Ways of asserting. English assertive nouns between linguistics and the philosophy of language

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Abstract

This paper focuses on the relationship between illocutions and the lexicon, in particular, illocutions and illocutionary nouns in their function of shell nouns. Theoretical insights from cognitive linguistics, supplemented by an empirical-conceptual approach to verbal communication, are used as a frame of reference. They share the idea that, though conceptualization does not lend itself to direct observation, it can be studied indirectly via language as there is a close relationship between linguistic and conceptual structure. In this vein, the semantics-pragmatics of illocutionary shell nouns is relevant to an understanding of illocutions and their categorization. This study singles out one type of illocutionary noun: assertive nouns, i.e. nouns that name assertive speech acts (e.g., *assertion*, *allegation*, *argument*, *claim*, etc.), and presents a corpus-based study of them. It approaches assertive nouns by analyzing their behavioral profile, i.e. the complementation patterns they occur with, as they emerge in their occurrence in reporting or denoting and, in so doing, in characterizing specific discourse situation speakers' utterance acts as acts of *F*-ing. The methodology used involves descriptive as well as exploratory statistics. As for descriptive statistics, reliance scores are calculated and a chi-square test added. As for exploratory statistics, a hierarchical cluster analysis is applied to the data. Results show that (i) constructional possibilities are part of the semantic-pragmatic meaning of the noun, and (ii) there is a correlation between semantic-pragmatic similarity and distributional similarity. At the same time they lend argument from linguistic patterns to what philosophy states about the commitment to belief, truth, and knowledge that define assertive speech acts, thus showing the potential that descriptive English research has for application across disciplinary boundaries.

1. Introduction

This study focuses upon the relationship between illocutions and the lexicon, in particular, illocutions and illocutionary nouns in their function of shell nouns (Schmid, 2000).[1] Examples (1-4), with their respective constructional patterns, extracted from the Corpus of Contemporary American English (henceforth COCA), are cases in point.

(1) All this casts serious doubt about Obama's assessment of the implications of Bin Laden's death for the war on terror and his **assertion** that <u>the present strategy has broken the Taliban's momentum in the face of the abundant evidence to the contrary</u>. [ACAD 2012]

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[1] Vendler (1967, 1968) calls them "container nouns". Winter (1992) uses the term "unspecific nouns", Francis (1986) "anaphoric nouns", Ivanič (1991) "carrier nouns", and Conte (1996) "anaphoric encapsulators". Within applied studies, Hinkel (2001, 2004) calls shell nouns "enumerative or catch-all nouns", and Flowerdew (2003, 2006), Flowerdew and Forest (2014) "signaling nouns". However, even within this more applied-oriented literature, the term "shell noun", coined by Schmid (2000), is the one that is accepted and used (see Aktas and Cortes, 2008; Caldwell, 2009).

N-that

(2) "There are patents in the patent office describing certain flying aircraft not of conventional design". One reader tells us. His **claim**: <u>the patents link many people who have worked on special or secret projects</u>. [MAG 1994]
Det-N

(3) "Then several hundred feet later you suddenly accelerated, lost control of the car, and went off the road". "Your **conjecture** is that <u>I accelerated about the same time I dialed nine-one-one</u>?" [FIC 1994]
N-BE-that

(4) She said, matter-of-factly, "<u>My daughter was paid to go to prison</u>." # Cynthia stopped writing and looked at Brixton. "That's an unusual **allegation**, Mrs Watkins," he said. [FIC 2011]
Pro-BE-N

Schmid's studies (1997, 2000, 2001, 2007) are the best known on the subject of shell nouns, particularly as far as English is concerned. Schmid (2000) defines shell nouns as "an open-ended functionally defined class of abstract nouns that have, to varying degrees, the potential for being used as conceptual shells for complex, proposition-like pieces of information." (Schmid, 2000:4). Nouns, therefore, are not shell nouns because of some inherent property; they have the potential to be used as shell nouns and some of them have this potential more than others.

