

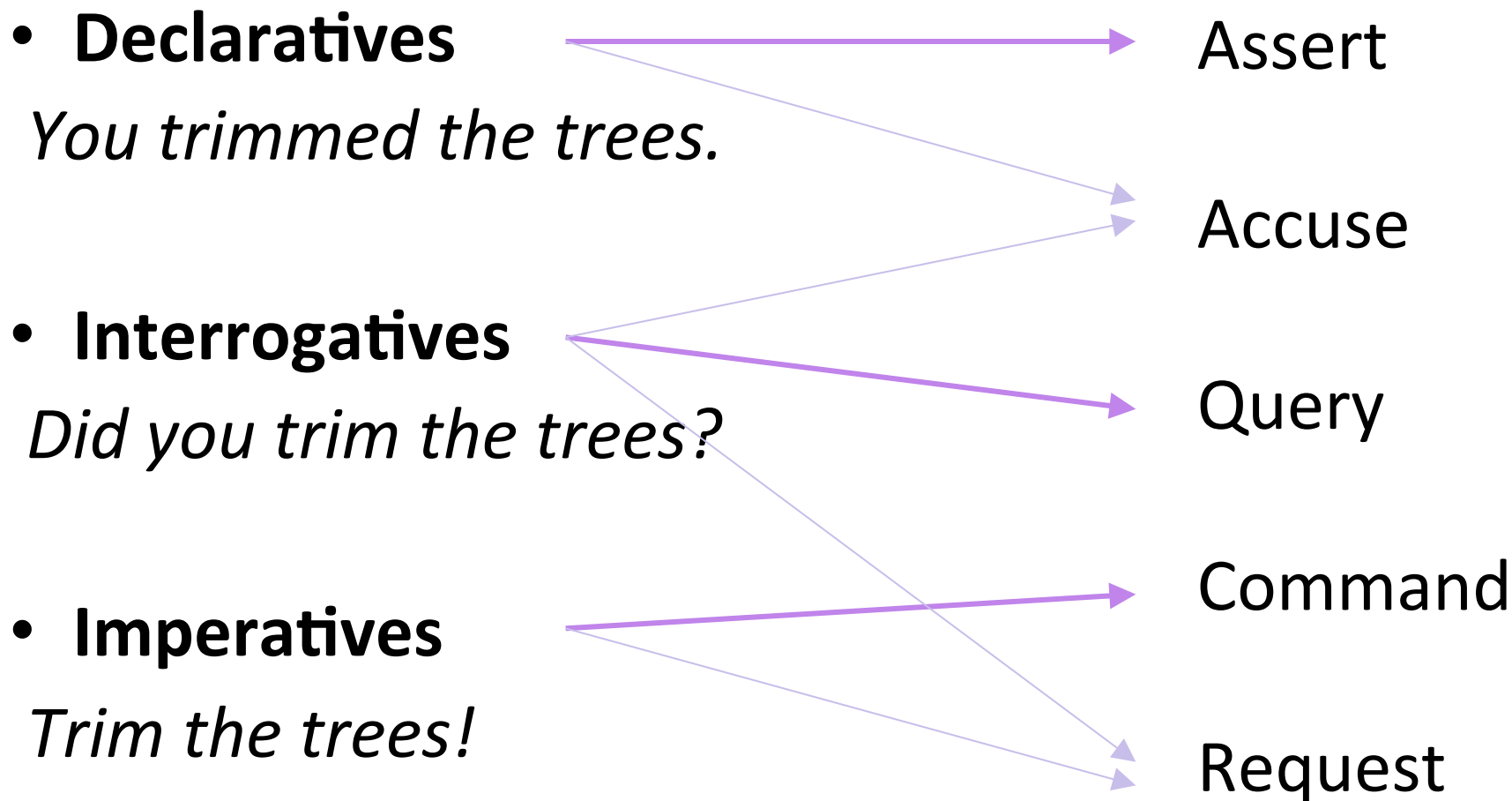
# Imperatives with downstepped level terminal contours (H\* !H-L%)

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<https://github.com/sunwooj/dltimperatives>

