simplex		complex	
		given	new	given	new
-contr.	-final	John was talking about someone, …who the hell about exactly.	John was talking, …who the hell about exactly.	John was talking about some girl, …what girl the hell about exactly.	John was talking, …what girl the hell about exactly.
	+final	John was talking about someone, …who the hell about.	John was talking, …who the hell about.	John was talking about a girl,…what girl the hell about.	John was talking, …what girl the hell about.
+contr.	-final	John was talking about someone and although I know who TO, I still don't know who the hell ABOUT exactly.	John was talking and although I know who TO, I still don't know who the hell ABOUT exactly.	John was talking about someone and although I know what man TO, I still don't know what girl the hell ABOUT exactly.	John was talking and although I know who TO, I still don't know what girl the hell ABOUT exactly.
	+final	John was talking about someone and although I know who TO, I still don't know who the hell ABOUT.	John was talking and I know who TO, but I still don't know who the hell ABOUT.	John was talking about someone and although I know which guy TO, I still don't know which girl the hell ABOUT.	John was talking and although I know who TO, I still don't know what girl the hell ABOUT.