

A semantic-syntactic study of implicative verbs based on corpus analysis

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ABSTRACT

The term “implicative verb” was first used by Karttunen (1971) to refer to those verbs taking infinitive complements which imply that the action expressed by the complement verb takes place or does not take place. It is shown here that the feature ‘implicative’ tends to be associated with a particular syntactic pattern of the verb (e.g. remember+ *to* inf) and that this feature is not part of the meaning of the verb, but of a lexico-syntactic pattern. This paper reports the results of a corpus-based analysis of implicative patterns and describes implicative patterns as verbs in phase (i.e. a sequence of verbs expressing a single process). The fact that these patterns are verbs in phase accounts for the features of the first verb in the phase. The first verb in the implicative pattern adds a semantic modification, which very frequently has an attitudinal meaning.

1. INTRODUCTION*

In his paper “Implicative verbs” Karttunen (1971) shows that, in addition to the well-known distinction between factive and non-factive, there is another semantic distinction between predicates (verbs, nouns or adjectives) which involves presupposition. He introduces the term “implicative verbs” to refer to verbs taking infinitive complements which express some “necessary and sufficient condition (...) which alone determines whether the event described in the complement took place” (Karttunen, 1971: 352). In the following example the underlined predicates are implicative:

- (1) When he *forgets to* do what he has agreed to do, she should be prepared to not react in an upset manner. She should say briefly, in an easygoing tone as if he has never forgotten anything before, any of following phrases: “*Did you get a chance to return the video? Did you happen to pick up the clothes from the cleaners? I know how busy you are, did you remember to empty the trash?*”

The implicative predicates above imply the following propositions: “When he does not do what he has agreed to do”, “Did you return the video?”, “Did you pick up the clothes from the cleaners?”, “Did you empty the trash?”

The purpose of this paper is to report the results of a corpus study of implicative verbs. I will describe the features of implicative verbs and attempt a semantic characterisation of this class of verbs. The starting point of this research is the assumption that there is a relation between syntax and semantics. This assumption will help to understand the concept of implicative verbs.

2. IMPLICATIVE VERBS

Karttunen (1971) discusses the following features of implicative verbs:

1. The assertion of a clause with an implicative verb as predicate implies the belief in the truth of its complement. Thus, (2a) implies¹ (2b):

- (2) a. John managed to solve the problem.
b. John solved the problem. (Karttunen, 1971)

2. Negating a clause with an implicative predicate implies negating its complement. Thus, (3a) implies (3b):

- (3) a. John didn't manage to solve the problem.
b. John didn't solve the problem. (Karttunen, 1971)

Rudanko (1989: 36) points out that if the verb in the main clause is stressed contrastively this condition does not hold, e.g. “John didn't **MANAGE** to solve the problem. He was given the answer”.

3. The answer to an interrogative clause with an implicative predicate is the same as the answer when the question is the complement. Thus, (4a) implies (4b):

- (4) a. Did John manage to solve the problem?
b. Did John solve the problem? (Karttunen, 1971)

4. With regard to modality, a clause like (5a) commits the speaker to the view expressed in (5b):

- (5) a. John will manage to solve the problem.
b. John will solve the problem.

5. There is agreement in time between the main clause with an implicative verb and the complement. Thus, (6) implies that the action expressed by “solve” is a past action:

- (6) *John managed to solve the problem.*

Karttunen distinguishes between verbs with affirmative implications (e.g. *manage*) and verbs with negative implications (e.g. *forget*). (7a) implies (7b):

- (7) a. Saturday afternoon and I'm home. I've forgotten to recycle my bottles.
b. Saturday afternoon and I'm home. I haven't recycled my bottles.

The concept of *implicative verb* is related to that of *phase*, defined by Hunston and Francis (1998: 59) as “two verbs that constitute a single verb group”. Downing and Locke (1992: 328) use the term “phased verbal groups” or “verbal group complex” to refer to those verbal groups “in a dependency relationship” which can be interpreted semantically as one complex process (e.g. *begin to rain*, *appear to see*). Downing and Locke draw attention to the aspectual meaning of the majority of phased verbs and suggest that the first verb often indicates the perfective or imperfective aspect of the second verb. This may have led Hunston and Francis (1998) to consider that the unifying factor behind the types of phased relations proposed by Downing and Locke is that two verbs are in phase when they “entail either the doing or the not doing of the activity indicated by the second verb”². For instance, *promise to eat* is not a phase, while *begin to eat* is a phase. In Hunston and Francis' definition of *phase* the first verb in phase seems to be an implicative verb, as defined by Karttunen (1971). However, the concept of *implicative* is more restricted, and cannot be equated with the first verb in phase. Downing and Locke (1992: 330) provide some examples of phases that do not include implicative verbs as understood by Karttunen (1971), e.g.