# Sentence types and illocution

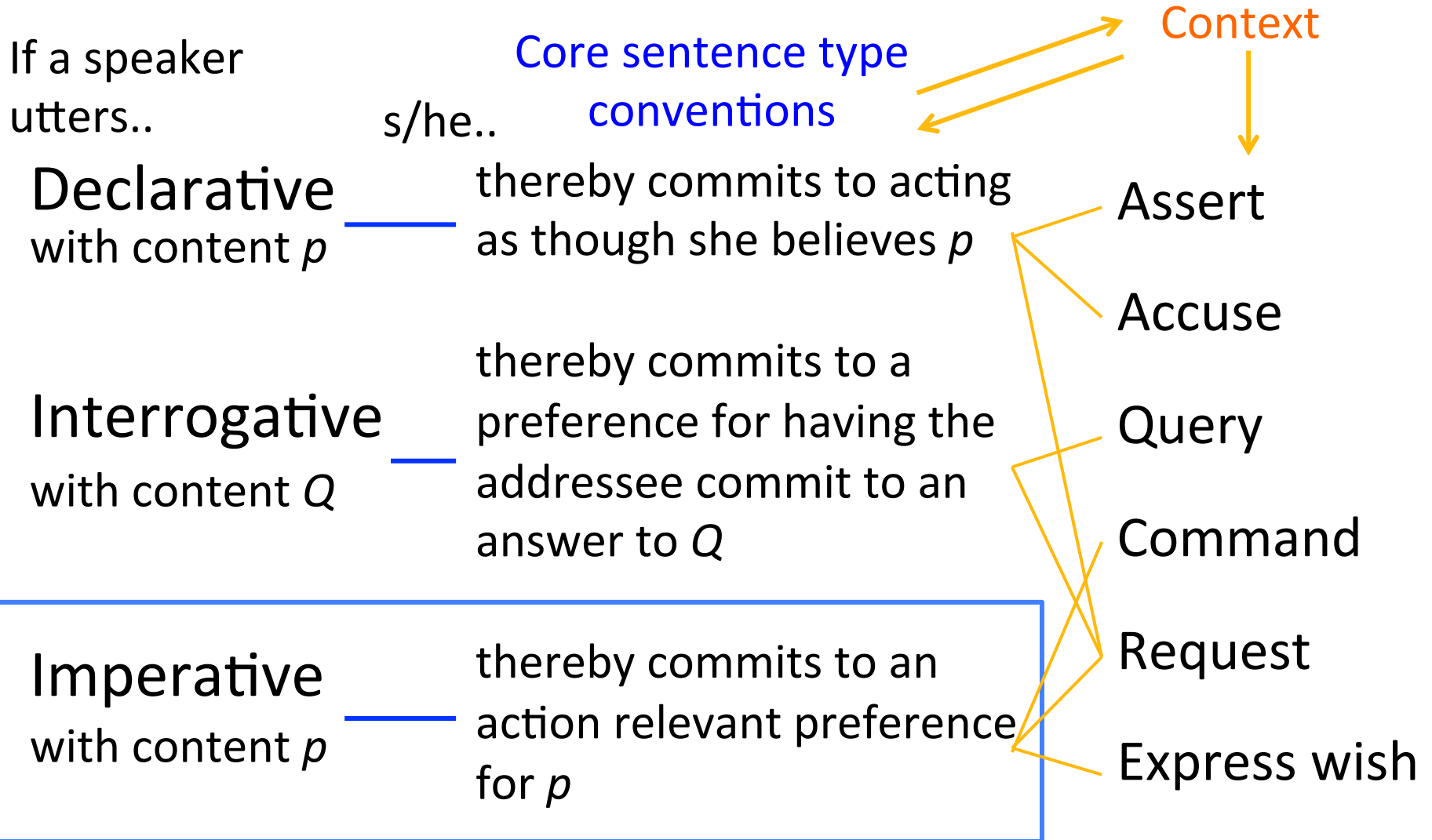


*form-force mapping*

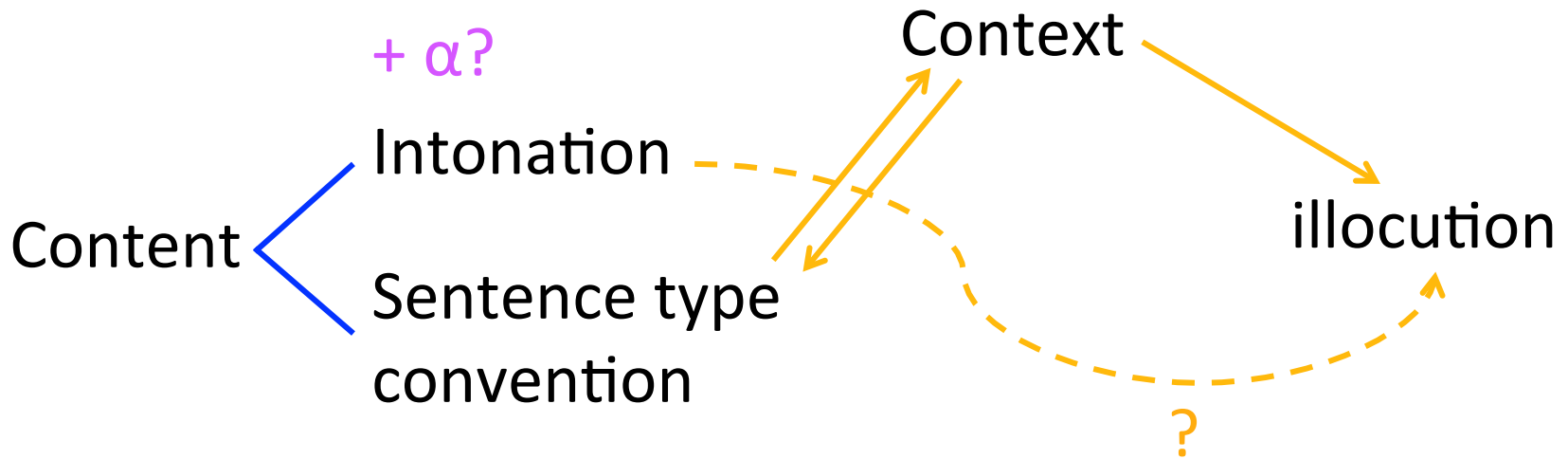
# Imperatives and illocution

<i>Hand in the report by noon!</i>	command
<i>Get some rest!</i>	(concerned) advice
<i>Take the A train!</i>	(disinterested) advice
<i>Take a cookie!</i>	offer
<i>Enjoy your dinner!</i>	well-wish
<i>Drop dead!</i>	ill-wish, curse
<i>Okay, go out and play!</i>	concession

# Sentence type conventions



# Intonation and illocution



Strong vs. weak imperatives Portner (forthcoming), Keough et al. (2016)

Have a banana. (H\* L-L%)  $\longrightarrow$  weak (*may*)

Have a banana. (L\* L-L%)  $\longrightarrow$  strong (*must*)

# Overview

- What is the **nature of the interaction** between **content, sentence-type, intonation, and context**?
  - How do these factors influence people's illocutionary and perlocutionary inferences?
- A case study with a new type of intonation:
  - Downstepped level terminal contour (H\* !H-L%)
  - **DLT** (H\* !H-L%) with **imperatives**

# DLT (H\* !H-L%)

**“Have fun storming the castle! (H\* !H-L%)” – The Princess Bride (1987)**



# DLT (H\* !H-L%)

- Types of uses studied
  - Calling contour (Pike 1945)  
“Anna! (H\* !H-L%)”
  - Stylization or shared convention (Ladd 1978)  
“Your lunch! (H\* !H-L%)”, “# Fire! (H\* !H-L%)”
- Decompositional analysis of the contour  
(Pierrehumbert & Hirschberg 1990)
- No connection drawn with imperatives



# DLT (H\* !H-L%) with imperatives

- **Well-wishes**

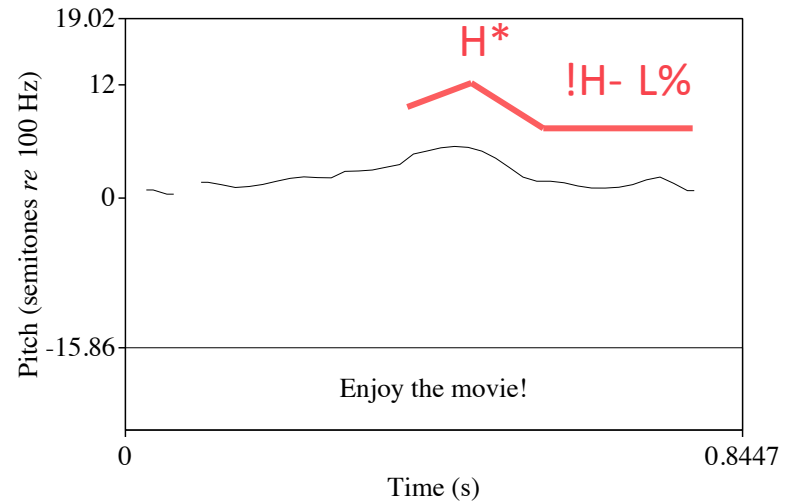
- Enjoy the movie!
- Enjoy your dinner!



