



Subjectivity, Intersubjectivity and Epistemic Complementation Constructions

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This paper takes a cognitive perspective on epistemic complementation constructions in English, focusing on the contrast between constructions of the type [X thinks that Y] and [X thinks Y]. Given that English has two different syntactic constructions for building up the same semantic content, the question to be raised, based on the Non-Synonymy Principle (Goldberg, 1995), is: what is the pragmatic difference between them?

In this paper, we aim at addressing this question, relying on the notions of subjectivity and intersubjectivity (Langacker, 1990; Verhagen, 2005). The analysis is based on real corpus data, consisting of complementation constructions instantiated by epistemic verbs such as think, suppose, believe, find and know, which were gathered from transcribed interviews (Kepler, 1995, 2009). Our main arguments are:

(i) Epistemic complementation constructions (e.g. I think that he'll come and I think he'll come) are more subjective than corresponding independent clauses (e.g. He'll come), since the former directly or indirectly codes the Ground (speaker, hearer and immediate circumstances of the speech event), whereas the latter presents the event as if there were no subject of consciousness implicit to it.

*(ii) Complementizer and non-complementizer taking constructions indicate intersubjectivity in two distinct ways. The latter signals the speaker's **cognitive conjunction** to other participants' perspectives presented in the preceding discourse or available through shared knowledge; the former indicates the speaker's **cognitive disjunction** to other participants' perspectives.*

The main contribution of the paper is to take an approach to subjectivity and intersubjectivity phenomena in complementation constructions which differs from other discourse-oriented proposals in the literature (Traugott and Dasher, 2002; Verhagen, 2005). We argue that intersubjectivity goes beyond the complex complementation clause, since it codes the relation between the speaker's perspective and other participants' perspectives available in the preceding discourse context.

1. Introduction

Using a cognitive linguistics perspective, this paper focuses on the contrast between epistemic complementation constructions such as [X *thinks* that Y] and [X *thinks* Y]. Given that English allows predicates to embed their propositional complements with the complementizer *that* or without it, the question to be raised, based on the *No-Synonymy Principle* (Goldberg, 1995) is: what is the pragmatic difference between these two constructions?

We aim at addressing this question, relying on data which consists of 382 complementation constructions instantiated by the epistemic verbs *think*, *suppose*, *believe*, *guess*, *find* and *know*. Our main arguments are:

- Epistemic complementation constructions (e.g. *I think (that) he'll come*) are more subjective than corresponding independent clauses (e.g. *He'll come*), since the former signal the speaker's perspective, either directly or indirectly.
- Epistemic complementation constructions also signal intersubjectivity, indicating the speaker's viewpoint with respect to other discourse participants' perspectives.
- Complementizer and non-complementizer-taking epistemic constructions constitute different strategies for signaling intersubjectivity.

The main contribution of this paper is to take a discourse-oriented approach to complementation constructions which differs from earlier proposals in the literature (Underhill, 1988; Traugott and Dasher, 2002; Verhagen, 2005). We argue that intersubjectivity goes beyond the relation between speaker/hearer and complement clause, but reflects a broader scenario involving speaker/hearer, complement clause and previous perspectives available in discourse, including the speaker's own previous perspectives.

2. Constructions and Psychological Principles

Construction Grammar assumes that every stored piece of language is a pairing of form and meaning, from individual morphemes to full clauses, and constructional meanings are taken not to be decomposable to the meaning of its constituent words (Goldberg, 1995, 2006; Croft, 2001).

Among the relevant psychological principles of language organization, Goldberg (1995: 67) includes the *Principle of No-Synonymy* which states that '*If two constructions are syntactically distinct and S(emantically)-synonymous, then they must not be P(ragmatically)-Synonymous.*'

This principle is compatible with the *Principle of Maximized Expressive Power* (Goldberg, 1995: 67), which states that the inventory of constructions is maximized for communicative purposes. The existence of complementation constructions in English and many other languages indicates that the

Principle of Maximized Expressive Power is at work. Let's contrast the following examples:

- (1) The book is interesting.
- (2) I think the book is interesting.

Semantically, example (1) provides information which is close to the one presented in example (2): in both cases the speaker's assessment of the book is positive, since she qualifies it as interesting. The difference between them is syntactic: in the first case, we can infer that the speaker thinks that the book is interesting, but the speaker's epistemic process is not directly coded; in the second case, the clause "*the book is interesting*" is subordinated to an epistemic matrix.

