

The different faces of the complementizer *oti*

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Περίληψη

Η παρούσα εργασία εξετάζει την κατανομή του συμπληρωματικού δείκτη (ΣΔ) «ότι» σε προτάσεις που εκ πρώτης όψεως έχουν επιρρηματική (χρονική) λειτουργία. Η ανάλυση βασίζεται στη σύγχρονη προσέγγιση των ΣΔ ως ονοματικών (αντωνυμικών) στοιχείων. Σε αυτό το πλαίσιο η παρουσία του «ότι» στις εν λόγω επιρρηματικές προτάσεις εξηγείται μέσω του χαρακτηρισμού του ως αντωνυμίας και της κατανομής του σε συγκεκριμένες ελεύθερες αναφορικές προτάσεις. Στο πλαίσιο αυτής της προσέγγισης, το στοιχείο «ότι» εξαρτά τη λειτουργία του και κατ' επέκταση την ερμηνεία του από το συντακτικό περιβάλλον στο οποίο εμφανίζεται. Η πολλαπλή αυτή κατανομή ερμηνεύεται ως μια περίπτωση συντακτικής 'πολυσημίας'.

Λέξεις-κλειδιά: συμπληρωματικός δείκτης, αντωνυμία, ελεύθερη αναφορική πρόταση, χρονική πρόταση, ονοματικό στοιχείο.

1 Introduction

The morpheme *oti* 'that' in (Modern) Greek is the typical declarative complementizer that introduces complements of verbs of belief, saying, knowledge, etc., as in (1a). In this context it freely alternates with the complementizer *pos* 'that'. It is also found as a free relative pronoun with an inanimate referent in the neuter (grammatical) gender, as in (1b):

- (1a) Είπε/νομίζει/ξέρει *ότι/πως* έφυγαν
said-3s/think-3s/know-3s that leave-3pl
'She said/thinks/knows that the we left'
(1b) Αγοράζει *ό,τι* είναι καινούργιο
buy-3s what be-3s new
'She buys what(ever) is new'

The view endorsed by traditional grammarians is that the two instances of *oti* in (1) are distinct. For this reason, the free relative *oti* is orthographically distinguished from the complementizer with a comma between the two morphemes *o* and *ti*, i.e., *o,ti* (literally 'the what').

A third instance of *oti*, introducing a clause in a peripheral position, not selected by a predicate, occurs in (2)¹; for ease of exposition, this *oti* is also glossed as 'that':

- (2a) *ότι* έφευγα εμφανίστηκε ο Κώστας
that leave.imp-1sprt showed.up-3s the Kostas
'As I was leaving, Kostas showed up'

¹ As pointed out by Eleni Agathopoulou (p.c.), this use of *oti* is not acceptable by all speakers, and there seems to be a north (ungrammatical) vs. south (grammatical) split.

- (2b) *ότι* ετοιμαζόμουν να φύγω
 that was.about-1s prt leave-1s
 ‘I was just about to leave/ I was at the moment of getting ready to leave’

As the English translations show the *oti*-clauses in (2) give rise to a temporal reading.

According to Triandafillidis (1941: §1046, 3) the three instances of *oti* described in (1) and (2) above are not to be confused: the declarative complementizer is distinct from both the temporal and the free relative pronoun *o,ti*. Interestingly though, he uses the same orthographical convention for both the temporal and the free relative one, thus distinguishing these two from the complementizer. On the other hand, Tzartanos (1989 [1963²]) suggests that the temporal *oti* originates from the temporal conjunction *ote* (*o-te*, relative ‘when’). As such, it is a different species altogether and falls in the same series as the interrogative *pote* ‘when’ and demonstrative *tote* ‘then’.

In the present paper I focus on the ‘temporal’ *oti*-clause in (2) and argue that this is an instance of a definite free relative. In section 2, I present the main properties of *oti*-temporal clauses with respect to their temporal reading and their relative clause structure. In section 3 I argue for their analysis as free relatives and consider the properties of *oti* as a pronoun. Section 4 concludes the discussion.

2 *Oti*-temporal clauses: main properties

2.1 *The temporal reading?*

Let us start with the properties of the temporal *oti*-clause. Consider the examples in (3) where the *oti*-clause translates as a temporal one introduced by a relevant expression, such as ‘the moment that’, ‘as I was doing x’, or ‘as soon as I had done x’. Furthermore, the preferred order is with the *oti*-clause preceding the main one. If the latter is postposed the preferred order requires topicalization of the matrix subject (SV order vs VS), as shown in (3c).