- **Mnemonic requests**

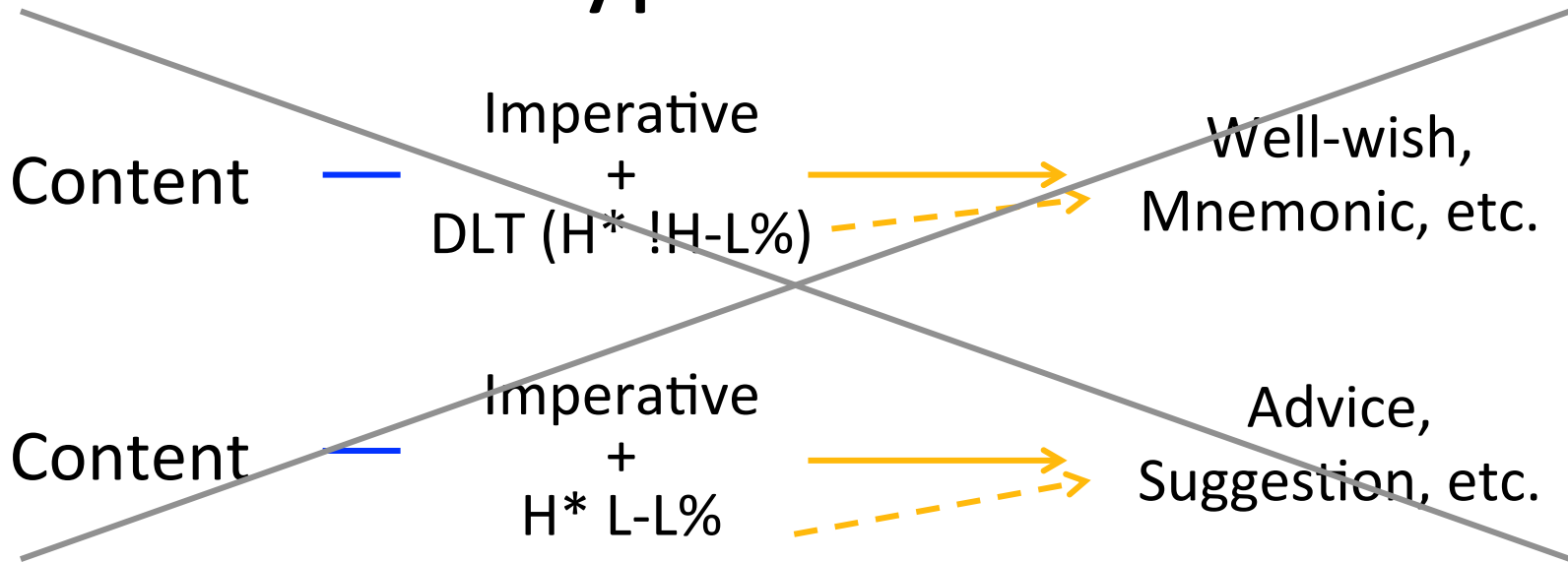
(cf. Crone 2016)

- Don't forget to feed the cats!



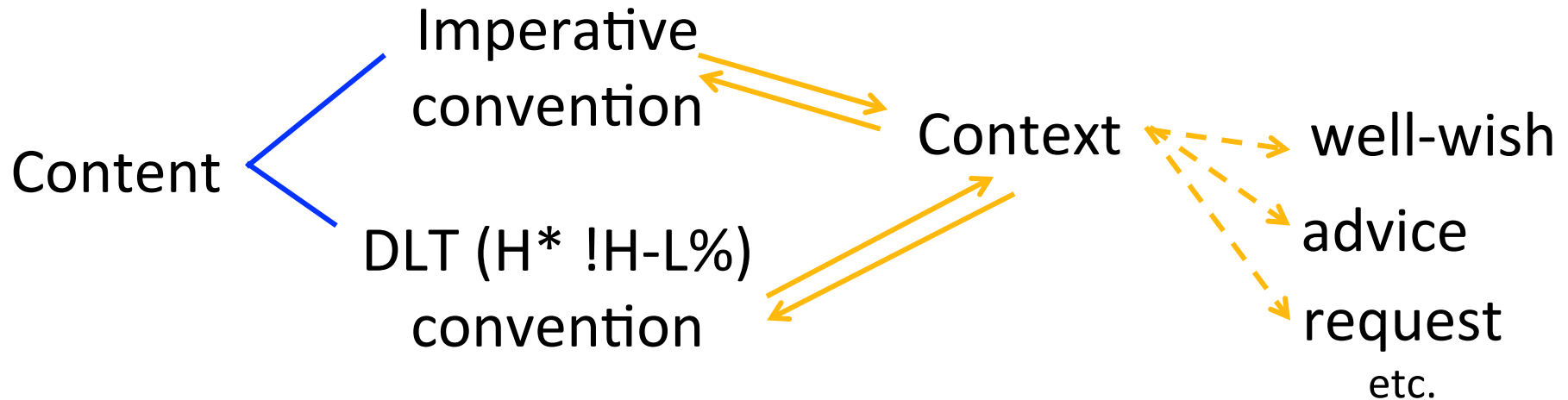
DLT preferred	DLT infelicitous
<i>Have fun at the party!</i>	<i>Don't touch the pie! (order)</i>
<i>Have a nice trip!</i>	<i>Take a cookie! (offer)</i>
<i>Remember to feed the cats!</i>	<i>Drop dead! (ill-wish)</i>

# Hypothesis?



DLT preferred	DLT infelicitous
<p>(Ad has a minor cold) <i>Get well soon!</i></p> <p>(Sp leaving) <i>Goodbye! Don't forget to feed the cats!</i></p>	<p>(Ad has pneumonia) <i>Get well soon!</i></p> <p><i>Don't forget to feed the cats!</i> <i>I'll put a reminder note.</i></p>

# Hypothesis



- DLT conventionally signals certain aspects of the discourse context
- DLT operates independently from the imperative sentence-type convention