On the other hand, languages may differ with respect to the syntactic structure of complementation constructions. For example, Portuguese only displays complementizer-taking epistemic constructions, while English also allows non-complementizer-taking ones. Here we have two slightly different syntactic constructions with similar semantics, as shown in the examples below:

- (2) I think the book is interesting.
- (3) I think that the book is interesting.

By the Principle of No-Synonymy, this phenomenon calls for a pragmatic explanation. In this paper, we will argue that the pragmatic distinction between sentences like (2) and (3) is related to subjectivity and intersubjectivity. In the next section, both concepts will be briefly discussed.

3. Objectivity, Subjectivity, Intersubjectivity

Since our analysis focuses on the syntactic coding of the speaker's perspective in complementation constructions, we will present some earlier proposals on subjectivity/objectivity asymmetries and intersubjectivity.

It has been argued that, in the objective point of view, the speaker or the writer intends (or pretends) to describe things as if there were no subject of consciousness behind the utterance. By contrast, the subjective point of view typically involves a subject of consciousness, who develops a personal, and thus subjective view of things (Langacker, 1990; Sanders and Redeker, 1996; Nikiforidou and Katis, 2000; Traugott, 1982, 1989; Traugott and Dasher, 2002).¹

As Langacker (1990) shows, subjectivity involved in the conceptualization of an expression is determined by the extent to which the *Ground* (participants and immediate circumstances of the speech event, such as time and space) figures in the meaning of that expression. For example, if we consider nouns and verb in isolation (e.g. *cup*, *run*, *dream*), we can regard the Ground as external to the scope of predication. It can be said that the speaker/hearer role is almost wholly subjective, and the construal of the profiled entity/relation is

almost wholly objective. Deictic expressions, on the other hand, can be defined as those which necessarily invoke the Ground. For example, expressions such as *I, you, here, now* put some facet of the Ground onstage.

Taking a somewhat different perspective on theory and methodology, Traugott and Dasher (2002) consider most objective those expressions which require the fewest inferences depending on speaker and/or addressee. On the other hand, the most subjective expressions may have overt spatial and temporal deixis, and explicit markers of speaker/writer's epistemic attitude to the proposition or to discourse structure.

Traugott's and Langacker's proposals come closer when we analyze expressions which neither exclude the Ground nor explicitly include it. As Langacker puts it, these are *grounding predications*, such as articles, demonstratives and tense markers, which can be defined as semantically schematic grammaticized elements which assume a 'relativistic' character: their meanings are limited to general specifications concerning fundamental 'epistemic' issues, such as reality, identification and so forth. They locate the profiled entity relative to the Ground ('known to the speaker and hearer', 'distant from the speaker', 'prior to the moment of speaking'), and assume a pivotal role as a reference point. Information related to the Ground is not directly designated by a grounding predication, but it is essential to its semantic value. For example, a sentence like "*Mary opened the door*" exhibits some degree of subjectivity in Langacker's view because the past tense verb takes the moment of speaking (i.e., some facet of the Ground) as an implicit reference point. But it would also be subjective in Traugott's view, since reference to this implicit point is explicitly marked in linguistic structure.

As for epistemic complementation constructions, the first question to be asked is: do they locate the profiled event relative to the Ground? If we turn to examples (2) and (3), the answer should be affirmative, since the first person subject in the matrix clause directly codes the speaker, and the present tense matrix verb takes the Ground as implicit reference point. Both constructions can be claimed to be more subjective than (1), which makes less reference to the *Ground* in its grammatical structure, and portrays the situation more objectively.ⁱⁱ

3.1. Discourse-oriented Proposals for that-Deletion

The relevance of discourse-oriented notions to the understanding of the syntax of complementation constructions has already been pointed out in the literature. Underhill (1988) has investigated "that-deletion" in journalistic texts in English and he has found out that deletion takes place under two partially overlapping general principles: (i) when the subject of the lower sentence, as opposed to the higher sentence, is the topic; (ii) when the speaker endorses the assertion of the lower sentence. In our proposal, endorsement will be also recruited for the explanation of the syntax of complementation constructions, but we will make clear that endorsement does not necessarily lead to that-deletion. As we shall see, when endorsement of the lower sentence by the speaker opposes to the perspective taken by some other discourse participant, the complementizer is maintained.

