

Constructional Modus Ponens: The case of antinomial *When*-Construction *

Abstract

My objective in this paper is to present evidence for the claim that explanatory models of linguistic phenomena need to include constructs whereby a theory can associate semantic and pragmatic interpretation principles with syntactic configurations larger than those corresponding to simple sentences. I focus on a certain type of *when*-clauses, which cannot be accommodated within current accounts, and try to tease out the various competing forces that contribute to the generation of its construction very much in Kay's (1997, ch. 8) fashion. I identify and fill in a template, corresponding to the enlarged *when*-clause's syntactic pattern coupled with its semantic characteristics and pragmatic interpretation and function.

Moreover, I claim that it is precisely the properties identified here and their concurrent function as a constructional unit that contribute to, and indeed generate, its potential for rhetorical use. In fact, the *when*-construction that will emerge here is a prime rhetorical construction as well. We will discover that we need to look on *when*-clauses such as the ones identified here, not in a compositional perspective, but as constructions that would also include the main clause in order to provide an adequate account of their use and rhetorical potential. Moreover, this *when*-construction is a case of a configuration in which propositional attitude meaning and evaluative attitudes are not encoded or lexicalized, but rather emerge as the sum total of the complex configuration of propositional meaning. Thus this construction can be claimed to constitute a subjectivity structure in the sense that it orients towards certain conclusions.

1. Introduction

If it is common sense that we can modulate what we mean by what we say, then perhaps we need to think seriously about the point in separating levels in our linguistic descriptions. A desirable goal of our descriptive explanatory linguistic theories is not only precision but also completeness. And if this is so, then perhaps a favourable option might be the adoption of a model of grammar in which we would include a certain amount of our semantic and pragmatic interpretations. Indeed, it is best not to isolate matters of syntactic form, semantic interpretation or either of these from the pragmatic function of the construct that they licence.

Of late there has been a rising awareness of the significance of evaluation and rhetoricity. This awareness has led to the production of grammars that are designed to take into account the speaker's stance, attitudes, etc. expressed in the language (cf. Fillmore and Kay 1987, Kay 1992, Kay 1995, Kay and Fillmore 1999), but also of models such as Malrieu's (1999) "Evaluative semantics", whose object is "to provide a theory of evaluative meaning effects, of their social and cognitive foundations" (p. 1), as well as proposals that grammars be written with the speaker's subjective expressivity as the central theoretical concept (Maynard 1999).

In a recent study (Kitis, 2000b), I claimed that in explanatory models of linguistic phenomena we need to adopt a perspective whereby a theory can associate semantic and pragmatic interpretation principles with syntactic configurations larger than those corresponding to simple sentences. My objective in this paper is similar. I will be concerned with a certain type of *when*-clauses and try to tease out the various competing forces that contribute to the generation of a constructional schema. I will hopefully identify and fill in a template, very much in Kay's (1997, ch. 8) fashion, corresponding to the syntactic pattern of those *when*-clauses, coupled with their semantic characteristics and pragmatic interpretation and function.

Moreover, I will claim that it is precisely the properties identified here and their concurrent function as a constructional unit that contribute to, and indeed generate, its potential for rhetorical use (section 12). In fact, the *when*-construction that will emerge here is a prime rhetorical construction as well. We will discover that we need to look on *when*-clauses such as the ones identified here as constructional schemata, or as constructions, in order to provide an adequate account of their use and rhetorical potential.

This construction also provides evidence that rhetorical and evaluative attitudinal meanings need not be lexicalized but can be generated by particular propositional configurations.

2. Preliminary observations

A *when*- clause such as (1), (2) or (3)

- (1) Why did the parents have a grammar school ballot when David Blunkett promised that there would be no grammar schools?
- (2) How did she have a date with you when she had a date with me?
- (3) How can they have children when they live separately?

ordinarily conveys an interpretation like those given in (1'), (2') and (3')

- (1') The parents shouldn't have had a grammar school ballot.
- (2') She didn't have a date with you.
- (3') They can't have children.

in which what is taken to be the speaker's intent is either the negation or querying of the content of the main clause. I will call this main or head clause the postcedent or apodosis and the *when*-clause the antecedent or protasis, and we will symbolize the latter with *p* and the former with *q* as is customary.

Both in the spirit and in the manner of Kay (1997, ch.8), I will be concerned with parcelling out for *when*-clause-containing sentences like those in (1), (2) and (3) the differential contributions of the grammar of

these sentences and of inferences which lead to the conveyed interpretations exemplified by (1'), (2') and (3'). We will reach the conclusion that, despite certain obvious parallels in interpretation with other *when*-clauses, the grammatical differences between them go beyond the differences of the functions of *when*-clauses described to date. They definitely go beyond a compositional temporal interpretation, as they also go beyond any conditional connotations or quantificational uses of *when*-clauses. It will be demonstrated that the case of *when*-clauses like the ones discussed here needs a constructional approach in the manner and spirit of Fillmore (1988) and Kay (1997), to yield a perspicuous account of their meaning and function.

3. *When*-clauses

It has long been established that *when* is not only a temporal connective. It has quantificational uses and has also developed other functions as well in domains other than temporality, such as conditionality. In the next subsections we will briefly review some of its main functions (cf. Declerck 1997).

3.1. Temporal '*when*'-clauses

Since Reichenbach (1947) it has generally been assumed that *when*-clauses give the reference time of their sentences. *When* is primarily a temporal subordinate connective and its primary function as described to date in the literature is that of signifying temporality. It can signify anteriority, simultaneity or concomitance but also posteriority¹ (Ritchie 1979, Partee 1984). We can say that a sentence of the form (4)

(4) *When p, q or q when p*

expresses temporality if the *when*-clause specifies a situation '*s*' in which the main clause holds, and is mostly represented by the existential quantifier, as in (5) (Krifka et al 1995):

(5) $\exists s (x \text{ in } s \ \& \ y \text{ in } s)$

When is the primary connective that can relate two propositions temporally by identifying or predicating a relation over the reference points of the two clauses, via what Reichenbach called the "positional use of the reference point" (Steedman 2000: 19). *When* in its quantificational function has been considered as quantifying over situations or occasions or cases (Krifka 1987, Bonomi 1997). *When* can also signify habituality and genericity. Moreover, as *when-p* provides a temporal anchorage, it signifies factuality and has a realis character (Declerck 1988), and therefore it is a proposition believed by the speaker and accepted as a true proposition in the context. Even if its reference point is in the future, a *when*-clause is viewed as denoting a specific temporal point that already exists in the future as a *fait accompli*, e.g. 'When I go back to Cambridge the first thing that I'll do is to rush back to my computer'.²

3.2. Atemporal '*when*'-clauses

Not all *when*-clauses though need to signify temporality (Carlson 1979). *When* can also be 'atemporal', quantifying over, not simply times or events, but also cases (Lewis 1975), signifying a variety of non-temporal meanings, such as specificity (in case that, in the case in which, etc.) but can also have causal or conditional connotations as in the following sentences (Declerck 1997):

There's never a dull moment in a mealtime when you use Heinz Pickles.

Children are orphans when they have no parents.

When-clauses, therefore, can help to restrict the domain of reference of NPs (Declerck 1988). More generally, such *when*-clauses are considered to specify admissible assignments of values (Lewis 1975, Declerck 1988), and can be treated as conditionals or adverbial quantifiers restricting the domain of some operator (Kratzer 1995, Krifka et al. 1995). Krifka et al. (1995) analyze *when*-clauses as restrictors of quantificational structures that can bind a situation variable, and then they would be temporal clauses, or they can quantify over an individual-level predicate and then they would be atemporal. Despite difficulties involved, the interpretation of such *when*-clauses are treated in a compositional manner.

4. *When*-clause-sentences: Preliminaries

Although we can acknowledge that there are considerable differences between preposed and postposed *when*-clauses, for the purposes of this study we will ignore their positional differentials. In the following and until we are ready to adopt the term *when*-constructions, I am going to use the phrase '*when*-clause-sentences' to refer to this type of *when*-clauses identified in (1), (2) and (3).

As a preliminary to the analysis of these *when*-clause-sentences we are not in a position to exclude either their temporal or their conditional function. But we may note that there are innocent or compositional *wh*-questions that pose a real question and seek an answer, conjoined with such *when*-clauses, which are treated as temporal:

(6) How shall I find a room when I go to London?

(6) just poses a real question asking for an answer. The *when*-clause specifies a time thus quantifying over the proposition of the question and providing its reference time. In particular, the *when*-clause in (6) is a temporal adverbial clause corresponding to an adverb; it could very well be replaced by a temporal adverb as in (7) (Vlach 1993),

(7) How shall I find a room tomorrow?

A *wh*-question such as the one in (6) is an innocent or compositional question.