- (3a) *ότι* έφευγα εμφανίστηκε ο Κώστας
 that left.imp-1s showed.up-3s the Kostas
 ‘As I was leaving/The moment I was leaving, Kostas showed up’
 (3b) *ότι* έφυγα εμφανίστηκε ο Κώστας
 that left.perf-1s showed.up-3s the
 ‘As soon as I had left/The moment I left, Kostas showed up’
 (3c) ?ο Κώστας εμφανίστηκε *ότι* έφευγα
 the Kostas showed.up-3s that left.imp-1s
 ‘As I was leaving/The moment I was leaving, Kostas showed up’

The (past) imperfective aspect in (3a) gives rise to a simultaneous reading between the event of my leaving and the event of Kostas’ showing up. The (past) perfective aspect in (3b), on the other hand, seems to set the event of my leaving prior to Kostas’ showing up. However, a closer look shows that there is coincidence between the endpoint of my leaving and the starting point of the following event (Kostas’ showing up). So in (3a), we can have the continuation in (4), which is not acceptable in (3b):

- (4) ... so I didn’t leave in the end (3a) = OK, (3b) = #

A similar construction is attested in Italian, at least in colloquial registers, with the declarative complementizer *che*, as in (5):²

- (5) *è arrivato che stavo uscendo*
 is arrived that was-1s leaving
 ‘He arrived as I was leaving’

The *che*-clause also gives rise to a simultaneous reading, as pointed out for the Greek sentence in (3a). So this is not specific to Greek, but seems to imply that there is some common pattern that involves declarative complementizers of this sort.

Going back to the *oti*-clause, we observe that it may stand on its own, similar to other temporal expressions, such as the one introduced by *molis* ‘just’, or *molis pu* (‘just that’) as in (6):

- (6a) *ότι έφευγα*
 that left.imp-1s
 ‘I was about to leave/I was just leaving’
 (6b) *μόλις (που) έφευγα*
 Just that left.imp-1s
 ‘I was just leaving (right now)’

The interpretation in both (6a) and (6b) is that the subject was at the point of leaving. If instead of imperfective aspect we use the (past) perfective one, then the derived reading is “I have just left”. So the event is interpreted in relation to some temporal point in the discourse. Note that despite the past tense in (6a) the temporal reference does not precede the Speech Time. Past imperfective in this sentence (and in the absence of a matrix clause) expresses the subject’s intention to leave. The data in (3) and (6) so far seem to justify the characterization of this *oti*-clause as a temporal one.

In both examples in (3a-b) the main verb has to be in the past perfective. If the aspect becomes (past) imperfective, the result is ungrammatical, as in (7a). Note that this is not the case when the temporal clause is introduced by the temporal adverb *otan* (‘when’), giving rise to a conditional (or universal quantification) reading, i.e., ‘every time I was leaving Kostas was showing up’. This is consistent with the translation of *otan* as ‘whenever’. Note also that *otan* is morphologically complex, consistint of the relative adverb *ote* (*o+te*) and the conditional morpheme *an*.

- (7a) **ότι έφευγα / έφυγα εμφανιζόταν ο Κώστας*
 that left.imp-1s / lef.perf-1s showed.up.imp-3s the Kostas
 ‘*As I was leaving, Kostas was showing up’
 (7b) *όταν έφευγα εμφανιζόταν ο Κώστας*
 when left.imp-1s showed.up.imp-3s the Kostas
 ‘When(ever) I was leaving, Kostas was showing up’

² I would like to thank an anonymous reviewer for pointing this out to me. The reviewer also suggests that the simultaneous reading is reminiscent of pseudo-relatives also introduced by *che* in Italian. Greek pseudo-relatives though are introduced by *pu*, the declarative complementizer that is found in (non-) restrictive relative clauses; *oti*, on the other hand, is excluded from this context.

Restricting our discussion to the pair in (7), we observe that the *oti*-temporal clause imposes restrictions on the tense of the matrix clause and excludes the conditional reading. Instead it triggers a definite (temporal) reading.