Illocutionary shell nouns are metalinguistic in nature. The referents they metarepresent[2] are higher-order entities, namely utterance-acts. From the morphological point of view, in general, illocutionary shell nouns, though not all of them, are deverbal abstract nouns derived from speech act verbs.[3] As such, they fall under the category of *nomina actionis*. More specifically, they are a sub-group of *nomina actionis* in that the action they name or refer to is the specific illocutionary force of the speech act verb they come from. The topic of *nomina actionis* has been widely studied in linguistics (see, among the others, Hopper and Thompson, 1985; Bierwisch, 1990; Gaeta, 2002), and is considered complex because it involves the transcategorization from a grammatical category (the Verb) to another grammatical category (the Noun). The main function of deverbal nominalization is of syntactic nature, i.e. that of operating – by predicate reifying – a recategorization. The feature of reification, refers to the fact that the predicate is conceptualized as an object and, as such, it can participate in the properties generally ascribed to nouns, such as, for example, the possibility to be pluralized.[4] Moreover, there is a loss of illocutionary force, which is a gradual process consisting mainly in (i) the loss of deictic properties (e.g. tense markers), and (ii) the backgrounding of the actants.

In addition to belonging to the wide category of *nomina actionis*, from the semantic-pragmatic point of view, illocutionary shell nouns are a subset of linguistic shell nouns. They share the property of referring to a verbal action that the speaker performs when addressing someone with an intention that her utterance counts as *F*-ing, namely as having the illocutionary force of doing the act purported by the verb they are related to. As such, illocutionary nouns, whether or not in their

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[2] Cf. Wilson (2000) for metarepresentation, and Noh (2000) for metarepresentation as representation by resemblance.

[3] Not all illocutionary nouns are deverbal nouns derived from illocutionary verbs. Some nouns enter the English language before the corresponding verb. However, most of them are nominalizations of, or morphologically related to speech act verbs (cf. also Schmid, 2000:148).

[4] In general, languages possess rather elaborate morphology to convert verbal roots into nouns, but no morphology whose sole function is to convert nominal roots into verbs. Hopper and Thompson (1985) explain this making reference to the fact that nominalizing means that events and actions are conceptualized metaphorically as objects, i.e. as something concrete. This is done because human cognition can deal with concrete entities more easily than with abstractions.

function of shell nouns, qualify as concepts of communication because they are used to refer to acts of verbal communication. More precisely, they embody concepts endowed with certain properties, and these are the properties of the speech acts they name.

The present paper reports the results of the analysis carried out on a group of assertive shell nouns. This type of noun has been chosen because no prior research has focused on a fine-grained investigation of them – as well as of illocutionary shell nouns in general – and on the contribution that research of this type can give to the study of illocutions.[5] Moreover, assertive shell nouns are particularly important because, though the argument for the unmarked status of informative speech acts is quite complex (cf. Givón, 1990), the speech acts they name are especially salient in discourse genres that represent the human-universal norm, and they predominate in terms of frequency (Givón, 1990:779; Green, 2013:387).

Although it is clear that the categorical aspects of noun meaning have to be represented in a different way from the components of the meaning of speech acts, if one conceives of meaning as conceptualization of knowledge, the construal of the noun evokes the components of the speech act[6] it names or refers to, in this case assertive speech acts. Searle's characterization of assertive speech acts is that "The point or purpose of the members of the assertive class is to commit the speaker (in varying degrees) to something being the case, to the truth of the expressed proposition." (Searle, 1979:12). The psychological state expressed by an assertive is Belief (that p). However, as Green (2013:403) clearly explains, this is a graded commitment, as if there were a cline of assertiveness, with some members showing more assertoric commitment – association of belief, truth and knowledge – than others:

> Assertions, conjectures, suggestions, guesses, presumption and the like are cousins sharing the property of commitment to a propositional content. They differ from one another in the norms by which they are governed, and thereby in the nature and degree of that commitment. An assertion (proper) puts forth a proposition as something for which the speaker has a high level of justification; by contrast, a sheer guess might put forth a proposition as true but need not present any justification at all.