But even in cases in which an adverb cannot replace a *when*-clause as readily as in (6), we can say that the questions are plainly compositional having an innocent reading since they pose a real question. However, some *wh*-questions can yield either innocent compositional readings or may indeed be rhetorical questions and constitute a rejection of their very proposition. In the case of our *when*-clause sentences we can say that they yield rejection-of-apodosis readings, depending on the content of the *when*-clause. When this is the case it is important to notice that when the special apodosis-rejection interpretation is assigned, then the innocent compositional reading is excluded. This obvious fact constitutes evidence that the apodosis-rejection reading cannot derive from an innocent compositional reading of the apodosis. This is *prima facie* evidence that the rejection reading does not derive from the compositional one, as in generalized conversational implicature (GCI) or conventional implicature. It is of the essence of indirect Gricean interpretations that what is said is accepted as such and thenceforth taken as the starting point of the conversational reasoning process (Kay 1997, ch. 8, Koutoupis-Kitis 1982). So the apodosis-rejection reading or the rhetorical reading of the *wh*-question cannot be a GCI neither a conventional one. Can it be then a particularized conversational one? For it to be a particularized conversational one, there would have to be a particular context beyond the linguistic one.³

5. Constructional cases

Let us come back to (1), (2) and (3) and consider the nature of the non-compositional questions of the main clause:

- (1) Why did the parents have a grammar school ballot when David Blunkett promised that there would be no grammar schools?
- (2) How did she have a date with you when she had a date with me?
- (3) How can they have children when they live separately?

Examples (1), (2) and (3) do not convey the following:

- (1*) Tell me the reason why the parents had a grammar school ballot when David Blunkett promised that there would be no grammar school. (I am asking because I want to know).
- Or, The parents had a grammar school ballot when David Blunkett promised that there would be no grammar schools. (Please, tell me) Why is that?
- (2*) She had a date with you when she had a date with me. (Please, tell me) How is that? (I am asking because I want to know).
- (3*) Please tell me how they can have children when they live separately? (I am asking because I want to know).

Clearly, the apodosis cannot be an embedded indirect question, but has to be a root question (Higginbotham 1996).

In other words, the questions of the sentences (1) to (3) do not have entailments (or presuppositions) (1e) to (3e), respectively, with *pro*-forms for the question-operators:

- (1e) There is a reason why parents had a grammar school ballot when David Blunkett promised that there would be no grammar schools.
- (2e) There is a way she had a date with you when she had a date with me.
- (3e) There is a way they can have children when they live separately.

For if this were the case, then (1) to (3) must have a correct answer, and, conversely, if (1) to (3) deserve an answer, then (1e) to (3e) must be true (Bromberger 1966a). So the *wh*-phrases of the questions of (1) to (3) cannot be regarded as equivalent to existentially quantified noun phrases (Karttunen 1978). Correspondingly, the translations of these questions cannot denote a (set of) true proposition(s).

However, while (1) entails or presupposes -as it should- (1x),

- (1x) The parents had a grammar school ballot when David Blunkett promised that there would be no grammar schools,

-since (1) is not a paradigmatic case at the centre of the range of *when*-constructions discussed here (cf. note 12)- both (2) and (3) do not appear -as they should- to entail or presuppose (2x) and (3x) respectively:

- (2x) She had a date with you when she had a date with me.
- (3x) They can have children when they live separately.

Sentence (2x) as an entailment or a presupposition is excluded from (2) on account of our world-knowledge, while (3x), although not excluded on this account if *when* is read as *while*- but then why not say *while*?, is not warranted by the *when*-construction of (3).

In fact, the questions in the apodosis do not express a request for an explanation of a fact vis-à-vis a temporal or conditional specification. Indeed, the default interpretations of (1), (2) and (3) as we have seen, are as in (1'), (2') and (3'):

- (1') The parents shouldn't have had a grammar school ballot.
- (2') She didn't have a date with you.
- (3') They can't have children.

And even more specifically, they are as in (1''), (2'') and (3''):

- (1') The parents shouldn't have had a grammar school ballot because David Blunkett promised that there would be no grammar schools.
 (2') She didn't have a date with you because she had a date with me.
 (3') They can't have children because they live separately.

One might object to the claim that (1) to (3) ordinarily convey (1') to (3') and argue that, on the basis of an analysis of the *why*-questions, the implication is that given a situation in which the contents of the *when*-clause holds, the speaker may be genuinely confused and want an explanation why the parents had a grammar school ballot in the case of (1), and even for (2). One, however, cannot object to the fact that what is conveyed by (1), for example, is that given that David Blunkett promised there would be no grammar schools, the speaker expected that there would be no grammar schools and hence s/he needs an explanation for why the parents had a grammar school ballot. Indeed, what is noteworthy in any reading of (1) is the speaker's *implicit expectation that there would be no grammar schools*. An innocent compositional *why*-question, however, does not carry any presuppositions as to the speaker's expectations other than the presupposition of *P* in *Why-P?* –in the case at point *The parents had a grammar school ballot*. This interpretation of the *when*-clause, involving specific expectations on the part of its speaker, does not appear to be consistent with quantificational or temporal uses of *when*. *When* in (1) does not quantify over the whole clause as a temporal adverb, neither does it restrict the domain of an NP.

Moreover, it is worth recalling that *why*-questions (unlike all other *wh*-ones) are base-generated and need not always entail inversion in some languages (e.g., in Greek). Bromberger (1966b) suggests that a *why*-question is a request for explanation and he calls *P* the presupposition of the question, as in *Why-P?*. He further restates the problem of explanation as a problem of giving the conditions under which proposition *Q* is a correct answer to a *why*-question with presupposition *p*. However, it has been pointed out by Hansson (1974) that there can be different *why*-questions demanding an explanation, not of a proposition or a fact, but rather of an aspect of it, as for example why *P* in contrast to another member of a set *X* of propositions. Example (1) belongs - in all its readings - to this category.⁴

Furthermore, quite clearly, such *when*-constructions convey the rejection of their main clauses unaided by any discourse facts (other than the accompanying *when*-clause), as indeed they do in my examples, even in the more marginal case of (1). Sentence (1), a *why*-question bearing a presupposition, lies on the periphery of the class of *when*-constructions discussed here, just because the question's factual presupposition is accepted by the speaker, too (see below). It is this mutual acceptance of the factual presupposition of (1) that explains the shift of mood of the conveyed content from (1') (shouldn't) to (2') (didn't); in other words, what is denied or rejected in (1) is precisely the *raison d'être* of this factual presupposition, as I claimed above (while (2) rejects the very presupposition).

We can, then, conclude that the *wh*-questions are not explanation-seeking questions of the type 'Why is it the case that...?' (Achinstein 1989); they are not asked of the addressee but are rather posed as non-information-seeking questions (Lyons 1977: 755) and are, therefore, unanswerable.

6. Context proposition requirement

It must be noted that the questions in the main clause of such *when*-clause sentences are *wh*-questions, which traditionally have been considered to carry presuppositions. A presupposition of a question has been defined as a sentence whose truth is a necessary condition of the question's having some true answer (Belnap 1966). As Belnap (1966: 610) notes,

in more Tarskian terms, [we define a sentence as a presupposition of a question] if every interpretation which makes the question truly answerable is an interpretation which makes the presupposed sentence true as well. And we may also say that a sentence *expresses the presupposition* of a question if its truth is both necessary and sufficient for the question's having some true answer.

However, leaving aside (1) for the moment, both (2) and (3) do not appear to have true presuppositions, as we have seen, and, as a consequence, there are no presupposed sentences to 'give rise to' (Bromberger 1966a) or 'evoke' (Harrah 1966) corresponding questions.

Wh- questions are more frequent in this construction than *yes-no*-questions which do not carry presuppositions. But if *yes-no*-questions occur, then again they are of an echoic nature. Moreover, we need to make a distinction between what is presupposed and taken for granted as common ground by both the speaker and the addressee or the interlocutors in general, on one hand, and what is on the floor, on the other. It must be noted that the assumed proposition of the question is not necessarily presupposed in the traditional sense of the word, but is just on the floor. That means that its presupposed part may have been uttered or it may have been suggested, implied, conveyed, or, indeed, it may be conventional wisdom or general practice, or it may form background knowledge. A speaker can not only "presuppose things that his audience believes but that he knows to be false in order to get them to believe further false things" (Stalnaker 1972), but a speaker can also provisionally embrace false presuppositions in order to enhance the rhetoricity of his or her discourse.

So we might conclude that part of the constructional schema here is the stipulation that the speaker takes the assumed content of the apodosis to be a context proposition in the sense that it has already been posed

in some form (Akatsuka 1986, Kay 1997, ch. 8). In short, we might say that there need be no commitment to the presupposition in q , the apodoses of (1), (2) and (3), but rather a commitment to the assumption that part of q is presupposed by the audience⁵.

Indeed, q , the apodosis, is a challenge to this context proposition that it contains. And if it is a factual proposition (cf. note 5), that is, if it is beyond any doubt that what is presupposed in q constitutes a fact, as in example (1), then what is challenged in q is the necessity of this fact; i.e. the grounds of its occurrence. Evidence that q is always a challenge to its contained contextual proposition is adduced by the possibility to express the question by the variant ‘how come’ without thereby affecting its interpretation:

(1+) How come the parents had a grammar school ballot when David Blunkett promised that there would be no grammar schools?

(2+) How come she had a date with you when she had a date with me?

(3+) How come they can have children when they live separately?

So, we can conclude by positing three stipulations: that there is a context proposition in the apodosis and that q , the apodosis, constitutes a challenge and further that q is a challenge to the context proposition it constitutes or contains.

7. The evoked implication

A compositional reading of the sentences under discussion would be along the following lines for each of our examples (1), (2) and (3):

(1a) How it is that q (parents voted...) at time/circumstance that/if p (David Blunkett promised that there would be no grammar schools)?