# Hypothesis

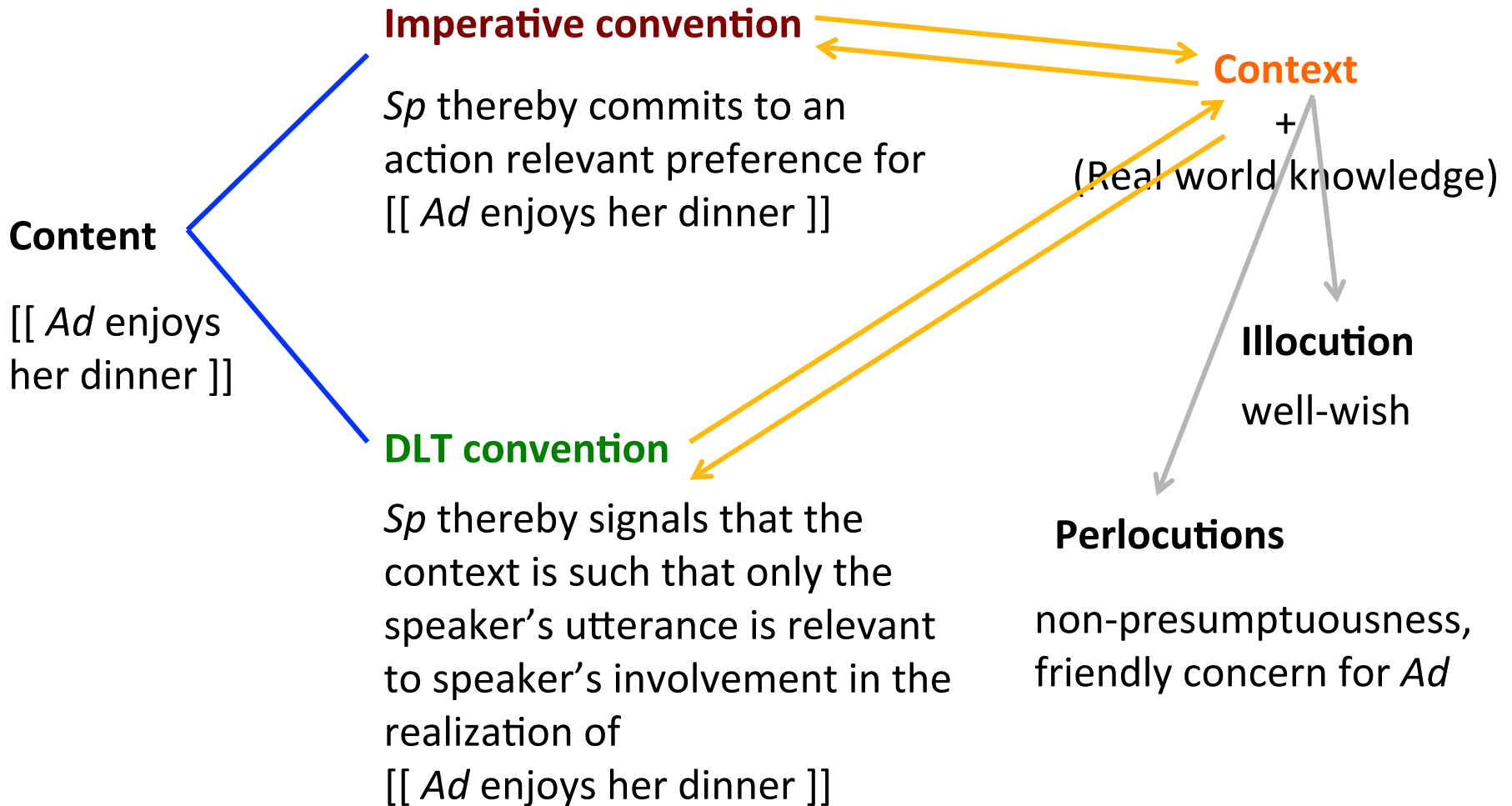
- **Imperative convention** (Condoravdi & Lauer 2012)

The speaker thereby commits to an action relevant preference for the content of the imperative.

- **DLT convention** (new)

The context is such that only the speaker's utterance (and not his/her subsequent actions) is relevant to the realization of the content.

# “Enjoy your dinner! (H\* !H-L%)”



**i.e. *Sp.*'s future action choices are not affected by the stated preference.**

# Experiment

- Are well-wish and mnemonic imperatives generally more likely to host DLT?
- **Can imperatives with the same content and illocution nonetheless prefer different intonation depending on the context?**
- **A perception experiment:** context manipulation (manipulating degree of speaker involvement in bringing about the content); choosing the more likely intonation between a given pair

# Perception experiment: Materials

<p><b>Group 1</b> DLT preferred</p>	<p><i>Enjoy your dinner.</i></p> <p><i>Good luck with the test.</i></p> <p><i>Have a nice holiday.</i></p> <p><i>Enjoy the movie.</i></p>
<p><b>Group 2</b> DLT infelicitous</p>	<p><i>Hand in the assignment by noon. (command)</i></p> <p><i>Take a cookie. (offer)</i></p> <p><i>Avoid the highway. (disinterested advice)</i></p> <p><i>Take these pills for a week. (advice)</i></p>
<p><b>Group 3</b> ambiguous w.r.t. DLT (depends on the context)</p>	<p><i>Get well soon.</i></p> <p><i>Have fun at the party.</i></p> <p><i>Remember to feed the cats.</i></p> <p><i>Don't forget your lunchbox.</i></p>

# Perception experiment: Materials

- **Base recording:**

- monotonous

↓  
manipulation

- **DLT tokens**

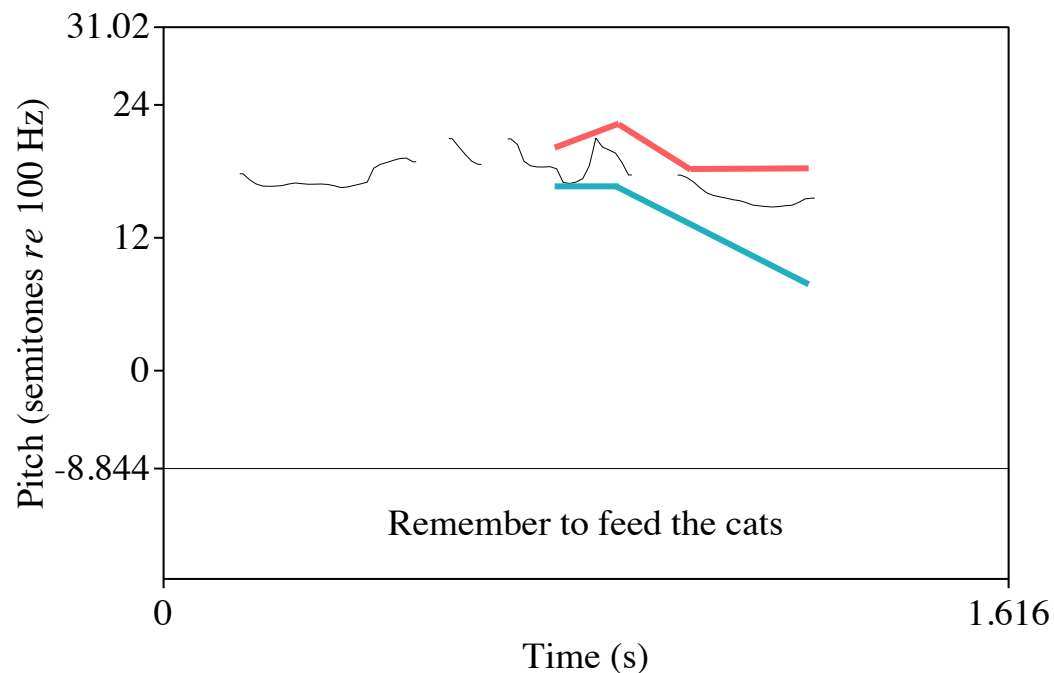
- H\* !H-L%



- **non-DLT tokens**

- H\* L-L%

- L\* L-L%



Base recordings produced by 4 speakers (2 male, 2 female)

Manipulations done using PSOLA



# Experiment: Sample trial 1

*(John is talking to his house-sitter friend Lily,  
right before leaving home)*

John: Thanks so much for doing this. I gotta leave now. Bye!