- (8) a. He tried to learn Arabic.
b. He is only pretending to be deaf.

Thus, implicative verbs are verbs in phase, but not all verbs in phase are implicative; that is, not all the verbs that may occur as the first element of a

phased verbal group imply the performance or non-performance of the action expressed by the second verb.

3. CORPUS ANALYSIS OF IMPLICATIVE VERBS

One of the basic postulates about language that corpus-based studies have revealed is that syntax and semantics are closely related (Sinclair, 1991; Francis, 1993). As Hanks (1996: 85) puts it, “each of the lexicosyntactic patterns in which a word participates is associated with a meaning potential”. The meaning potentials of words are projected onto the syntactic patterns with which the words are associated. He provides the following example with the word *bank*:

The meaning of the verb **bank** differs depending on its transitivity. But we also need to say something in the syntax about the semantic type of its subject and object. An aircraft banks (intransitive), people bank money (transitive); a pilot banks an aircraft (also transitive, but the semantic type of *aircraft* is very different from the semantic type of *money*). These two facts (the verb’s transitivity patterns and the semantic types of its arguments) determine the way in which we interpret it (Hanks, 1996: 90).

Given that there is a relation between syntax and semantics and that presupposition and implication are part of the semantics of a word it is sensible to suppose that the different syntactic environments in which a verb may occur will be related to meaning differences in terms of implications and presuppositions.

Karttunen (1971: 340) states that verbs that take a *that*-complement divide into factive and non-factive and that verbs with an infinitive complement divide into implicative and non-implicative. In his study on patterns of verb complementation Rudanko (1989) uses the distinction implicative/non-implicative not only with reference to verbs with an infinitive complement but also with reference to verbs which take an *-ing* complement. I will consider that it is not the verb that is implicative/non-implicative or factive/non-factive but the verb in a specific syntactic structure, with a specific complement. This results from the fact that differences in syntactic pattern reflect differences in meaning.

The corpus used for this research is the Bank of English at Cobuild³ (300 million words at the moment of the study), which includes written and spoken discourse from different varieties of English.

As was stated above, implicative verbs are verbs in phase. Given that a phase implies the occurrence of two verbs in sequence, verbs in phase form one of the following patterns: verb+ *to-inf*, verb+ *-ing* form, verb+ preposition+ *-ing* form (Hunston and Francis, 1998). A concordancer was used to find all the

occurrences of these patterns in the corpus. The concordancer at Cobuild makes it possible to search the corpus in order to produce all the occurrences in the corpus of a word (e.g. *comes*), lemma (COME) or pattern (e.g. verb+ *to-inf*). The concordancer was used to find the verbs that occur as the first element of the patterns listed above. I used 10,000 occurrences of each of these three patterns (i.e. 10,000 concordance lines of each pattern). The next step was to find all the different types⁴ and to select the verbs that conform to Karttunen's definition of implicative verbs. For instance, the sequence *promise+ to-inf* was excluded and the sequence *manage+ to-inf* was included. The purpose was not to produce an exhaustive list of implicative verbs, but to find which lexicosyntactic patterns are implicative and which are the features of these patterns.

4. RESULTS

4.1. Correlation between syntax and semantics

The feature {implicative} tends to be associated with a particular syntactic pattern of the verb. Thus, being implicative is not an inherent feature of a verb, but of a lexicosyntactic pattern. For this reason, I will use the term "implicative pattern" to refer to combinations of verbs and types of complement which are implicative. For instance *manage+ to inf* is an implicative pattern. I will use the term "implicative verb" to refer to the first verb in the sequence and "complement verb" to refer to the second verb in the sequence. The verbs *remember* and *forget*, described by Karttunen (1971) as implicative verbs, are implicative only with some of their complement clauses. When complemented by a *that*-clause the verb *remember* is factive (e.g. 9), when complemented by an *-ing* clause it is neither factive nor implicative (e.g. 10), and when followed by an infinitive clause it is implicative (e.g. 11):

- (9) Also, remember that you pay a charge to the managers of this kind of home loan.
- (10) a. Being useless at running, I generally entered the novelty races at the bottom of the day's card. And I can't remember winning any of them.
b. I don't remember being born.
- (11) a. When ordering please remember to include your current daytime telephone number.
b. They promised to build us something "more fitting" in its place. They did, and I always remember to look the other way every time I pass that corner.
c. Sipping a glass of acid red wine she did not like but didn't want to waste, wishing she'd remembered to bring a paper.

