

IMPLICATIVE DISCOURSE MARKERS: A COMPARATIVE INQUIRY INTO GREEK AND ENGLISH

ALEXIS KALOKERINOS & BRUCE FRASER

This paper proposes an analysis of discourse markers from the point of view of argumentation theory, on the basis of the category of discourse modality. Within this framework it defines by the notion of justification an area of implicative discourse markers, and consisting of causals, inferentials, telics and resultatives. The application of the theory to English and Greek data shows that causal and inferential markers form the two strong poles of this domain, while there is a marked lack of resultative markers; it also explains the parametric variation of Greek and English. The wide scope of this paper allows a tendency towards functional symmetry to become apparent; this affects the procedural semantics of markers and thus determines the features of an interface between the linguistic and the cognitive system, which could be designated as discourse syntax.

1. Introduction

We will dwell here neither on the nature of discourse markers (DMs) nor on a general description of their field. For discussion on these issues, see Fraser (1987, 1996, 1999), Kalokerinos (2004).

In this paper we will focus on a subfield of discourse markers, which will be defined by a notion of communicative action which all members of the category subserve: *justification*. From our point of view Implicative DMs (IDMs) articulate discourse segments into justificatory communicative acts. In what follows we will attempt to put to the fore the procedural means by which IDMs steer discourse segments towards justification. Cross-linguistic (Greek – English) evidence will be advanced for IDM classification. Bringing to light shared as well as divergent features in mechanisms of discourse construction will help us to assess the shape of the interaction between discourse strategies and language systems.

2. On the nature of DM articulation

We take as a defining feature of DMs their *modal character*. DMs take into their scope aspects of the *indicated* or *presented*, not merely the *said* or *represented*

meaning of the discourse segments (DSs) they connect and integrate into upper level discourse units¹. The distinction we trace is not coextensive with the standard semantic – pragmatic distinction that is adopted by Sanders (1997, Sanders et al. 1992): our modal level differs from Sanders’ pragmatic level in that the former is not confined to a focus on illocutionary force but also encompasses propositional attitudes such as epistemicity. We believe that though epistemicity affects illocutionary force there is theoretical gain in keeping the two distinct², as related aspects of *discourse modality*. We also want to avoid mapping the semantic –pragmatic dichotomy onto the propositional content– illocutionary force distinction, since we take as well established that on the one hand there is an (at least partial) pragmatic determination of propositional content, and on the other hand there is an (at least partial) semantic determination of illocutionary force (and, more generally, of the *presented* aspects of meaning).

The need for modality-internal distinction between propositional attitude and illocutionary force is put into light by the non-equivalence in paraphrases of the following pair of discourse units, both articulated by a causal DM:

1. Buy your supplies now, *because* I care for you.
2. John loves her, *because* he came back.
 - 1a. I advise you to buy your supplies now and the reason I want you to is that I care for you.
 - 1b. I state that John loves her and the reason I believe so is that he came back.
 - 2a. I advise you to buy your supplies now and the reason I do so is that I care for you.
 - 2b. #I state that John loves her and the reason I do so is that he came back.

The first set of paraphrases (1a, 1b), focusing on propositional attitudes is unproblematic. From the second set though, focusing on illocutionary forces, the non epistemic sequence (2a) but not the epistemic one (2b) constitutes a possible paraphrase of (1) and (2) respectively. It appears that the causal DM provides reasons for wanting and advising in (1); whereas in (2), it provides reasons for believing but not (adequate) reasons for stating³.

Furthermore, there is linguistic motivation for postulating a *metamodal do-*

-
1. The distinction between “what is said” and “what is indicated” belongs to Grice. The homologous distinction between what is represented and what is presented is evoked by Kalokerinos (1999), based on Ducrot (1984) and Récanati (1981), who traces it back to Gardiner (1932).
 2. For discussion of this point, see Kalokerinos 2004. Kalokerinos proposes the term *intentional attitudes* as a cover term for illocutionary forces and propositional attitudes. The descriptive gain of this approach will appear in our cross-linguistic discussion later on.
 3. For extensive discussion of the issue, see Kalokerinos 2004.

main, where the justifying function of the IDM focuses on higher-order speech act aspects of a discourse segment. Here are two examples focusing respectively on the “saying what” and “saying how” aspects of communicative acts:

3. Go! *Because* you didn’t hear it.
4. GO! *Because* we have to shout in this place.

There also exist domain-interface cases, which will not be treated here (but see Kalokerinos 2004).

DMs so construed may affect the illocutionary meaning of at least one of the DSs they connect. For this to happen, though, DMs must link not simply sentences but at least “embryonic” utterances. This requirement has a syntactic side to it: no complement sentences may enter the focus of DMs *as such*, because they cannot be conceived as utterances. The same is true for the sentences to which complements are attached: they cannot be conceived of as utterances independently of their complements. For the same reasons, complex sentences with lower level attachments are excluded from consideration. At the other extreme, syntactically self-contained sentences are in principle suitable to enter under the scope of DMs as utterances, and are generally the object of coherence relations. The middle ground is occupied by complex sentences with highest-level dependencies. These are cases of loose subordination (“hypotaxis”), which may be discursively modal.

IDMs articulate a justifying and a justified discourse segment. The first will be named *Source Segment (SS)* and the second *Target Segment (TS)*.

First Segment (DS1)	Discourse Marker	Second Segment (DS2)
Target Segment (TS)	because	Source Segment (SS)
Source Segment (SS)	so	Target Segment (TS)

Table 1

DMs operate by modally interpreting the DSs they connect and integrating them into upper level discourse units. This process we name *integration by interpretation*. It may be analysed as a three step procedure, as follows:

- Step 1: DM initiates a process of integration of the two segments. This requires an interpretation of DSs.
- Step 2: DSs are being interpreted inside the process of integration. Interpretation is steered by the aim of integration.
- Step 3: Integration is completed in light of the discourse modality of the interpreted DSs.

Here are two examples:

5. I am your commander. *So*, go out.
6. Are you going to close the window, *because* it's cold outside.

Step 1: *So* and *because* initiate an integrative process of justification. DSs will be interpreted in the light of this process.

Step 2: In (5) SS is an argument for TS; therefore it is an assertion. Given the force and content of SS and the DM, TS will be interpreted as an order. In (6) given the impossibility to interpret SS at a lower level (as a V-bar attachment, see below), SS will be interpreted as a quasi-assertion. Given the status of SS and the DM, TS will be interpreted as a request. Therefore SS is confirmed as a statement. TS is interpreted in the light of DM and SS as an indirect speech act of request (for 6) and a direct speech act of order (for 5).

Step 3: In light of the output meaning and the meaning of DM the whole sequence(s) get their full meaning as acts of justification: a justified direct order and a justified indirect request, respectively.

3. The class of IDMs

In our view, most theorists have wrongly taken the notion of cause as a defining feature for at least some subcategories of IDMs.

For Sanders et al. "[o]ne of the more organizing [text] types is Causation" (ibid, p. 95). Indeed, the authors opt for the pair of "basic operations" causal vs. additive as the first of their four "prototypes" in a taxonomy of coherence relations (ibid, p. 98-99, also Sanders et al. 1992: 6-7). In a similar vein, Knott & Dale (1994) consider the pair causal vs. non-causal relations to be among the main features of their taxonomy of DMs ("cue phrases"). They split the category in two: cause phrases are introduced by cue phrases such as *because*, *for*, *considering that*, *given that*, *on the grounds that*, while result phrases are introduced by cue phrases such as *therefore*, *consequently*, *as a result*, *as a consequence*, *so*, *so that*, *in order that*, *this way*.

The category of causality is subsumed under a more general category of "implication" by van Dijk (1977), in his taxonomy of "natural language connectives", where this category is contrasted to the category of "conjunction". He refers to a single category of "causality (consequence)" DMs which includes *because*, *so*, *for*, *therefore*, *since*, *due to*, *given*, *thus*, *as a result*, *consequently*, *the reason why*, *hence*, *while*, *whilst*, and *as* (but not *in order to*, which appears as the only member of the category of "finality" – ibid, p. 15). In Halliday (1985: 213-214) the "causal – conditional" appears as the most extended of the four categories of "markers of enhancement clauses" (the other three being the temporal, the spatial, and the one of manner). Lastly, Lascarides and Asher (1991) postulate a result category for coherence relations.