The research question the study purports to answer is the following: if, as it is, assertive shell nouns are used to characterize utterances[7] as any type of assertive speech act, i.e. to refer to acts of asserting, guessing, conjecturing, etc., and if the construal behind any such nouns corresponds to the components of the illocutionary force of an assertive speech act, then this must be embodied in the noun behavioral profile, i.e. in the complementation patterns the noun occurs with – "the compatibility of certain kinds of nominals with certain kinds of containers" (Vendler, 1967:127) – as it emerges in their occurrence in reporting or denoting and, in so doing, characterizing speakers' utterance acts in a specific discourse situation as acts of *F*-ing.

Results show that (i) constructional possibilities are part of the semantic-pragmatic meaning of the noun and (ii) there is a correlation between semantic-pragmatic similarity and distributional similarity. At the same time, they lend argument from linguistic patterns to what philosophy states about the commitment to belief, truth, and knowledge that define assertive speech acts, thus showing the potential that descriptive English research has for application across disciplinary boundaries.

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[5] Chapter VIII of Schmid (2000) is the only exception. However, the aim of Schmid's study is to give a broad-brush picture of the category of shell noun per se. Thus, it is the choice of this author not to delve into a finer-grained analysis of each individual category included in the research.

[6] Sbisà (2013) makes use of the term "script" to refer to the conceptual knowledge lying behind the use of speech acts.

[7] It goes without saying that this characterization is completely up to the speaker in the current discourse situation and, therefore, in the case of non-correspondence between the current speaker and the speaker who uttered the original utterance, it may or may not correspond to what the original speaker intended to communicate.

2. Theoretical framework

The theoretical framework underlying this research consists of a combination of selected insights from cognitive linguistics, especially the prototype-based view of semantics. The empirical-conceptual approach (Verschueren, 1985, 1987) supplements such insights.

First of all, in cognitively inspired approaches to language, meaning comprises both content and construal, i.e. the conceptualization of experience (Croft and Cruse, 2004). As Langacker puts it, "An expression's meaning is not just the conceptual content it evokes – equally important is how the content is construed. As part of its conventional semantic value, every symbolic structure construes its content in a certain fashion." (Langacker, 2008:55). Though conceptualization does not lend itself to direct observation, it can be studied indirectly via language, due to the close relationship between linguistic and conceptual structure, i.e. linguistic meaning is equated with conceptualization, and linguistic structures are viewed as conventionalized conceptual units.[8]

Indeed construal manifests itself at the level of grammatical and lexical items alike. The consequence is that structure and experience are related: syntactic structure reflects semantic structure and the semantic structure corresponding to a syntactic construction represents a conceptualization of experience. Both grammatical constructions and lexical elements are meaningful units, the only difference between them residing in the higher level of specificity of lexical items compared to the more schematic character of grammatical units. Therefore, the meaning of lexical items and that of grammatical units need to be compatible in order to be integrated and yield felicitous syntagmatic combinations. Syntactic behavior can thus have cue validity in the analysis of meaning categorization.

Categorization, i.e. the ability to create classes to classify experience, is one of the fundamental qualities of human cognition (see, for example, Langacker, 1991; Taylor, 2003). As is well known, Rosch (1973, and later work) introduced a prototype approach to categorization. In prototype theory entities are categorized on the basis of their attributes. However, these attributes are not the binary constructs of the classical Aristotelian view: "In categorizing an entity, it is not a question of ascertaining whether the entity possesses this attribute or not, but how closely the dimensions of the entity approximate to the optimum value." (Taylor, 2003:44). Categorization is thus graded in nature, and prototypes serve as cognitive reference points for the categorization of not-so-clear instances. A prototype is generally taken to be a generalization or abstraction of some general tendencies. It has to meet specific criteria. For example, a prototype (i) maximizes the number of attributes shared by members of the category; (ii) minimizes the number of attributes shared with members of other categories (Taylor, 2003); (iii) is used to define the other terms in the lexical domain through explicitation (Faber and Mairal Usón, 1999), i.e. its definition is included in the definition of the other members of the lexical domain.