- d. We all sit on the freeway and wonder why we didn't remember to go to the bathroom before we left home.
- e. Your partner says: "Did you remember to take the lawn mower in for servicing?"
- f. We must remember to practice what we preach.

"Please remember to include" in (11a) has the same force as the imperative "please include". (11b), (11c), (11d), (11e) and (11f) imply respectively "I always look the other way", "wishing she had brought a paper", "I didn't go to the bathroom", "did you take the lawn mower for servicing?", and "We must practice what we preach".

The verb *forget* is factive when complemented by an *-ing* clause, and implicative when complemented by an infinitive clause:

- (12) a. I'll never forget seeing a quarter of a million people in Bombay, gathered for the Pope's visit.
- b. Mr. Lahr said the playwright had told him he had forgotten writing the story. He had no memory of it and was as fascinated as the rest of us.
- (13) a. I'm one of those people who, on hearing that someone's going on holidays always says: "Don't forget to send a postcard".
- b. Roger Ashby did not forget to impart such advice to his players on Saturday.

However, there are some cases when *forget* is complemented by an *-ing* clause and it could be considered implicative rather than factive. This happens when *forget* occurs in the imperative form or in other structures used as directives, as in (14c):

- (14) a. Forget using plasters and bandages on grazes, cuts or scrapes!
- b. ...the kitchen will become the local rodent holiday camp with all the attendant sanitary problems. Forget employing the cat - apart from being the cruellest killer, he is usually too fat.
- c. Look on the bright side: you might pass. Then what? Well you can forget looking for a job —there aren't any.

As can be seen, the verb *forget* has two types of implicative imperatives. The negative imperative, *don't forget to*, is used as an indirect and therefore polite way of making a request. The affirmative imperative, *forget+ -ing*, is used to express that an action is useless.

The verb *try* is implicative when complemented by an *-ing* clause and non-implicative when complemented by an infinitive clause:

- (15) Have you ever tried getting up at three in the morning to be greeted by frozen pipes, no heating and no hot water?

- (16) We aren't trying to cure cancer. We try to make little girls happy and portray lifeguards as they would like to be portrayed.

4.2. Implicative verbs as verbs in phase

It was stated above that implicative verbs are in phase with their complement verbs. When two verbs are in phase they form a complex verb group: "the actions or states expressed by the two verbs cannot be separated from each other" (Francis *et al.*, 1996: 90). The fact that the implicative verb and the verb that complements it form a single verbal group accounts for the features of these verbs described by Karttunen (1971). Implicative verbs are part of what Dixon (1991: 88) calls "secondary verbs": verbs which provide "semantic modification of some other verb, with which they are in syntactic or morphological construction". In this section I will comment in more detail on the features of implicative patterns, which derive from the fact that they constitute phases.

Implicative verbs do not occur in the passive voice (e.g. *"To solve the problem was managed by John"), since they are mainly used to indicate whether an action was performed and in which circumstances. The process is in fact expressed by the complement verb. In example (17) the process is "write" and "hastened" expresses the time and adds the semantic feature "hastily".

- (17) Lest my memory fail me, I hastened to write down the name that I had heard.

The fact that verbs in phase refer to a single process accounts for the agreement in time between the main clause containing an implicative predicate and the complement clause. By the same token, adverbials that modify the implicative verb, in fact modify the whole verbal group.

- (18) I always remember to look the other way every time I pass that corner.
 (19) There is the odd fact that the country up to now has somehow contrived to hold together.

Thus, (18) implies "I always look the other way every time I pass the corner" and (19) implies "the country up to now has somehow held together".

The reference to a single process is also the reason why a clause with an implicative predicate modified by a modal meaning implies the complement clause with the same modal meaning. Thus, (20a) and (21a) imply respectively (20b) and (21b).

- (20) a. Gordon Brown condemned what could prove to be another intense embarrassment for the Government over the privatised utilities.
 b. Gordon Brown condemned what could be another intense embarrassment for the Government over the privatised utilities.
- (21) a. He could be subpoenaed to give evidence by the other side and could not decline to answer questions as to his factual findings and opinion thereon.
 b. He could be subpoenaed to give evidence by the other side and must answer questions as to his factual findings and opinion thereon.

Similarly, since the denial of a phase denies the whole complex group, the negation of the implicative predicate involves the negation of the complement (see example 3).

When the implicative verb is omitted or replaced with a pro-form, it is in fact the whole group, with the complement verb as the process, that is omitted or replaced. Thus, in (22) “she hasn’t” replaces “she hasn’t given me the cheque”.