Nevertheless, cause is a non-modal notion. It enters the modal domain as *reason*, and is then integrated into acts of *justification*. The latter notion will prove to be the unifying notion of the field of implicatives. Starting from the notion of cause, however, gives us a vantage point for investigating the transitions from the non-modal (pre-modal) to the modal domain of meaning. In this way it helps to single out the properties of DMs and clarify the conditions under which these expressions contribute to the coherence of discourse, operating thus above the sentential level. We may take as a starting point the notions of cause and effect not as labels for categories of DMs but as binary features whose possible combinations exhaustively define the substructure of the field of connectives *in their sentential* (i.e. *non-modal* or *pre-modal*) function. By applying this configuration to the non modal level, one gets three possible combinations:

	CAUSE	EFFECT
CAUSALS	YES	NO
TELICS	YES	YES
RESULTATIVES	NO	YES

Table 2

Here are some elementary non-modal examples:

7. John came back *because* he loved her.
8. I leave early *so as to* be on time.
9. He was forced to work overtime. *As a result*, he quit.

On this most basic level, CAUSAL DMs appear to introduce causes and not effects, and RESULTATIVE DMs appear to introduce effects and not causes. This is exactly what one should expect. TELIC DMs introduce DSs the propositional content of which is in one sense a cause and in another an effect of whatever TS expresses. The causal part of the content is expressed by the non indicative mood in SS, which carries an intention for the action propositionally expressed by TS. What TS expresses appears to be motivated by an intention to bring about the propositional content of SS. Thus, the latter content is not an actual but merely a would-be result.

So much for top-down (conceptual) argumentation. But there is also some bottom-up (lexical) evidence. Incidentally, this runs against the exclusion by van Dijk of the telics from the general category of “causality (consequence)” (see above). The evidence comes from languages that, as Thompson and Longacre (1985: 185) note, “use the same morphology for purpose and reason”. According to the authors this happens in many African languages. Most of these have a “different marking to signal the unrealized status of the purpose clause versus the unrealized status of the

reason clause” (ibid). Purpose usually is indicated by the subjunctive (e.g. in Ngizim), or non fully inflected verb forms (e.g. in Kanuri – see ibid, p.185-186)⁴.

Much the same happens in Indoeuropean languages such as Greek and, to a lesser extent, French and English, which use the same morpheme (*pour*, *ja* and *for*, respectively) with distinct configurations of mood and tense to express cause and purpose (see Kalokerinos 1999, 2004).

This extended cross-linguistic parallelism in discourse – grammatical phenomena strongly suggests a common conceptual basis⁵. What is more, if TELIC is a composite category, as we have argued, one would also expect some DMs to spread from the category of RESULT to TELIC. Indeed, this prediction is born out, as attested by evidence of Greek and English, to be presented in section 4.2⁶. Again, that spreading is subject to similar modal constraints in the verb of DS2 to those applying to causals⁷.

In summary, the sentential/pre-modal domain of implicatives is divided among CAUSALS which are marked for cause, RESULTATIVES, which are marked for result, and TELIC, which are marked for both⁸. This partition reflects a conceptual landscape that is linguistically depicted with the concurrence of both lexical (DM) and grammatical (verbal mood) means.

Table 2 does not feature a most basic class of IDMs, namely *inferentials*. These are pure DMs; they do not assume sentential (pre-modal) functions. Inferentials introduce the result of a mental process as such, i.e. they epistemically qualify the propositional content of the TS and thus subserve the higher order speech act of

-
4. Cf. Longacre (²1996: 72): “Ilianen Manobo teaches us that what have often been called cause and purpose are sufficiently similar that they may rightly be grouped under causation. It teaches us at the same time that ... natural languages consistently distinguish efficient from final cause, even in a relatively similar surface structure encoding as in Ilianen Manobo”.
 5. We acknowledge the existence of functional motivation in discourse – grammatical phenomena, because we believe that these are among of the most prominent interfaces between language and cognition. However, we do not need to take a position as to the nature of sentence – grammatical phenomena, i.e. to take a position in the controversy of “functionalists” vs. “formalists” (for a recent constructive account, see Newmeyer 1998).
 6. For convergent crosslinguistic evidence, see Palmer (1986: 180-182), who concludes “there is a good case for believing that purpose and result are in a variety of languages closely related, and even indistinguishable, concepts” (ibid, p. 182).
 7. Though in English the indicative does not exclude purpose readings (see Palmer, ibid, p. 180).
 8. In this paper we are concerned only with “positive” relations between the DSs that are being connected. We do not take into account “negative” relations that give “contrastive” interpretations (see Sanders et al. 1992: 10-11, Sanders et al. 1993: 101-103, also van Dijk 1977).

concluding. In this way, no “sheer” propositional content may be introduced by an IDM. This can be shown with the aid of the following examples:

- 10. The metal is being heated. { *As a result* / ?*Therefore* } it is expanding.
- 11. The metal is expanding. { **As a result* / *Therefore* } it is being heated.
- 12. The metal is being heated. { *As a result* / **Therefore* } I have a perception of it expanding.
- 13. The metal is being heated. { **As a result* / **Therefore* } I have a perception of it getting heated.

The distribution of acceptability of *therefore* suggests that its fitness to (10) and (11) is a matter of intellectual processing, not of the fact described by TS being the result of the fact described by SS. Indeed, when this is “objectively” the case, there is some difficulty in accepting *therefore* (ex. 10), due to the need to imagine a context in which the content of TS is not perceived but inferred. As perception can never be a matter of inference, *therefore* is not acceptable in (12) and (13)⁹. These niceties leave unaffected the resultative expression *as a result*, which in every case indicates factual relations that either hold (exs. 10, 12) or don’t (exs. 11, 13)¹⁰.

If now we introduce the modality character into the aforementioned defining features we get a rather different picture:

Type of IDMs	IDM introduces a:	
	justifying DS (modal “cause”)	justified DS (modal “effect”)
CAUSALS	Yes	No
INFERENCEALS	No	Yes

Table 3

This is a minimum table. The question we will have to answer is whether telics and resultatives may enter the picture (i.e. may function as DM-proper). This double question can be schematized as follows:

- 9. Judgments and evidentials are considered as forming the two main sub-systems of epistemic modality (Palmer 1986: 53). Many languages grammaticalize both. “[T]he *visuales* are the *preferred evidentials*” (ibid, p. 68-69).
- 10. A more accurate wording would be that the utterance *presents* its content *as* being in the world. Nothing we say in this article is about ontology. Some is about how ontology is spoken. For the notion of the linguistic (*self*) *presenting as* (*se presenter comme*), see Ducrot 1984. The same argument should be extended to modal readings. Cf. Tsahatzidis (1994: 222): “[O]ne must present oneself *as* having those beliefs, desires and intentions, whether or not one *actually* has them”.

the possibility of commenting on non-foregrounded aspects of what has just been said. On the contrary, *jati* has access to that domain. The part of this domain that appears inaccessible to *epidi* bears to the quasi-analytic justification of a saying by rendering explicit a presupposed part of its content. *Jati* appears to feel comfortable in this role:

24. Metaniosa pu ton skotosa – {*jati*/?*epidi*} ton skotosa.

“I regret killing him – *for* kill him I did / *cos* I did kill him”.

25. Iða to fantasma tu Piryu – {*jati*/?*epidi*} iparxun fantasmata.

“I saw the Pyrgos ghost – *for* ghosts do exist”¹¹.

Here *jati* but not *epidi* turns out to fulfil the function of justifying a way of saying whatever is said in TS by rendering explicit in SS presuppositions carried by a factive verb (24), or existential presuppositions of definite descriptions (25).

On the contrary, *epidi* is almost acceptable, along with *jati*, in justificatory commentaries of a previous saying that are presented, in one way or another, as informative by themselves:

26. O filós mu – {*jati*/?*epidi*} mono ena filó exo – erxotan kaθimerina na me di.

“My friend – {*cos*/*for*} I’ve only got one friend – came to see me every day”.