There are two axes of categorization, one vertical and the other horizontal, with nodes on each axis that are in a categorizing relationship. The vertical axis represents levels of categorization, each more inclusive than, and instantiations of, the preceding one (table, chair and bed are included in furniture). The horizontal axis represents contrastive categories, linked by relations of similarity, which are included in the next highest category (kitchen chair and dining-room chair are included in chair).

There is a level of categorization that is linguistically and cognitively more salient than others. This is the basic level of categorization. The notion of basic level meshes with the prototype structure of categories. Indeed, there is an interplay between the two: "The basic level has to do with what things are called. [...] Prototypes have to do with what words refer to." (Taylor, 2000:53). The basic

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[8] This is in line with what recent cognitive approaches to language suggest, but the idea that language somehow mirrors thought goes back at least to Aristotle's *De Interpretatione* (cf. Lo Piparo, 2003).

level, thus, captures the onomasiological salience of a term, and the prototype its semasiological salience.

Lastly, if meaning comprises the conceptualization of experience, it is not determined by objective reality. The speaker always acts as a conceptualizer who has the ability to conceive of a situation from different vantage points. The analysis of vantage points offers an additional perspective to understanding the way an event is conceptualized, because it is another means to describe the relationship between events and actors that participate in them in the miniature plays represented by sentences.

The approach that complements the above sketched insights is the empirical-conceptual approach to verbal communication.[9] It is based on the idea that there is a link between cognition and language use, a unity between concepts and practices: social actors conceptualize their own practices and, therefore, the character of those practices must be partly determined by their own way of perceiving it. In this sense, action is always interpreted action. If any natural lexicon is a structured conceptualization of the words of that lexicon, then an analysis of illocutionary force indicating devices (any of them) in a particular language qualifies as a valid contribution to our understanding of illocutions in that language. Indeed, as Verschueren (1985:20) puts it, if there is a relationship between words and concepts, it is possible to learn something about the conceptual space associated with certain practices by examining the words and expressions that participants in the action have at their disposal to talk about those practices. In claiming this, I am more sympathetic with Austin's lexicalist approach (1962), i.e. the idea that illocutions are accessible via the lexicon, than with Searle's universalist perspective (1979) according to which the lexicon is a treacherous guide to illocutions because illocutionary verbs and nouns belong to a particular language.[10] In this vein, the semantics-pragmatics of illocutionary shell nouns is relevant to understanding illocutions and their categorization. Much more so if one considers that, to date, studies of illocutions taking into account prototype theory are rare and the existing ones deal with verbs, not with nouns.[11]

3. Data and methodology

The list of assertive nouns used for the study includes the following types: *affirmation*, *allegation*, *argument*, *assertion*, *claim*, *conjecture*, *contention*, *guess*, *hint*, *presumption*, *statement*, *suggestion*, *supposition*. The nouns under scrutiny belong to a wider corpus of assertive nouns comprising 198 nouns, developed by the author. The complete list of illocutionary nouns belonging to the corpus I developed takes speech act verbs *qua* illocutionary verbs as a starting point and comes from the consultation/comparison of previously published works on speech act verbs (Austin, 1975 [1962]; Bach and Harnish, 1979; Verschueren, 1980; Leech, 1983; Searle and Vanderveken, 1985; Wierzbicka, 1987). For those illocutionary nouns that ran the risk of not being included because they are not deverbal nouns, all the synonyms found in Word-Net (http://wordnet.princeton.edu/wordnet) synsets were added. The nouns selected for the pilot study designate the speech acts discussed by Green (2013) as being exemplary members of the assertive family. The speech acts that do not appear in Green (2013), i.e. affirmation, allegation, argumentation, claim, hint, suggestion and statement, have been included to have more data for the analysis, and have been selected because they all appear in the synsets of the other nouns. Two hundred tokens randomly sampled have been extracted from the COCA,[12] and analyzed for each noun in the list, for a total of 2600 examples. Given that some nouns were sometimes indeterminate

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[9] Cf. Vanparys (1996) and Proost (2007) for similar approaches.
[10] Searle (1979) discusses only illocutionary verbs.
[11] Cf. Vanparys (1996), Chapter 2, for an overview.
[12] At the time of writing, the size of COCA sub-corpora is as follows: 91 million words in Academic Journals [ACAD]; 90 million words in Fiction [FIC]; 92 million words in Popular Magazines [MAG]; 92 million words in Newspapers [NEWS]; 95 million words in Spoken language [SPOK]. Cf. Davies (2008).

with respect to the question of whether or not they involve verbal communication, co-textual and contextual clues have been used to filter illocutionary and non-illocutionary uses. For example, in (5) there is an indication of direct quotation.

