Imperatives and Intonation

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https://github.com/sunwooj/dltimperatives
Sentence types and illocution

• **Declaratives**
  
  *You trimmed the trees.*

• **Interrogatives**
  
  *Did you trim the trees?*

• **Imperatives**
  
  *Trim the trees!*

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**form-force mapping**

- **Assert**
- **Accuse**
- **Query**
- **Command**
- **Request**
Imperatives and illocution

Hand in the report by noon!
Get some rest!
Take the A train!
Take a cookie!
Enjoy your dinner!
Drop dead!
Okay, go out and play!

command
(concerned) advice
(disinterested) advice
offer
well-wish
ill-wish, curse
concession

Schmerling (1982), a.o.
Sentence type conventions

If a speaker utters...

Declarative
with content $p$

thereby commits to acting as though she believes $p$

Interrogative
with content $Q$

thereby commits to a preference for having the addressee commit to an answer to $Q$

Imperative
with content $p$

thereby commits to an effective preference for $p$

Intonation and illocution

Content

Intonation

Sentence type
convention

+ α?

Context

Illocution

Strong vs. weak imperatives Portner (2015), Keough et al. (2016)

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

Have a banana. (L* L-L%) 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?
  – What is the role of intonation in the individuation of clause types?

• 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%) imperatives

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!

<table>
<thead>
<tr>
<th>DLT preferred</th>
<th>DLT infelicitous</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Have fun at the party!</em></td>
<td><em>Don’t touch the pie!</em> (order)</td>
</tr>
<tr>
<td><em>Have a nice trip!</em></td>
<td><em>Take a cookie!</em> (offer)</td>
</tr>
<tr>
<td><em>Remember to feed the cats!</em></td>
<td><em>Drop dead!</em> (ill-wish)</td>
</tr>
</tbody>
</table>
### Hypothesis?

![Diagram with text]

**Content**

- Imperative
  - DLT (H* !H-L%)

**Well-wish, Mnemonic, etc.**

**Advice, Suggestion, etc.**

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<tbody>
<tr>
<td><em>(Ad has a minor cold)</em></td>
<td><em>(Ad has pneumonia)</em></td>
</tr>
<tr>
<td>Get well soon!</td>
<td>Get well soon!</td>
</tr>
<tr>
<td><em>(Sp leaving) Goodbye! Don’t forget to feed the cats!</em></td>
<td>Don’t forget to feed the cats! I’ll put a reminder note.</td>
</tr>
</tbody>
</table>
Interim summary

• Sentence-type (imperatives), context, content, and illocutionary inferences

• All of these factors conspire to generate the patterns of felicity/infelicity of DLT imperatives

• Need to clarify the contributions of each factor
Experiment

• A brief foray into a perception experiment
  (Jeong & Condoravdi 2017)

• A perception experiment: context manipulation (manipulating degree of speaker involvement in bringing about the content); choosing the more likely intonation between a given pair
Experimental hypothesis I

• Apparent illocution dependence of DLT

• DLT preferred:
  – imperatives with content biased towards certain well-wishes and mnemonic requests/advice

• DLT infelicitous:
  – imperatives with content biased towards orders, offers, non-mnemonic requests, etc.
Experimental hypothesis II

• The felicity of DLT is further dependent on certain contextual information
  – Extent of expected speaker control and further involvement in the realization of the content of the imperative

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<td><em>(Sp leaving)</em> Goodbye! Remember to feed the cats!</td>
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Experimental hypothesis II

• The relevant contextual information does not just concern the objective extent of speaker control. What is at issue:
  – the choice of the speaker to bring attention to, or to signal this lack of speaker control

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</tr>
</thead>
<tbody>
<tr>
<td>(Ad has a minor illness)</td>
<td>(Ad is seriously ill)</td>
</tr>
<tr>
<td><em>Get well soon!</em></td>
<td><em>Get well soon!</em></td>
</tr>
</tbody>
</table>
## Perception experiment: Materials

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

Perception experiment: Materials

- **Base recording:**
  - monotonous

- **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.
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** \((H^* \text{ !H-L\%})\)
  - *Enjoy your dinner!*
  - *Have a nice trip!*

• **Group 2** sentences mostly associated with **non-DLT** \((H^* \text{ L-L\% or L^* L-L\%})\)
  - *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
• DLT conventionally signals certain aspects of the discourse context

• DLT operates independently from the imperative sentence-type convention
Analysis

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

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

• **DLT convention** (new)

The speaker thereby commits to a belief that her action choices do not change as a result of the utterance.
DLT convention

• **DLT convention**: By virtue of a DLT utterance $u$, the speaker thereby doxastically commits herself to $A_{c[u]} = A_c$
  
  – $A_c$: a partition of the set of historical alternatives relative to a given world and time (Belnap 1991)
  
  – $C$: the speaker’s commitment state before $u$
  
  – $C[u]$: the commitment state that results from $u$

\[ u = \text{“Enjoy your dinner!”} \]
DLT convention

• $A_C$: In general an utterance $u$, by changing the speaker’s commitment state, also changes the speaker’s action choices.

  e.g. B checks assignment to see if they were turned in on Friday;

  $t_u$

  e.g. B doesn’t check assignment to see if they were turned in on Friday;

  $u = “Hand in the assignment by Friday!”$ by speaker B
$u = \text{“Remember to feed the cats!”}$

- **Imperative convention**
  - $Sp$ thereby commits to acting in accordance with having a preference for $[[Ad \text{ remembers to feed the cats }]]$

- **Context**
  - (Real world knowledge)

- **Illocution**
  - mnemonic request

- **Perlocutions**

**Content**
- $[[Ad \text{ remembers to feed the cats }]]$

**? DLT convention**
- $Sp$ thereby commits to acting in accordance with a belief that:
  - $A_{c[u]} = A_c$

In general, $Sp$ presumed to have no control over $Ad$’s memory.

Sp may put a reminder note to help with $Ad$’s memory.
\[ u = "\text{Enjoy your dinner! (H* !H-L\%)}" \]

**Imperative convention**

- \( Sp \) thereby commits to acting in accordance with having a preference for \([ [ Ad enjoys her dinner ]]\)

**DLT convention**

- \( Sp \) thereby commits to acting in accordance with a belief that:
  \[ A_c[u] = A_c \]

**Context**

- (Real world knowledge)
  - Well-wish

**Illocution**

**Perlocutions**

- Non-presumptuousness, friendly concern for \( Ad \)

i.e. \( Sp \)'s future action choices are not affected by the stated preference.
$u = "Take a cookie! (#H* !H-L%)"$

**Imperative convention**

$Sp$ thereby commits to acting in accordance with having a preference for
[[ $Ad$ takes a cookie ]]

**DLT convention**

$Sp$ thereby commits to acting in accordance with a belief that:

$A_{c[u]} = A_c$

$Sp$ is expected to offer the plate of cookies, etc.

cf) likewise for orders, advice, etc.
Theoretical implications

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

• **DLT convention:**
The speaker thereby commits to a belief that her action choices do not change as a result of the utterance, i.e. $A_{c[u]} = A_c$

• Data and experiment:

https://github.com/sunwooj/dltimperatives

Thank you!
References


• KEOUGH, MEGAN; ELISE MCCLAY; MOLLY BABEL; and LISA MATTHEWSON. 2016. Intonational qualities of strong and weak imperatives. Poster presented at LabPhon15.