27. O Makis i Killer – {*jati*/?*epidi*} prokite ja to idio prosopo –
perimene ta θimata tu [...].

“Makis or the killer – {*cos*/*for*} he is one and the same person – stalked his victims [...]”.

It thus appears that only *jati* can access and comment on the non-explicit aspects that constitute the quasi-analytic background of what is said. Interestingly, this metacommunicative function may be assumed in written English also by *for* or, on a different (oral) register, by *cos*. Here are some Darwinian examples with *for*, that may sound “dated” to contemporary speakers:

28. It excited the liveliest admiration that I, a perfect stranger, should know the road (*for* direction and road are synonymous in this open country) to places where I had never been.

29. I heard one of his mad buffoons (*for* he keeps two, like the barons of old) relate the following anecdote.

30. At night I experienced an attack (*for* it deserves no less a name) of the “Benchuca”, a species of *Reduvius*, the great bug of the Pampas.

11. Translations reveal an interlingual affinity between *jati* on the one hand and *for* and *cos* on the other hand. Here *cos* and *for* appear as variants in register. The question of this interlingual affinity will be discussed in the next section.

31. One which I caught at Iquique (*for* they are found in Chile and Peru) was very empty.
32. [T]he numerous specimens shot either on Chatham or Charles Island (*for* the two sets were mingled together) all belonged to the two other species¹².

It should be reminded that *for* as a preposition has similar functions as the MG *ja* in its prepositional uses. Prominent among them is the meaning of purpose. Nevertheless, English DM *for* doesn't spread towards telics, contrary to MG *ja* (+ subjunctive, see below). *Ja* + subjunctive may also assume epistemic readings without commitment to the factuality of the SS content and without order restrictions:

33. O Janis (θa) ine eđo, ja na ine to aftokinito tu apekso.
"John {is/must be} here, since his car is outside" / "If his car is there, then John is outside".
34. Ja na ine to aftokinito tu apekso –opos anaferun anepiveveotes plirofories– o jerusiastis θa ine eđo.
"For his car to be outside, as claimed by unconfirmed reports, the senator must be there".

The situation for the MG equivalents of *because* can be summarized as follows: in the premodal domain *jati* and *epidi* are interchangeable (given restrictions of position for *jati*, which can never have SS placed in first position). In the modal domain though, it appears that *jati* and *epidi* are complementaries. In "epistemic" readings, where no other order than TS-first is acceptable, *epidi* requires at least some grammatical clues for the epistemic meaning of DS1. In the rest of the modal cases, the *epidi*-introduced segment (SS) exhibits a strong preference for first position, whereas similar *jati*-introduced segments appear always second, in compliance with a general requirement of that DM. This complementarity gives rise to different functional perspectives, and reflects different strategies of argumentation. DM-SS initial (*epidi*) constructions give rise to "entrenched" and formal argumentations that may be felt as more objective than exposed and informal argumentations expressed by DM-SS final (*jati*) constructions. As a matter of fact, the former aim towards or better pretend to be objective. Judging from the filling of speakers, this aim is achieved.

Finally, in metamodal uses *epidi* appears rather restricted. A whole area of metacommunicative uses (quasi-analytic commentaries on "saying how") is occupied solely by *jati*. The situation is summarized in the Table 6.

12. Examples are taken from the electronic edition, published 1997 by the *Project Gutenberg Official Web Site* (<http://promo.net/pg/>).

	NON-MODAL	MODAL		META-MODAL	
		EPISTEMIC	NON-EP IST.	“Saying that”	“Saying how”
<i>epiði</i>	{TS, eSS}	<TS*, eSS>	<eSS, TS>	(<eSS, TS>)	
<i>jati</i>	<TS, jSS>	<TS, jSS>	<TS, jSS>	<TS, jSS>	<TS, jSS>
<i>ja+subj</i>		{TS, jSS}			
<i>because</i>	{TS, bSS}	<TS, bSS>	{bSS, TS}	{TS, bSS}	(<TS, bSS>)
<i>for</i>		<TS, fSS>	<TS, fSS>	<TS, fSS>	<TS, fSS>

* Explicitly epistemic.

Table 6

Beyond complementarity inside the Greek modal domain there is another cross-categorical and cross-linguistic complementarity to be noticed, one that concerns the epistemic domain. As a matter of fact, this is the work of inferential DMs, to which we will turn in next chapter. Inferenceals are basically epistemic. They present the content of the discourse segment they introduce as the object of a belief produced within the same discourse. Since they are paratactic, they present a strict word order. Schematically: <p, infDM- Bq>. Within the same perspective, the epistemic use of *because*, *jati* and *epiði* in (2), (14) and (16-18) respectively may be schematized as < Bp, causDM-q>¹³. It is also a noticeable fact that pre-position of DM-SS seems impossible in the epistemic use of *because*, as well as the use of *epiði*:

35. John came back, so he loved her.

36. *So he loved her, John came back.

7'. Because he loved her, John came back.

2'. #Because he came back, John loved her.

The symmetry of the two forms may be considered as uncovering the motivation for causals to enter the domain of epistemicity. The field exhibits complementarity in the formal means to linguistically retrace mental effect.

Apart for English *for* and *because* and MG *jati* and *epiði*, there is a third DM usually described as causal, namely *since* and *afu*, respectively, which have also a temporal meaning. *Afu* and *since*, as well as French *puisque* exhibit a propensity for epistemic interpretations (ex. 37, below). They seem odd in the classic example of direct non-modal (sentential) etiology (Sweetser 1990: 77, Kitis 1996: 430

13. For detail argumentation for this meaning form, which is different from Sweetser's (1990) reading as far as the content of TS is concerned, see Kalokerinos 2000.

– see ex. 38). If the same sequencing is epistemically modalized (exs. 39, 40), things get better. Put in dialogue (ex. 41), everything is fine. Indeed, *afu*, more than *since*, shows also a propensity for dialogue:

- 37G. O Janis tin ayapuse, *afu* jirise.
 37E. John loved her, *since* he came back.
 38G. ?O Janis jirise *afu* tin ayapuse.
 38E. ?John came back *since* he loved her.
 39G. O Janis θa jirise *afu* tin ayapuse.
 39E. John must have come back *since* he loved her.
 40G. O Janis θa jirisi *afu* tin ayapa.
 40E. John will come back *since* he loves her.
 41G. A: O Janis jirise.
 B: E, vevea, *afu* tin ayapuse.
 41E. A: John came back.
 B: Of course he did, *since* he loved her.

The propensity for dialogic environments and epistemic interpretation must be taken into account when defining the procedural meaning of *since* and *afu* as discourse markers. According to Heinämäki (1975), “both the speaker and the hearer assume the proposition in a *since*-clause to be true”. Wickboldt (1997: 134) on the other hand, claims that “[t]he necessary and sufficient condition for a causal meaning [of *since*] is that the content of the clauses [i.e. TS, SS] allows inferring a causal relation, with the *since*-proposition as the reason”. Of course this cannot be the whole thing, since as Wickboldt notes, *since* introduces a “secondary assertion”. As a matter of fact, *since*-clauses pass Rutherford’s (1970) tests for non-restrictive clauses. Kalokerinos (2001) contends that “a function of backgrounding, together with a function of free epistemic anchoring, is at the kernel of the procedural meaning of *afu*, *since*, and [french] *puisque*”.

Obviously *since* and *afu* stem from a temporal origin. They still are ambiguous between a temporal non-modal meaning (V-bar attachment) and a causal (“justificatory”) modal meaning (I-bar attachment, see Wickboldt 1997, chapter 3, also above, section 2). According to Kalokerinos (ibid) the latter meaning is generated by the former via a grammaticalization process which turns representations of past events into presentations of assumed events. Events that are presented as assumed (i.e. as the object of a belief) form a background. The default epistemic anchoring for a background is the “mutual cognitive environment” (see Sperber & Wilson 1986, chapter 1) of the participants in communication. Therefore, it basically lies beyond the sole speaker.