Lily: Okay. Safe travels!

John: Thanks. \_\_\_\_\_

Q1: Which of the two sounds below is better suited to be inserted in the blank space \_\_\_\_\_ in the dialogue above?



# Experiment: Sample trial 2

*(John is giving his house-sitter friend Lily some instructions)*

John: Thanks so much for doing this. Do you have any concerns?

Lily: Watering the plants, check. Getting the newspapers, check. Is there anything I am missing?

John: Yes. \_\_\_\_\_ (pointing at the cupboard). The food is in there. I will put instructions and a reminder note on the fridge.

Q1: Which of the two sounds below is better suited to be inserted in the blank space \_\_\_\_\_ in the dialogue above?



# Experiment: Sample trial 3

*(A waitress is talking to a customer at a restaurant)*

Waitress: Good evening! What can I get for you?

Customer: Can I get a cheeseburger with a side of fries?

Waitress: Sure thing! (10 minutes later) Here you go.

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# Experiment: Sample trial 4

*(A doctor is talking to his patient)*

Doctor: Hello, how are you feeling today?

Patient: I am doing better but I still have a headache. Do you have anything that can help me get rid of it?

Doctor: (giving out a pill bottle) Yes. \_\_\_\_\_ You will probably feel better soon, but come back if you still have the symptoms.

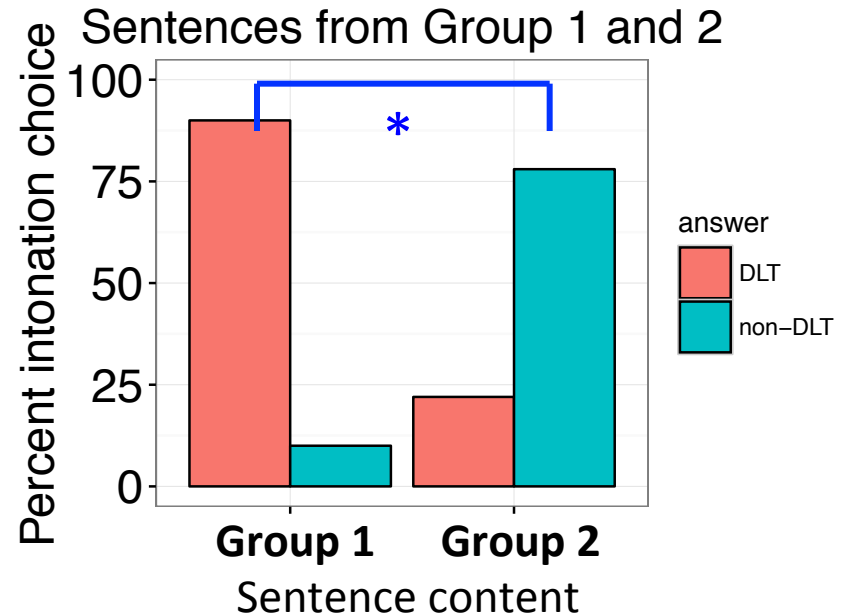


# Experiment: Procedure

- 8 trials: 6 target trials counterbalanced in speaker gender; 2 filler trials
- 400 native English speakers recruited as participants
- Experiment lasted 10-20 minutes for each participant
- Mixed effects logistic regression models fitted to the data

# Results: group 1 and group 2

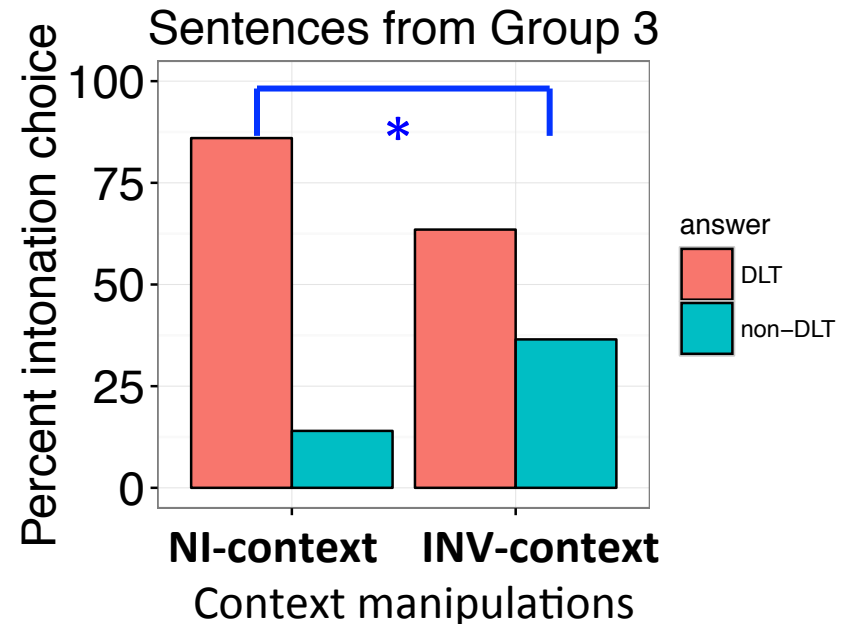
- **Group 1** imperatives almost always associated with **DLT (H\* !H-L%)**
  - *Enjoy your dinner!*
  - *Have a nice trip!*
- **Group 2** sentences mostly associated with **non-DLT (H\* L-L% or L\* L-L%)**
  - *Hand in the report by noon!*
  - *Take a cookie!*



Content of Group 1 & Group 2 sentences:  
strongly associated with specific contextual expectations