- (22) I said “Oh God, I forgot, you owe me 30 pounds”. She just said, “Oh yes, I must remember to give you a cheque”. I’ve seen her three times since then but she hasn’t.

The imperative forms of implicative verbs are used as indirect ways of performing a directive act. Mental verbs do not tend to occur in the imperative form. However, *remember to* and *forget to* occur very frequently in the imperative: the purpose is not to ask the hearer to perform a mental process, but to ask him/her to perform the process expressed by the complement verb in a more polite way (see example 11a).

Karttunen (1971: 347-8) makes an interesting observation about the behaviour of *because*-clauses with respect to implication. He points out that (23a) does not imply (23b):

- (23) a. Because the ring was cheap, John managed to purchase it.
 b. John purchased the ring because it was cheap.

While in (23a) *because* has an explanation meaning, in (23b) it has a motivation meaning. Karttunen considers that clauses with a verb like *manage* as predicate seem to permit only the explanatory meaning. In fact, this is due to the fact that implicative verbs, being secondary verbs (Dixon, 1991: 88), provide “a semantic modification of some other verb”. The semantic modification added by *manage* (i.e. difficulty in the performance of an action) accounts for the fact that *manage* determines a selection of the explanation meaning. Similarly, the semantic modification added by *resist* selects the motivation meaning of *because*, as the example below shows:

- (24) The British government resisted joining the system because Britain's inflation rate was significantly higher than other members of the community.

In terms of the polarity of the proposition they imply there are two different types of implicative patterns: affirmative and negative. Affirmative implicatives imply that the action was performed when they occur in the affirmative and that the action was not performed when they occur in the negative. While some of these patterns occur very rarely in the negative (e.g. *happen to*, *hasten to*, *prove to*), some others occur mainly in the negative form, in that case implying that the action was not performed (e.g. *NOT bother to*). Negative implicatives imply that the action was not performed when they occur in the affirmative (e.g. *fail to*, *forget to*). When they occur in the negative they imply that the action was performed (e.g. *can't resist -ing*, *can't avoid -ing*).

4.3. Semantic types

Since implicative verbs are secondary verbs that provide semantic modification, the use of implicative patterns must be explained from semantics. In some cases, rather than expressing ideational meaning these patterns express interpersonal meaning, reflecting the speaker's attitude towards the process.

Downing and Locke (1992: 328-331) describe seven types of phase relation: initiation (e.g. *begin to*), continuation (e.g. *continue to*), termination (e.g. *stop -ing*), appearing or becoming real (e.g. *seem to*), attempting or not attempting (e.g. *fail to*), manner or attitude (e.g. *regret to*) and modality (e.g. *happen to*). As has been pointed out, not all the verbs that they consider as the first verbs in phase are implicative verbs. However, here I will follow a similar criterion to theirs in order to classify implicative patterns: the different meanings that the implicative verb can add to the complement verb.

1. Patterns expressing aspect: beginning of an action (e.g. *begin to/-ing*, *commence -ing*, *start to/-ing*), continuation (e.g. *continue to/-ing*, *go on -ing*, *persist in -ing*, *persevere in -ing*, *keep on -ing*) or termination (e.g. *stop -ing*, *retire from -ing*, *drop out of -ing*, *abandon -ing*). The implicative verbs that express termination are negative implicatives.

- (25) a. We did not begin to see the epidemic take off here until 1981 or 1982.
 b. But then you keep recognising the same face and you start wondering whether this woman really is getting some fun out of it.
- (26) I had trusted and stubbornly persevered in doing what I thought I was supposed to do.
- (27) Other couples have dropped out of swinging.

While patterns like *manage to* imply the completion of an action, verbs like *begin to* do not imply completion, but they imply that at least part of the action was done.

2. Patterns expressing time. *Hasten to* indicates imminent action:

- (28) My body is failing me: who knows what it has in store next? I am not, I hasten to add, a hypochondriac.

3. Patterns expressing achievement (e.g. *manage to*, *get to*, *succeed in -ing*, *contrive to*):

- (29) a. I did not succeed in getting any of the members to make adequate use of questions.
 b. I have a great family, and I get to do the work that I want.
 c. Last year Lizzie gave me a cordless drill. I'm not good at DIY, but I did manage to put up a rack.

4. Patterns that express an element of chance or eventuality (e.g. *prove to*, *turn out to*, *happen to*):

- (30) a. Each bird is a totally unique individual. Like children at school, they just happen to dress in the same uniform.
 b. If the emerging leaders do not prove to be men or women of vision, it could have horrendous consequences for the municipalities.