Thompson and Mulac (1991b) have also argued that “that-deletion” in conversational English is highly related to various discourse features (such as first and second person subjects, the verbs *think* and *guess*, etc.). They proposed a unified explanation for these phenomena which states that certain combinations of main clause subjects and verbs in English (such as *I think*) are being reanalyzed as single epistemic phrases. As this happens, the distinction between ‘main’ and ‘complement’ clauses is being eroded, with the omission of *that* as a strong concomitant. Moreover, the factors most likely to contribute to this reanalysis are claimed to be precisely those which relate either to the epistemic nature of the main subject and verb or to the topicality of the complement at the expense of the main clause.

Nuyts (2001) analyzes the role of subjectivity in epistemic modal expressions, and argues for an interpretation of the dimension of subjectivity as a separate evidential qualification. On the basis of corpus data, the author attempts to show how this dimension manifests itself in linguistic structure, proposing that if the evidence for an event is available solely to the speaker, the epistemic assessment may be considered subjective; on the other hand, if the evidence is made available to a group of individuals, the assessment reflects intersubjectivity. Let’s take two of Nuyts’s examples (2001: 393):

- (4) ...but I think that also in believing there are ups and downs, because to me believing has everything to do with life and vice-versa.
- (5) I think now I have to say something after all worthy colleague.

According to Nuyts’s characterization of subjectivity and intersubjectivity, example (4) indicates subjectivity since it expresses some aspect of the speaker’s personal experience, which is not available to the others. Example (5), on the contrary, should be taken to indicate intersubjectivity, since the matrix clause functions as an attenuation of what is being said. Nuyts analysis clearly relies on the semantic content of complement clauses. As we shall see later, our analysis will make quite different claims for these examples. We will assume that both are intersubjective, but signal different kinds of intersubjectivity.

Yet, the fact that intersubjectivity is an important aspect of complementation constructions in general has not been disregarded in the literature. Verhagen (2005) suggests that an utterance of the type *X thinks/promises/hopes that Y* is clearly intersubjective, since it is taken as an instruction, from speaker/writer to addressee, to coordinate cognitively with him/her in construing the object of conceptualization represented by the complement clause. Verhagen’s approach is closer to ours than Nuyts’s, since it recognizes the central role of intersubjectivity in the analysis of complementation constructions. But it differs from our proposal in three important ways:

- it points to the coordinative character of intersubjectivity, while our account claims that not only cognitive coordinationⁱⁱⁱ, but also cognitive disjunction is involved in intersubjectivity.

- it relates cognitive coordination to the syntactic structure of complementation constructions, but not to the presence or absence of a complementizer; our analysis focuses not only on the syntactic structure of complementation constructions as a whole, but pays special attention to the presence or absence of the complementizer.
- Verhagen's definition of cognitive coordination refers to an instruction for the addressee to construe the content of the complement clause in the same way as the speaker; while we propose that cognitive conjunction (or disjunction) indicates an instruction to construe the content of the complement clause as either aligned or not aligned to previous perspectives presented in discourse.

In section 5, these differences will be exemplified and discussed in greater detail.

4. Methodology

The data analyzed in this paper was gathered from printed and electronic versions of *Speak Up Magazine*, which provide up-to-date interviews and articles on travel, business, technology and education for students wishing to improve their knowledge of everyday English.^{iv} The corpus consists of 382 epistemic complementation constructions, which present the following syntactic schema:

- (i) [NP Vepist./pres. [(that) S]]

Vepist = epistemic verb
pres. = present tense

The analysis focused on instantiations of the schema above which exhibited the following present tense matrix verbs:

| Epistemic Verbs | Frequency | Percentage |
|-----------------|-----------|------------|
| Suppose | 36 | 9,42% |
| Guess | 31 | 8,11% |
| Think | 193 | 50,52% |
| Believe | 45 | 11,78% |
| Find | 36 | 9,42% |
| Know | 41 | 10,73% |

Table 1. Distribution of verbs by complementation constructions

As Table 1 shows, epistemic complementation constructions are most frequently instantiated by “think”, while other epistemic verbs get distributions around 8% to 11%. These results suggest that “think” is the unmarked epistemic verb, while the other verbs are marked ways of expressing epistemic assessment. We will come back to this issue in the next section.