This tendency of *since* and *afu* should materialize in constraints on monological uses of these markers and lead to a propensity for dialogue. As a matter of fact, this is what the following examples illustrate:

- 42G. Ela, {*epidi*/*?afu*} to *thelo*.
 42E. Come, {*because*/*?since*} I want you to.
 43G. Ela, {*afu*/*?epidi*} to *thelis*.
 43E. Come, {*since*/*?because*} you want to.
 44G. A: Ela.
 B1: *Θa ertho*, {*afu*/*??epidi*} to *thelis*.
 B2: *Θa ertho*, {*epidi*/*??afu*} to *thelo*.
 44E. A: Come.
 B1: I'll come, {*since*/*??because*} you want me to.
 B2: I'll come, {*because*/*??since*} I want to.

Nevertheless, the epistemic anchoring of *since* and *afu* may remain unspecified. This may happen to *afu* in DM-SS second position only, contrary to *since* which does not require specification of the epistemic anchoring in either position, and may even prefer pre-position (see Wickboldt, chapter 4). In the later position, *since* may even not exit the modality domain and convey only a propositional content in which human agency (that is, intentionality) is involved. For the following sentences, which are equivalent in propositional meaning, to be uttered, only the Greek one requires that the epistemic anchoring constraint stated above be obeyed:

- 45E. *Since* the diners fell ill, the restaurant's licence was suspended. (Wickboldt *ibid*, p. 66)
 45G. *Afu* i pelates arostisan, I *adia* tu estiatoriu anakliθike.

Contrary to (45E), example (45G) presupposes that the content of SS is not assumed exclusively by the speaker (and it might not be assumed by the speaker at all). The Greek utterance may receive a (45)-like reading only if the order of constituents is reversed:

- 45'G. I *adia* tu estiatoriu anakliθike, *afu* i pelates arostisan¹⁴.

This is an "etiolated" modal use, where the epistemic anchoring, by remaining unspecified, is fading out. This use has recently become pervasive in journalistic writing and speech. The reason for this must be the particular functional perspective that *afu* endows speech: backgrounded reasons are presented as undisputed information which is out of focus and rather provides a frame for focal information (see also note 15, below).

There is also another borderline case which involves "reported intentionality", operating a transfer from the modal to the non-modal domain. Examples (46G/E)

14. For further discussion of distributional properties of *afu*, see Kalokerinos 2001.

below illustrate the case. Nevertheless, core reasons introducing uses such as (47E) with *since*, are impossible with *afu*, in either order configuration (although again, (47Gb) may marginally receive a reading of reported intentionality):

46G. Irθe, *afu* θa ton plironan.

46E. *Since* they would pay him, he came.

47E. *Since* John loves Mary, he gave her flowers (Wickboldt, *ibid*, p. 55).

47Ga. #*Afu* o Janis ayapa ti Meri, tis xarise luluθia.

47Gb. #O Janis xarise luluθia sti Meri, *afu* tin ayapa.

In any case, both *since* and *afu* assume a backgrounding function, which prevents the segment they introduce from entering the focus of what is communicated. This is an important option for discourse organization, since both *epidi* and *because* may introduce either focus or topic information, and both *jati* and *for* are restricted to non-topic introduction¹⁵. Therefore the use of *since* and *afu* is also a straightforward way of conveying non-focal information.

The procedural features of the *since* and *afu* render them appropriate for retrieving and bringing to the fore parts of the non explicit meaning of the previous speaker utterance. These implicit meanings range from presuppositions to conversational implicatures and to figures of speech. In doing this in MG, *afu* appears to be the dialogical equivalent of *jati* (see above). The following examples in English illustrate the point:

48. A: I regret killing him.

B: *Since/afu* you killed him, there is no salvation.

49. A: Where does Harry live?

B: Somewhere in France.

A: *Since/afu* you don't know where he lives, how are we going to find him?

50. A: She has an iron will.

B: *Since/afu* she is so persistent, she'll succeed.

15. *For* is restricted in peripheral commentary functions; it can assume neither topic or focus positions. See the distribution of acceptability in the following examples:

aG. Jirise, {epidi, jati, afu} tin agapuse.

aE. He came back, {because, for, since} he loved her.

bG. Jirise, akrivos {epidi/jati/*afu} tin agapuse.

bE. He came back, precisely {because/*for/*since} he loved her.

cG. {Epidi, *Jati, #?Afu} tin agapuse, jirise.

cE. {Because/*For/Since} he loved her, he came back.

dG. Akrivos {epidi, *jati, *afu} tin agapuse jirise.

dE. Precisely {because/*for/*since} he loved her, he came back.

The same semantic features render *since* and *afu* prompt for the speech acts of concession and provocation. This depends on the respective endorsement or non-endorsement by the speaker of whatever she attributes (and projects) to the other side of the communicative exchange. In this way, the marker helps in elucidating the modality of speech, within the familiar DM process, which we named “interpretation by integration”. The following examples illustrate the point:

51. A: Throw it away.

B: *Since/afu* you want me to...

52. A: I have an award in mathematics.

B: *Since/afu* you are so good (as you say), what is the root of 4594?

But only Greek *afu* can react to silent events:

[In a car accident, one driver to the other, at the beginning of the verbal encounter:]

53G. *Afu* $\dot{\iota}\chi\alpha$ to flas anameno, kopane!

53E. **Since* I had the turn signal on, jurk!

Moreover *afu* but not *since* can be conveyed in dialogue in order to undermine the first speaker’s speech, by denying some implicit information upon which her argumentation is based. Somewhat surprisingly, this possibility is realized by *afu*, which appears in interjective utterances without TS, exposing a background that contradicts the one on which the former speaker’s speech appears to have been based. How is it possible to deal with a sheer background (that is a background without foreground)? Kalokerinos (2004) argues that, due to the interjective character of the utterance, this contradicting background is not posited but exposed, so that its character *as a background* is being respected. In this role *afu* may be headed by *ma*, which is a dialogic oppositive marker in Greek. In the circumstances, English simply uses *but*.

54G. A: O Lakis epapse na kapnizi meta apo 25 χ ronia.

B: [Ma] *afu* den kapnize poté!

54E. A: Lakis gave up smoking after 25 years.

B: But he never did smoke!

55G. A: $\dot{\iota}\delta\alpha$ to fantasma.

B: *Afu* den ipar χ un fantasmata!

55E. A: I saw the ghost.

B: But ghost do not exist!

On this evidence Kalokerinos (2001, 2004) concludes that (strictly speaking) *afu* is not a causal DM. Contrary to *since* it has not undergone grammaticaliza-

tion so as to incorporate a basic causal relation to its core-meaning. Although this marker is preferentially invested with a causal meaning, this comes from a pragmatic processing that is still external to its meaning. On the other hand, when invested with causal meaning, *since* may enter the non-modal domain of reasons. The following table illustrate a template of functions for *since*, which emerge overall as less modal than those of *afu*¹⁶ (Table 7).

	Non-modal - agency	Non-modal + agency	Modal Epistemic	Modal Non-epistemic	Metamodal Linguistic	Metamodal Situational
Since	NO	YES	YES	YES	[YES]	NO
Afu	NO	(limited)	YES	YES	YES	YES

Table 7

Our discussion of other causal DMs will be cursory and only selective. English *given that* and Greek *dedomenu oti* are exclusively modal:

- 56E. He loves her, *given that* he came back.
- 56G. Tin ayapa, *dedomenu oti* jirise.
- 57E. #He came back, *given that* he loves her.
- 57G. #Jirise, *dedomenu oti* tin ayapa.
- 58E. ??Buy your supplies now, *given that* I care for you.
- 58G. ??*dedomenu oti* se niazome, kane tis promiθies su tora.

In order to be accepted, examples (57) require a context providing an epistemic relation between the segments. Such relation is provided by the default context of (56). Though both *given that* and *dedomenu oti* are grammaticalized as DMs, their origin of formation is fairly transparent and seems to govern their function and limit them to the epistemic domain.