5. Patterns expressing mental processes of remembering (e.g. *remember to*, *forget to*):

- (31) J P, one of the three drummers on the march, had forgotten to bring the drums.

6. Patterns expressing the meaning "to have an effect" (e.g. *serve to*, *suffice to*):

- (32) a. But these internal resonances do not serve to explain how Yeats came to light on the image.
 b. They will, I hope, suffice to illustrate the tension inherent in the present discussion.

7. Patterns expressing concern (e.g. *(not) bother to/ -ing*, *(not) trouble to*, *care to*). These verbs occur frequently in the negative form, to express that an action has not been performed:

- (33) a. Many schools will not trouble to offer the subject at all on the grounds of expense, concentration of resources and so on.
 b. On satellite TV, nobody bothers to prepare anything in advance.

8. Patterns expressing willingness (e.g. *deign to*, *condescend to*):

- (34) ... someone who does not condescend to talk to urchins even as he signs their Snoopy autograph albums.

9. Patterns that express risk or tentativeness (e.g. *venture to*, *presume to*, *dare to*, *risk -ing*, *hazard -ing*, *try -ing*).

- (35) How could I presume to teach others without a completed human experience?

10. Patterns that express delay or unwillingness in the realisation of the action (e.g. *hesitate to*, *defer -ing*, *delay -ing*):

- (36) a. If Commissioner Monti's proposals do turn out to be unacceptable then the Government will not hesitate to veto them.
b. He deferred taking up a Cambridge scholarship to teach maths for two years at St. Andrews.

11. Negative implicatives that imply that an expected action is/was not performed (e.g. *fail to*, *omit to*, *neglect to*, *forbear to*):

- (37) a. The party failed to address any to the basic issues.
b. Downing St. forbore to instigate the routine leaks inquiry.
c. The reason my light switch didn't work was because I had neglected to change the light bulb when it burned out a week earlier.

12. Negative implicatives which express refusal (e.g. *decline to*, *disdain to*, *refuse to*):

- (38) a. But, equally predictably, the Japanese have declined to come.
b. Slater surprises everyone by disdaining to tell a white lie about his past.

13. Positive implicatives which express that the action is performed unwillingly (e.g. *begrudge -ing*, *grudge -ing*, *resent -ing*, *regret to*):

- (39) a. None of the children want to go, and they behave badly because they resent being there.
b. I regret to say that it has come to my attention that the publisher of this book has just been bought by Rupert Murdoch, and I refuse to write another single word for that dreadful man.

I/we regret to is a hedge that weakens the force of the following utterance. All the occurrences of *regret to* in the corpus, except five, have as subject a

first person pronoun. The five occurrences when *regret to* has a third person subject are reported speech (i.e. “He regretted to say..”). The pattern never occurs in negative form or preceded by a modal. The infinitive verbs that complement *regret* in this pattern are discourse verbs or verbs of cognition (e.g. *say, inform, tell, announce, report, record, confess, observe, advise, learn, add, find, see*).

14. Negative implicatives which express negative intention against the realisation of the action (e.g. *avoid -ing, evade -ing, escape -ing, eschew -ing, resist -ing, shun -ing, shirk from -ing*):

- (40) a. He does not flinch from raising the tough question of international fairness.
 b. So I would give you something like “I avoid reading the result section of research reports”.
 c. And he escaped paying full price because he traded in his old Citroen and qualified for a discount.

4.4. Implicative patterns and prototypicality

Up to now I have referred to lexicosyntactic patterns as being implicative or non-implicative, using the criteria set up by Karttunen (1971). However, one may consider {implicative} a non-absolute feature and allow for the existence of a gradience of implicativeness. The prototype of implicative patterns would be those that conform to all the criteria described by Karttunen (1971).

There are patterns that are only implicative (i.e. that express a sufficient and necessary condition for the action to take place) when associated with a specific feature, such as past tense. In fact, they are not implicative patterns, but when associated with specific syntactic features they imply that the action is done or is not done. For instance, *be about to* in the past implies that the action did not take place. Similarly, *be tempted to* is a negative implicative pattern when used in the affirmative form of the past (e.g. 41a), but its use in the present tense does not imply that the action is not performed (e.g. 41b):

- (41) a. Years ago, while Dynasty was a weekly event, I was tempted to watch an episode, but having heard it was truly abysmal, I refrained lest I became hooked.
 b. I am frequently tempted to mention my age, because in my view it's the most startling, as well as the most absurd, thing about me. “Speaking as a man of 70...”