(2a) How it is that q (she had a date with you) at time/circumstance that/if p (she had a date with me)?

(3a) How it is that q (they can have children) at time/circumstance that/if p (they live separately)?

In other words, the compositional meaning ‘Please explain how it is that q when/if p ’ would evoke an implication of the form ‘when/if p , q ’:

(1i) When/if David Blunkett promises that there would be no grammar schools implies that parents will have a grammar school ballot.

(2i) When/if she had a date with me implies that she had a date with you.

(3i) When/if they live separately implies they can have children.

Since the temporal meaning of the *when* protasis is more factual than that of the antecedent of a conditional, it is natural to expect that the compositional meaning of these sentences yields the interpretation of a conjunction of the two propositions in situation s with the added question of why q , very much in the manner of (5) $\exists s (p \text{ in } s \ \& \ q \text{ in } s)$ adapted as (5a): $\exists s (p \text{ in } s \ \& \ q \text{ in } s) \ \& \ (\text{why } q \text{ in } s)$:

(1ai) $\exists s$ (Both David Blanket promised that so and so [p] in s & the parents voted...etc. [q] in s) & (why q in s).

(2ai) $\exists s$ (Both she had a date with me [p] in s & she had a date with you [q] in s) & (why q in s).

(3ai) $\exists s$ (Both they can live separately [p] in s & they can have children [q] in s) & (why q in s).

For if p of the implication *if/when p then q* is true then so must be q for the implication to be true. So if p is presupposed (as we will see in the next section) due to its temporal anchorage via the connective *when*, then we are committed to the truth of q , if indeed the implication (the *when*-clause-sentence) is true. For $p \rightarrow q = \neg(p \ \& \ \neg q)$. The statement connective *if...then* is dispensable in favour of conjunction and denial as is generally accepted in logic (Strawson 1952, Quine 1941/1965).

Instead, the case is quite different and the implication invoked is not ‘when/if p , q ’ as in (1i) to (3i), but rather ‘when/if p , $\neg q$ ’. For example, (1) does not evoke the idea that if Blunkett promised something then his promise could be broken, but rather evokes the opposite implication that if he promises something he must keep his word. More specifically, what is evoked in each case is an implication of their entailed generic propositions rather than the propositions *per se*; (for example, *If one promises something one must keep one’s word*, etc.). Similarly, (2) invokes the idea that if one is at one place one cannot be at another place at the same time, while (3) evokes the idea that if a couple lives separately it is not easy to start a family. So this evoked implication of the form ‘ p implies $\neg q$ ’ is common to all our examples and, indeed, it is a stipulation for the constructional specification. Moreover, such an evoked idea forms a background stereotype, and, as I have argued (Kitis 1999a, 2000a, b forthcoming[a]), stereotypical knowledge, just like generalizations and law-like statements (Quine 1941/1965, Elio and Pelletier 1997), is expressed in the ‘primordial’ conditional.⁶

We can then conclude that the invocation of stereotypical knowledge in the form of a conditional is a conventional aspect of the interpretation of such *when*-constructions. Moreover, the antecedent of this conditional is the protasis expressed in the *when*-clause or its more generic entailment and the consequent is the negation of the proposition expressed as contextually assumed in the apodosis or its more generic entailment (e.g., *If one promises, one must not break one’s promise*, *If one is at place₁ at time t_i , one cannot be at place₂ at time t_i* , *If a couple live separately, they cannot have a child*).

8. Presupposition of the protasis

Our sentences (1), (2) and (3) also carry a further contextual requirement: Sentences containing temporal connectives are presuppositional. It is generally acknowledged that the temporal clause introduces an eventuality (Bach 1981) or a situation (Comrie 1976, Mourelatos 1978) that is presupposed to obtain or have occurred; otherwise the whole sentence cannot be assigned a truth-value (Heinämäki 1972, Karttunen 1973, Lascarides and Oberlander 1993).

The *when*-clause is presupposed, that is, the proposition expressed in it is taken for granted by the speaker as a factual state of affairs, as an event or as a situation that holds or is valid. Indeed, as a temporal clause, the *when*-clause is considered to establish a reference point for the tense of the main clause to refer to anaphorically and this property of the *when*-clause has been likened to the presuppositional nature of a definite expression in so far as it is presupposed that the eventuality or situation is identifiable to the hearer (Partee 1984, Webber 1988). It is not enough here to just say that the proposition is on the floor as we said with regard to the apodosis. Instead, the protasis in these constructions is viewed by the speaker as something uncontroversial and unproblematic, not only for him/her but also for the addressee. Both speaker and addressee are committed to the proposition of the protasis. As has been said, this is a consequence of the temporal anchorage of the meaning of *when* and its (at least initially) subordinate status, so that even if its meaning is conditional, it still signifies a factual conditional in the sense that it denotes occasions at specific points in time (genericity, repetition) (*There's never a dull moment in a mealtime when you use Heinz Pickles*).

So (1) presupposes that David Blunkett promised that there would be no grammar schools, (2) that she had a date with the speaker and (3) that they live separately. This further empirical observation about these *when*-constructions then is that the proposition expressed in the protasis or the *when*-clause is taken as presupposed and uncontroversial.

9. Summary of all the properties observed in *when*-constructions

The following table is a summary of all the properties observed so far in the *when*-constructions we identified:

I. The '*when*'-construction (initial formulation)

1. Syntactic properties: speaker says something of the form: *wh-q when p?* or *when p wh-q?*
2. Semantic-pragmatic properties:
 - a. p (the meaning of the protasis P) is presupposed;
 - b. The implication ' p implies $\neg q$ ' is evoked as a contextually relevant, though not necessarily reliable, stereotype;
 - c. q (the meaning of the apodosis Q) is a context proposition.

10. The covert generalization

When sentences like the ones we are discussing are uttered, they seem to convey directly a negation-of- q -reading interpretation along the lines of (1'), (2') and (3'), respectively, repeated here for convenience:

(1') The parents shouldn't have had a grammar school ballot at all.

(2') She didn't have a date with you.

(3') They can't have children.

These interpretations follow from the empirical observations stated in I with respect to the *when*-construction. More specifically, property (2c) of I, that q is a context proposition, does not in actual fact commit the speaker to its acceptance beyond his/her acceptance of it as being on the floor (assumed, presupposed, generally accepted, etc. by the interlocutors or more generally). In case, however, the proposition q of the apodosis denotes a factuality, then we must note that the mode in which it is embedded in the clause of the apodosis (e.g. *wh*-questions, etc.) signifies the speaker's stance towards it (the speaker may question its necessity, its *raison d'être*, etc.).

Property (2b) of I commits the speaker to the presence, even if covert, of a conditional expressed as an implication of the form $p \rightarrow \neg q$. This conditional is, not only present, but also relevant. It also expresses a stereotypical generalization, even if of a precarious nature. The point is that in an utterance of such *when*-constructions, the speaker appears to be committed to the relevance of this conditional.

By condition (2a) of I the speaker in these constructions appears to be committed to the validity of proposition p of the protasis since p is factual and regarded as presupposed and its truth and validity is not questioned or debated. Now, condition (2a) together with condition (2b) of I force the speaker to the conclusion $\neg q$, i.e. *s/he* concludes against the truth or validity or necessity of proposition q of the apodosis. This is achieved by the familiar reasoning expressed in *modus ponens*, as shown below:

$$\begin{array}{l} \text{If } p \text{ then } \neg q \\ p \text{ _____} \\ \neg q \end{array}$$

But q was only a context proposition, that is, it is the proposition that the speaker accepted as being on the floor or assumed by the audience or interlocutors or accepted more generally, without, however, committing him/herself any further than that to its validity, truth, *raison d'être*, etc. In effect, this conclusion, $\neg q$, is the negation of this assumption and hence the speaker appears to negate the interlocutor's commitment to an

assumption or the acceptance of a state of affairs, which the speaker, while s/he acknowledged it, is not prepared to adopt as his/her own. Thus the speaker is heard as expressing a contrast or incongruity between the two propositions, and moreover an evaluative attitude towards their concurrent conjunction.

11. Are such *when*-clauses constructions then?

A grammatical construction is a conventional association of any or all of the following types of information: Lexical, morphosyntactic, semantic, and pragmatic (Fillmore 1986, Fillmore and Kay 1987, Lakoff 1987, Kay 1997, Kay and Fillmore 1999). In other words, there is a conventional association of all these types of information and any deletion or addition may upset the balance and result in the dissolution of the construction. A grammatical construction, then, is a configuration of grammatical, semantic and pragmatic conditions (a) which are not predictable from the grammar, and (b) whose meaning cannot be derived compositionally. Fillmore (1988: 36) defines a grammatical construction as “any syntactic pattern which is assigned one or more conventional functions in a language, together with whatever is linguistically conventionalized about its contribution to the meaning or the use of structures containing it”.

Moreover, grammatical constructions seek to encompass in their specifications both cognitive and social aspects of language structure and use. The barrier between the two is rather artificial since social aspects of language use are reflected in grammatical structures, which, in their turn, reflect interactional experience that is internalized. As Croft (1994: 461) writes, “[g]rammatical constructions represent the conventionalization of particularly salient distinctions found in language meaning and use, achieved through the mental internalization of patterns of conversational interaction itself”.