5. Corpus-based Analysis of Complementation Constructions

This section discusses the main results of data analysis, and argues that viewpoint, subjectivity and intersubjectivity are the most relevant pragmatic phenomena involved in the interpretation of epistemic complementation constructions.

5.1 Subjectivity and Viewpoint

Data analysis has shown that complementation constructions usually take first person subjects in the main clause, as shown in Table 2 below:

| 1 st person | | 2 nd person | | 3 rd person | |
|------------------------|------------|------------------------|------------|------------------------|------------|
| Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| 322/382 | 84% | 18/382 | 5% | 42/382 | 11% |

Table 2. Types of matrix subjects

Given that first person matrix subjects explicitly code the speaker, Table 2 shows that, most of the time, complementation constructions explicitly indicate subjectivity.

As for 2nd person subjects, they occur most frequently in interrogative sentences, marking the speaker’s direct reference to the addressee, as shown in the examples below:

- (6) Speak up: *Don’t you think that overweight people might feel uncomfortable watching this film?*

Gwyneth Paltrow: No, I totally disagree. I mean, I think that the film is incredibly embracing and warm. The message of the film is that it doesn’t matter if you’re extremely overweight or not and that this is ridiculous thing that is sociologically imposed on all of us that we feel that it’s unacceptable when it has nothing to do with who the person actually is. (*Speak up 181, 2003: 21*).

- (7) Speak up: *Do you really believe it can be possible—another world?*

Peggy Nash: Absolutely, I wouldn’t be a member of a union; I wouldn’t get up and fight for change every day if I didn’t feel that a better world was possible. Timing...who knows? But I absolutely believe that corporations

cannot rule the world in an undemocratic fashion forever, that at some point this has to change and people are organizing to make that change, and I believe it will happen (*Speak up* 194, 2004:25).

Due to their deictic character, 2nd person references also make implicit reference to the speaker, indirectly marking subjectivity.

With respect to 3rd person matrix subjects, let's consider the examples below. In example (8), Dick Meyer's speech is preceded by a paragraph summing up his ideas ("*Dick Meyer also thinks that...*"):

- (8) *Speak up*: Although he is of a different political persuasion, *Dick Meyer also thinks that* the scandals of Clinton administration will play a major role.

Dick Meyer: I think people are extremely tired. I don't think they're morally horrified, I think they're sort of aesthetically fatigued from it, they're ethically challenged by it, they're not morally outraged by it. (*Speak up* 153, 2001:12)

In the same vein, example (9) reports American scientists' beliefs about bumblebees:

- (9) *Speak up*: *American scientists believe that* the bumblebee risks extinction and this could be disastrous for both the US and world economies. Entomologist John Losey explains: "Insects provide valuable services: bumblebees, for example, play an important role in pollinating plants." Losey reckons that this free service generates \$57 billion for American farmers. (*Speak up* 241, 2007:10)

The examples above show that we usually take to know what someone else thinks after having access to the verbal expression of these thoughts. Thus, 3rd person complementation constructions are reported speech strategies which also make implicit reference to the speaker, since someone else's thoughts are presented from the speaker's viewpoint.

5.2 Intersubjectivity and Viewpoint

From the observations presented so far, we may conclude that complementation constructions are subjectivity operators, which either explicitly or implicitly mark the speaker's viewpoint. The former case is attested by the preference for 1st person matrix subjects, as shown in Table 2; the latter case is exemplified by the occurrence of 2nd and 3rd person matrix subjects, which are implicitly anchored in the speaker's viewpoint, as discussion of examples (6) to (9) has shown. However, subjectivity is only a fraction of the whole picture.

The analysis has shown that the syntactic structure of complementation constructions, which allows complementizer or non-complementizer-taking complement clauses, also marks different aspects of intersubjectivity: not only do they directly or indirectly express the speaker's viewpoint, but they do so

with respect to other explicit or implicit viewpoints available in discourse.

5.2.1 Cognitive Conjunction

In this section, we will argue that non-complementizer-taking complementation constructions promote **cognitive conjunction**, which is defined as the alignment of the speaker's viewpoint to another viewpoint presented in previous discourse.

To start out, let's take a look at an example instantiated by "think", in which the speaker shows cognitive conjunction with the addressee:

- (10) Speak up: Which of the following will weigh more heavily in the election: the economy or Iraq?