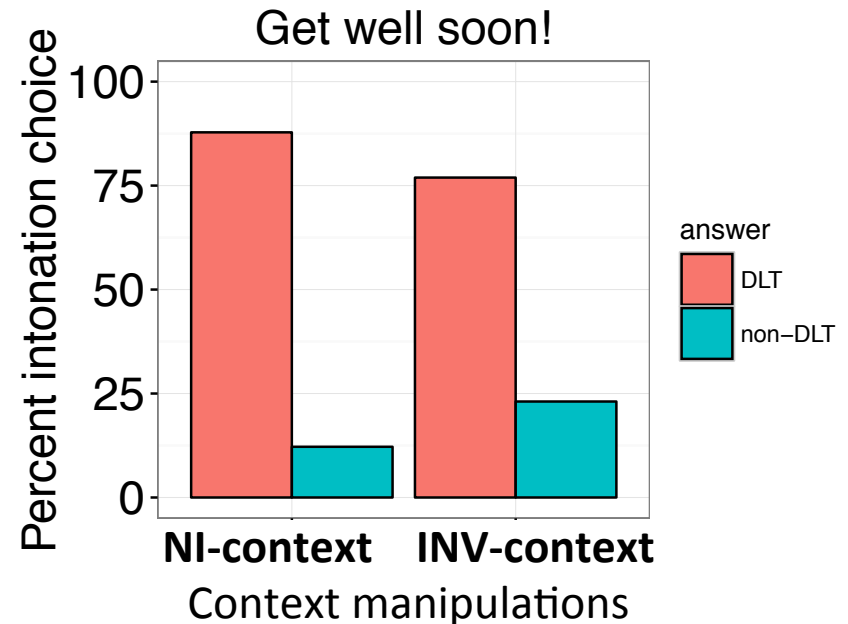
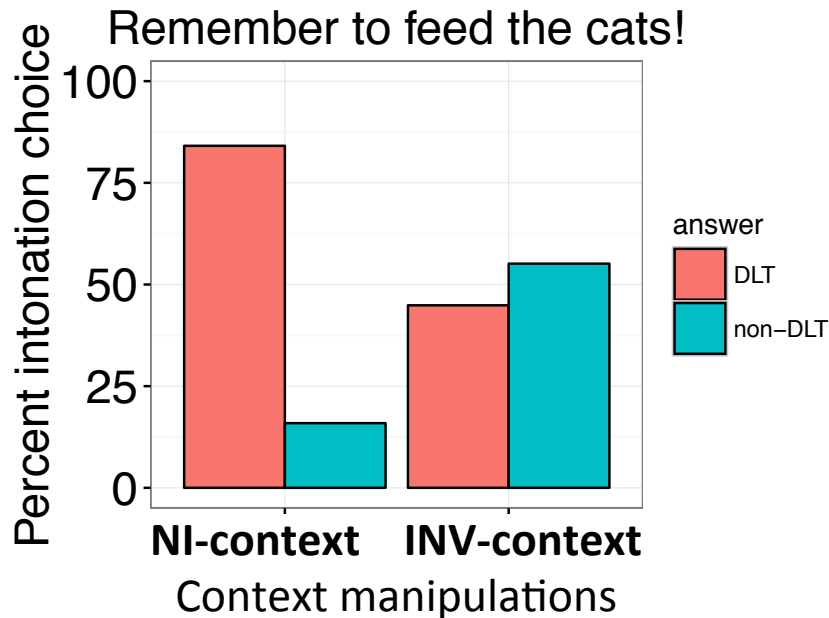
# Results: group 3

- Contexts intended to mark **speaker non-involvement** (NI-context): significantly **more DLT**
- Contexts intended to mark **more speaker involvement** (INV-context): significantly **less DLT**



Context manipulation elicited less dramatic shifts in intonation than anticipated

# Results: group 3 (continued)



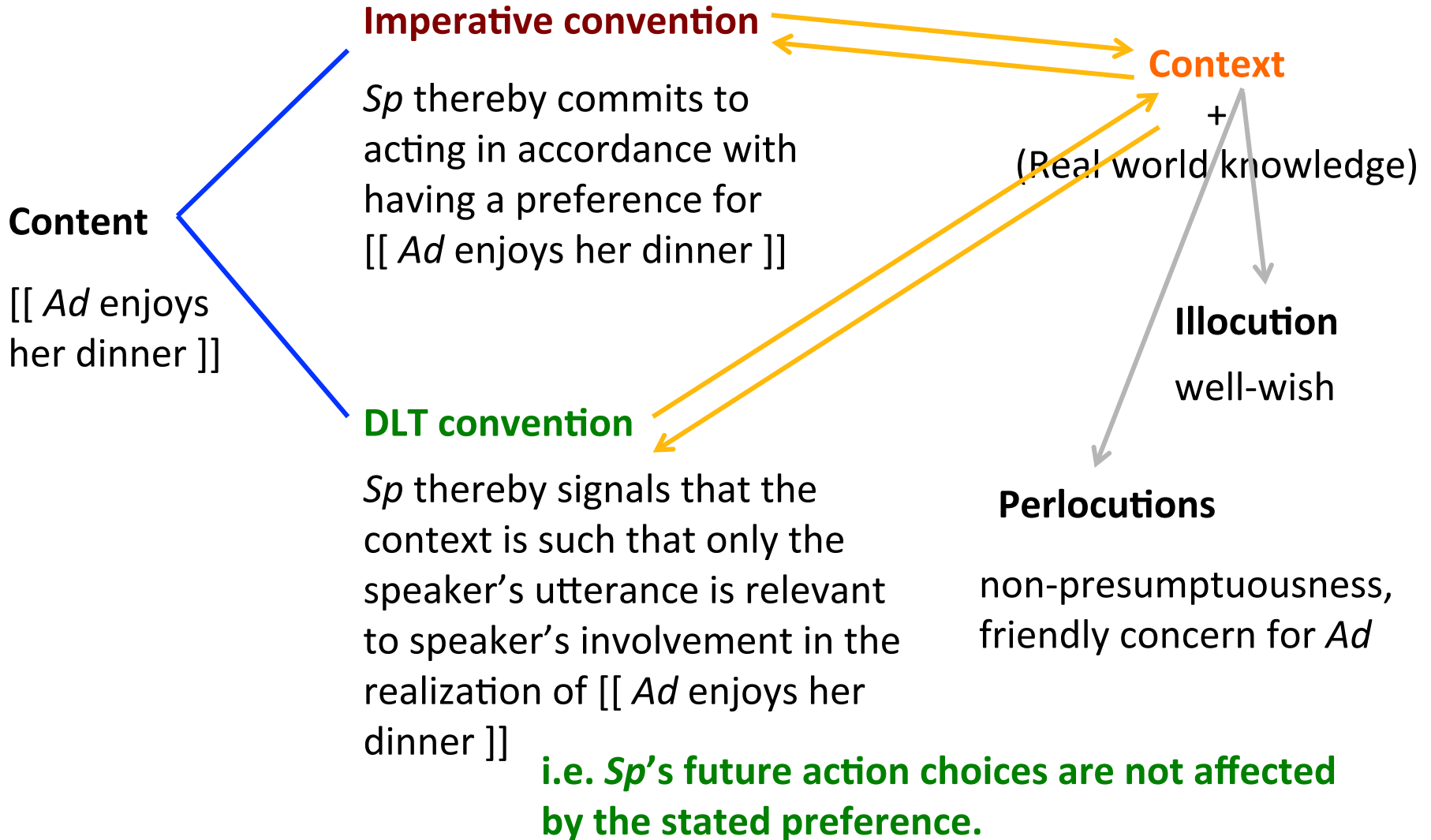
- Context manipulations worked to different degrees.
- INV-contexts consistently elicited significantly less DLT responses.



