



Temporal interpretation in Directive Speech Acts

A competition between imperative and 2nd person subjunctive in Greek

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The puzzle: Two forms -> Single Force

Greek employs two forms in *directly* expressing Directive Illocutionary Force:

(1) a. Djavase!

Imperative mood

COMMAND

Read.IMP.2SG

REQUEST

b. Na djavasis!

Subjunctive mood

ADVICE

SUBJ read

PERMISSION

Main Claim: Immediacy restriction in Imperatives

Main Question: *What is the semantic/pragmatic difference between the two forms?*

- Primarily a difference in their *temporal interpretation*:
 - Imperatives are associated with an *immediacy restriction*
 - Subjunctives give rise to a *lateness inference*

Main Claim: Immediacy restriction in Imperatives

Follow-up Question: *How is this difference derived?*

- The semantic difference is due to the entire lack of semantic and syntactic tense in imperatives as opposed to tensed Subjunctives (*competition*-based account).

cf. Veloudis (2010): *na*-Subjunctive is marked with a spatiotemporal distance-inference

Roadmap

- Background: Differences between the two forms (imperative and subjunctive), the *surrogate* and the *true* subjunctive
- Developing the Hypothesis: Lack of Tense in imperatives
- Tensed Subjunctives: A competition-based approach
- Experimental Study: Imperatives vs Subjunctives
- Discussion
- Further Questions

Background: True & “Surrogate” imperatives

It is well-known that in certain languages, *imperatives* under negation are replaced by a surrogate form (Rivero 1994, Rivero & Terzi 1995, Isac 2015)

(2) a. Canta!

sing.IMP.2SG

‘Sing’

No cantes!

NEG sing.SUBJ.2SG

‘Don’t sing!’

Spanish

Background: True & “Surrogate” imperatives

The subjunctive in Greek is not a surrogate form.

There is “surrogate” *na*-less subjunctive (3b) patterning with the ‘true’ imperative (3a).

(3) a. Fige. leave.IMP.2SG	b. Min figis NEG leave.2SG	<i>True & Surrogate Negative Imperative</i>
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(4) a. Na figis SUBJ leave.2SG	b. Na min figis SUBJ NEG leave.2SG	<i>Subjunctive & Negative Subjunctive</i>
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Background: Imperatives-Subjunctives differences

Three differentiating aspects have been discussed in the literature:

A. Politeness (Subjunctives $>_{\text{POLITE}}$ Imperatives, Rouchota 1994, Isac 2015)

B. Lack of wishes (Only subjunctives can express wishes, Tzartzanos 1946)

C. Immediacy in Imperatives vs. Temporal distance in Subjunctives (Tzartzanos 1946, Veloudis 2010)

(5) a. Fige.

leave.IMP.2SG

b. Na figis

SUBJ leave.2SG

Immediacy vs. Distance: Is it a lexical restriction?

No! Imperative is compatible with future adverbials and subjunctive is compatible with immediacy adverbials. Immediacy or lateness inference is not part of the meaning (cf. Tucano, Cheyenne, Indo-Aryan, Aikhenvald 2010, Kaufmann 2012, Murray 2016, Banerjee & Kaur 2022).

(8) a. Fige amesos tora/avrio

leave.IMP.2SG right now/tomorrow

‘Leave right now tomorrow.’

b. Na figis amesos tora/avrio.

SUBJ leave.2SG right now/tomorrow

Immediacy vs. Distance: A Tense difference

We argue for the following difference between the two forms: Imperatives lack tense. Subjunctives involve tense.