Besides, a preoccupation of construction grammarians is “their insistence on simultaneously describing grammatical patterns *and* the semantic and pragmatic purposes to which they are dedicated, and their tendency to give attention to the fine and fussy details of what might be called the *non-central constructions of a language*” (Fillmore 1988: 36). The type of *when*-clauses examined here does not belong with the central cases of *when*-clauses described to date as specifying the reference time of the main or as delimiting domains, despite its frequent occurrence, especially in argumentative discourse.⁷

Moreover, a grammatical construction that does not derive its interpretation in a compositional manner is interpreted, nevertheless, through parallel processing without recourse to non-linguistic context (Cf. Gibbs 1984). In other words, we cannot say in respect of this type of *when*-clause sentences (call them A) that they achieve this interpretation in a situation in which features X and Y are perceived, and that interpreting A in a specific text evokes X and Y in some manner (Verhagen 1997). Further, as Talmy (1988: 165) put it, “[t]he grammatical specifications in a sentence ... provide a conceptual framework or, imagistically, a skeletal structure or scaffolding, for the conceptual material that is lexically specified.” And the grammatical *when*-construction discussed here provides a clearly unique scaffolding for the conceptual material of the incongruous juxtaposition of two eventualities, one in its presupposed formulation and one in its (modalized) rhetorical (*non-bona fide*) question form (also see Kitis 2000b in this respect).

The specific interpretation is not achieved through particularized conversational implicature either (Grice 1975), for it does not need any additional contextual specification or any extended discourse (cf. Koutoupis-Kitis 1982). Further evidence for the parallel processing of the modalized ‘main’ clause (its rhetorical question) is adduced from the fact that in interpreting it in this construction we do not have to go through an indirect speech act schema processing, as proposed in Bach and Harnish (1984/1979). For we cannot in any sense try to respond to the direct illocutionary force of the question ignoring its rhetorical indirect force,⁸ neither do we derive this indirect force by resorting to MCBs (Mutual Contextual Beliefs), which help to determine the identity of the indirect act. Moreover, contextual beliefs can thereby be created (not necessarily shared) through the invoked covert generalization; hence, the construction’s potential for rhetorical argumentation.

Shall we then conclude that this *modus ponens* inference is part and parcel of the construction and, therefore, part of the grammar of these sentences? Indeed, for *when*-clauses of the sort we have been considering here to be called constructions, they have to feature certain more or less predictable properties.

The apodosis cannot be embedded in a bridging or hedging verb like *think*, *believe*, *consider*, neither can it be hedged by any particles or adverbs; in other words, it cannot be epistemically qualified (Bach 1981):

(8) Why do you think/believe the parents had a ballot when David Blunkett promised that there would be no grammar schools?

(9) How do you think/believe she had a date with you when she had a date with me?

(10) How do you think/believe they can have children when they live separately?

Examples (8)-(10) do not promote a *modus ponens* inference neither do they give rise to an interpretation whereby the speaker’s intent in uttering them is summed up in the rejection or challenge of the apodosis. Instead, *q* of the apodosis is heard as a real question asked of the addressee. This is a syntactic restriction for our construction, then, according to which the *q* of the apodosis cannot be embedded or hedged, and, moreover, must appear as the main clause.⁹ We can then revise the properties of the *when*-construction summarized in I to include this syntactic constraint too:

II. The 'when'-construction (revised formulation)

1. Syntactic properties:
 - a. speaker says something of the form: *wh-q when p?* or *when p wh-q?*
 - b. *q* (the consequent of the implication) must be the literal meaning of the main clause of the sentence. It may not be embedded in a verb like *think* or *believe*, or be the complement of a noun like *reason*.
1. Semantic-pragmatic properties:
 - a. *p* (the meaning of the protasis *P*) is presupposed;
 - b. The implication 'p implies ¬q' is evoked as a contextually relevant, though not necessarily reliable, stereotype;
 - c. *q* (the meaning [or part thereof] of the apodosis *Q*) is a context proposition.

Firstly, in the *when*-clauses examined here, the apodosis is a question. This is not the most oft-occurring type of apodosis with *when*-clauses, which mostly specify a temporal anchoring for the event expressed in the main, or else set a frame within which the proposition of the main develops. While not usual, it is not unlikely either (cf. example (6)). However, the questioned *q* is a consistent pattern in the *when*-construction we identified, while it is not the preferred or most usual option for the head of ordinary *when*-clauses. Besides, while a questioned apodosis of an ordinary *when*-clause will be an innocent compositional question seeking an answer, the questioned *q* of *when*-constructions is always a non-compositional question, and more specifically it is a rhetorical one.

Secondly, corroboration for the non-compositional rhetorical nature of the question is adduced from the fact that the expression *how come* can substitute for the *wh*-question element. The function of *how come* is well known.

These restrictions are indeed constraints on the *when*-construction, which are associated with the interpretation we have explored. However, this interpretation is a conventional aspect of the meaning of the *when*-clause and is inextricably associated with the thus specified construction. This interpretation of evaluative contrast, antinomy or incongruity is part and parcel of the conventional meaning of the *when*-construction.

Can we conclude that this interpretation of antinomy or contrast is conventional but not truth-functional? For if we say that it is conventional, but forms part of the broader conventional meaning just like Grice's conventional implicatures, then we can preserve our truth-functional meaning derivable on a compositional basis. But what will that be? As we have seen, there is no compositional basis contributing to truth functionality that further generates conventional implicatures. The only meaning derivable from this construction is this conventional meaning of contrasting the two propositions of the two conjoined clauses and further challenging that of the apodosis. There is no other truth-functional meaning, since the conveyed meaning is associated with the semantic representation. All these observations, then, in respect of both syntactic constraints, semantic properties and pragmatic interpretation and functions, provide evidence for the thesis of constructionality in the case at issue. For if there is conventionality then there is constructionality (Kay 1997, ch.8).

12. The antinomial *when*-construction as a rhetorical structure

As has been claimed in the introduction, the *when*-construction examined here provides a prime rhetorical structure for foregrounding antinomial states of affairs that are deemed by the speaker to be incongruous. In a *when*-construction, the speaker manages to contrast as antinomial or incongruous two states of affairs represented in its propositions, one presumed to hold, *p*, whose truth and validity is taken for granted, the other, *q*, (its truth, validity or *raison d'être*), accepted or assumed by the speaker's audience only.

But the speaker is not heard as merely contrasting the two propositions, *p* and *q*, of the protasis and the apodosis. The speaker could do that by either using a simple contrastive connective or by reasoning from *p* to ¬*q* via a *because*-clause, as in (11)-(13):

(11a) David Blunkett promised that there would be no grammar schools but the parents had a grammar school ballot.

(11b) The parents should not have had a grammar school ballot because David Blunkett promised that there would be no grammar schools.

(12a) ?She had a date with you but she also had a date with me.

(12b) She didn't have (couldn't have had) a date with you because she had a date with me.

(13a) They live separately ?but/and they can't have children.¹⁰

13b) They can't have children because they live separately.

Instead, the speaker is heard as expressing an evaluative stance or attitude towards the conjunction of *p* and *q*, and this evaluation is presumed to have a certain impact on the audience. In effect, the *when*-construction is used as a rhetorical ploy to achieve a maximal impact on the audience. It is no coincidence that this type of *when*-construction is encountered in argumentative discourse, as in editorials, interviews or in Parliament. How is this impact achieved? The antinomy presented in the *when*-construction is greatly enhanced by the invocation of the allegedly generalized conditional approximating or simulating a stereotype (section 7). Instead of simply

being presented with the contrastive relation of two propositions, the addressee is presented with a generalization, even if a covert one, which is supposed to subsume in its scope all specific eventualities that bear a resemblance to the one at hand.¹¹ Thus the addressee has to reach the conclusion of the antinomial (contrastive) or incongruous state of the two propositions of the protasis and the apodosis by first accessing the generalization. By projecting the addressee's reasoning to accessing the covert implication, the speaker is in effect forcing the addressee to access the typical schema used for expressing general laws and stereotypes, i.e. the conditional (Quine 1941). Thus the addressee is led to reason from general principles – serving as major premises (e.g., *If one promises one must keep one's promise*) – to particular facts (the propositions *p* and *q*). In other words, the addressee is led to use a deductive reasoning rather than an inductive one; it is common knowledge, then, that deductive reasoning is always valid while inductive reasoning is 'imperfect' or unreliable. By thus impinging the contrastive relation on a generalization, the speaker secures a much greater impact for the inferred conclusion $\neg q$.

Moreover, the covert generalization generated by this *when*-construction renders the construction polyphonic (Vološinov 1973, Ducrot 1984), for we can claim that the speaker's or author's voice is fused therein with the voice of the general opinion encrypted in this covert implication of the *when*-construction and sustained by its structure.