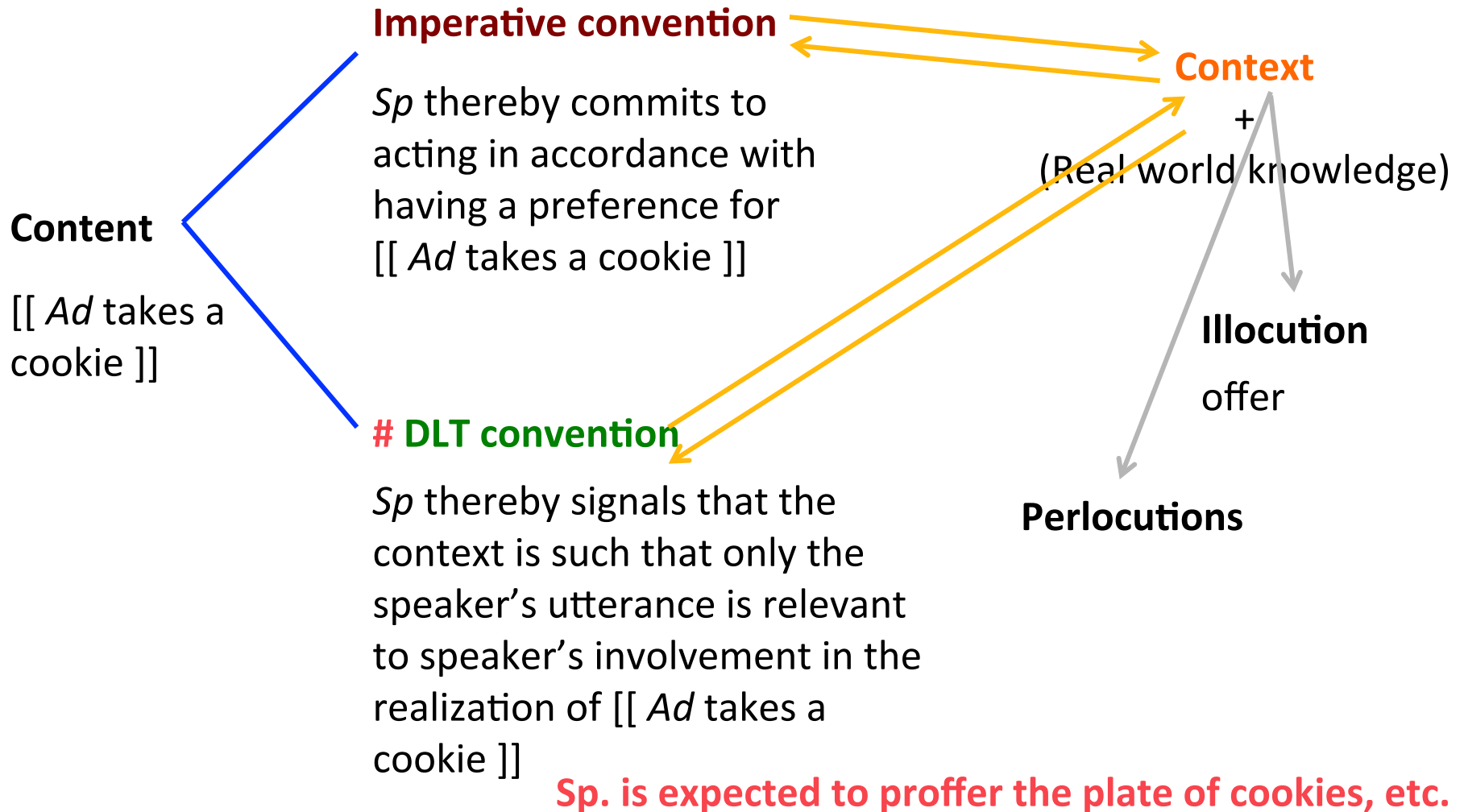
# Results

- Mixed effects logistic regression model fitted to the data:
  - **Intonation choice** as the main dependent variable
  - Sentence **content** and **context** manipulation as an independent variable
  - **Speaker** and **participants** as random effects
- **Context manipulation** is a significant predictor
- **Sentence content** also a significant predictor

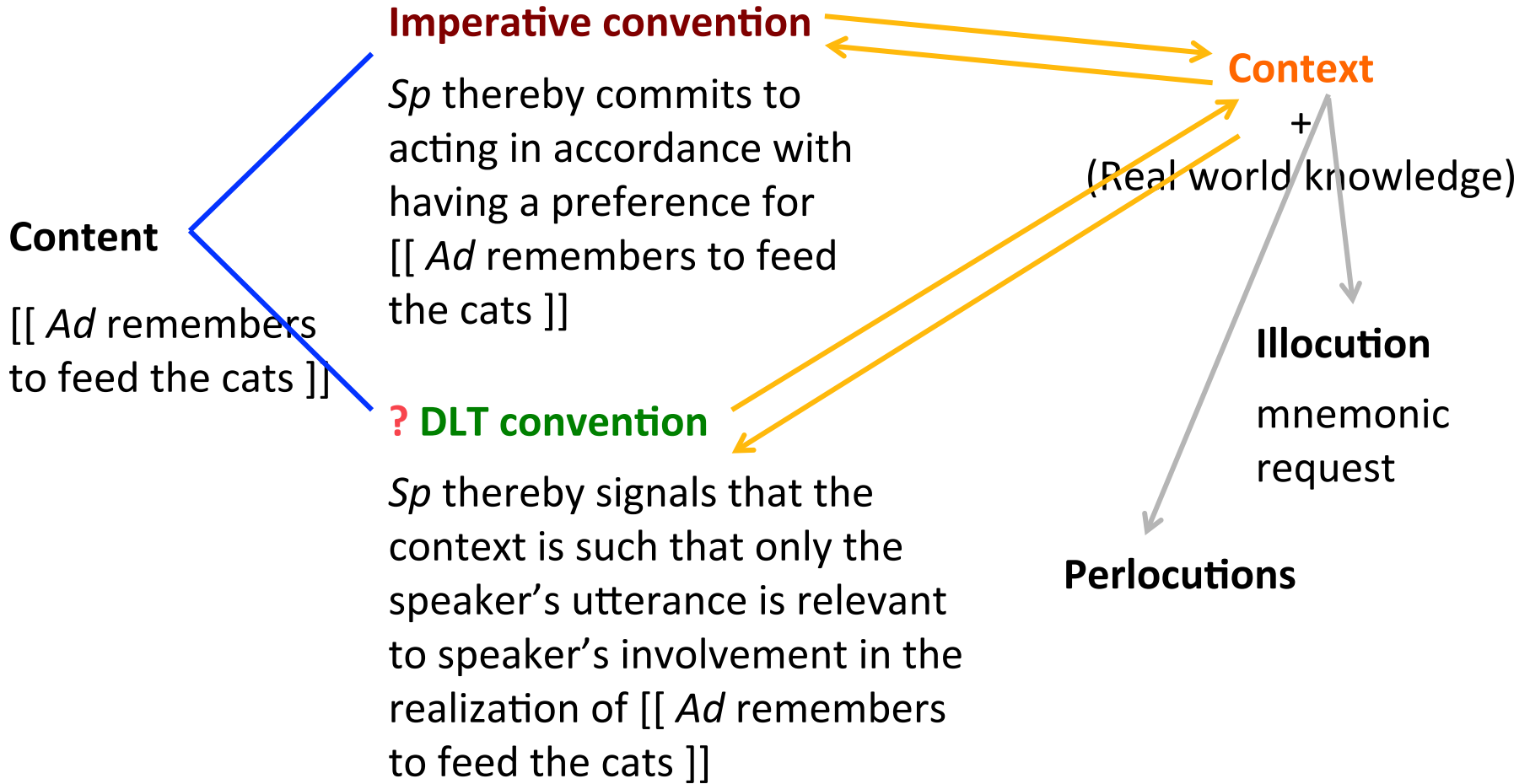
# “Enjoy your dinner! (H\* !H-L%)”