(5) [. . .] the salesman jokes, "You guys must be reactionaries or something", hardly realizing the irony of his **supposition**. [ACAD 2000]

And, in example (6), although there is no direct quotation, it is likely that Fry's criticism was put in words at some time, but the occurrence of linguistic action cannot be guaranteed, and this is rather common with nouns such as conjecture, guess, presumption and supposition.

(6) Freud's written views on art angered and disturbed a good many people, among them, famously, the distinguished British art critic Roger Fry. His **supposition** was that Freud did not understand the basic elements of esthetic pleasure. [MAG 1990]

When it was not possible to filter out non-illocutionary uses in a clear-cut way, it was decided to follow Vanparys' (1996) rationale in including indeterminate cases in the data for analytic purposes, because it is still useful to consider what they would mean if they were intended to be used as illocutionary nouns.
The procedure followed in the research involves a core and an additional analysis. The core analysis has been carried out with the aim of checking whether the nouns are used in their shell noun function, and, if yes, what their behavioral profile is.
I then added an additional analysis to this core analysis, namely the analysis of the type of determiners – markers of reference, definiteness, and deixis – that precede the noun. This analysis is aimed at checking to what degree the source of the utterance-act is backgrounded, defocalized or even deleted,[13] thus providing additional information about the vantage point. The codification of the additional analysis has been done using the codification reported in Table 1:

[Insert Table 1 here]

The whole dataset consists of manually annotated corpus data.
The methodology used for data analysis involves descriptive as well as exploratory statistics. As for descriptive statistics, reliance scores[14] were calculated, and a chi-square test added. Reliance is a syntagmatic measure that accounts for the combinations of nouns with types of patterns. Reliance scores refer to the relative frequency of tokens of noun type in a construction vis-à-vis tokens of the same noun in other constructions, and thus capture the degree to which a particular noun relies, or depends, on a pattern for its occurrence. A chi-square test is used to check whether the differences among the constructional patterns the nouns rely on for their occurrence are significant,[15] and thus whether there is a significant difference in their syntactic behavior.
As for exploratory statistics, a hierarchical cluster analysis was applied to the data[16] to complement the descriptive part. This technique organizes large sets of data into clusters or groups such that the members of one group are very similar to each other and at the same time very dissimilar from members of other groups, and, in so doing, it provides a transparent representation of the data that emerge from descriptive statistics. The results are organized in a dendrogram, i.e. a tree diagram that illustrates the arrangement of the clusters produced by hierarchical clustering. Since the choice

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[13] Caffi (1999:896) calls them "objectivization shields".

[14] Cf. Schmid and Küchenhoff (2013) for the advantages and disadvantages of reliance and attraction measures.

[15] The following notation is used: <0.001 = highly significant difference ***; <0.01 = significant difference **; <0.05 = significant difference **; <0.1 = little significant difference *.

[16] Cf. Divjak (2010) for a clear application of this method to the analysis of the behavioral profile of near-synonyms in Russian.

of distance measure and amalgamation/linkage algorithm – the two basic metrics on which clusters are based – may influence the clustering results, two analyses were carried out using two combinations of distance measure and amalgamation algorithm, i.e. a Euclidean and a Manhattan or City-block cluster analysis. It must be emphasized that, even if cluster analyses allow for an objective identification of groups, subjective decisions must nonetheless be made to decide how exactly the dendrogram looks like, and what it is that the dendrogram reflects.

4. Analysis and results

4.1. Descriptive statistics

4.1.1. Analysis of determiners

Table 2 shows the results of the analysis carried out on the type of determiners that precede the noun.