"Evaluation", Malrieu (1999: 7) writes, "is a key notion to describe the complex articulation between subjective experience and cultural knowledge." The covert implication we identified in the *when*-construction that amounts to a generalization should be seen as the product of a subjectification process of cultural knowledge or cultural norms rather than as secure knowledge or generally accepted beliefs. This point is particularly relevant and visible in advertising discourse where the construction is used widely in order to promote particular ideological constructs into generally accepted stereotypes (cf. Kitis 1997, also note 13). The *when*-construction, then, is used as an exponent of evaluative orientation and primarily of negative evaluation. As such it is a prime instance of the subjectification of meaning, for as Verhagen (1996) would say, subjectivity can be construed as an orientation towards certain conclusions. Its function is to help a discourse move forward by orienting the reader/hearer towards particular conclusions. It is no surprise, then, that this construction is mainly encountered in argumentative discourse, since it is in this type of discourse that the speaker/writer is oriented towards leading his/her addressee/reader to reach certain conclusions. No less significantly, the eventualities or situations associated in this construction are mostly represented by propositions featuring non-past tenses and imperfective aspect.¹²

Moreover, the *when*-construction discussed here is further enhanced and consolidated as a rhetorical construction by the inclusion in its most central paradigmatic cases of a rhetorical question that yields a strongly modalized proposition for the 'main' clause. As is generally acknowledged, questions are hearer-oriented, and since rhetorical questions are simulated real questions, we can claim that they are used by the speaker, not only to emphasize a point or argument, but primarily to align him/herself with the audience in invoking their cognitive efforts and inviting them to coordinate with the speaker (Verhagen 1998). Rhetorical questions are, in this respect, contrasted with authorial declarative statements as (11) and (12) would be. The rhetorical question, then, is an addressee-involvement ploy and a subjectivity marker in an assumed effort to take the audience's perspective into account, engage their attention and generally involve them in the act of communication.

13. An alternative account

In this Section, I will review Declerck's (1988) theory of quantificational (both temporal and atemporal) *when*-clauses in respect of the type of *when*-clauses discussed here. He proposes to view *when*-clauses as quantifying over the head clause, thus helping to restrict the domain of the NP of the main; within an extended analysis he aspires to include the type of *when* examined here, as well as some other non-anaphoric *when*-clauses that resist uniform treatment.

Declerck (1988: 161, 1997) refers to this type of *when*-clauses as concessive or adversative, but does not comment on the almost consistently interrogative status of the main in his data (1997) of the so-called concessive or adversative type, neither does he discuss any other modalities prevalent in the main.¹³

More specifically, although Declerck (1988: 160) notes, as has been said, this use of *when*-clauses, he not only fails to notice the modalization of the main, but is also oblivious of the rhetoricity and evaluative character of the construction, both of which sharply differentiate this type from all the other *when*-clauses he discusses. He, therefore, sees no reason to distinguish them from the rest, but instead tries to group them together with *when*-clauses that help to restrict the domain of reference of unbounded NPs. In fact, he proposes to extend his analysis of atemporal *when*-clauses to cases in which *when*-clauses are not anaphorically related to their head clauses, as in (14a) to (14d) below:

- (14a) Restaurants are bad places to eat when the head waiter is a greedy person.
- (14b) My doctor refuses to operate when the patient is well into his nineties.
- (14c) The sergeant is dissatisfied when all newcomers are very young.
- (14d) How can you even think that, when I have already proven that point of view wrong?

(adapted from Declerck 1988, 158, 160, originally in Carlson 1979)

In (14a) and (14b) Declerck claims that there is a logical relation between the two propositions that is almost an anaphoric one, while in (14c) there is a causal relation between the two clauses.¹⁴ As for (14d), a type of *when*-clauses that is the focus of the present study, Declerck (1988) proposes to account for it within his extended theory, thus disregarding its rhetorical character and evaluative nature. While, in my view, (14a, b, c) can be accommodated within his theory if we additionally make use of the notions of frame and script (cf. note 14), example (14d) resists an explanation in Declerck's terms. He acknowledges the different nature of this example but he, nevertheless, categorizes it along with the rest and associates it with concessive meanings, in agreement with previous researchers:

In sentence [14d], finally, the relation between the two clauses is one of concession. However, this example is different from anything we have discussed so far in that neither of the two clauses refers to some unbounded (e.g., habitual, generic) situation: both clauses denote a single event. The paraphrase is therefore: 'How can you even think that, in a (=this) case in which I have already proven that point of view wrong?' (Declerck 1988: 160-161)

Although he accepts the non-restrictive character of this type, he, nevertheless, tries to lump it together with the rest atemporal *when*-clauses that restrict an unbounded NP of the main, claiming that "this *when* is not unrelated to the other cases of atemporal *when*" as "the *when*-clause exercises its basic function of defining the case(s) in which the proposition made in the head clause is true" (Declerck 1988: 161). He further attributes the concessive meaning to the presumed need of a logical relation between the *when*-clause and its head.

However, as we have seen, the consistent modalization of the main prevents it from being true in respect of its specification by the *when*-clause. For, as we have shown, we cannot accept the proposition of the question as valid, as it is merely a context-proposition and not a presupposed one. So the *wh*-word cannot be treated as a quantifier quantifying over a variable in the proposition expressing the true and complete answer to the question, for all our questions are rhetorical ones. Besides, it is the *wh*-word that helps to falsify ('in collaboration with' the elements we identified) the presumed truth of the proposition of the question. A further argument militating against Declerck's account is the likelihood of modalization of the *when*-clause; in other words, we cannot ignore the fact that modalization can also 'afflict' the *when*-clause of this construction (cf. note 13).

Moreover, an assumed logical relation such as reason, also attributed to this type of *when*-clauses,¹⁵ is not particular to it but seems to be a rather generalized function of *when*-clauses. It, thus, cannot provide a significant differential correlate for the type discussed here. It also appears that we cannot accept that the relation between the *when*-clause and its main is that of concession, for if this were true, one would be in a position to substitute concessive connectives such as (*al*)*though* for *when*. But this is not possible as (15a, b) witness:

(15a) ?How can you even think that, (*al*)*though* I have already proven that point of view wrong?

(15b) ?*Although* I have already proven that point of view wrong, how can you even think that?

Declerck (1988) claims to have offered a unified account of both temporal and atemporal *when*-clauses: *when*-clauses specify time(s) or case(s) of which the head clause is true and in doing that they primarily bind the NP of the main clause. Moreover, these atemporal *when*-clauses are assigned concomitant adverbial meanings such as causality and concessiveness, corresponding to the logical relations existing between the two clauses.

We have seen that Declerck himself acknowledges that in examples such as (14d), which are our focus, the *when*-clause does not either specify certain cases or times of which the main is true, or restrict the NP of the head clause. It nevertheless defines, as he claims, the case in which the proposition of the main is true. But what is that supposed to mean when all our examples feature modalities in their main clauses? What truth assignment is due to the questions of the main? We cannot claim that the *when*-clauses of (1), (2) and (3) specify times or cases of which the postcedents or heads are true. For example, we cannot assume that there were many or an unbounded number of cases or times in/at which the parents had a grammar school ballot, and that it is somehow restricted by the *when*-clause. Neither can we assign a truth-value to the main, as we have seen, even in its non-interrogative form, that is, even if it were a declarative sentence (e.g., *The parents had a grammar school ballot*) with respect to David Blunkett's promise; for the latter, i.e. the proposition of the *when*-clause, does not define the case or the time in/at which the proposition made in the head clause is true, as Declerck would claim. The *when*-clause does not provide the sentence's reference time or the referent or antecedent for the past tense of the main (McCawley 1971). The proposition of the main may be true or false irrespective of the proposition of the *when*-clause. It can be true that the parents had a ballot even if it turns out that David Blunkett never promised anything. His promise (or its absence) is also inconsequential for the truth or falsity of the proposition of the main clause. There is, moreover, no logical sequence or consequence (Steedman 1982) between the two propositions of the construction, even if we assume a declarative head clause. The same is true *mutatis mutandis* of our other examples.

Instead, there are two distinct eventualities represented by the propositions of the two clauses, which are antiparathesized or juxtaposed as incongruous in a single construction. The only relation that exists between the two clauses is that of juxtaposition or antiparathesis. But this is not all. The antiparathesis acquires a strongly evaluative flavour, just because one eventuality or situation is presented in a modalized manner, mainly in the

form of a *non-bona fide* question, thus invoking an implication reflecting a presumed stereotype that generalizes and enhances the incongruity interpretation, as discussed above. So we cannot agree with Declerck (1988) that this type of *when*-clause exercises its basic function of defining the case(s) in which the proposition made in the head clause is true.¹⁶

14. Conclusion

This paper provides further evidence for the need of constructionality, as it adds another construction to the repertoire, but also advances an argument for the subjectification of meaning and the rhetorical use of such constructions. I examined a type of *when*-clauses, which to date has not received an adequate explanatory treatment. The *when*-clause of the construction identified here does not contribute the compositional semantics of a temporal adverbial in a model such as Vlach's (1993), for instance. It does not have a time-specifying function or a quantificational adverbial one; neither does it restrict the domain of the NP of the main, but rather acts as an independent circumstantial clause.

The question of the main clause of this *when*-construction is a root question and cannot be reduced to an indirect one with an introducing performative verb so that it could be equivalent to a declarative sentence of a certain kind and be self-verifying. The question of the apodosis or the main cannot be treated as an epistemic request (Wachowicz 1978). Further, the *wh*-phrases of the questions in (1) to (3) cannot be treated as quantifier-type expressions. Since there are no existentially presupposed –or even implicated- noun phrases, the *wh*-words of the questions in (1) to (3) cannot be regarded as quantifying into common nouns (Karttunen 1978).