There are also verbs that even with the same complementation have two different senses, one of them implicative and the other non-implicative (e.g.

insist on -ing, hate to, regret to, choose to, refuse to, risk -ing). Karttunen (1971) observes that in some cases whether a predicate is implicative or not depends on the context. One of his examples is *be able to*:

- (42) a. In the last game, the quarterback was able to complete only two passes.
 b. Ten years ago John was able to seduce any woman in Torrance (Karttunen, 1971: 355)

While (42a) implies that the quarterback completed two passes, (42b) does not imply that John seduced any woman in Torrance. The potential meaning of “was able to” in (42b) is related to the presence of *any*, which is always used in non-factual contexts (Downing and Locke, 1992: 176). We could say that *be able to* has two meanings, that is, it expresses two different types of ability: potential and actualised. Something similar happens with *be able to* in present tense.

- (43) a. Every few months I am able to bring the two groups together for a tearful reunion.
 b. The factory’s 100 overseers are best able to express the workers’ concerns and convey the answers to them in terms they can understand.

While in (43a) *be able to* is used as implicative in (43b) it is not. Examples (42a) and (43a) show that when there is a temporal reference *be able to* is implicative. This fact distinguishes *be able to* from *manage to*, which is always implicative.

- (44) Some pubs manage to tame the pleasures of boozing and eating when they decide to serve food.

The pattern *insist on -ing* has two different senses very difficult to distinguish. In fact we could say that the only difference is that one of the senses is implicative. When it is implicative *insist on* is an aspectual verb, similar in meaning to *keep on* (e.g. 45). When it is non-implicative *insist on* is a report verb, meaning “ask strongly” (e.g. 46). We can compare the following examples:

- (45) a. And this means that if we insist on watering our gardens in a drought, we will see the cost in terms of more reservoirs in our countryside.
 b. But why do writers insist on using extreme and unrepresentative examples?
 (46) a. And now I insist on speaking to him on the telephone if he can’t come here.
 b. You know that I insisted on seeing you, Mr. Kemp. Did you not wonder why?

The verb *hate* when complemented by an infinitive clause may also have an implicative and a non-implicative sense, as the examples below show:

- (47) a. And I hate to admit this, but I was actually hoping Great Britain would win the race.
 b. I hate to whinge, but I don't think that my salary reflects the amount of work that goes into my job.
- (48) a. I don't know about you, but I hate to be penniless at the end of the week.
 b. There is a man who doesn't hate to imagine this scenario. It's the story of his life.

I hate to is an implicative pattern when it functions as a hedge (e.g. 47). In "I hate to admit" (e.g. 47a) the process is not a mental process (*hate*) but a verbal process (*admit*) and the only function of *I hate to* is to anticipate an action in the immediate future: what the speaker is going to do is to admit something. When the verb is implicative it tends to collocate with complement verbs expressing a verbal process (e.g. *say, admit, recognise*). In these cases the verb *hate* never occurs in negative (*"I don't hate to say that"). The meaning and function of *hate to* when it is implicative is similar to that of *regret to*. In (48) *hate to* is non-implicative. The meaning is *dislike*, with no implication that the action takes place or does not take place.

Patterns such as *choose to* or *elect to* can also be used as implicative (e.g. 49) and as non-implicative (e.g. 50) (Karttunen, 1971: 355):

- (49) a. They have been made aware of the judge's remarks and they have chosen to ignore them.
 b. So why do we choose to turn a blind eye to the inhumanity that is happening within our own state?
 c. ... seen Pritchard Ellis seem to make a fool of him, because he did not choose to answer what he could have answered.
- (50) ...behind it an old nylon shopping bag in which he kept his paper. Did he choose to live like this, I wondered?

Implicative *choose to* is similar to *decide to* but it adds the implicative feature. Implicative *choose to* collocates very frequently with verbs that express disregard (e.g. *ignore, turn a blind eye*).

Risk -ing can also be implicative (e.g. 51) and non-implicative (e.g. 52), although the implicative sense, similar to *try -ing*, is less frequent.

- (51) It's worth sowing broad beans and peas now for earlier crops in spring. You risk losing them in a bad winter but, if they survive, there are advantages.

- (52) Do I risk telling him I'm fat and turn him off me? Or do I arrange the meeting and just turn up? If I tell him first, he may not even want to give it a try.

In (51) *risk* has a meaning of possibility, similar to that of the modal *may*, with a future orientation. In (52) "Do I risk telling him?" implies "Do I tell him?"