Michelle Lerner: *I think for most Americans the economy will weigh more heavily, because the majority of people are most concerned with that which most directly affects their lives – having good jobs, enough food on the table, enough money to care for their families. (Speak up 209, 2005:15).*

In the example above, the speaker chooses one of the options proposed by the interviewer, and structures the subsequent discourse in order to explain her choice ("*because the majority of people...*").

Cognitive alignment can also be prompted by negative matrix clauses, as in the following example:

- (11) Speak up: Yet when Lisa See met with Speak up, she talked about China of today. We asked her how many prejudices westerners still had about the country.

Lisa See: A lot, I think, a lot. You know, I think people hear, "Oh, this will one day be a superpower", *but I don't think* people have a concept of what that really means and how much China has changed and how different it is today. (*Speak up 240, 2007: 13*)

Although displaying a negative matrix clause ("*but I don't think people have a concept (...) of how much China has changed (...)*"), Lisa See's epistemic complementation construction is aligned to the presupposition subjacent to *Speak up's* question, which indicates that westerners used to have prejudices about China.^v

5.2.2 Cognitive Disjunction

Cognitive disjunction also reflects intersubjectivity, but in a different way. In this case, we will argue that **cognitive disjunction** marks the non-alignment of the speaker's viewpoint to another viewpoint presented in previous discourse.

In the following example, the speaker challenges the commonly accepted view that having a pint in a modern bar or in an old pub is the same thing:

- (12) Speak up: Many people might see no difference having a pint in a modern bar and absorbing the atmosphere in one of the many traditional pubs that, fortunately, Britain still has. For Peter Wheeler, though, the building is almost as important as the pint itself.

Peter Wheeler: *I do think that* the past has an impact on a building and *I do think that* you absorb a lot of the atmosphere and a lot of the either welcome or unwelcome when you first go in what I would call a “genuine pub.” (*Speak up* 237, 2007:31)

It is worth noting that, in the example above, cognitive disjunction is not only marked by the complementizer-taking epistemic construction, but also by the discourse marker “do”, which has already been classified as intersubjective. (Traugott and Dasher, 2002).

As well as cognitive conjunction, cognitive disjunction can be also expressed by epistemic complementation constructions which take negative matrix clauses, as in Chomsky’s second turn below:

- (13) Noam Chomsky: I think the World Social Forum should be considered not as a place for the excluded members of society but for society.

Speak up: He was asked about Latin America, whether the continent should make institutions of its own.

Noam Chomsky: *I don’t think that* there should be a Latin American alternative to OPEC or the IMF, but rather worldwide alternatives (*Speak up* 191, 2004:17).

In the example above, Chomsky’s opinion is contrary to the presupposition that “*Latin America should make institutions of its own*”, prompted by the interviewer’s question.

5.3 Integration between Verbs and Constructions

The analysis has shown that the epistemic verbs “guess”, “suppose”, “think”, “believe”, “find” and “know” may occur in both complementizer and non-complementizer-taking constructions. However, it was also found that some verbs are preferred in cognitive conjunction constructions, while others tend to occur in cognitive disjunction ones.

As shown in Table 3, the verbs “suppose”, “guess” and “think” seems to be more compatible with cognitive conjunction, whereas “believe”, “find” and “know” are more frequently instantiated in cognitive disjunction constructions.

| Verb | Cognitive conjunction Frequency Percentage | Cognitive disjunction Frequency Percentage |
|---------|---|---|
| Suppose | 24/36 66,7% | 12/36 33,3% |
| Guess | 20/31 64,5% | 11/31 35,5% |
| Think | 122/193 63,2% | 71/193 36,8% |
| Believe | 14/45 31,1% | 31/45 68,9% |
| Find | 8/36 22,3% | 28/36 77,7% |
| Know | 6/41 14,6% | 35/41 85,4% |

Table 3. Frequency of verbs in complementation constructions

These results allow the conclusion that “suppose”, “guess” and “think” are less assertive, since cognitive conjunction reflects intersubjective alignment. On the other hand, “believe”, “find” and “know” may be considered more assertive, since cognitive disjunction requires a greater degree of strength of illocutionary point toward the propositional content of the subordinate clause.^{vi}

The following scale of assertiveness is compatible with the results on Table 3:

| | |
|---|--------------|
| SUPPOSE > GUESS > THINK > BELIEVE > FIND > KNOW | |
| (-assertive) | (+assertive) |

Table 4. Scale of assertiveness

In what follows, the relation between epistemic verbs and complementation constructions will be discussed.