English *as* and Greek *kaθos* which are temporal and signal that the event denoted in TS is situated within the temporal interval of the event of SS, seem bound to their temporal origin and unable to go beyond the *post hoc ergo propter hoc*, which gave rise to them. They do not enter the modal domain, and therefore are not DMs. Nevertheless, they introduce backgrounded (i.e. non-focal information only) in a parallel way, just as *since* and *afu* do. As a matter of fact, there is a tendency for *afu*, in the “etiolated” modal uses, to compete with *kaθos* in its own domain. *Kaθos* will probably lose the fight, since as a causal it appears archaic to many MG speakers today. Nevertheless

16. Greek locution *mia ke*, which introduces a “circumstantial reason”, has a similar distribution.

it is still the only to assume a non-modal exclusively backgrounding function in first position:

- 59Ga. *Kathos tin agapuse, jirise.*
 59Ea. *As he loved her, he came back.*
 59Gb. (?)*Jirise, kathos tin agapuse.*
 59Eb. *He came back, as he loved her.*
 60G. #*Tin agapuse, kathos jirise.*
 60E. #*He loved her, as he came back.*
 61G. **Pijene, kathos ime o diikitis su.*
 61E. **Go, as I'm your commander.*

The situation for Greek and English causal DMs is summarized in the following concentrating table 8.

	<i>Non-modal - agency</i>	<i>Non-modal + agency</i>	<i>Modal epistemic</i>	<i>Modal non- epistemic</i>	<i>Metamodal "saying that"</i>	<i>Metamodal "saying how"</i>
because	YES	YES	YES	YES	YES	(YES)
επιδι	YES	YES	YES	YES	YES	NO
jati	YES	YES	YES	YES	YES	YES
since	NO	YES	YES	YES	YES	YES
afu	NO	(limited)	YES	YES	YES	YES
given that	NO	NO	YES	(YES)	NO	NO
δεδομένου oti	NO	NO	YES	(YES)	NO	NO
as	YES	YES	NO	NO	NO	NO
καθως	YES	YES	NO	NO	NO	NO

Table 8

We are now in a position to complete the Greek part of table 6 with *afu* and *kathos* (Table 9a).

	NON-MODAL	MODAL		META-MODAL	
		EPISTEMIC	NON-EP IST.	“Saying that”	“Saying how”
epiði	{TS, eSS}	<TS, eSS>	<eSS, TS>	(<eSS, TS>)	
jati	<TS, jSS>	<TS, jSS>	<TS, jSS>	<TS, jSS>	<TS, jSS>
ja + subj		{TS, jSS}			
afu	[<TS, aSS>]	{TS, aSS}	{TS, aSS}	{TS, aSS}	(<TS, aSS>)
kaθos	{TS, kSS}				

Table 9a

4.2. Telics

As we said above, telics positively combine the defining features of the category of implicatives: + CAUSE, + RESULT. SS carries the motivation for an action presented in TS, whose result will be the accomplishment of the proposition expressed in SS. One would expect this intricate meaning relationship between two DSs to be reflected in a tight syntactic link. As a matter of fact, telic relations may be expressed with strong subordination (“embeddment”) resulting in “desententialization” (see Lehmann 1988: 193ff.) of the subordinate clause and may not need a specific marker to introduce them. Such desententialized purpose clauses suffer also restrictions in mood¹⁷ (infinitive for English, subjunctive for Greek):

62E. He came (*in order*) to see.

62G. Irθe (*ja*) na di¹⁸.

Since these purpose clauses have a reduced sentential status they could not possibly have an independent illocutionary force. Therefore they cannot possibly reclaim a status of utterance. As a consequence, they cannot be members of discourse marker relations.

It is to be expected from the semantically composite nature of purpose clauses that both cause and result particles will enter the field if combined with non factu-

17. “[T]he absence of the grammatical marking in non-finite clauses is possible with little loss of relevant information, because the relevant information is mostly indicated in the main clause” (Palmer 1986: 156). Palmer (ibid, p. 162) reports that according to Givon (1980) “the degree of reduction [of verbs] is related to the degree to which the event described in the subordinate clause is “bound” to the agent or experiencer in terms of his influence over it”.

18. Greek *na* is a verbal prefix of subjunctive mood (see Veloudis & Philippaki-Warburton 1983, Philippaki-Warburton 1992).

al moods. Of the causal domain prepositions *for* and *ja*, in English and Greek may serve that function¹⁹:

- 63E. You must win the all stars game, *for* everyone to call you a hero.
 63' E. *For* everyone to call you a hero, you must win the all stars game.
 63G. Prepi na kerðisis ston teliko, *ja* na se lene oli iroa.
 63' G. *Ja* na se lene oli iroa, prepi na kerðisis ston teliko.

Note that *for* also has a causal DM function; as for *ja*, it is the prepositional basis for the basic Greek causal DM *jati*, formed in composition with an indicative complementizer (for further discussion on these issues, see Kalokerinos 2004).

The other possibility, i.e. from the side of result markers is exemplified by Greek *oste* (+ subjunctive) and English *so as* (+ infinitive).

- 64E. He sits in the first row, *so as* to be filmed by [television] cameras.
 64G. Kaðete stin proti ðesi *oste* na ton pèrnun I kameres.

In having recourse to subjunctive²⁰, Greek purpose expression allows for a syntactic connection between main and subordinate clause less tight than English, which has recourse to infinitival constructions²¹. As a matter of fact, purposes clauses introduced by *ja* may target both the illocutionary or the higher level speech act status of the main (TS) clause. They therefore assume both modal and metamodal functions.

- 65G. *Ja* na mi nomizis oti ðe se niazome: kane tis promiðies su tora!
 65' G. Kane tis promiðies su tora! *Ja* na mi nomizis oti ðe se niazome.
 65E. **In order* that you don't think I don't care for you: buy your supplies now.
 66G. *Ja* na kseris ti ÷inete, o Janis ðen tin aÿapa pia.
 66' G. O Janis ðen tin aÿapa pia. *Ja* na kseris ti ÷inete.
 67E. ??John doesn't love her anymore, *so that* you be aware of the facts.
 68G. *Ja* na mi to kseÿaso: telefonise o Janis.
 68E. **So that* I don't forget it: John has called.

The above three groups of examples are instances of modal, "hybrid" (interface) modal – metamodal, and metamodal DM functions respectively.

19. See also section 3 above for reported evidence from other languages.

20. MG lacks infinitive. For a historical account of the loss of infinitive in Greek, see Horrocks (1997).

21. Nevertheless, English can indirectly express purpose with inflected clauses introduced *so* followed by complementizer (*that*) and future tensed verb:
 Do it, so that everyone will call you a hero.

It therefore appears that in Greek, contrary to English, purpose has a direct DM expression. As a matter of fact, the same morpheme, *ja*, combines with a marker of indicative to introduce cause and with a marker of subjunctive to introduce purpose. Combination with the indicative marker *oti* is grammaticalized into a connective (*jati*) that assumes DM functions. *Ja* (+ subjunctive) also exhibits across-the-board DM behavior. Interestingly, the only slot that cannot be occupied by a telic function²², finds a causal (but non-factual) vocation. This we have reviewed in the previous section (see exs. 33, 34, and related discussion). The two-fold *ja* complementarity is schematized in Table 9b.

	NON-MODAL	MODAL		META-MODAL
		EPISTEMIC	NONEPISTEMIC.	
<i>ja</i> (+na: subjunctive)	TELIC	“CAUSAL” [- FACTIVE]	TELIC	TELIC
<i>jati</i> (+ indicative)	“CAUSAL”	“CAUSAL” [+ FACTIVE]	“CAUSAL”	“CAUSAL”

Table 9b

4.3. Inferenceals

The case with inferenceals (IDMs) seems relatively clear. IDMs introduce TS as a conclusion or, more broadly, as a speech act justified by the content of SS. SS provides the premises or part of them. In the latter case the rest of the premises are to be retrieved in the context²³.

The inputs to natural inferences are bearers of truth values, i.e. propositions linguistically expressed by assertions. Nevertheless, a conclusion in natural language may take the form of a non-assertive utterance. Beyond epistemic utterances, deontically modalized ones are the possible outcome of a linguistic inferential process²⁴:

69. He is an Englishman; he is, *therefore*, brave. (Grice 1989: 25)

22. This is so on conceptual reasons: “the contents of purpose as a goal to achieve, and of belief as an achieved mental basis for inference, are conceptually incompatible. Therefore, we should not expect *ja na*, as a marker of purpose, to carry epistemic meaning” (Kalokerinos 2004).

23. “Implicated premises”, see Sperber & Wilson 1986, ch. 2.