We have seen above (e.g. 36) that *hesitate to* is an implicative pattern. The pattern has two different meanings: (i) not to do something (e.g. 53); (ii) not to do something immediately but end up doing it (e.g. 54). It only has the second meaning when there is a time expression informing about for how long the action was not done. When *hesitate to* is preceded by a negative element it always has the first meaning (see example 36).

- (53) But Mr. Gandhi has hesitated to join Mr. Shekar in a coalition government.
 (54) For a fraction of a second I hesitated to give the address (COBUILD dictionary).

Hasten to is an implicative pattern which expresses that an action is done immediately after another. *Hurry to* is implicative when it has the same meaning as *hasten to* (e.g. 55) and non-implicative when it is used as a verb of movement (e.g. 56):

- (55) I hurried to reassure Mrs. Easton that meningitis is an extremely unusual complication of a painful ear.
 (56) Mr. Pai mentioned this in passing as we hurried to catch our bus.

Some verbs which are not usually followed by any other verb may be the first element in a sequence of verbs where there is a relationship of dependency similar to that between an implicative verb and a complement verb. This is the case of *live to*.

- (57) a. Germans have not even had time to find themselves. Unification, which few believed they would live to see, has crashed upon them.
 b. Hilary Footitt thinks British industry will live to regret its failure to prize language skills.

And also the case of some verbs of movement and position followed by an *-ing* form. The first verb in the sequence could be used on its own:

- (58) a. When I go lecturing in schools, the buzzword now is steroids.
 b. I liked to watch him from my balcony window when he came riding up to the hotel.

- (59) a. I lay listening to vague presences in the next room.
 b. He stood holding the refrigerator door open for a good minute.

Example (58a) illustrates the use of the pattern *go+ -ing* to imply the performance of an action which involves going somewhere. Forms such as *go racing*, *go running*, *go lecturing* refer to one complex process. Similarly, in example (58b) “he came riding” implies that the action of riding was done. In clauses such as “he came riding up to the hotel”, “he came hurrying out of his cabin” or “he came swarming through the shop door”, the meaning is the same as “he rode up to the hotel”, “he hurried out of his cabin” or “he swarmed through the shop door”: the gerund indicates the kind of movement while the verb *come*, which seems to be redundant, is used to indicate a movement to the place where the speaker was.

Although examples (59a) and (59b) could be analysed as clause complexes, verbs of position such as *lie* or *stand* may hold a relationship with a following verb similar to the relationship existing in an implicative pattern. The first verb indicates the position of the subject while he/she performs the action indicated by the second verb.

5. CONCLUSIONS AND PEDAGOGICAL IMPLICATIONS

In this paper I have offered a description of the meanings and uses of implicative patterns and have attempted to explain the features of these patterns as a result of the fact that implicative verbs are used to add a semantic modification to the meaning of the verb which complements them.

I have considered that {implicative} is a feature of a lexicosyntactic pattern and that this feature is related to specific types of complements that a given verb may have. An important point concerning implicative verbs was brought up by Karttunen (1971: 354) when talking about the problems that his definition of implicative verb leaves unresolved: “There are many verbs that must sometimes be understood in an implicative, sometimes in a non-implicative sense”. We have seen that in some cases the sequence of a given verb and a specific complement may have both an implicative and a non-implicative sense. Thus, we need to refine the scope of the lexicosyntactic pattern to which the feature implicative applies. For instance, the pattern NEGATIVE+ *hesitate to* is always implicative (i.e. *not hesitate to* implies the performance of the action). *Hate to* is implicative when it occurs in the present tense, with a first person subject, complemented by specific verbs (usually discourse verbs), and often followed by the conjunction *but* (e.g. “I hate to admit it, but...”). *Choose to* is implicative when the complement verb is a verb meaning *disregard*, and *serve to* is implicative with a non-human subject. Thus, the implicative lexicosyntactic

pattern may involve more than a given verb with a specific complement: it may involve a specific set of complement verbs, of subject, a specific tense, etc.

We have also seen that implicative verbs inform about the performance/non-performance of an action, about the circumstances in which the action is or is not performed, and very often about the speaker's attitude to it. This accounts for the fact that the feature {implicative} seems to co-occur with specific grammatical features. Some verbs that are implicatives occur most often in past tense than in any other tense (e.g. *fail to*, *manage to*). Some negative implicatives occur frequently in negative imperative (e.g. *don't hesitate to*, *don't forget to*), and some positive implicatives in affirmative imperative (e.g. *remember to*, but not **don't remember to*).