2.2 *Oti*-temporal clauses and other expressions

As we saw in (6b) the adverbial *molis* can be modified by a *pu*-relative. Perhaps there is a very subtle difference between (6a) and (6b); however, it need not concern us here. What interests us instead is that *molis* can be further modified by a *pu*-relative clause. The same pattern is attested with other expressions, such as the nominals (DPs) *ti stighmi* ‘the moment’, *tin ora* ‘the time’, or adverbs like *pano* ‘on/upon’, *eki* ‘there’, all modified by a relative clause, as in (8):

- (8a) *τη στιγμή/ώρα που έφευγα* εμφανίστηκε ο Κώστας
 the moment/time that left.imp-1s showed.up-3s the Kostas
 ‘The moment (that) I was leaving, Kostas showed up’
- (8b) *πάνω/εκεί που έφευγα* εμφανίστηκε ο Κώστας
 upon/there that left.imp-1s showed.up-3s the Kostas
 ‘Upon my leaving, Kostas showed up’

What the above expressions have in common is some notion of location at a temporal or spatial point. The similarity between *oti*-temporal constructions and the sentences in (8) further supports the temporal reading of the *oti*-clause.

Another option which also carries the simultaneous meaning is the one in (9) with the preposition *me* ‘with’ followed by what looks like a nominalized clause, that is a construction where the complementizer *pu* is preceded by the neuter definite article *to*.

- (9) *με το που έφυγα* εμφανίστηκε ο Κώστας
 with the that left-1s showed.up-3s the Kostas
 ‘As soon as I had left, Kostas showed up’

Given that *pu* resists nominalization (see Roussou 1991), (9) should either be treated as an exception or as different kind of structure. I will tentatively assume that (9) is an instance of relativization as is the case in (8) (see section 3.3). More precisely, *to* is like a pronominal head modified by the *pu*-clause. This approach is further supported by the fact a *pu*-relative may also modify *oti*, as in (10).

- (10) *ότι που έφευγα* εμφανίστηκε ο Κώστας
 that that left.imp-3s showed.up-3s the Kostas
 ‘As I was leaving, Kostas showed up’

The sentence in (10) carries the same reading as the one in (3). It is interesting to note that *oti* and *pu* are in complementary distribution in complement clauses (Roussou 2010).

To summarize the discussion so far, the *oti*-clause gives rise to a temporal reading and can be paraphrased by other nominal expressions which are modified by a *pu*-relative clause. Based on the empirical evidence presented so far it is next argued that the *oti*-temporal clause is an instance of a free relative.

3 Temporal *oti*-clauses as free relatives

3.1 *Oti*-relatives as arguments or adjuncts

Having established the temporal reading of the *oti*-clause in (3), we can now turn to its analysis. Recall from section 1 that *oti* apart from introducing declarative complement clauses may also introduce a free relative, as in (1b). The similarities with the free relative construction are supported by the fact that an *oti*-relative in argument position may also be substituted by a headed *pu*-relative clause, as in (11):

- (11a) *έφαγα ό,τι μαγείρεψες*
ate-1s what cooked-2s
'I ate what you had cooked'
(11b) *έφαγα αυτό που μαγείρεψες*
ate-1s this that cooked-2s
'I ate the thing that you had cooked'

The pattern in (11) is reminiscent of the one we saw for *oti*- vs. headed (temporal) relatives in section 2. Note that the *oti*-relative in (11a) has a definite reading, as is also evident from the paraphrase in (11b). The *oti*-temporal clause also gives rise to a definite reading, as is evident from the corresponding paraphrases that carry the interpretation 'at the moment/time that'.³

Another piece of evidence comes from the fact that while *oti* in complement clauses may be freely substituted by *pos* (as a complementizer), this option is blocked both for argument free relatives and temporal clauses as shown in (12):

- (12a) **πως έφηνγα εμφανίστηκε ο Κώστας*
that left.imp-1s showed.up-3s the Kostas
(12b) **έφαγα πως μαγείρεψες*
ate-1s that cooked-2s

The data so far point towards an analysis of the *oti*-temporal clause as a relative one. The parallel with other temporal expressions that are headed relatives supports the analysis of the *oti*-clause as a free relative in accordance with (11).