Imperatives

- Tenseless
- In the absence of covert/overt lexical tense, t is interpreted as the context time t_c
 - ↷ Immediate action
- Later interpretation: Due to an overt or covert lexical tense binding t

Subjunctives

- Tensed
- Non-past Tense $t_c \leq t$
- Due to competition with the imperative, the $t_c = t$ interpretation is blocked
- A lateness inference is derived

A tenseless approach to imperatives

Greek imperatives are tenseless

Tenseless imperatives

- Imperatives have been shown to be defective crosslinguistically (Huntley 1980, Platzak & Rosengren 1998, Portner 2004, 2007 cf. Kaufmann 2012)
- Radical: Imperatives lack syntactic & semantic tense
- Not so radical: Imperatives have **Aspect**.
- Pancheva & Zubizarreta (2020): **Temporal interpretation can be achieved in certain languages without Tense by the contribution of Aspect**

The meaning of imperatives

- Imperatives involve a modal operator IMP (pace Schwager 2011, Kaufmann 2012, Oikonomou 2016)
 - Imperatives are modalized propositions. Modality is bouletic relativized to the Speaker's desires (Sperber & Wilson 1989, Condoravdi & Lauer 2012)
- (9) $\llbracket \text{imp } p \rrbracket^c = \exists w' \in W. S_c \text{ desires in } c \text{ are satisfied in } w' \wedge p(w')$
- Performativity is ensured via the presuppositions of *imp* (see Kaufmann 2012, 2016)

Focus in this talk: The complement of *imp*

- IMP takes as its complement an IP, which only involves an aspectual head, no Tense

(10) IMP [..... [_{aspP} asp [_{VP} V...]]

so far: very similar to Kaufmann (2012)

- The perfective – imperfective distinction is instantiated in imperatives:

(11) a. Pekse

b. Peze.

Play.IMP.PRF.2SG

Play.IMP.IMPRF.2SG

Temporal interpretation in imperatives

Without tense, how is temporal interpretation achieved in imperatives?

- A sentence φ is evaluated in context c , s.t. $\llbracket \varphi \rrbracket^c$ is true iff φ is true at t_c
- Following Pancheva & Zubizarreta (2020), we assume that evaluation time is syntactically represented as a covert indexical pronoun *pro* in the CP domain. When *pro* is evaluated in a context c , $\llbracket pro \rrbracket^c = t_c$
- Temporal interpretation is achieved in imperatives by **restricting the time variable introduced by aspect.**

The meaning of Aspect

- In Greek, there is the perfective / imperfective distinction (same semantic contribution in imperatives).
- Imperfective introduces a time variable t , denoting that t is part of the in the event time:

$$(12) \quad \llbracket \text{IMPERFECTIVE} \rrbracket = \lambda P_{\langle v, t \rangle} \lambda t \exists e [P(e) \wedge t \subset \tau(e)]$$

- Perfective introduces a time variable t , denoting that event time is part of t :

$$(13) \quad \llbracket \text{PERFECTIVE} \rrbracket = \lambda P_{\langle v, t \rangle} \lambda t \exists e [P(e) \wedge \tau(e) \subseteq t]$$

Imperfective Imperatives

(14) a. *Peze* ‘Play.IMP.F.IMP.2SG’

b. LF: $[_{CP} pro [_{IMP} [_{IP} \dots \dots [_{AspP} \lambda t \exists e [play(e) \wedge t \subset \tau(e)]]]]]]$

c. $[[Peze!]]^c = \exists w' \in W. S_c$'s desires at t_c in c are satisfied in w' in \wedge
 $\exists e. play(e, Ad_c, w') \wedge t_c \subset \tau(e)$

d. *There is a world w' consistent with the Sp 's desires in c & the Ad plays in w' and **the utterance time is included in the event time.***



$t_c \subset \tau(e)$ in Imperatives: Problem?

Unanimous (?) agreement in the literature that imperatives are future oriented.

- Platzack and Rosengren (1998): Imperatives lack TP → No tense interpretation → future orientation is brought in by directivity.
- Ogihara (2007): Ordering is inherently future oriented (e.g. ‘Be quiet’ despite being stative is future oriented due the directive force of the utterance)

Schwager (2011)/Kaufmann (2012): Imperatives are not necessarily future oriented. Presupposition of *IMP*: *event frame need not lie entirely in the future, it must not lie entirely in the past either.*

$t_c \subset \tau(e)$ in Imperatives: Not a problem

In many cases an imperative is uttered while the eventuality is already in progress:

(15) Encouraging/ordering (keep-going interpretation)

- a. Artist is singing a nice song, person who hears says
Traguda, fonara..! ‘Sing.IMPRF.IMP.2SG great voice!’
- b. A is sweeping the floor, B says to A:
Orea, skupize. ‘Nice sweep.IMPRF.IMP.2SG

$t_c \subset \tau(e)$ in Imperatives: Not a problem

In many cases an imperative is uttered while a state is already holding:

(16) Indifference imperatives / Permission imperatives

- a. A is cold, and tells B, she feels cold. B responds: (*let-it-be interpretation*)

Krione.. 'Be-cold.IMPRF.IMP.2SG'.... There is nothing I can do...