Let’s start with instantiations of the less assertive verbs “suppose”, “guess” and “think” in cognitive conjunction constructions. In example (14), the speaker confirms that he is a convert of Sufi Islam by answering a question about his motivations for conversion:

- (14) Speak up: Richard Thompson who was a founder and a member of the legendary English group, Fairport Convention, has been an important part of the music scene since the 1960’s. Yet he is also a convert of Sufi Islam and, in the light of recent events, we decided to ask about this.

Richard Thompson: Well, you know, it’s just a method. It’s a process of understanding the world and communicating with the creator and that’s basically it. And I *suppose* I was attracted to this inner qualities of the Muslims. You know, as I traveled through the Muslim world, people only offered me generosity and sweetness, that was all I ever saw. People were so kind and had such impeccable, *I suppose* the world would be “manners”. You know, people’s courtesy and hospitality was just extraordinary and that was very attractive and seductive. (*Speak Up 181*, 2003:32).

In the example above, two complementation constructions initiated by “*I suppose...*” indicate the speaker’s response to the interviewer’s question about his motivations for conversion to Sufi Islam.

In the next example, the speaker is requested to describe her most pleasant experience as a taxi driver. She starts with a non-complementizer-taking construction (“*I guess...*”), which might be signaling the retrieval of her memories:

- (15) Speak up: When Melissa Plaut met with Speak up, we asked her to described her most pleasant experience as a taxi driver so far.

Melissa Plaut: *I guess* the easiest one to pick out is, you know, when it involves money! And I had a guy give me a very, very generous tip, which was...the fare on the meter was four dollars and ten cents, he was my first passenger of the day, it was a Sunday in June, my first summer, driving, and we had a very nice conversation, he was a very nice man, we really just hit it off as two human beings, perfect strangers, who just sort of met and it was very nice and at the end of it, I was dropping him off at the Museum of Modern Art and he said: “Here’s 140 dollars, don’t give up.” And I was blown away. (*Speak up 253, 2008:14-15*)

Finally, in (16) below, cognitive conjunction constructions with “think” mark the alignment of the information in the subordinate clause with mythological and folkloric knowledge regarding wolves:

- (16) Speak up: Wolves are bad guys of myth and folklore: from the Big Bad Wolf in Little Red Riding Hood and the menacing predator in Three Little Pigs to the wolves guarding Dracula’s castle and modern-day wolf cartoons. Wolves are universally depicted as cunning, wicked and evil. But this image simply isn’t accurate, says Kate Joki, who worked with Wolf Haven International, a sanctuary and wolf conservation organization based in Thurston County, in the state of Washington. She says wolves are misunderstood.

Kate Joki: *I think* it started hundreds of years ago with mythology, you know, the Big Bad Wolf and the werewolves. And there’s a lot of misinformation, that they attack humans and they hate humans. And none of that is remotely true. So *I think* people think of them as sort of the demon. *I think* they’ve been used as the bad guy animal in all kinds of things. And so people think that’s true, and it’s not. (*Speak up 242, 2007: 36*)

Summing up, it seems that “suppose” indicates a temporary result of a reasoning process, while “guess” marks an attempt the speaker makes to express her opinion without reflecting thoroughly about it, and “think” points to a more permanent result of an epistemic assessment. (Wierzbicka, 2006: 209-10). In all these cases, the speaker tends to take a viewpoint which is aligned to previous perspectives established in discourse.

By contrast, Table 3 suggests that “believe”, “find” and “know” are more assertive, given their greater compatibility with cognitive disjunction contexts. Let’s take a look first at the two first occurrences of “believe” within the following stretch of speech:

- (17) Speak up: Cristina Estrada, for example, is a stage manager for a TV station in New York. She plans to vote for Hilary Clinton. We asked her whether America was ready for a woman president.