What distinguishes the free relative in (11a) from the ones in (3) is the fact that in the former case *oti* binds a variable (copy) that corresponds to an argument (the object of the predicate) and introduces a clause that is an argument to the matrix predicate ('efagha'). On the other hand, *oti* in the constructions under consideration (cf. (3)) arguably binds a variable that corresponds to the temporal/event argument of the predicate (left/was leaving). The *oti*-clause modifies the temporal reference of the main clause. In this respect the *oti*-clause in its temporal reading functions like other (adverbial) free relatives, as will be shown immediately below.

3.2 *The free relative analysis*

³ The definite reading is not the only one available for free relatives. In fact, if we change the matrix and embedded verbs into present tense (*troo oti majirepsis* 'I eat what you cook'), the reading is that of 'whatever', i.e., a universal reading. On the interpretation of free relatives in general see Jacobson (1995), and more recently Caponigro (2003), Šimik (to appear), among others.

In one of the earliest generative analyses, that of Bresnan and Grimshaw (1978), free relatives are treated as nominal phrases (DPs in current terms) or PPs. This accounts for their distribution as arguments (in subject or object position) or adjuncts. A major question in the literature has been whether free relatives are internally or externally headed, that is whether the relative pronoun is the external head of the relative clause with a proform in the gap position (Bresnan and Grimshaw 1978) or internal to the relative clause with a trace/ copy in the gap position (Groos and van Riemsdijk 1981). In some recent approaches this issue is resolved in terms of labelling (Chomsky 2013), as argued by Donati (2006).

In relation to Greek, Alexopoulou (2006) and Daskalaki (2008) argue that what projects in free relatives is the pronoun itself, turning the CP to a DP, as in (13):

(13) [DP FR pronoun [CP (FR pronoun)]]

There are some differences between the two approaches in relation to the how the case mismatching effects are accounted for. Thus, Alexopoulou argues that the FR pronoun merges directly above the CP and binds a variable in the predicate position while it serves as the argument of the matrix predicate as well (an argument associated with two predicates along the lines of Manzini and Roussou 2000). On the other hand, Daskalaki argues for a ‘move and project’ approach. I will not elaborate on the details of each approach. For present purposes the structure in (13) suffices, and leaving details aside, I will assume that the relative pronoun is shared by both the embedded and the matrix clause. What is crucial is that the free relative takes its label from the pronoun which binds a variable inside the clause. In principle this variable can correspond to an argument or a non-argument of the predicate.

Given the above let us now go back to the *oti*-temporal clause. Assuming that it is a free relative, we expect *oti* to bind a variable inside its clause, and at the same time to function as an adjunct to the matrix clause, in the same way that a free relative can function as an argument of the matrix predicate. The question in relation to the *oti*-clause is what sort of variable it binds. Given its temporal reading, the answer seems to be rather obvious: it binds a temporal/event variable. At this point let us briefly consider the analysis of English *when*-clauses provided by Halle and Caponigro (2010); the relevant example is given in (14):⁴

(14) I came to visit you *when Bill left*

They assume after Jacobson (1995) that free relatives “denote the maximal element of a given set” and that with *when*-clauses “the given set is a set of time intervals or events” with *when* acting as a set restrictor that takes “a set of entities and returns a subset that only contains time intervals or events” (p. 548). Although *when*-clauses distribute more like *otan*-clauses in Greek, the approach of Halle and Caponigro is still relevant to the current discussion, as it supports the free relative analysis.

Halle and Caponigro (op. cit.) distinguish between time intervals and events, arguing that *when*-clauses are ambiguous. On the other hand, *oti*-clauses do not trigger such ambiguity. Consider again the example in (3a): *oti efevgha, emfanistike o Kostas*. As pointed out in section 2, there is a simultaneous reading between the two events, which is partly maintained in (3b) with the perfective aspect, i.e., *oti efigha*,

⁴ Halle and Caponigro (2010) do not discuss conditional *when*-clauses, like “When it rains, I feel sad” (cf. If it rains, I feel sad). These are contexts where Greek can use *otan* instead of conditional *an*.

emfanistike o Kostas, to the extent that the final point of my leaving overlaps with Kostas' arrival. As such, the clause is anchored to a specific time interval. On the other hand, if we substitute *oti* for *otan*, as in *otan efigha, emfanistike o Kostas* ('When I left, Kostas showed up'), the time of Kostas showing does not share the same time interval with my leaving. It is possible to say that I left at 3.00 p.m. and Kostas showed up a while later. Under this reading, the matrix clause is anchored to the event of the *otan*-clause, but the two events do not need to take place simultaneously, thus they may not be anchored to the same time interval. Imperfective aspect triggers a simultaneous reading with *otan*-clauses as well, favoring the time interval reading. Leaving aside the semantic details, we can see that the distribution and readings of the *oti*-temporal clause are quite restricted, compared to *otan*-clauses.