24. In case of a deontic DS2, the context usually provides as (implicated) premises the preparatory conditions of the speech act that is being performed in that discourse segment.

- 70E. The weather is cloudy. {*So/Therefore/Hence/Thus*} it will rain.
 70G. O keros ine sinefiasmenos. {*Ara/Epomenos/Sinepos*} θα vrekxi.
 71E. You have many debts. {*So/Therefore/Hence/Thus*}, sell your car.
 71G. Exis pola xrei. {*Ara/Epomenos/Sinepos*}, pula to aftokinito su.

Despite the apparent simplicity of the case, there is the puzzling problem of delimiting the semantic import of IDMs in cases where the content of an assertive TS seems not to be the product of an inferential process but to be independently stated as a fact. The above possibility of interpretation is exemplified in the following utterances²⁵:

- 72E. Yesterday it was very hot, *therefore* we went to the beach.
 72G. Xθes ixe poli zesti. Piyame *epomenos* stin paralia.
 73E. We were unable to get funding *and therefore* had to abandon the project.
 73G. Den boresame na vroume xrimatodotisi *ke epomenos* anangastikame na engatalipsume to sxedio.
 74E. He is retiring in March *and thus* not able to take on the project.
 74G. Sintaksiodotite to Martio *ke sinepos* den bori na analavi to ergo.

We think that the solution to the puzzle is to be found in Blakemore's (1988: 192-193) comparison of the following utterances (examples renumbered):

75. Tom ate the condemned meat *and* he fell ill thirteen and a half hours later.
 76. Tom ate the condemned meat *and so* he fell ill thirteen and a half hours later.

As Blakemore (*ibid*) remarks (76) "would... be acceptable to a hearer who believed that anyone who ate the condemned meat would fall ill thirteen and a half hours later. In contrast, the causal interpretation of [75] is not dependent on such an assumption"²⁶.

As a matter of fact, it is significant that examples (72-74) are conjoined sentences (explicitly, by *and*, or tacitly, with comma or "comma intonation"). What is more, the position of the IDM in Greek is revealing: though in "pure" inferential readings, the Greek IDMs occupy an external (leftmost) position, heading the TS, in the utterances in question it is embedded in the TS, as a parenthetical commentary.

25. Ex. (70) is taken from van Dijk (1977: 47). The rest is taken from the Cambridge Dictionary of English. Examples have also been translated into Greek. Interestingly lexicographers' intuitions diverge on the meaning of *therefore*. According to the CDE: it means the same as "as a result, because of that; for that reason". According to Collins Cobuild English Dictionary, "[y]ou use *therefore* to introduce a logical result or conclusion".
 26. In Oswald Ducrot's terms the speaker should be able to convey a *topos* relating consumption of bad food and a very particular illness (for the notion of *topoi*, a tool of argumentation theory, see Ducrot 1988).

In summary, the difference between the two possible readings of TS is as follows: In the purely inferential reading, the content of TS is deduced from (i.e. assumed solely on the basis of) SS (plus contextual input to the inference). In the “impure” reading, the content of TS is factually assumed *and* there is an inferential dependence of the content of TS on the content of SS. This dependence is felt more as a nomic dependence, because the inference as a process seems not to take place in these utterances.

In both cases a major (hidden) premise mediates between the content of SS and the content of TS. The factuality of the TS content is not controlled by the IDM. The marker is there to establish premises and a conclusion. The factuality of TS is brought in by the conjunction (*and*), given that SS *is* in any case factual (if grammatical requirements internal to SS are fulfilled). Whenever the conjunction is absent, the factuality of TS content is not warranted: either there is a double reading or a purely inferential one. This depends on contextual knowledge. The rest is simply a question of semantic compositionality. In Greek the position occupied by the IDM may favour one reading over the other. There is also an IDM in that language (*ara*) which precludes the presence of brute facts (ex. 72, as opposed to the modally loaded examples 73, 74) even in “impure” readings (i.e. *ara* is not acceptable in 72G). Incidentally, Blakemore’s argument shows that *so* belongs to the category of inferentials.

Inference is a pervasive feature of discourse. It is important to mark a discourse segment as a consequence, not only in one’s speech but also in dialogue: negotiation of conclusions is one of the most important tasks of verbal communication. It is thus expected that IDMs will have a prominent position in turn taking. Dialogue gives the opportunity to hearers to reason and infer, after having taken the floor, on the basis of the former speaker’s speech, even without endorsing her claims. Not surprisingly, this conditional-like reasoning is marked, in both English and Greek, with a morpheme that (optionally) participates in ordinary conditionals: *then* (Greek, *tote*).

77. A: We decided to move to LA.

B: {*So/Then*} you’ll be selling your house.

78. A: The match will be very difficult.

B: {*So/Then*} train hard.

Interestingly, Greek has yet another IDM (*oste* + indicative) specialized in dialogue, which marks the bringing to the forth by speaker B of premisses of speaker A’s speech²⁷. In the following dialogue the choice of IDM produces a difference in interpretation:

27. More accurately, this device allows B to *present* whatever he says as a premise of A’s previous assumptions.

- 79G. A: Vjeno me kapion alo.
 B: { *Tote/Oste* } ola teliosan metaksi mas.
 79E. A: I'm seeing someone else now.
 B: { *Then/So* } it's all over between us.

Speaker B cannot introduce his utterance with *oste* if he thereby wants to announce to B that, as a consequence of what he just has heard, "everything is over". Here *oste* may only serve to ascertain "everything is over" as a *fait accompli* which the speaker now comes to acknowledge. Our description predicts that *tote* but not *oste* headed TS may have a performative value. The prediction is born out as the distribution of acceptability in the following example attests:

- 80G. A: I eteria apofasise na se metaθesi.
 B: { *Tote/*Oste* } paretume.
 80E. A: The company has decided to remove you.
 B: { *Then/So* } I quit.

Oste on the other hand is also a means for bringing presuppositions of the former speaker's speech to the fore in dialogue:

- 81G. A: O Janis epapse na δerni ti jineka tu.
 B: { *Oste/*Tote* } tin ederne!
 81E. A: John stopped beating his wife.
 B: { *So/*Then* } he was beating her!

In a word, with *oste* (+ indicative) the turn taking (B) speaker presents himself as inferring a content from what the former speaker said, which he finds (that is, presents himself as having found) in the background (either presuppositional or inferential) of the former speaker's speech. In this way *oste* is a backward looking inferential, whereas the other Greek dialogical IDM, *tote* (*then*), is forward looking: it presents the result of B's inferential processing of A's speech, as informative also for A²⁸.

The above discussion may help to outline the situation from a contrastive point of view. Markers in different languages extend in different ways over the same functions in discourse. From this perspective, the most interesting are the more wide ranging. In what follows we will overview the discourse functions of *so*, which seem to assume all non properly causal functions (i.e. to introduce result, inference, and purpose), and try to map the Greek implicatives that match

28. Backward looking inferences are factive; hence they convey a commitment of the speaker to their truth. Forward looking inferences are unmarked as to these features.

the same functions. At first sight, there are two wide ranging Greek particles: *etsi* and *lipon*.

Let us first note that *so* has a deictic origin and still serves synchronically (not as a DM, of course) an ostensive function²⁹. It is not alone in this: both English *thus* and Greek *etsi* have the same active origins. A reasonable speculation would be that, in a process of grammaticalization, English *so* and Greek *etsi* have acquired an anaphoric function, then a discourse marker function. (82), below, exemplifies deixis, (83) exemplifies anaphora. (84) contain inferential DMs:

82E/G. Do it *so!* / Kanto *etsi!*

83E. I think that Celtics will win. All my friends say *so*. (Fraser 1999b: 399)

83G. Pistevo oti tha kerdisun i Seltiks. *Etsi* lene oli i fili mu.

84E. The water didn't boil. *So* we can't have tea. (Fraser 1999b: 407)

84G. To nero den evrase. *Etsi*, den borume na ftiaksume tsai.

These are not the only functions of *so*. As noted above *so* may assume functions of forward or backward inferencing in dialogue (see examples 77-80 and discussion, above). Greek *etsi* cannot do so in either case. For backward dialogical inferencing Greek has IDM *oste*. The case of forward dialogical inferencing will be examined later on.