- b. A is painting a wall. While A is still painting, he looks at B. B tells him:
(*keep-going interpretation*)

Vafe. Den me enohlis. 'paint.IMPRF.IMP.2SG.. You are not bothering me.

$t_c \subset \tau(e)$ in Imperatives: Not a problem

- In-progress-imperatives are hard to be interpreted, if we do not allow any overlap with utterance time.
- Crucially, in all of these cases we need to have imperfective aspect.

(see Kaufmann 2012)

Perfective Imperatives

(17) a. *Pekse* ‘Play.PRF.IMP.2SG’

b. LF: $[_{CP} pro [_{IMP} [_{IP} \dots [_{AspP} \lambda t \exists e [play(e) \wedge \tau(e) \subseteq t]]]]]]$

c. $[[Pekse!]]^c = \exists w' \in W. S_c$'s desires at t_c in c are satisfied in w' in $\wedge \exists e.$
 $play(e, Ad_c, w') \wedge \tau(e) \subseteq t_c$

d. *There is a world w' consistent with the Sp's desires in c & the Ad plays in w' and the event time is included in the utterance time.*

[UT]

{---}

$\tau(e) \subseteq t_c$ in Imperatives: Problem?

The Present Perfective Paradox (PPP): Utterance time is a very short interval to accommodate perfective aspect (Bennett & Partee, 1978; Kamp & Reyle, 1993; Smith, 1997, Wyngaerd, 2005, a.o.).

There are however certain cases in which perfective is consistent with present (see Ogihara 2007 for a discussion, De Wit 2017 for crosslinguistic data):

Sports-speech: *x passes the ball to y*

Performatives: *I apologize / I fire you...*

$\tau(e) \subseteq t_c$ in Imperatives: Problem?

- In both cases duration of the event is very short
- Language makes use of grammatical means to convey pragmatic information
- In the case of perfective imperatives the semantic interpretation provides exactly this immediacy inference:
 - Be as quick/immediate as possible: *the event should last no more than the speaker's utterance*

Future interpretation in imperatives

- Imperative (perfective and imperfective) can also receive a future interpretation. How is this possible?
- In the presence of a **temporal adverbial**, the adverbial can bind the t -variable (P&Z 2020; 1336)

(20) a. Klidose avrio otan fevgis. *Lexical tense*
 Lock.IMP.PRF.2SG tomorrow when you-leave.

b. $[_{CP} [_{IMP} [_{IP} \textit{tomorrow-when-leave} [_{AspP} \lambda t \exists e [lock(e) \wedge \tau(e) \subseteq t]]]]]]$

c. $[[20]]^c = \exists w' \in W. S_c$'s desires at t_c in c are satisfied in w' in $\wedge \exists e.$
 $lock(e, Ad_c, w') \wedge \tau(e) \subseteq [tomorrow - depart \cdot time(ad)]$

Future interpretation in imperatives

- Likewise, in many contexts a temporal adverbial is given in the context and thus there is silent lexical tense in the imperative clause.
- E.g. Speaker A says: Tomorrow I'm gonna leave for a few days.

(21) a. Klidose ~~avrio~~ ~~otan~~ ~~fevgis~~.

Lock.IMP.PRF.2SG [tomorrow when you-leave].

Subjunctives are tensed

Compare: The complement of *subj*

- In subjunctives instead the complement of subjunctive mood, is tensed.

(22) [SUBJ [_{TP} T [_{aspP} asp [_{VP} V...]]]]