[Insert Table 2 here]

In most cases, Type 3 is used, with a peak of 93.62% of occurrences with *presumption*. This suggests that, in general, the speaker who reports an utterance using one of the assertive shell nouns in the list with this type tends to present the propositional content in a depersonalized, objective way. The deletion of the utterance source permits to present personal beliefs as pieces of factual information. Thus, in example (7), the impression is that many people share the claim.

(7) Spurlock wanted to taste the **claim** that eating fast food is making America too fat. [NEWS 2004]

In the case of *assertion* and *contention* the difference in the distribution of Type 2 and Type 3 is not significant.

(8) As egregious was his assertion that the town of Hebron is essentially an Arab town. [ACAD 2008]

Type 1 is rare. It never reaches 10% of the occurrences, with the notable exception of *guess* (61.73%) for which this represents the most frequent type found in the data. In the case of Type 1 usage, the situation is reversed compared to Type 3, in that here the deictic origin of the utterance overlaps with the speaker in the current discourse situation, and the propositional content is presented as something that is subjective and tentative. The results for *guess* tally completely with Schmid (2000, 2001).

(9) How do you fall without gravity? My **guess** is that they seemed to be moving around pretty normally. [FIC 2007]

Lastly, Type 4 is not common at all, but it occurs rather frequently with *conjecture* and *hint*.

(10) I intimated at the top of the show that maybe this underscores that al Qaeda is back, and bigger than ever before. That they are regaining strength. Is that **conjecture** on my part? What do we make of what happened in Amman? [SPOK 2006]

4.1.2. Constructional pattern analysis

Table 3 reports the summary of the noun behavioral profile. Of all the constructions the nouns in the list occur with, Det- N, N-that, N-BE that, and Pro-BE-N represent 81.3% of all the occurrences of these nouns as shell nouns, and, therefore, reliance scores concerning these constructions will be discussed in detail.[17]

[Insert Table 3 here]

4.1.2.1. Det-N

The pattern Det-N phrase crosses over all types of shell nouns (Schmid, 2000), not just those belonging to the illocutionary type. It signals anaphoric and cataphoric uses, and thus the cohesive function shell nouns perform in providing referential continuity within texts. Example (11) exemplifies this pattern.

> (11)   As a result, <u>young Igbo women commonly leave unfaithful lovers, and use the threat of doing so to curtail their boyfriends' potential unfaithfulness</u>. While I know of no quantitative data that can support the **claim**, it is my observation that men who were courting potential wives were more likely to be faithful. [ACAD 2010]

Fig. 1 shows graphically the relative frequency of the nouns under analysis with regard to this pattern. With the exception of *guess* that relies significantly less than all the other nouns on this construction, no important statistical differences emerge in the reliance to this pattern. Indeed, there is little statistical difference between *affirmation* and the neighboring noun *allegation*, and the same holds for *hint* and *assertion*. For the sake of the present study argumentation, it is however important to notice that *statement* and *claim* are the nouns that rely more than the others on the pattern for their occurrence in the corpus.

[Insert Figure 1 here]

4.1.2.2. N-that clause

Not surprisingly, much more interesting from the conceptual point of view is the construction N-that reported in Fig. 2, namely the pattern in which the assertive shell noun in the matrix clause is followed by a *that*-clause. Example (12) exemplifies this pattern.

> (12)   Bald conjecture, as indicated by the word 'perhaps', does little to lessen the central **allegation** here <u>that natives on that memorable day more than two centuries ago exhibited deviousness</u>. [ACAD 2007]

[Insert Figure 2 here]

This construction seems to be the best predictor of cluster solutions, in that, whereas all other constructions, with the exception of Det-N, are unsaturated, i.e. they yield empty categories, N-that is always saturated in the small corpus under analysis (Fig. 2).

In the literature, studies on the complementation pattern *that*-clause are numerous and varied, and a comprehensive analysis of all of them goes beyond the scope of this paper. Therefore, I will give a very selective overview of some studies that may help to understand this type of complementation.