Moreover, it has been customary to identify pragmatic meaning and mostly propositional attitude meaning and evaluative attitudes in terms of lexical items rather external to the proposition such as style disjuncts, parentheticals and pragmatic markers. The *when*-construction furnishes us with a prime case where the pragmatic meaning, propositional attitude meaning and evaluative function of the utterance, in general, are effected via a complex configuration of its propositional meanings involved in the complex sentence, rather than via style disjuncts or pragmatic or discourse markers external to the proposition, or by lexicalizing the evaluative or propositional attitude in conventional expressions bearing such meanings.

I argued that *when*-clauses bearing the properties identified here could only be adequately accounted for within a constructional framework. Accounting for them in this constructional framework will take care, not only of their syntactic peculiarities, but also of their semantic characteristics as well as of their interpretation and pragmatic function as prime rhetorical structures. Moreover, their rhetorical potential is due to a covert generalization invoked in their use. This generalization in the form of an implication can only be accounted for within constructionality. And, as we have seen, it is this covert implication which, as the exponent of a generalization approximating an alleged stereotype or encapsulating purportedly stereotypical knowledge, achieves the incongruity interpretation of the construction; this interpretation is the upshot of an appropriation, in other words a subjectification, process of objective lexical meanings and it is a conventional part of the meaning of the construction. My findings are conducive to the more general argument for constructionality, that is, to blending in our accounts syntactic, semantic and pragmatic levels with a view to achieving completeness but also explanatory power for our descriptive theories. The *when*-construction proposed here is one more example that needs to be rescued from a state of compositional chaos into a principled result of “the complicated interplay of a number of motivations for sentence construction” (Brugman 1996: 26).

References

- Achinstein, P. 1989, ‘Can There Be a Model of Explanation?’, in Brody and Grandy (eds), 200-216.
- Akatsuka, N. 1986, ‘Conditionals Are Discourse-Bound’, in E. Closs Traugott, A. ter Meulen, J. Smitzer Reilly and Ch. Ferguson (eds), *On Conditionals*, 333-351, Cambridge University Press, Cambridge.
- Bach, E. 1981, ‘On Time, Tense, and Aspect: An Essay in English Metaphysics’, in P. Cole (ed.) *Radical Pragmatics*, 63-81, Academic Press, New York.
- Bach, E and R. M. Harnish 1984/1979, *Linguistic Communication and Speech Acts*. The MIT Press, Cambridge, Massachusetts, and London, England.
- Belnap, N. D. 1966, ‘Questions, Answers, and Presuppositions’, *The Journal of Philosophy* LXIII, No 20, 609-611.
- Bonomi, A. 1997, ‘Aspect, Quantification and *When*-Clauses in Italian’, *Linguistics and Philosophy* 20, 469-514.
- Brody B. A. and R. E. Grandy (eds), *Readings in the Philosophy of Science*, Prentice Hall, Englewood Cliffs, New Jersey.
- Bromberger, S. 1966a, ‘Questions’, *The Journal of Philosophy* LXIII, No 20, 597-606.
- Bromberger, S. 1966b, ‘*Why*-Questions’, in R. G. Colodny (ed.), *Mind and Cosmos*, 86-108, Pittsburgh.
- Brugman, C. 1996, ‘Inalienability and the Interpretation of Modified Noun Phrases’, in M. Shibatani and S. Thompson (eds.), *Grammatical Constructions*, 1-27, Clarendon Press, Oxford.
- Carlson, G. N. 1979, ‘Generics and Atemporal *When*’, *Linguistics and Philosophy* 3, 49-98.

- Carlson, G. N. and F. J. Pelletier 1995, (eds.), *The Generic Book*, The University of Chicago Press, Chicago and London.
- Chafe, W. 1984, 'How People Use Adverbial Clauses', *Proceedings of the 10th Annual Meeting of the Berkeley Linguistics Society*, ed. C. Brugman and M. Macaulay, 437-449, University of California, Berkeley.
- Cole, P. and J. L. Morgan (eds.) *Syntax and Semantics*. V3, Academic Press, New York.
- Comrie, B. 1976, *Aspect*, Cambridge University Press, Cambridge.
- Croft, W. 1994, 'Speech Act Classification, Language Typology and Cognition', in S. Tsohatzidis (ed.), *Foundations of Speech Act Theory. Philosophical and Linguistic Perspectives*, 460-477, Routledge, London and New York.
- Declerck, R. 1988, 'Restrictive *When*-Clauses', *Linguistics and Philosophy* 11, 131-168.
- Declerck, R. 1997, *'When'-Temporal Clauses*, Routledge, London and New York.
- Ducrot, O. 1984, *Le Dire Et Le Dit*, Editions de Minuit, Paris.
- Ducrot, O. 1988, 'Topoi et Formes Topiques', *Bulletin d' études de linguistique française de Tokyo* 22, 1-14.
- Elio, R. and F. J. Pelletier 1997, 'Belief Change as Propositional Update', *Cognitive Science* 21(4), 419-460.
- Fillmore, Ch. 1986, 'Varieties of Conditional Sentences', *Proceedings of the Third Eastern States Conference on Linguistics*, Ohio State University Department of Linguistics, 163-182, Columbus, Ohio.
- Fillmore, Ch. 1988, 'The Mechanisms of "Construction Grammar"', *Proceedings of the 14th Annual Meeting of the Berkeley Linguistics Society*, 35-55, University of California, Berkeley.
- Fillmore, Ch and P. Kay 1987, *The Goals of Construction Grammar*, Technical Report No 50. Berkeley: University of California, Berkeley Cognitive Science Program.
- Gibbs, R. 1984, 'Literal Meaning and Psychological Theory', *Cognitive Science* 8, 275-304.
- Gordon, D. and G. Lakoff 1975, 'Conversational Postulates', in P. Cole and J. L. Morgan (eds.), 83-106.
- Green, G. M. 1975, 'How to Get People to Do Things With Words', in P. Cole and J. L. Morgan (eds), 107-141.
- Grice, P. 1975, 'Logic and Conversation', in P. Cole and J. L. Morgan (eds), 41-58.
- Haack, S. 1978, *Philosophy of Logics*, Cambridge University Press, Cambridge.
- Hansson, B. 1974, 'Explanations-Of What?', Stanford University mimeograph.
- Harrah, D. 1966, 'Question Generators', *The Journal of Philosophy* LXIII, No 20, 606-608.
- Heinämaa, O. 1972, 'Before', *Papers from the Eighth Regional Meeting of the Chicago Linguistics Society*, 139-151, University of Chicago, Chicago, Illinois.
- Higginbotham, J. 1996, 'The Semantics of Questions', in S. Lappin (ed.), *The Handbook of Contemporary Semantic Theory*, 362-383, Blackwell, Oxford.
- Hiž, H. (ed.), *Questions*, Reidel, Dordrecht-Holland/Boston-U.S.A.
- Karttunen, L. 1973, 'Presuppositions of Compound Sentences', *Linguistic Inquiry* 4, 169-193.
- Karttunen, L. 1978, 'Syntax and Semantics of Questions', in H. Hiž (ed.), 165-210.
- Kay, P. 1991, 'Constructional Modus Tollens and Level of Conventionality', *Chicago Linguistic Society* 27, 107-124. Reprinted in Kay 1997, ch.8.
- Kay, P. 1992, 'At Least', in A. Lehrer and E. F. Kittay (eds) *Frames, Fields and Contrasts: New Essays in Semantic and Lexical Organization*, 309-332, Lawrence Erlbaum, New Jersey. Reprinted in Kay 1997, ch.3.
- Kay, P. 1995, 'Construction Grammar', in J. Verschueren, J-O. Östman and J. Blommaert (eds), *Handbook of Pragmatics*, 171-177, John Benjamins, Amsterdam/Philadelphia. Reprinted in Kay 1997, ch.4.
- Kay, P. 1997, *Words and the Grammar of Context*. CSLI Publications, Stanford. California.
- Kay, P. and Ch. Fillmore: 1999, 'Grammatical Constructions and Linguistic Generalizations: The 'What's X Doing Y?' Construction', *Language* 75, 1-33.
- Kitis, E. 1987a, 'A Comment on the Article', *Proceedings of the 1st International Symposium on English and Greek: Description and/or Comparison of the two languages*, 42-54, School of English, Aristotle University, Thessaloniki.
- Kitis, E. 1987b, 'A Comment on John Hawkins, "A Note on Referent Identifiability and Co-Presence"', *Journal of Pragmatics* 11: 93-97.
- Kitis E. 1997. 'Ads-Part Of Our Lives: Linguistic Awareness of Powerful Advertising'. *Word and Image* 13(1): 304-313.
- Kitis, E. 1999a, 'On Relevance Again: From Philosophy of Language Across "Pragmatics and Power" to Global Relevance', *Journal of Pragmatics* 31, 643-667.
- Kitis, E. 1999b, 'Antiparathetic Evaluative *When*'. Paper presented at PRAGMA99, Tel Aviv, June 1999.
- Kitis, E. 2000a, 'Temporality and Causality: The Case of Greek Subordinating Connectives', *Revue de Semantique et Pragmatique* 8: 121-141.
- Kitis E. 2000b, 'Connectives and Frame Theory: The Case of Hypotextual Antinomial *And*', *Pragmatics and Cognition* 8(2), 357-409.