For the moment, we might bear in mind that *so* in composition (*so as*, and indirectly *so that*) serves as a telic connective. Here it parallels again *oste* introducing subjunctive (*oste na*). Obviously the resultative locution *so that* is derivative over the sentential function *so x that*, which is a degenerated deictic/anaphoric function. There is an intermediate step between them, namely anaphoric *so that*, a step from lexical conceptual meaning to lexical procedural meaning:

85E. Put the instructions down *so that* everyone can understand them.

85G. Grapse tis odijies *etsi oste* o kaθenas *na* tis katalaveni.

As a matter of fact, this is a hybrid case, between conceptual and procedural function. Interestingly, Greek here combines deictic *etsi* with telic/resultative *oste* (+ subjunctive). All these instances appertain to the non-modal domain. Nevertheless, both *so* and *etsi* enter the modal domain, as example (84) above suggests. *So*, however appears to have a wider modal range than *etsi*. Let us return to dialogical forward inferential cases (see examples 77-80). Here *so* appears to alternate with non-committal *then*. For the latter function Greek has *tote* (see above). The Greek equivalent of *so* in the aforementioned position is *lipon*, which strongly prefers second (at least after the head of first XP) or final position:

29. For an overview of the multifarious functions of *so*, see Fraser 1999b.

- 77' G. A: Apofasisame na metakomisume sto LA.
 B: Pulate to spiti sas *lipon*.
 78' G. A: To mats θa ine poli diskolo.
 B: Proponisu *lipon* sklira.

Etsi cannot possibly find a place in the above replies.

Lipon may also alternate with *etsi*, *oste* and *tote* and even combine with them, with no change in meaning, in replies like (79G-B), (80B) and (81G-B). The possible options are as follows:

- 79Ba. *Tote lipon* ola teliosan metaksi mas.
 79Bb. *Oste lipon* ola teliosan metaksi mas.
 79Bc. Ola teliosan metaksi mas *lipon*.
 80Ba. *Tote lipon* paretume.
 80Bb. Paretume *lipon*.
 81Ba. *Oste lipon* tin ederne!
 81Bb. Tin ederne *lipon*!
 84Ba. *Etsi lipon*, den borume na ftiaksume tsai.
 84Bb. Δen borume na ftiaksume tsai *lipon*.

There is no difference in meaning between the (80B), or the (81B), or the (84B) options. As for (79B), were both *tote* and *oste* are possible, (79Bc) may be interpreted either way, i.e. as introducing a forward or a backward inference.

As a matter of fact, *lipon* may also take the place of every inferential DM in monological discourse. Its versatility in the domain parallels the behaviour of *so*. Nevertheless, the origin of *lipon* lies on the other side of the pre-modal – modal – meta-modal cline. Where *so*, as well as *etsi*, have a pre-modal origin, the use of *lipon* spreads to the modal domain from the meta-modal side.

Basically, *lipon* is a marker of the sequencing of discourse. This upper level integrative function is achieved through a marking operation of a previous utterance element as a theme (topic) of the following utterance³⁰. This is a very general coherence function. In this respect, the examples below are telling:

86. Once upon a time there was a bad wolf. The wolf *lipon* was very lonely. One day *lipon* he decided...

30. Notice also that *lipon* may combine not only with every inferential DM (*oste lipon*, *etsi lipon*, *sinapos lipon*, etc.) but also with causals (*epidi lipon*, *afu lipon*) with no change of meaning, beyond fixation of thematic perspective. It cannot do so only with *jati*, for a good reason: *jati* is confined to non-thematic positions (see Kalokerinos 2004). In the light of above remarks, Brewster's (1992) attempt to draw a strict parallelism between *so* and *lipon* appears to miss the point.

87. I saw Kostas. He told me *lipon* that his sister got married.

In the same vein, *lipon* may serve as a topic-change operator and as a weapon for a candidate speaker to take the floor:

88. A: Blah, blah, blah,...

B: *Lipon*, ...

English seems not to dispose of such a functor of discourse sequencing and alternation. The overall picture for Greek presents one discourse-communication filler (*lipon*) and a deictic particle (*etsi*) to converge, combine and overlap inside the modal domain. Though each of them has a narrower range than *so*, they together cover an even wider range of function, from conceptual word to procedural communication operator.

The situation may be partially schematized in the following table 10.

	Sentence			Discourse		
	CONCEPTUAL NON-MODAL	PROCEDURAL NON-MODAL		MODAL	META-MODAL	
	DEIXIS/ ANAPHORA	TELIC ANAPHORA	RESULT & TELIC	INFERENTIAL		DISCOURSE SEQUENCE
ENGLISH	so	so that	so as/that	so	so	
GREEK	etsi	etsi oste	(etsi) oste na	etsi, lipon	oste, lipon	lipon

Table 10

4.4. DMs of result

The above conceptualization of the uses of *so* in discourse together with Blake-more's (1988) remarks also alluded to above, leave no space for a "resultative" function beyond the non-modal (sentential) domain. It appears that *so* acquires its procedural inferential meaning in its way out of the deictic/anaphorical domain of the sentence, in the way of becoming a discourse marker. The same line of thought applies to Greek *etsi* which, as we saw, covers a part of the functional domain of *so* (and as a matter of fact, the relevant one, from sentence to discourse). But then what is left in the domain of result?

The obvious candidates remaining are *that's why*, Greek *j'afto*, *as a result*, Greek *os apotelesma*, and *as a consequence*, Greek *os sinepia*.

We should notice the transparent character of these locutions: clearly they carry a conceptual meaning, presumably together with their alleged procedural one. English *that's why* and Greek *j'afto* are self contained anaphorical expressions

with transparent composition. *As a result/os apotelesma* and *as a consequence/os sinepia* are no less transparent. Indeed, they are elliptical expressions. They stand for and are equivalents to *as a result of...*, *as a consequence of...* (Greek equivalents complemented with NP genitive). Notice that no other candidate to the DM status has such characteristics: *because* is not interchangeable in the same positions with *because of...* Moreover, it seems that once similar locutions get grammaticalized they slip into the inferential domain. This is what happens in Greek with *os sinepia* (“*as a consequence*”, an expression of result) vs. *sinepos* (“*consequently*”, an inferential DM)³¹:

89. John loves her. {*So/As a result*} he came back.
 90. John came back. {*So/#As a result*} he loves her.
 91. I’m your king. {*So/*As a result*} go and get Holy Grail!
 92E. The cost of maintenance is very high. {*As consequence/Consequently*} a significant part of the budget goes to it.
 92G. To *kostos sintirisis ine ipsilo*. {*Os sinepia/Sinepos*} *meγalo meros tu proipoloyismu pai eki*.
 93E. The cost of maintenance is very high. {*Consequently/?As a consequence*} we will apply for supplementary funds.
 93G. To *kostos sintirisis ine ipsilo*. {*Sinepos/?Os sinepia*} *θα anazitisume prosθeti xrimatodotisi*.
 94E. The cost of maintenance is very high. {*Consequently/?As a consequence*} go and raise funds.
 94G. To *kostos sintirisis ine ipsilo*. {*Sinepos/?Os sinepia*} *pijene ke vres porus*.

It appears that *os sinepia*, contrary to the adverbial *sinepos*, cannot go beyond its literal compositional meaning to assume a function that is beyond mere propositional content relations. As a matter of fact, markers of result seem to stick to the sentential level. So, they do not seem to be able to get into the domain of discourse modality, which is the domain of discourse markers.

But why this should be so? A possible functional answer to that question is that markers of result tend not to exist because they need not exist. Their work would be to lexicalize a coherence relation that is the most basic of all: in terms of Sanders et al. (1992) it is causal, “semantic” (that is, non-modal) has “basic order” and is “positive”. This should be the default textual relation. As such it doesn’t need lexical support for processing. Zero can do, and this should be the most economical solution. The appearance of any bearer of procedural meaning instead, should be taken as an indication to go beyond the basic level relation, and so to enrich discourse with modal meaning.

31. An additional indication of the grammaticalization of this adverbial is that the *-os* adverbializing morpheme is no longer productive in Modern Greek.

A corollary of this study is that we should not speak of discourse markers as about morphological or syntactic formations. There are no DMs morphemes or expressions but merely DM functions.