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[17] The percentage reaches 87.8% if one adds the two variants of the constructions N-that and N-BE-that in which the complementizer that is omitted. In these cases, a subtle semantic information is introduced when the complementizer is omitted, namely the fact that the subordinate and the main clause are construed holistically, as a unitary entity, whereas they are not in the presence of the complementizer that because it has a distancing effect, reflected iconically in the phonological distance it introduces between the two clauses (Langacker, 1991).

Kiparsky and Kiparsky (1970) underline the importance of the component 'factivity/truth' in the case of verbs, adjectives and nouns followed by that-clause. The 'factual' component of verbs that take *that*-clauses is also underlined by Quirk et al. (1985:1180) who add to this semantic feature that of 'suasiveness', suggesting that a cline exists between 'factual' and 'suasive' in the semantics of verbs that take *that*-clauses.

Wierzbicka (1988) is still the most exhaustive study on English complementation. In her radical semantic approach aimed at showing that the differences among various types of complements can be explained in terms of meaning, she discusses various types of complementation patterns. In the of case *that*-clauses, she underlines the association of this type of complement and knowledge.

> THAT complements can be shown to be derived from either SAY clauses or KNOW clauses. I have argued that of these two types the KNOW type is more basic and SAY clauses can be reduced to the KNOW type. (Wierzbicka, 1988:163)

More precisely, she says that, whereas, for example, *to*-infinitive clauses always imply the elements of 'thinking', 'wanting', 'opinion' and 'future time', *that* complements are acceptable in those kinds of sentences where a component of the frame 'know' can be reconstructed. However, the type of knowledge she talks about is not 'personal' knowledge. She defines it as 'public' knowledge, i.e. something that is generally knowledgeable, i.e. 'one can know this', and this implies an objective, factual perspective on what is said: "THAT complements introduce an objective, impersonal, 'one can know' perspective." (Wierzbicka, 1988:164). She adds that this would explain the use of *that*-complementation with assertive verbs such as *assume*, *presume*, *expect*, etc., which can be regarded as semantic derivates of 'know', that is as verbs which in their semantic structure refer to knowing (whether in the affirmative or in the negative). Indeed, Wierzbicka's claims are not corpus-based, but are confirmed in Vanparys' (1996) corpus-based study on English illocutionary verbs, in which the objective, informative aspect – contrasted with the binding aspect of to-infinitive – seems to be the main reason for the occurrence of assertive verbs with that-clauses.

> In a *that*-clause the proposition is introduced as being more or less autonomous. The link between complement and main clause is not very tight. It is this characteristic that makes that-clauses the primary option for assertive verbs. [. . .] While a construction with a that-clause introduces the speech event and its P as two separate units, an infinitival complement tends to fuse them into one unit. As a result, infinitives qualify as highly appropriate complements for commissive verbs. (Vanparys 1996: 198)

Frajzyngier and Jasperson (1991) discuss the association between *that*-clauses and the *de dicto* domain, i.e. propositions that have a metalinguistic function, underlining the link between the construction and the notion of truth and actual states of affairs, in contrast to infinitival clauses that refer to potential, not actual states of affairs.

Langacker (1991) deals with complementation in English from a strictly cognitive linguistics point of view. For the purpose of this study, what Langacker adds to Wierzbicka is the observation that the complementizer *that* used in *that*-clauses imposes an atemporal construal on the clause it combines with and, in so doing, serves to objectify the proposition expressed. All the definitions given so far share the association of the construction *that*-clause with truth, knowledge and objectivity.

Reliance scores show that *contention* and *assertion* rank first with no statistical difference between the two nouns. Let us repeat for the sake of argument that the characterization of assertive acts by Searle is that "The point or purpose of the members of the assertive class is to commit the speaker (in varying degrees) to something's being the case, to the truth of the expressed proposition." (Searle, 1979:12). Indeed, the psychological state expressed by an assertive is Belief (that *p*). Of course, the degree of belief or commitment may approach or even reach zero, as in the case of lies,

but along the true-false dimension that characterizes assertives, *assertion* shows more commitment than the others in the group under analysis, and *guess* and *conjecture* the least commitment of all. As for the distribution of *that*-clause with *contention*, one has to remember that the noun characterizes assertions as acts of defending and safeguarding one's own position, in which the content is strongly asserted.

