# Why would you D that? On the D-layer in Greek clausal subjects

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#### Introduction

- Clausal subjects in some languages, including Greek, are reported to obligatorily have an overt DP element (D-layer).
- We show that the D-layer in Greek clausal subjects is optional and context-dependent.
- We argue that the distribution of the D-layer in Greek indicative clausal subjects is not governed by syntactic, but rather by **semantic and pragmatic** considerations.

## **Empirical Picture**

- Kastner (2015); Roussou and Tsimpli (1994) report that the D-layer is obligatory, focusing mostly on factive verbs.
- We find that in a lot of contexts, the presence of the D-layer is optional.

(1)There has been a murder, and we're trying to find the killer.

- [(To) oti o Christos ine o dholofonos] ine pithano.

  DET COMP the Christos be.3sg the killer be.PRs probable
- 'That Christos is the killer is probable.'
- Certain predicates, however, trigger preference or dis-preference for the D-layer. The D-layer is preferred when the main predicate entails that the proposition *p* expressed by the clausal subject is true (check-mark indicates preference):

(2) There has been a murder, and the forensic pathologist found that the victim had been poisoned.

- [(\sqrt{To}) oti to thima pethane apo dhilitiriasi] ine dhedomeno. Det comp the victim die.pst.3sg from poisoning be.prs given
- 'That the victim died of poisoning is a given.'
- When the predicate entails the falsity of the subject, the D-layer is dispreferred.
- (3)There has been a crime and some policemen are trying to bring the victim back to life with CPR. A doctor, however, who already examined the victim and knows they are dead, says:
- [(??To) oti to thima tha ksanarchisi na anapnei] ine adhinato.

  DET COMP DET victim will start-again.3sg subj breath.3sg be.prs impossible
- 'That the victim will start breathing again is impossible.'
- When the main predicate does not make any claims about the truth of the clausal subject, the preference for the D-layer depends on whether the speaker believes the clausal proposition.
- (4) I am a scientist trying to convince via logical reasoning a flat-earther that the earth is not flat.
  - a.[(??To) oti i ghi ine epipedhi] proipotheti oti boris na
    DET COMP DET Earth be.PRS flat presuppose.PRS COMP can.PRS COMP
    ftasis stin akri tis.
    reach.subj to-the edge her.dat

'That the Earth is flat presupposes that you can reach its edge.'

b.[(To) oti i ghi ine strogili] sinepaghete oti dhen ine epipedhi.

DET COMP DET Earth be.PRS round entail.PRS COMP NEG be.PRS flat

'That the Earth is round entails that it's not flat.'

#### **Previous accounts**

- The D-layer's context-depend distribution is not captured under purely syntactic approaches.
- Hartman (2012); Kastner (2015) propose the D-layer is obligatory to turn a clausal subject into a DP to move to SpecTP as a subject. This does not explain that the D-layer is **never** obligatory, nor that the predicate or the belief state of the attitude holder may affect its distribution.
- Kastner (2015) claims that the presence of the D-layer in clauses correlates with a factive presupposition. This is too strong to account for our data, since it is sufficient that the clausal subject is **possibly** true for the D-layer to be licensed, see (1).
- The D-layer also does not correlate with the proposition being anaphoric to a previously uttered sentence, as we see examples of it is licensed in out of the blue scenarios like (1).

## **Proposed Analysis**

- Proposal: The distribution of the D-layer in clausal subjects is determined by its **semantics**.
- The D-layer is not necessary for syntactic purposes; clausal subjects can be **DPs** (with a D-layer) or **CPs** (without it).
- We assume that there is no silent D-head in Greek. The \*[P CP] constraint shows that when a D-layer is needed for syntactic reasons, it is always overt:
- (5) I Maria thimose ghia [\*(to) oti dhen plirothike tris mines].

  DET Maria mad.PST for DET that NEG paid.PASSIVE.PST three months.
- 'Maria was mad for not being paid for three months.'