This study has some relevant pedagogical implications. Being implicative is a feature of the meaning of some patterns and should be taught in order to prevent language learners from misunderstanding the meaning of some utterances. For instance, in example (60) the most important information conveyed by "we hesitated to" and "we forgot to" is "we did not". If the listener does not perceive this implication, he/she will misunderstand the whole utterance.

- (60) "We were so polite, so obedient," says Mrs. Kawamura. "We hesitated to ask for anything. We forgot to insist on our rights".

Karttunen (1971: 341) points out that although there seems to be agreement with respect to which verbs are non-implicative in different languages (e.g. the closest equivalent in Finnish of a non-implicative verb in English is also a non-implicative verb), this is not the case with the inventory of implicative verbs. That is, the closest equivalent of an implicative verb in English is not necessarily implicative in other languages. In the following example a Spanish student could interpret "resist doing" as "resiste haciendo", instead of "resistete a hacer" if he/she is not aware that *resist -ing* is an implicative pattern.

- (61) Don't add to a losing position: if a trade is going against you, resist doing more of the same on the old stock market theory that doing so will lower your average costs.

Teaching implicative patterns is also useful to help learners distinguish between the meaning of *to*-infinitive and *-ing* complementation of a high number of verbs. [For instance, *like to* in indicative clauses is usually defined as having "the meaning of 'consider the action right or appropriate'" (Downing and Locke, 1992: 83); *like -ing* is usually defined as having "an actualisation meaning similar to *enjoy*" (Downing and Locke, 1992: 83):]

- (62) a. I don't like to telephone him after midnight (I don't think I should)
 b. I don't like telephoning people I don't know (I don't enjoy it)
 (Downing and Locke, 1992: 83)

Although this is true, a basic difference between these two patterns is that *like to* seems to be an implicative pattern and *like -ing* is not. As regards verbs of retrospection (e.g. *regret, remember, forget*), Downing and Locke (1992: 84) observe that "with a *to*-infinitive clause, the action expressed is seen as *following* the mental process of remembering or forgetting, whereas an *-ing* form marks the action as *previous* to the mental process". It is quite difficult to help students see the difference by saying that in "I forgot to close the door" the action of not closing follows the mental process of forgetting, since the action of closing does not take place. I believe that the difference in meaning would be much clearer if explained in terms of implicative/ non-implicative.

The fact that some patterns are implicative is also useful to explain why some verbs cannot co-occur with specific syntactic features (e.g. passive forms). Or why some mental verbs occur with a high frequency in the imperative form as mitigating strategies (e.g. *don't forget to, remember to*). In fact the imperative does not correspond to the mental process but to the process expressed by the following verb.

Additionally, one outstanding reason to teach implicative patterns is that they are important linguistic elements for the expression of attitudinal and interpersonal meaning. A high number of implicative verbs indicate the subject's attitude towards the realisation of the action (e.g. *decline to*) or the speaker's attitude towards the subject's action. For instance, *he failed to* suggests that the subject did not do what he was supposed to do. Similarly, *he didn't bother to* or *he condescended to* also have a component of criticism.

We have also shown that implicatives are polite ways to express directives (by using an imperative such as *don't forget to*), to express encouragement (e.g. *don't hesitate to*), or to ask whether something was done (e.g. 1), and effective linguistic devices to express meanings such as determination, e.g.

- (63) And I will not shirk from closing schools if it is clear that they cannot be turned around and improved.

In this paper I have concentrated on the meanings that implicative verbs add to the verbal group, devoting little attention to the pragmatic use of implicative patterns. Since implicative patterns do not only indicate whether the event described in the complement took place, but also carry other presuppositions, it would be interesting to explore this aspect in more detail, in order to describe the effects that the speaker/ writer intends to achieve when using a specific implicative pattern. More analytical work remains to be

done on their use as hedges, as politeness devices, or as elements to convey the speaker's attitude.

NOTES

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¹ As Karttunen (1971: 344) remarks "imply" is used here in its weak sense. Thus, "p implies q" means only that asserting p commits the speaker to q. Asserting ~q, need not commit the speaker to ~p".

² The concept of *phase* is not always defined like that. In the *Collins COBUILD English Grammar* (1990: 184ff) two verbs in sequence (i.e. in the patterns "V+ to *inf*" and "V+ *-ing* form") are considered to be in phase. Thus, *promise to eat* would be a phase.

³ I am grateful to COBUILD for their permission to use this corpus. All the examples in this paper have been taken from the Bank of English at COBUILD.

⁴ In corpus analysis there is a distinction between *type* and *token*. Here the number of types will be the number of different verbs in the 10,000 concordance lines. The number of tokens will be the total number of occurrences (i.e. 10,000).

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