5. Some conclusive remarks

In this study, we have set out a definition of DMs as linguistic expressions, which serve the integration of meaning units (MU1) to upper level meaning units (MU2). Typically, DMs integrate two MU1 into one MU2. MU1 are illocutions, at least “embryonic” utterances. Prior to the process of integration, MU1 must be endowed with a discourse modality independently of the other MU1. If this is not the case then integration takes place at the sentential level, which precedes the level of discourse. During the process of integration in discourse, the modality of one or of both MU1 may get specified. This part of the integrative process we have named “interpretation by integration”.

In our study of the broad category of implicative DMs, we did not take as a theoretical basis for meaning unification the notion of cause. This notion does not pertain to discourse units; it is a non-modal notion. Moreover, the production and interpretation of discourse cannot receive a *linguistic* explanation in terms of cause. The notion pertaining to discourse is the one of *justification*, which *is* modal, i.e. it characterizes the speaker’s doing *as a speaker*.

From that perspective, we have confined markers of result to the pre-modal domain. We have also looked into the reasons why expressions of purpose are mostly confined to the sentential (pre-modal) level and put to light cross-linguistic variation: Greek though not English has one telic DM, spreading from the proto-etiological domain lexicalized by preposition *ja*. As a result of our study, it appears that “causals” and “inferentials” constitute the two strong poles of the implicative DM domain.

Inside the modal domain though, these two classes appear as discourse – syntactic variations of the same relation, which they serve by the different means, namely hypotaxis and parataxis, respectively. The basic scheme of their function is as follows:

{TS, causDM-SS}
<SS, infDM-TS>

Both schemes are instantiations of the justification relation:
JUST (SS, TS)

Nevertheless, the two instantiations of the same relation focus on different parts of that relation, namely *arguments* and *conclusions*, and thus give rise to different, and indeed complementary, perspectives for the unfolding of discourse.

These interact with ordering possibilities which are related to functional (topic – focus) perspective.

A more comprehensive account of the semantics of these “conventional implicature” particles should take into account all these factors. That is to say, it should uncover the instructions they carry for discourse modality constitution and integration, argumentation structure, and functional perspective. These aspects of discourse are not “encapsulated” but influence one another. Nevertheless, such a study is beyond the purpose of the present inquiry.

Alexis Kalokerinos
University of Crete
e-mail: alexis@phl.uoc.gr

Bruce Fraser
Boston University
e-mail: bfraser@bu.edu

REFERENCES

- Blakemore, D. L. 1988: “So as a constraint on relevance”. In R. Kempson (ed.), *Mental Representations. The Interface between Language and Reality*. Cambridge: Cambridge University Press, 183-195.
- Brewster, C. A. 1992: “Discourse and relevance: the case of Modern Greek *lipon*”. *Studies in Greek Linguistics* 12, 357-376.
- Dijk, T. van 1977: “Connectives in text grammar and text logic”. In T. van Dijk & J. Petofi (eds.), *Grammars and Descriptions*. Berlin: Walter de Gruyter, 11-63.
- Ducrot, O. 1984: *Le dire et le dit*. Paris: Les Editions de Minuit.
- Ducrot, O. 1988: “Topoi et formes topiques”. *Bulletin d'études de linguistique française* 22, 1-14.
- Fraser, B. 1987: “Pragmatic formatives”. In J. Vershueren & M. Bertuccelli-Papi (eds.), *The Pragmatic Perspective*. Amsterdam: Benjamins, 179-194.
- Fraser, B. 1996: “Pragmatic markers”. *Pragmatics* 6, 167-190.
- Fraser, B. 1999a: “What are discourse markers?”. *Journal of Pragmatics* 31, 931-952.
- Fraser, B. 1999b: “The particle *so* in English”. *Rask* 9/10, 397-413.
- Gardiner, A. H. 1932: *The Theory of Speech and Language*. Oxford: Clarendon Press.
- Grice, P. 1989: *Studies in the Way of Words*. Cambridge, Mass.: Harvard University Press.
- Halliday, M. A. K. 1985: *An Introduction to Functional Grammar*. London: Arnold.
- Heinämäki, O. 1975: “Because and since”. *Linguistica Silesiana* 1, 135-142.

- Horrocks, G. 1997: *Greek. A History of the Language and its Speakers*. London: Longman.
- Kalokerinos, A. 1999: "Aetiologies". In A. Moser (ed.), *Proceedings of the 3rd International Conference in Greek Linguistics*. Athens: Elinika Gramata, 141-150. [In Greek]
- Kalokerinos, A. 2000/ms.: "Domains of discourse and the levels of explicitness". Boston University, Applied Linguistics Program.
- Kalokerinos, A. 2001: "Afu". In Y. Aggouraki et al. (eds.), *Proceedings of the 4th International Conference in Greek Linguistics*. Thessaloniki: University Studio Press, 315-322. [In Greek]
- Kalokerinos, A. 2004: "The justifying connection, mostly in Greek". *Journal of Greek Linguistics* 5, 27-80.
- Kitis, E. 1994: "Some preliminary remarks on the Greek causative conjunctions *γιατί*, *επειδή* and *διότι*". *Proceedings of the 8th International Symposium on English and Greek*, Thessaloniki, 306-318.
- Kitis, E. 1996: "Supplementary observations on the causal connectives in Modern Greek". *Studies in Greek Linguistics* 17, 424-437 [in Greek].
- Kitis, E. (forthcoming): "Causal connectives: the evidence from Greek".
- Knott, A. & Dale, R. 1994: "Using linguistic phenomena to motivate coherence relations". *Discourse Processes* 18, 35-62.
- Lascarides, A. & Asher, N. 1991: "Discourse relations and defeasible knowledge". *Proceedings of the 29th Annual Meeting of the Association for Computational Linguistics*, 52-55.
- Lehmann, C. 1988: "Towards a typology of clause linkage". In J. Haiman & S. A. Thompson (eds.), *Clause Combining in Grammar and Discourse*. Amsterdam: Benjamins, 181-225.
- Longacre, R. E. 1996²: *The Grammar of Discourse*. New York: Plenum Press.
- Newmeyer, F. J. 1998: *Language Form and Language Function*. Cambridge, Mass.: MIT.
- Palmer, F. R. 1986: *Mood and Modality*. Cambridge: Cambridge University Press.
- Philippaki-Warbuton, I. 1992: "On mood and complementizers in Modern Greek". In I. Philippaki-Warbuton & R. Ingham (eds.), *Working Papers: Occasional Papers in General and Applied Linguistics 1*. Reading: The University of Reading, 5-41.
- Récanati, F. 1981: *Les énoncés performatifs*. Paris: Les Editions de Minuit.
- Rutherford, W. E. 1970: "Some observations concerning subordinate clauses in English". *Language* 46, 97-115.
- Sanders, T. 1997: "Semantic and pragmatic sources of coherence: on the categorization of coherence relations in context". *Discourse Processes* 24, 119-147.
- Sanders, T., Spooren, W. & Noordman, L. 1992: "Toward a taxonomy of coherence relations". *Discourse Processes* 15, 1-35.

- Sanders, T., Spooren, W. & Noordman, L. 1993: "Coherence relations in a cognitive theory of discourse representation". *Cognitive Linguistics* 4, 93-133.
- Sperber, D. & Wilson, D. 1986: *Relevance*. Oxford: Blackwell.
- Sweetser, E. 1990: *From Etymology to Pragmatics*. Cambridge: Cambridge University Press.
- Thompson, S. & Longacre, R. 1985: "Adverbial phrases". In T. Shopen (ed.), *Language Typology and Syntactic Description*. Cambridge: Cambridge University Press, 171-234.
- Tsohatzidis, S. L. 1994: "The gap between speech acts and mental states". In S. L. Tsohatzidis (ed.), *Foundations of Speech Act Theory*. London: Routledge, 220-233.
- Veloudis, Y. & Philippaki-Warbuton, I. 1983: "Subjunctive in Modern Greek". *Studies in Greek Linguistics* 4, 151: 168 [In Greek].
- Wickboldt, J. M. 1997: *The Semantics of "since"*. Doctoral Dissertation, Indiana University.