Cristina Estrada: I would like to think so, but I’m really not sure, *I do believe that* under the Bush administration, the country has gotten more conservative, in terms of culture. I think a lot of woman really don’t like Hillary, and I think it has a lot to do with the way women sometimes are very hard on other women. I think women judge her, whether she stayed with her husband, or whether...if she would have left her husband. *I believe that* women – and actually *I believe* the statistics back up this – *that* women are very, very hard on Hillary and very critical of many, many decisions that she’s made. (*Speak up* 241, 2007:14)

In the example above, the speaker expresses opinions which other people might not agree with; she presents the unexpected belief that America might not be prepared for a woman president (and in particular for Hillary), and she uses two cognitive disjunction constructions. It is worth noting, however, that she also chooses a non-complementizer taking construction “*I believe the statistics back up this*”, when reporting her alignment to statistical data.

As for “find”, there is indication of assessment via personal experience, as shown in the cognitive disjunction example below:

- (18) Speak up: How designers fail

The idea and act of failing has become a buzzword with the economic downturn, but graphic designers fail every single day, and have been failing successfully through most of the 20th century into our current one. (...) To those students entering school and primed for the workforce, just appreciate the fact that design is all about failure. Every designer I’ve ever met has failed, and failed miserably, and they continue to make a successful career out of failing.

Semi-Anonymous: What I can say is that I feel a lot of the things in this article apply to me personally, and I’m scared there might not really be a way I can fix it. I’m an engineer, not an artist, but a lot of these ideas carry over. I grew up with the understanding that I was brilliant and had an exciting future ahead of me. Since childhood, I’ve always had difficulty dealing with not being praised for something. I’ve always been lazy, and because of that, I haven’t accomplished anything significant in my life, and I dislike and fear challenge. I can’t deal with failure, and I can’t deal with stress. I perform well only when not under pressure. Increasingly, *I find that* my natural talents are not terribly useful given my lack of drive. (*Speak up*^{vii})

In the example above, the complementizer-taking construction instantiated by “find” not only marks the speaker’s present feelings (“*I find that my natural talents are not terribly useful given my lack of drive*”), but also indicates that these feelings contrast with his own expectations in the past. In this case, cognitive disjunction involves two different perspectives taken by the speaker at two different periods in time – as a child (“*the understanding that I was brilliant and had an exciting future ahead of me*”) and as an adult nowadays (“*I haven’t accomplished anything significant in my life*”).

Finally, the semantics of “know” points to an even greater assertiveness which, as Table 3 has shown, is usually linked to cognitive disjunction constructions:

- (19) Speak up: Julia Roberts herself is sanguine about the ebb and flow of her career. “I didn’t check the schedule, but I guess it was my turn”, she says. *She knows that* every rise to stardom is always followed by a backlash. But she won’t let that faze her again. “I don’t think I realized that the cost of fame is that it’s open season on every moment of your life”, she explains. (*Speak Up* 172,2003:22)

As Ferrari and Sweetser (forthcoming) have argued, “know” is an intersubjective lexical item which simultaneously has meaning at multiple levels. In (19), “know” refers to Julia Roberts knowledge structure (“She knows that P”); but it necessarily makes implicit reference to the writer’s epistemic state. Thus, “know” can be taken to signal that the information in the subordinate clause is shared by both Julia Roberts and the interviewer.

We can conclude, then, that there can be different levels of intersubjectivity in complementation constructions: the verb choice indicates the degree to which speech event participants presently share the information put forward in the subordinate clause (for example, “know” prompts that this information is shared by participants, while “suppose” indicates that this information only takes the perspective of the matrix subject); on the other hand, constructional choice may signal the congruence/incongruence between the information presented in the subordinate clause and other perspectives available in previous discourse. As example (19) shows, although “know” indicates intersubjective coordination to the idea that “every rise to stardom is always followed by a backlash” (in this case, by both the writer and Julia Roberts), the constructional choice indicates cognitive disjunction between Julia Robert’s previous expectations about stardom and her present ones.

6. Conclusions

In this paper, we presented an analysis of epistemic complementation constructions in English, contrasting complementizer and non-complementizer-taking syntactic structures instantiated by the verbs “suppose”, “guess”, “think”, “believe”, “find” and “know”. The main findings can be summarized as follows:

- (1) Epistemic complementation constructions are subjectivity operators which present the object of conceptualization (complement clause), either

direct or indirectly, from the speaker's perspective.