- The past subjunctive conveys that ‘*you should have played.*’

(23) a. Na peksis

SUBJ Play.PRF.2SG

b. Na pezis.

SUBJ play.IMPRF.2SG

c. Na epezes.

SUBJ play.IMPRF.PAST.2SG

Subjunctives are tensed

- Subjunctive clauses encode the past - non-past distinction .

(24) a. $\llbracket non \circ past \rrbracket = \lambda p_{\langle it \rangle} . \lambda t . \exists t' [t' \geq t \wedge p(t')]$

b. $\llbracket past \rrbracket = \lambda p_{\langle it \rangle} . \lambda t . \exists t' [t' < t \wedge p(t')]$

- The reason why the non-past subjunctive does not result in immediate interpretation, is because it is blocked by the most **specified** imperative which, lacking tense, results in an immediate interpretation (Pancheva & von Stechow 2004 for Present Perfect).

Subjunctives cannot convey in-progress encouragement/permission/indifference

Mama, is telling her child who peacefully eats.

(25) a. √Troge pulaki mu. b. #Na tros pulaki mu.

eat.IMP.IMPRF.2SG bird-my SUBJ eat.IMPRF.2SG bird my

Eat my little bird!

Predictions

If Imperatives in the absence of tense, are evaluated at t_c and Subjunctives involve non-past tense, we expect the following patterns:

Imperatives

- Preferred in immediate environments [for short events]
- In later contexts: OK if there is a salient lexical tense in the discourse

Subjunctives

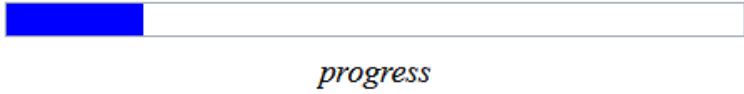
- Dispreferred in immediate environments (blocked by the more specified imperative)
- In later environments: always fine

Experimental Study on immediacy restriction

Experimental study: Design

- A sentence evaluation task on a naturalness Likert-scale (1-5)
- Context varied with respect i) **Temporacy** (Immediate vs Later-context) and ii) **Speech Act Type** (SAT) (Request vs. Advice).
- Participants were presented with a context followed by (i) a subjunctive and (ii) an imperative (two orders, balanced)
- They were asked to evaluate each one on a separate scale.
- 10 items per temporacy condition (out of which 5 pairs instantiated advice and 5 pairs request). In addition, we had 33 fillers.

Example of immediate context



It started raining. Maria and her roommate are in the balcony. Maria tells her:

Να κατεβάσεις την τέντα.

SUBJ Lower the tent

Not at-all natural

entirely natural

1

2

3

4

5

Κατέβασε την τέντα.

Lower.IMP the tent

Not at-all natural

Entirely natural

1

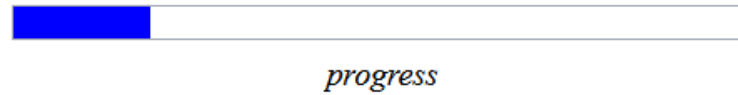
2

3

4

5

επόμενο



Anastasia and Dionisis are out for a walk. While they are walking back home, it started getting cloudy. Anastasia then says:

Να κατεβάσεις την τέντα.

SUBJ Lower the tent

Not at-all natural

1

2

3

4

5

entirely natural

Κατέβασε την τέντα.