√ Why D that? }

- In clausal subjects, the D-layer contributes a presupposition:
- (6)  $\llbracket to \rrbracket = \lambda p_{st}.\lambda x : \forall q_{st} \in \text{DOX}(\mathsf{x}) \exists w \ q(w) \land p(w) = 1. \ p$
- It makes use of the doxastic set  $\mathbf{pox}$  of the speaker x, representing the set of their beliefs and takes the proposition p expressed by the clausal subject as its argument.
- It then introduces a presupposition that p is not contradicting with any other proposition in pox. Thus, for every proposition in pox, there is a world where it is true and p is too.
- Note that this presupposition is rather weak. We could have proposed the presupposition that *p* is part of the set of beliefs of the speaker:
- (7)  $\llbracket to \rrbracket = \lambda p_{st}.\lambda x : p_{st} \in \text{DOX}(\mathsf{x}) . p$
- This would make the wrong prediction for predicates like "probable" (1). If the speaker already believed p, then they would not simply state p is probable, since this would give rise to an implicature that p could be false. Thus, (7) would wrongly predict that a D-layer is impossible in.
- The denotation in (6) rules out the presence of the D-layer in examples like (3), where p is incompatible with the speaker's beliefs. The presupposition is not met, given that the predicate 'impossible' entails the proposition to be false.
- The presupposition tests confirm that the D-layer does contribute a presupposition:
- (8) An [(??to) oti forao jialia] itan alithia, dhen tha icha kani etisi ghia pilotos. if DET СОМР wear glasses was true NEG will have done application for pilot.

'If it was true that I wear glasses, I wouldn't have applied to be a pilot.'

## Predicting optionality

- When the presupposition of the D-layer is met, it's inserted to meet Maximize Presupposition! (Heim, 1991). Why is it the D-layer not obligatory then, whenever licensed?
- Structures with the D-layer are DPs, as opposed to CPs. The non-D-layered structure is simpler and does not compete with the D-layered one (Katzir, 2007).
- The speaker may choose a more complicated structure to satisfy Maximize Presupposition! or they may choose to minimize the structure instead; this explains the optionality of the D-layer in (1).

# **Predicting preference**

- How do we predict the difference between optionality (1) and preference (2) for a D-layer?
- We follow Lauer (2016) in assuming that MP is not a normative rule, but rather a 'linguistic preference' between forms that speakers have. This allows us to explain why the D-layer is never obligatory in the contexts where its presupposition is met, but rather only preferred.
- In (2) the presupposition of the D-layer is necessarily met, since the factive predicate imposes an even stronger presupposition on its subject. In (1), however, the predicate does not introduce any additional presupposition and it may still turn out that the subject p is incompatible with the beliefs of the speaker (or they want to convey impartiality).
- Thus, with predicates like (1) the speaker may choose to enforce the presupposition pragmatically. We then correctly predict the presence of the D-layer to depend on the conversational intents of the speaker:
- (9) In a courtroom, the evidence so far neither proves nor disproves that the defendant is guilty.
  - a. Defendant's lawyer: [(??To) oti o katighorumenos ine enochos] ine mia Defendant's lawyer determination defendant be. Preside guilty be. Preside a pithanotita. Ala tha sas apodikso tin athootita tu.

    possibility. But will you. Dat prove. Preside defendant be. Preside guilty be. Preside a possibility. But will you. Dat prove. Preside defendant be. Preside guilty be. Preside a possibility. But will you. Dat prove. Preside defendant be. Preside guilty be. Preside a possibility. But will you. Dat prove. Preside a possibility.
  - 'That the defendant is guilty is a possibility. But I will prove to you his innocence.'
  - b.Prosecution's lawyer: [(\sqrt{To}) oti o katighorumenos ine enochos] ine mia Prosecution's lawyer DET COMP DET defendant be.PRS guilty be.PRS a pithanotita ghia tin ora. Tha sas apodhikso oti ine pragmatikotita. possibility for the time. will you.DAT prove.PRS COMP be.PRS reality
  - 'That the defendant is guilty is a possibility for the time being. I will prove to you that it's the reality.'
  - c.Judge: [(To) oti o katighorumenos ine enochos] ine mia pithanotita. As Judge DET COMP DET defendant be.PRS guilty be.PRS a possibility. Let akusume ta epichirimata sas.

    hear.SUBJ DET arguments yours
  - 'That the defendant is guilty is a possibility. Let's hear your arguments.'

## Conclusion

- The D-layer in Greek clausal subjects introduces a pragmatically determined presupposition.
- More arguments and references in the handout. Scan the QR code!