# “Take a cookie! (#H\* !H-L%)”



# “Remember to feed the cats!”



**In general, *Sp* presumed to have no control over *Ad*'s memory.**

***Sp* may put a reminder note to help with *Ad*'s memory.**

# Perlocutionary and social meanings of DLT

- Social and perlocutionary meanings frequently associated with DLT: **terminality, casualness**
- Analyzed as further inference derived from the interaction of the core DLT convention with requisite context and content
- Not specified in the convention itself

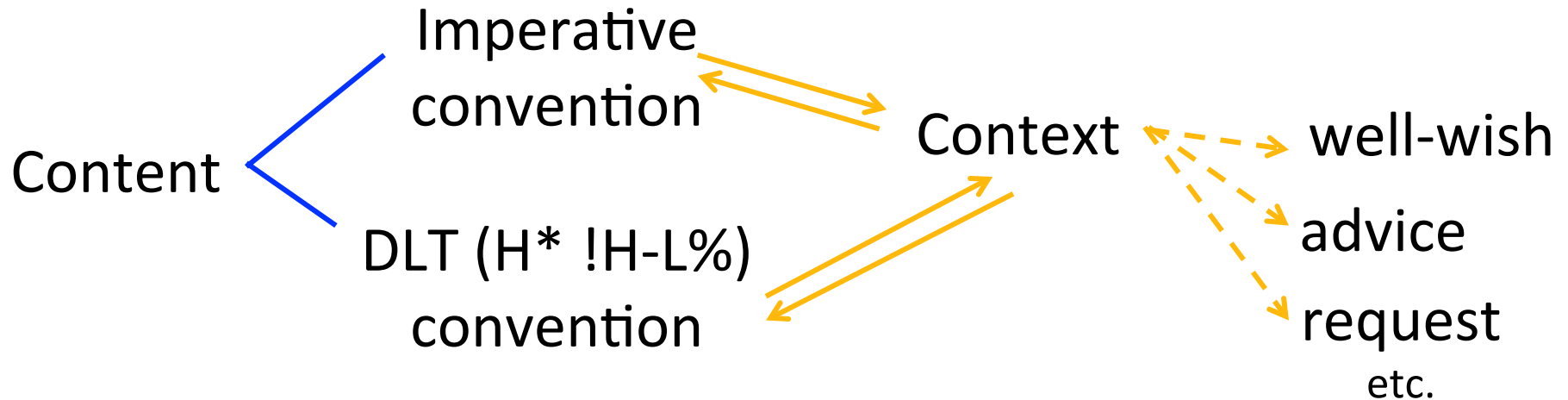
# DLT without imperatives

- DLT convention operates independently of the imperative sentence-type convention
  - *“Passenger A, please proceed to gate B. We wouldn’t want to leave without you! (H\* !H-L%)”*
- DLT with non-imperatives have very different perlocutionary flavors from DLT imperatives
  - Our account can easily predict this: under specification of cannot / will not

# Consequences

- DLT marks certain aspects of the context
  - Can predict why it is often associated with well-wish and mnemonic imperatives
  - Can predict why it is only licensed for the above imperatives in certain contexts
- DLT operates independently from imperatives
  - Can predict uses with other sentence types which generate different perlocutionary effects

# Theoretical implications



- Conventional effects of terminal contours
- Repercussions on theories of *form-force* mapping: cumulative effects of two conventions



# Conclusion

- **DLT convention:**

The context is such that only the speaker's utterance (and not his/her subsequent actions) is relevant to the realization of the content.

- Data and experiment:

<https://github.com/sunwooj/dltimperatives>

- We also have a more formal analysis of DLT!!

**Thank you!**

# Experiment: Sample trial 5

*(Marcus is talking to his friend Dan in the hospital)*

Marcus: How are you feeling, Dan? I brought some flowers.  
When can you leave the hospital?

Dan: Thanks for the flowers. I have to stay another week to get  
the stitches out.

Marcus: I see. Well, I have to leave soon but I will come back in a  
few days. \_\_\_\_\_



# Experiment: Sample trial 6

*(Marcus is talking to his friend Dan at school)*

Marcus: Hi Dan! You've been sneezing a lot. Are you okay?

Dan: Oh yeah. It's just the allergy. Spring pollens do that to me but it's nothing serious.

Marcus: I see. Well; I gotta run to class now. \_\_\_\_\_



# Hypothesis? (from non-imperatives)

- **Vocative** (Pike 1945): “Anna! (H\* !H-L%)”
  - Cannot cover well-wishes or mnemonic imperatives
- **Stylization or shared convention** (Ladd 1978): “Your lunch! (H\* !H-L%)”, “# Fire! (H\* !H-L%)”
  - Why “Remember to feed the cats! (H\* !H-L%)”?
  - Why not “# Take a cookie! (H\* !H-L%)”?

# Hypothesis?

- **Compositional analysis** (Pierrehumbert & Hirschberg 1990):  
H\*+L signals that salience of the accented item should be inferred from mutual beliefs of the hearer
  - DLT highlights that  $p$  takes part of the mutual belief (common ground)?
  - Does not predict that DLT precludes future speaker action
  - Wrongly predicts that DLT can occur with offer uses

# Theories on imperatives

- Kauffmann (2012): performative uses of modals
- Portner (2007): To-Do List (deontic, bouletic, etc.); comparison with modals
- Condoravdi & Lauer (2012): order vs. offer uses distinguished *not* in terms of quantificational force