Lower.IMP the tent

Not at-all natural

1

2

3

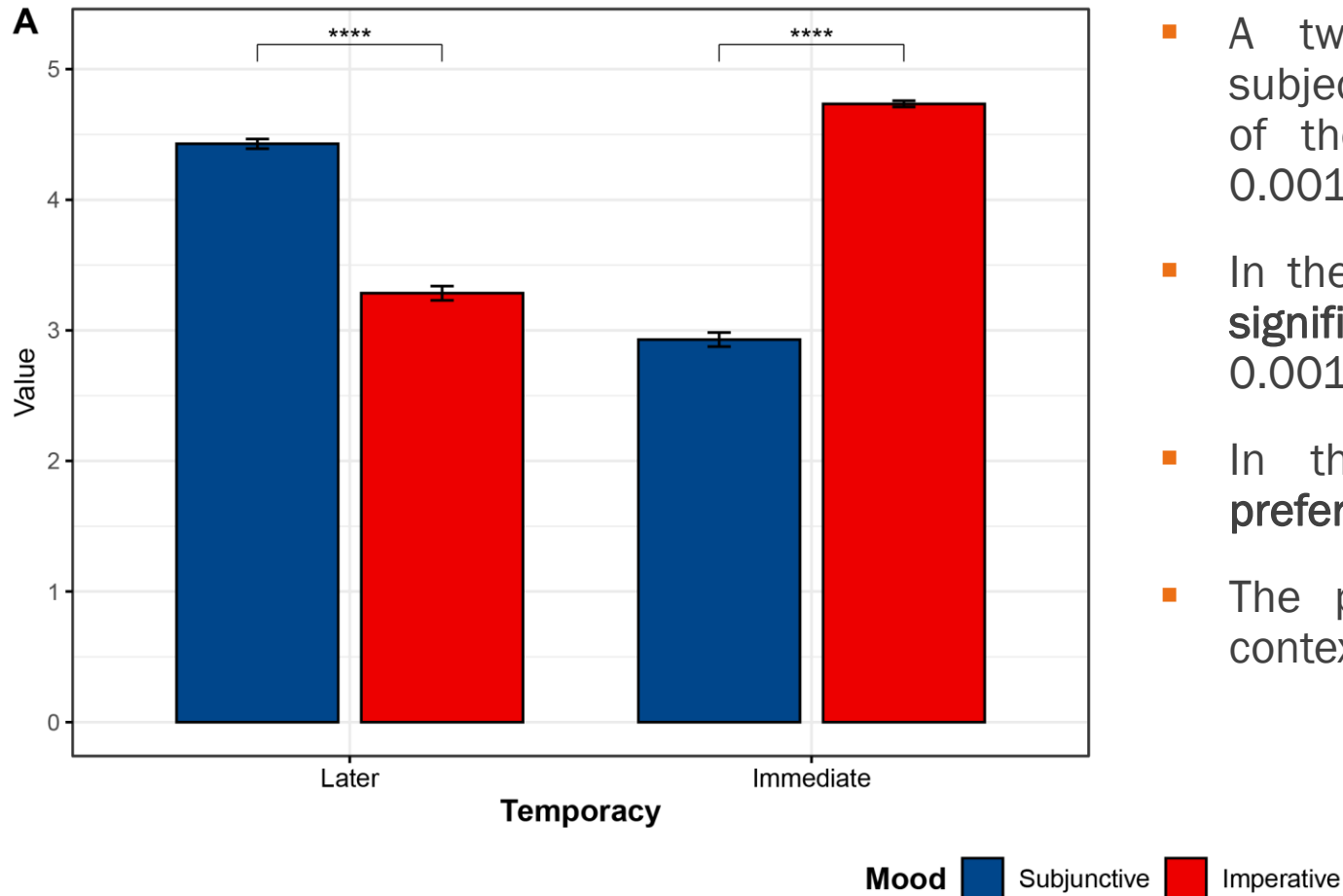
4

5

Entirely natural

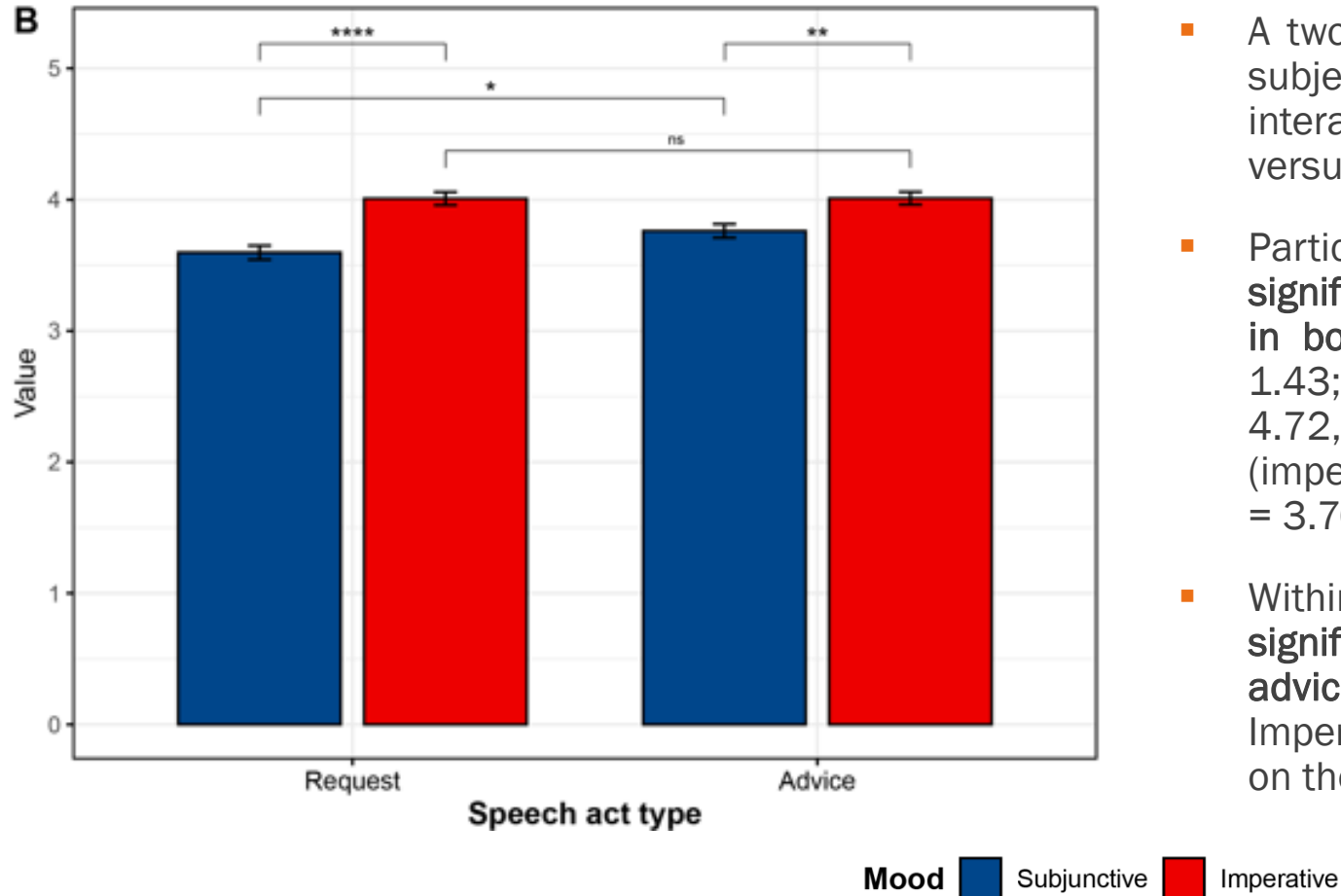
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Results: Temporacy



- A two-way (TEMPORACY×MOOD) within-subject ANOVA showed an interaction effect of the two factors ($F(1,83)= 298, p < 0.001$).
- In the immediate-condition **imperative** was significantly preferred over **subjunctive** ($p < 0.001$).
- In the later-condition, **subjunctive** was preferred over the **imperative** ($p < 0.001$).
- The preference difference in immediate-contexts was larger than in later-contexts.

Results: Speech Act



- A two-way (SPEECH ACT TYPE × MOOD) within-subject ANOVA ($F(1,83) = 4.356$) showed an interaction effect between SAT (i.e., advice versus request) and mood.
- Participants rated the use of **imperative** significantly higher than the use of **subjunctive** in both request (imperative: $M = 4.01$, $SD = 1.43$; subjunctive: $M = 3.59$, $SD = 1.55$; $t(839) = 4.72$, $p < 0.001$) and advice contexts (imperative: $M = 4.01$, $SD = 1.42$; subjunctive: $M = 3.76$, $SD = 1.52$; $t(839) = 2.98$, $p < 0.01$),
- Within Subjunctive mood, participants showed significantly higher preference for **subjunctive** in advice compared to request ($p = 0.02$). Imperatives did not vary significantly depending on the speech act type.