- Kitis, E. 2001, 'The Case of Some Temporal Subordinate Connectives: Existential and Universal Quantification Operators' (in Greek), *ICGL99, Proceedings of 4th International Conference in Greek Linguistics*, Cyprus 1999, 268-276, Thessaloniki, University Studio Press.
- Kitis E. forthcoming[a], 'Causal Connectives: the Evidence from Greek'.
- Kitis E. forthcoming[b], 'Conditional Constructions as Rhetorical Structures', paper presented at 7th International Pragmatics Conference, Budapest, 2000.
- Kitis E. and M. Milapides 1997, 'Read it and Believe it: How Metaphor Constructs Ideology in News Discourse', *Journal of Pragmatics* 28(5), 557-590.
- König, E. and J. van der Auwera 1988, 'Clause Integration in German and Dutch Conditionals, Concessive Conditionals, and Concessives', in J. Haiman and A. Thompson (eds), *Clause Combining in Grammar and Discourse*, 101-33, J. Benjamins, Amsterdam.
- Koutoupis-Kitis, E. 1982, *Problems Connected with the Notion of Implicature*. Ph.D. Thesis, University of Warwick.
- Kratzer, A. 1995, 'Stage-Level and Individual-Level Predicates', in G. N. Carlson and F. J. Pelletier (eds), 125-175.
- Krifka, M. 1987, *An Outline of Genericity*, (partly in collaboration with Claudia Gerstner), 87-23, SNS-Bericht, University of Tübingen.
- Krifka, M., F. J. Pelletier, G. N. Carlson, A. ter Meulen, G. Link, and G. Chierchia 1995, 'Genericity: An Introduction', in G. N. Carlson and F. J. Pelletier (eds), 1-124.
- Lakoff, G. 1987, *Women, Fire, And Dangerous Things*, University of Chicago Press, Chicago.
- Lambrecht, K. 1986, 'Pragmatically Motivated Syntax: Presentational Cleft Constructions in Spoken French', *Papers from the 22nd Regional Meeting of the Chicago Linguistics Society*, University of Chicago, Chicago, Illinois.
- Lambrecht, K. 1990, "'What, Me Worry?': 'Mad Magazine Sentences' Revisited", *Proceedings of the 16th Annual Meeting of the Berkeley Linguistics Society*, 215-228, University of California, Berkeley.
- Lascarides, A. and J. Oberlander 1993, 'Temporal Connectives in a Discourse Context', *Proceedings of the European Chapter of the Association for Computational Linguistics, EACL 93*, 260-268, Utrecht, The Netherlands.
- Lewis, D. 1975, 'Adverbs of Quantification', in E. L. Keenan (ed.), *Formal Semantics of Natural Language*, 3-15, Cambridge University Press, Cambridge.
- Lyons, J. 1977, *Semantics*, V2, Cambridge University Press, Cambridge.
- Malrieu, J. P. 1999, *Evaluative Semantics*, Routledge, London and New York.
- Maynard, S. K. 1999, 'Grammar with Attitude: on the Expressivity of Certain *da* Sentences in Japanese', *Linguistics* 37(2), 215-250.
- McCawley, J. D. 1971, 'Tense and Time Reference in English', in C. H. Fillmore and D. T. Langendoen (eds), *Studies in Linguistic Semantics*, 96-113, Holt, Rinehart and Winston, New York, Chicago, San Francisco.
- McCawley, J. D. 1981, *Everything that Linguists have always Wanted to Know about Logic, but were ashamed to ask*. Basil Blackwell, Oxford.
- Minsky, M. 1975, 'A Framework for Representing Knowledge', in P. H. Winston (ed.) *The Psychology of Computer Vision*, 211-277, McGraw-Hill, New York.
- Moens, M. and M. Steedman 1988, 'Temporal Ontology and Temporal Reference', *Computational Linguistics* 14, 5-28.
- Mourelatos, A. P. 1978, 'Events, Processes and States', *Linguistics and Philosophy* 2, 415-434.
- Partee, B. 1984, 'Nominal and Temporal Anaphora', *Linguistics and Philosophy* 7, 243-286.
- Poutsma, H. 1929, *A grammar of Late Modern English. Part 1: The Sentence. Second Half: The Composite Sentence*, Noordhoff, Croningen.
- Quine, van W. O. 1941/1965, *Elementary Logic*, Harper & Row, Harper Torchbooks, New York.
- Quine, van W. O. 1960, *Word and Object*, Wiley, New York and London.
- Raccah, P-Y. 1995, (ed.), *Argumentation Within Language*, special issue of the *Journal of Pragmatics* 24.
- Reichenbach, H. 1947, *Elements of Symbolic Logic*, University of California Press, Berkeley, California.
- Ritchie, G. 1979, 'Temporal Clauses in English', *Theoretical Linguistics* 6, 87-115.
- Schank, R. and R. Abelson 1977, *Scripts, Plans, Goals and Understanding. An Inquiry into Human Knowledge Structure*, Lawrence Erlbaum, New Jersey.
- Shibatani, M. and S. A. Thompson 1996, (eds), *Grammatical Constructions. Their Form and Meaning*, Oxford, Clarendon Press.
- Smith, C. 1991, *The Parameter of Aspect*, Reidel, Dordrecht-Holland/Boston-U.S.A.
- Stalnaker, R. C. 1972, 'Pragmatics', in D. Davidson and G. Harman (eds), *Semantics of Natural Language*, 380-397, Reidel, Dordrecht-Holland/Boston-U.S.A.
- Steedman, M. 1982, 'Reference to Past Time', in R. Jarvella and W. Klein (eds), *Speech, Place and Action*, 125-157, Wiley, New York.

- Steedman, M. 2000, MS, *The Productions of Time: Temporality and Causality in Linguistic Semantics*. Division of Informatics, University of Edinburgh.
- Strawson, P. F. 1952, *Introduction to Logical Theory*, Methuen, London.
- Talmy, L. 1988, 'The Relation of Grammar to Cognition', in B. Rudzka-Ostyn (ed.), *Topics in Cognitive Linguistics*, 165-205, John Benjamins, Amsterdam/Philadelphia.
- Tedeschi, P. J. 1981, 'Some Evidence for a Branching-Futures Semantics Model', in P. J. Tedeschi and A. Zaenen (eds), *Syntax and Semantics V 14*, 239-269, Academic Press, New York.
- van Fraassen, B. C. 1989, 'The Pragmatics of Explanation', in Brody and Grandy (eds), 217-227.
- Verhagen, A. 1996, 'Sequential Conceptualization and Linear Order', in E. H. Casad (ed.), *Cognitive Linguistics in the Redwoods. The Expansion of a New Paradigm in Linguistics*, 793-817, Mouton de Gruyter, Berlin, New York.
- Verhagen, A. 1997, 'Context, Meaning, and Interpretation in a Practical Approach to Linguistics', in L. Lentz and H. Pander Maat (eds), *Discourse Analysis and Evaluation: Functional approaches*, 7-39, Rodopi, Amsterdam – Atlanta, GA.
- Verhagen, A. 1998, 'Subjectivity in a Usage-Based Approach to Language', plenary paper delivered at the 3rd International Conference of the Hellenic Association for the Study of English, *The Other Within*. May 1998, Aristotle University, Thessaloniki, Greece.
- Vlach, F. 1993, 'Temporal Adverbials, Tenses and The Perfect', *Linguistics and Philosophy* 16, 231-283.
- Vološinov, V. N. 1973. *Marxism and the Philosophy Of Language*. Trans. Ladislav Matejka and I. R. Titunik, [1930, Lenigrad], Seminar Press, New York and London.
- Wachowicz, K. 1978, 'Q-Morpheme Hypothesis, Performative analysis and an alternative', in Hiz (ed.), 150-163.
- Webber, B. 1988, 'Tense as Discourse Anaphor', *Computational Linguistics* 14, 61-73.
- Žagar, I. (ed) 1996, *Oswald Ducrot. Slovenian Lectures*, ISH, Ljubljana.

¹ But see Steedman (2000).

² The return to Cambridge is visualized and expressed as an event already allotted -anchored- to a specific point in time (even if future), and from that point of view it can be assigned a form of factuality or realis status, especially if the future is regarded as having a present reference point, just like the perfect (Smith 1991). The factuality of statements of future events is a controversial issue but McCawley (1981: 343) proposes the actual future as an extra index; moreover, *when* admits a non-modal verb form. Steedman (2000: 21) claims that the simple future has a reference time that is co-temporal with event time based on the observation that "the futurate is anaphoric, like the past, with exactly the same need for an 'anchored' reference point". The *when*-clause provides exactly this anchored reference point and its proposition is considered presupposed and factual. Also cf. the treatment of future as factuality in pre-quantum Newtonian physics, which is reflected in language in the western world, where we visualize time linearly, (for logics consonant with physics cf. Quine's (1960) proposal, Bach (1981), for a review in this respect see Haack 1978). Also see Steedman's (2000: 29) treatment of non-modal future tense as being structured symmetrically with the past having a "determined set of states constituting actual future history" even if "our information about future actuality is in fact limited, and our knowledge merely probabilistic". Besides, most computational approaches treat *when* as having a referent-setting effect. The issue concerning us here is that the proposition of a *when*-clause is *presented by the speaker as a fact*. So, even if the future is conceived as a branching into alternative worlds or options, *when* acts as an operator selecting one alternative and putting it on the history line (Tedeschi 1981), its proposition, thus, acquiring a retrospective perspective and linearizing the future as determined. However, (5) is meant to reflect the most general trend in the meaning of *when*. *When* can indeed be purely conditional, for as Chafe (1984) said, a condition often masquerades as a temporal orientation (cf. Vlach 1993, Moens and Steedman 1988). But I would agree with Declerck (1988) that *when* and *if* are not necessarily equivalent, since *when*, as he claims, expresses factuality and realis.