Before we leave this section, it is worth considering the properties of *oti* in temporal clauses. The free relative clause analysis supports the view that the temporal reading is not inherent to *oti* but derives syntactically. Halle and Caponigro make a similar claim with respect to *when*, that is they argue against an inherent temporal reading associated with *when*. Going back to *oti*, I have argued that it is the same pronominal element that occurs in free relatives in argument position with an inanimate neuter referent. In this respect the same pronoun has a temporal or argument function depending on the syntactic context. This approach has the advantage of eliminating homophony in the lexicon as well as lexical polysemy, since it attributes any differences to syntax.

Regarding its morphological properties, *oti* is bimorphemic: *o-* is a (definite) determiner-like morpheme, while *ti* is an interrogative morpheme (see Daskalaki 2008). Other elements in this paradigm also have the *o-* morpheme followed by the interrogative pronoun, as in (15) below:

- (15) *o-pjos o-pu o-pos o-pote*
 the-who the-where the-how the-when

The morpheme *o-* is bound and carries no phi- or case-features. Even if we assume, along with Tzartanos (1989 [1963²]), that the temporal *oti* originates from the temporal *ote*, which synchronically overlaps with the pronoun *oti*, the crucial point regarding the bound morpheme *o-* remains.

3.3 Extensions

The discussion regarding the morphological structure of *oti* are partly relevant in considering the cooccurrence of *oti* and *pu*, as in (10) in section 2. As pointed out there, this pattern was taken as a restrictive relative clause formation, quite similar to the ones with a nominal head (*ti stighmi pu*) for example, or a pronominal one (*afto pu*, cf. (11b)). Having a pronoun as the head of a restrictive relative clause is not surprising.

In fact, the *oti pu* configuration is found in some archaic and poetic formations where the head of the relative clause is the definite article (or an older form of the relative pronoun), as in the examples below from Tzartanos (1989 [1963²]) (§282, p. 203):

- (16a) *Ψυχáι αι που εδοζάσατε τον Ασωπόν*
 souls the.fem that glorified-2s the Asopos

‘Souls, which you glorified Asopos ...’
 (16b) *Ξεχνώ το που με τρώει σαράκι*
 forget-1s the that me= eat-3s woodworm
 ‘I forget the woodworm that eats me up’

In the examples above, the definite article is used pronominally as the head of a restrictive relative clause.⁵

The example in (16b) is particularly interesting, as we have the *to pu* sequence. As mentioned in section 2 *pu*-complement clauses resist nominalization of this sort. In relation to the *me to pu*-construction (see (9)), the tentative analysis was that *to* is used pronominally and is modified by the *pu*-clause. This line of reasoning finds further support given the examples in (16). This is a very first approximation to the data; a more detailed analysis is required, but this is beyond the scope of this paper.

5 Concluding remarks

In the present paper I focused on the properties of *oti* in adjunct clauses with a temporal reading. As it was shown in section 2, there is a simultaneous reading between the matrix and the *oti*-clause, which can be affected by grammatical aspect. The *oti*-clause was next argued to have the structure and properties of a definite free relative. This analysis was supported by the presence of *oti* in free relatives in subject or object positions (as arguments). The distribution in different types of free relatives was supported on the grounds of the pronominal status of *oti*. An obvious question that arises is whether the declarative complementizer is a different element. Considering that complement clauses have been analyzed as instances of relativization, and in particular, as free relatives (Manzini 2010), the similarities between the different occurrences of *oti* seem to fall into place. However, due to space limitations, this topic will have to be addressed in future work.

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⁵ There is one further reading with the *oti pu* sequence, as in *oti pu anaseni* which would translate as ‘he can barely breathe’. This reading is not clearly temporal but implies the lowest point to which the event holds (see Tzartanos (1989 [1963²]) §282, p. 220).

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