Discussion

- The experimental study confirms the importance of **immediacy** in mood choice in directive clauses.
- The fact that the size of the difference is larger in immediate environments suggests that subjunctives are ruled out in such environments.
- Later contexts: Target sentences do not involve overt lexical tense → Subjunctive is preferred.
- However, silent lexical tense is not excluded → Imperatives are licensed

Discussion

- The imperative is overall preferred across the speech act type.
- In *Advice-contexts*: the size of the imperative – subjunctive difference is smaller (may be related with the temporal interpretation of advice, after all not so relevant for the speaker).
- In *Request-contexts*: the size of the difference is larger. A potential explanation could be that immediacy is considered more important in requests than in advice:

i.e. *Eat the banana* vs. *Lower the tent*

Further Questions

No tense approach: Why only in imperatives?

- We saw that the immediacy restriction in imperatives can be explained if we follow a no-tense analysis
- Why would a language, which otherwise has tense, would allow lack of tense in a specific clause-type? (Rumi Pancheva, p.c.)
- Temporal interpretation *is* restricted in directive speech. Kaufmann (2012): Utterance time is not excluded, but past interpretation is excluded.
- If a language partially allows No-Tense we expect to find it in Directive Speech, not in assertive speech.

What mechanism is behind ‘blocking’?

Option A:

- Tenseless imperatives being evaluated at t_c end up semantically more specified than tensed subjunctives which convey non-past ($t_c \leq t$)
- The most specified form “wins over” the less specified form, thus the participants prefer the imperative (Pancheva & von Stechow 2004, on present perfect)

What mechanism is behind ‘blocking’?

Option B:

- Tenseless imperatives are structurally and morphosyntactically less complex than subjunctives.
- It follows that in immediate-contexts, the subjunctive, as a more complex alternative, is expected to be dispreferred.
- This blocking effect can be derived in terms of a manner implicature based on Horn’s *Principle of least effort* [The use of a marked expression when a corresponding unmarked alternate expression is available tends to be interpreted as conveying a marked message.] (Rett 2014)

What mechanism is behind ‘blocking’?

Option A or B

- We opt for option A because when there is an overt adverbial the difference between imperatives and subjunctive is not as strong.
- Under a manner implicature (based on the complexity of the structures), we would expect the same effect.
- Under a less vs. more specified distinction, we expect these differences to soften once there is external specification.

Prediction: Absence of distance effect in subjunctives when there is no alternative

When an imperative is not available, we expect that subjunctives will not block an in-progress interpretation.

Questions:

A is painting a wall, - and while painting – asks B if it is OK that she paints while the other one is fixing the ladder.

(26) Na vafo oso ftiahnis ti skala?
SUBJ paint.IMPRF.1SG while make.IMPRF.2SG the ladder
Can I paint while you make the ladder?

Prediction: Absence of distance effect in subjunctives when there is no alternative

When an imperative is not available, we expect that subjunctives will not block an in-progress interpretation.

3rd person:

The camera is in a good position. So the director says:

(28) Orea, i kamera na ine edo.

Nice the camera SUBJ be.IMPRF.3SG here

‘Nice the camera should be (and remain here).’

Future interpretation = future lexical tense?

Context: I visit my friend who lives at Aguseliana of Rethymno. He shows me his tasty and juicy tomatoes and tells me:

(26) Fitepse ki esi aftus tus sporus pu mas edose o Janis.

Plant.IMP.PRF.2SG and you these the seeds that us gave the John

‘You should also plant these seeds that Janis gave us.’

In this context, apparently the event is not part of the utterance time. The speaker means sometime later. But also, no lexical tense in the context.

An indefinite-future time, when evaluation at t_c is not possible?

Are imperatives at t_c veridical?

The Uncertainty Condition: Speaker takes p and $\neg p$ to be possible.