³ See Koutoupis-Kitis for a critical appraisal of implicature and Grice's (1975) programme.

⁴ See van Fraassen (1989) for relevant discussion and some similar why-examples.

⁵ Past tense verb forms and perfective aspect affect this issue.

⁶ Stereotypical knowledge has been represented in frames (Minsky 1975) and scripts (Schank and Abelson 1977), but also as topoi (for example, the lexical description of the word *promise* (example (1)) would include a lexical topical field <PROMISE, keep one's word>) within the framework of AWL (Argumentation Within Language). AWL is primarily represented by Ducrot and his associates (cf. Ducrot 1988, Raccah 1995, Žagar 1996). Both frames of knowledge and lexical topical fields provide a mechanism that accounts for the consolidation in language of ideological complexes shared by the speech community and constituting stereotypes.

⁷ Other instances of such neglected constructions that, despite their high frequency of occurrence, received treatment only recently, within the framework of construction grammar, are Lakoff's (1987) study of *here* and *there*, Lambrecht (1986, 1990), but also Kay's studies (with his associates) (1997), Kay and Fillmore's (1999) study of the 'What's X doing Y?' construction, as well as the collection of studies in Shibatani and Thompson (1996) amongst many others. Also see Kitis (2000b, forthcoming[b]).

⁸ It should be noted, though, that there is a continuum between the *when*-construction discussed here and ordinary temporal or atemporal conditional uses of *when*. This point holds primarily for such *when*-constructions that are at the centre of the category. They will then be additionally specified by non-past verb forms and, when aspect is morphologically marked as in Greek, also by non-perfective aspect (cf. note 12).

⁹ All question-embedding verbs (except for emotive or evaluative ones) as they appear in Karttunen (1978) are exempted, as are some 'emotive factives' or dubitative verbs (*Why bother/doubt...?*). It is rather interesting to note that *expect*, just like *exactly*, but unlike *think* or *believe*, can actually enhance the negation of *q* or part of it, and will not therefore be included in the *think/believe/consider* list. It seems to me that both *expect* and *exactly* quite often act as triggers for polarizing the speaker's choice of grammatical structure against his/her intent: *How do you expect Rover to survive when they have suffered escalating losses? And how exactly will Rover survive when they have suffered escalating losses?* (MP in Parliament).

¹⁰ Although *and* can have an antinomial function (cf. Kitis 2000b), it is not licensed here as an antithetical connective but rather functions as a resultative one.

¹¹ See Kitis and Milapides (1997) on covert argumentation. Also, see Kitis (2001) on *when* as a universal quantification operator, a function that is implicated in the generation of the interpretation of the type of *when* discussed here.

¹² Imperfective aspect in this construction is especially significant in languages such as Greek. Non-past tense and imperfective aspect are mostly implicated in this construction when it is used in advertising discourse (see following note), in newspaper editorials and, generally, in 'seductive' argumentation. From this point of view, examples (1) and (2) would not be paradigmatic cases of this *when*-construction, as (3) might be. It is interesting to note that in Modern Greek (MG), a language that affords a rather richer range of connectives in this respect than English, examples, such as (1) or (2), that feature perfective aspect and past tense, can admit other contrastive connectives like *eno/while, whereas*. But the translational equivalent of *when* in MG, *otan*, enhances the rhetoricity of the construction, even if it may need an imperfective aspect, because, as I claimed (Kitis 2001), *when[otan]* can act as a universal quantifier subsuming in its scope a multiplicity of instances of the eventuality represented in the construction. Also, notice that connectives such as *while* or *whereas* cannot substitute for such occurrences of *when* in whatever formulations yielding the same interpretation, despite their semantic meaning of contrast (especially, in the case of the latter). However, this choice of examples was purposeful in order to demonstrate the wide range of use of this construction and its derived incongruity reading, enforced by the modalized main, despite the past tense and perfective aspect in them. The aspectual properties of the verb forms of this construction are associated with quantificational uses of *when* as a generic quantifier signifying habituality and/or genericity (Bononi 1997). Genericity is understandably linked with the covert generalization of the construction identified here. The etymology of the connective *otan[when]* of Modern Greek is particularly revealing in this respect. See Kitis (1999b, 2001).

¹³ Although I have not touched on this issue here, the construction identified can be extended to include a strongly modalized *q* (for example, deontic modality) or evaluative terms. But the *when*-clause also can include root modalities: *Why were ministers squabbling over money when they should send more helicopters [to Mozambique] to winch the people out?* (discussion on BBC4, Spring 2000); *It is disgraceful how the opposition is trying to shut me down when they should be supporting the bill* (disability discrimination bill, 2000 UK, Lady MP in defence of the bill). Evidently, such a modalized *when*-clause cannot provide reference time, neither can it quantify over the NP of the main, nor does it define a case in which the proposition of the main is true (Declerck 1988: 161). Furthermore, the apodoses of such constructions can often be in reduced form (*why+infinitive*, Green's, 1975, *whimperatives*), which is motivated by the rhetoricity of the question, but is also conventionally associated with a specific meaning such as impositive meaning (Gordon and Lakoff 1975). This version of the *when*-construction is mostly capitalized upon in advertising discourse ('whimperative impositives'): *Why settle for peanuts when you can get the lion's share with our AAAM rated Jersey money Funds?* (Liberty International Advertisement), but also in argumentation: *Then, why a review when we know that all we need is legislation?* (Woman's Hour, BBC4, 10-5-2000). Moreover, the two clauses need not feature properties of main and subordinate (König and van der Auwera, 1988) as there is minimal integration and the *when*-clause is non-anaphoric (example [1], ad). *When*-constructions can feature their *when*-clauses in initial position, too, and mostly when there is a cascade of them. On further treatment of *when*-clauses see Kitis (1999b, 2000a, 2001).

¹⁴ Although this point is not my concern here, I think that Declerck can justifiably subsume all these cases of *when*-clauses, anaphoric or non-anaphoric (excluding (14d) though), under one category if he makes use of the notion of ‘frame’ or ‘script’ (Minsky 1975, Schank and Abelson 1977), rather than invoke ‘logical’ or haphazard ‘causal’ relations supposedly holding between the two clauses. (For example, cf. his note 29 [Declerck 1988] concerning example (14c), in which he posits, quite unnecessarily, causal relations between the two clauses in respect of the sergeant’s presumed jealousy of his wife being surrounded by young soldiers). Instead, it is immediately noticed that the main clauses of (14a, b, c) invoke well defined frames or scripts of background knowledge, which account, not only for the domain-restricting or value-assigning function of the *when*-clauses, but also for the use of the definite NPs in them (‘the head waiter’ as a participant value within the well attested restaurant script, ‘the patient’ within the surgical operation frame or ‘all newcomers’ within the sergeant-soldiers frame) (cf. Koutoupis-Kitis 1982, Kitis 1987a, b). The relation need not be logical or causal, but, whereas in anaphoric *when*-clauses (e.g., *A person is a pacifist when he is against any form of violence* [Declerck 1988: 131]) the *when*-clause quite clearly *has to* belong to the frame invoked by the main, since the anaphor binds the *when*-clause to its NP, in examples such as (14a, b, c) it is the activation of the specific frames or scripts within which the *when*-clauses are bound to their head clauses that licenses the so-called ‘near-anaphoric’ NPs in the *when*-clauses (*alias*, ‘default-values’). Moreover, the assumption of logical or causal relations between the two clauses of (14a, b, c) offers little towards their explication since close scrutiny of the *when*-clauses examined in Declerck (1988) will reveal that their majority involves such relations. Steedman (1982) claims that one meaning of *when* is related to causation and consequence.

¹⁵ Declerck’s (1988) other example of this type of *when* is the following, borrowed from Poutsma (1929: 669): *Haven’t I reason to go out of my senses, when I see things going at sixes and sevens?* in which he claims that the *when*-clause is interpreted as an adverbial clause of reason.

¹⁶ This is also true of some evaluative uses of *when*-clauses even if their heads are not modalized; this non-modal, and yet antiparathetic, type of *when*-construction appears to have greater visibility in Modern Greek, in which there is a variety of antiparathetic, contrastive connectives that at times can also function either contrastively or concessively, such as *enofwhile, whereas*. An evaluative *when*-construction that does not feature any modalities would be the following example (translated from MG): *Greece spends 2.000 ECU’s per student ?when[otan] Spain spends 3.000 ECU’s per student, Portugal 2.5000 ECU’s and ...etc.* While *whereas* or *while* would translate better the MG connective *otan [=when]*, in Greek the latter (*otan*) rather than *enofwhile, whereas* is used to enhance the subjective evaluation of the parathesis. Indeed, there is a continuum between such atemporal, non-quantificational cases of *when* and those featuring modalities (cf. Kitis 2001). Constructions are categories whose members may vary in their degree of prototypicality.