- (2) Epistemic complementation constructions signal intersubjectivity, since they implicitly refer to the speaker's perspective with respect to other perspectives put forward in previous discourse.
 - (2a) Non-complementizer-taking complementation constructions indicate cognitive conjunction between the speaker's perspective and other perspectives available in discourse.
 - (2b) Complementizer-taking complementation constructions indicate cognitive disjunction between the speaker's perspective and other perspectives available in discourse.

By showing that cognitive conjunction and cognitive disjunction are the main cognitive factors motivating the speaker's syntactic choice regarding complementation constructions, the analysis demonstrates that structural factors based on frequency of occurrence may be treated as co-occurrence tendencies, but they do not really provide an explanation for the phenomenon. For example, although our data confirms the tendency widely pointed out in the literature that complementation constructions tend to display first person matrix subjects, we do not claim that speakers choose a complementation construction when they are about to use a first person matrix subject. In fact, it is just the other way around. Since the speaker chooses to take a subjective perspective by using a complementation construction, first person matrix subjects are highly compatible with this choice. But it is not a necessary choice, and as we have shown in this paper, second and third person matrix subjects also implicitly point to subjectivity in these constructions.

On the other hand, our account differs from other semantically and/or cognitively based accounts such as Nuyts (2001) and Verhagen (2005), which also recognize the important role of intersubjectivity in complementation constructions. As we have shown Verhagen's definition of cognitive coordination refers to an instruction for the addressee to construe the content of the complement clause in the same way as the speaker. Our proposal assumes that not only cognitive conjunction, but also cognitive disjunction may take place. Moreover, complementizer and non-complementizer-taking complementation constructions function, respectively, as instructions to construe the content of the complement clause as aligned or not aligned to previous perspectives presented in discourse (which also include other perspectives taken by the speaker).

As for the relation between epistemic verbs and complementation constructions, we observed that cognitive conjunction is more frequently instantiated by the epistemic verbs *suppose*, *guess* and *think*, while cognitive disjunction tend to be instantiated by *believe*, *find* and *know*. Again, these are co-occurrence tendencies, which should not be taken as motivating factors. If the speaker chooses to use the verb *suppose*, for example, she is not restricted to using a cognitive conjunction construction. In fact, our data has shown that both constructions were attested with all six verbs analyzed.

But these co-occurrence tendencies support the claim that these verbs are located at different positions on the following scale of increasing assertiveness: suppose > guess > think > believe > find > know. Thus, if the speaker expresses cognitive conjunction with previous perspectives presented in discourse, less assertive verbs may be chosen. On the other hand, cognitive disjunction should require more assertive verbs in order to contradict previous claims.

We expect that future research will not only confirm the (inter)subjective role of epistemic complementation constructions in English, but also provide a deeper account of the integration between epistemic verbs and complementation constructions. Further investigation should also allow us to generalize the findings presented here to other epistemic verbs in English, and to establish the basis for a contrastive analysis of complementation constructions in other languages.

Notes

- i Langacker (1990) points out ,however, that such extreme polarization represents an ideal that may seldom be achieved in practice. The fact that we are dealing with linguistic expressions in themselves poses the question of whether there can be speaker-neutral or objective language.
- ii In (1), the only indirect reference to the Ground is the use of present tense.
- iii In the remainder of the paper, we use the term *cognitive conjunction* (and not *cognitive coordination*) to refer to the cognitive alignment between speaker and hearer prompted by complementation constructions, in order to indicate that the kind of viewpoint alignment we propose is different from Verhagen's, and also to keep the parallelism with the term "cognitive disjunction", which will be used to refer to viewpoint non-alignment.
- iv Written versions (Kepler, 2001, 2003, 2004, 2005, 2007, 2008) and electronic versions 2002-2009 (<http://www.underconsideration.com/speakup>)
- v According to Levinson (1983), presupposition triggers are linguistic expressions which prompts presuppositions. In the sentence "We asked her if westerns still have prejudices against China", "still" triggers the presupposition that " westerns used to have prejudices about China before" .
- vi Searle and Vanderveken (1985) cite requesting and ordering as illocutionary acts that show a distinction between the degree of strength of illocutionary force. Ordering, in their analysis, has a greater degree of strength of illocutionary point than requesting, due at least in part to the institutional authority of the orderer. In this paper, we assume that the notion of degree of strength of illocutionary force may be applied to the same illocutionary act (assertion), and we suggest that epistemic verbs may signal different degrees of strength.
- vii <http://www.underconsideration.com/speakup/archives/005924>

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