Kaufmann (2012): UC is evaluated in a precontext c' , preceding the context of the utterance (cf. Schlenker 2004, *context of thought*)

Epistemic Uncertainty Constraint (EUC)

$\llbracket OP_{Imp} \rrbracket = \lambda f \lambda g \lambda t \lambda P \lambda w. (\forall w' \in O(fCG(c) \cup f, g, c_T, w)) [P(t)(w')]$,

presupposes: the precontext c' of c is such that for all $w \in CS(c')$:

$(\exists w' \in Bel'_{c_S}(c'_T)(w)) (\exists w'' \in Bel'_{c_S}(c'_T)(w)) [\neg p(t)(w') \ \& \ p(t)(w'')]$

(= *the speaker believes that both $\neg p$ and p are possible*).

Uncertainty Condition

Fake permissions in Kaufmann (2012) : Somehow B's utterance seems to suggest that he did not take A's announcement as definite and would assume A to refrain from going swimming if he expressed resentment (our paint-cases).

(27) A: Ich gehe jetzt schwimmen.

A: I go now swim
'I'm going swimming now.'

B: Ja, bitte, tun Sie das.

B: yes, please, do.IMPOLITE you.2POLITE that
'Please, do so.'

More questions!?

Thank you!

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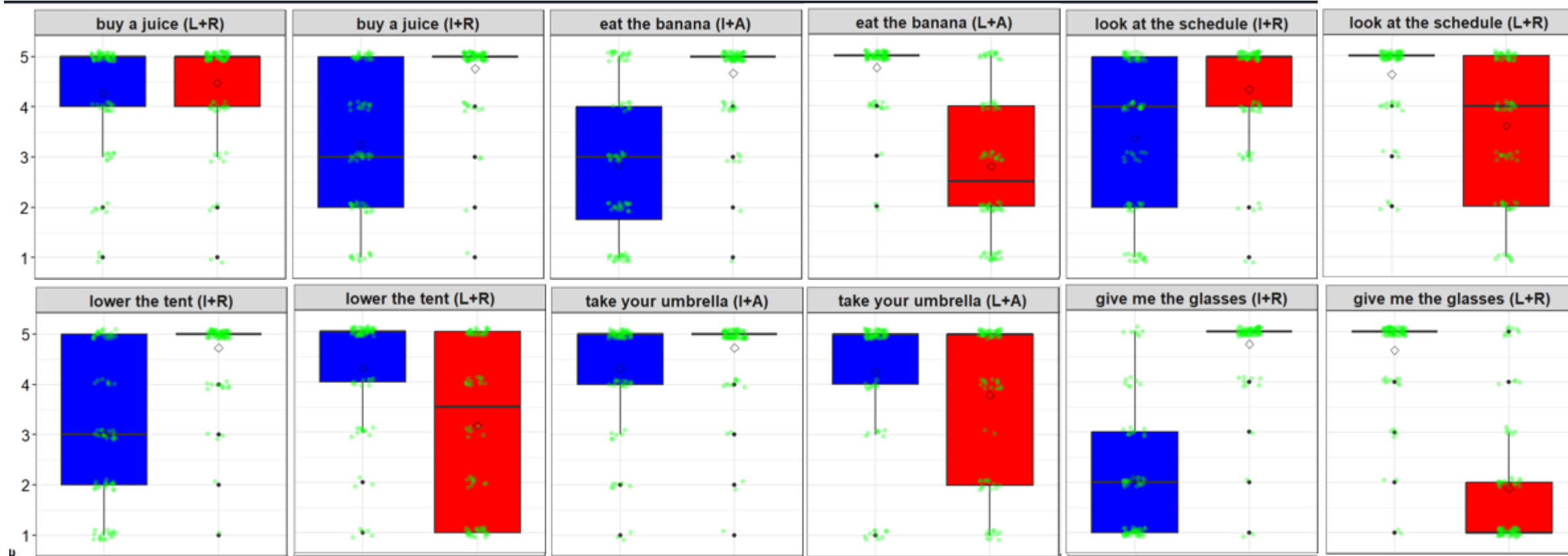
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Appendix: Item variation



Appendix: Item Variation