(13)   Here is another challenge in the war against porn: fighting the **contention** that, as between classical sculpture and Larry Flynt, there is hardly any difference - it's all in the eye of the beholder. [MAG 2001]

As for *suggestion* and *presumption*, one has to consider that philosophers have observed that asserting imposes a kind of responsibility on the speakers to propagate an assertion or to rely on it for some further assertion. However, the normative requirement of justification does not generalize to every assertive speech act: for instance, the speaker is not committed to having good evidence when she is suggesting. As Kissine (2008, 2010) states, canceling one's commitment to having sufficient justifications does not prevent one from being committed to the truth of the communicated content. Indeed, the speaker may remain committed to *p* being true with respect to what she takes to be true at the utterance time only. Nouns such as *presumption* and *suggestion* characterize assertive speech acts in a way that makes it mutually manifest to speaker and hearer that the speaker does not know for sure whether the content *p* is true, but that it has to be taken as such for the sake of the argument, with revision and reassessment that may loom large. Indeed,

the role of an assertive speech act cannot be reduced to that of providing information. [...] putting forward a proposition with reservations, which is a rough definition of suggesting qua speech act, does not amount to assigning a low degree of probability to that proposition. (Kissine, 2010:355)

Walton (1993) basically says the same things when he explains the difference between assertion, presumption and supposition. As a speech act, presumption is halfway between assertion and supposition. Presumption essentially means that the proponent of the proposition in question does not have a burden of proof, only a burden to disprove contrary evidence, should it arise in the future sequence of a dialog. Thus, a presumption stays in place for a certain number of moves in a dialog, but for neither party is it a permanent or non-retractable commitment that must stay in place for the duration of the dialog. A presumption operates to give the argument some provisional basis for going ahead, even in the absence of firm premises known to be true.

(14)   Mr. ROLLBAND: I'm just as qualified to pick someone for you as you are to pick someone for you. ROSE: Well, now, that's quite a **presumption**. [SPOK 1991]

What mostly differentiates *presumption* and *suggestion* from *argument*, *supposition*, *allegation*, *affirmation*, *claim* and *statement*, i.e. the nouns that are under the same node in the cluster analysis, is the requirement of justification.

(15)   Animals cannot have beliefs and desires. This latter assertion is founded on the **argument** that in order to have beliefs and desires one must have language. [ACAD 1999]

Instead, the main difference between the sub-cluster argument, supposition, affirmation, and allegation, and the sub-cluster claim and statement (cf. section 4.3), is that between more argumentative assertions and more informative assertions (Leech, 1983).
Hint is neither a declaration, nor a speculation. Rather, it is a suggestion or clue as to what the reality might be. It could be construed as an allusion in lieu of an explicit statement. Usually, a hint

is something that A says to B as a way of leading A to the truth, so it is a partial revelation.[18] And it is also more private than public.

> (16)   "Can't we talk to base?" Wolverton said, ignoring Nozaki's broad **hint** that <u>he should shut up</u>. [FIC 2008]

Conjecture characterizes a speech act in which one weakly asserts that *p* while presupposing that one has at least some slight evidence for *p*, and, as a consequence, it is one of the nouns that relies less on the *that*-clause construction.

> (17)   "Evidently you do not regard yourself as a member of the Yao gentry." Helsse laughed. "More tactful might be the **conjecture** that <u>I enjoy what I am doing</u>." [FIC 1993]

Lastly, *guess* is the noun that relies less than all the others on this construction for its occurrence, and the chi-square test shows that there is a statistical difference between the occurrence of *guess* with *that*-clause and the occurrence of this construction with all the other nouns in the corpus. Indeed, if a conjecture is a very weak assertion, a guess can just be "an unfounded stab in the dark." (Searle and Vanderveken, 1985:188).

> (18)   "And how do we find Ocean Boulevard?" "I'm taking a wild **guess** that <u>it runs parallel to the ocean</u>", she quipped. [MAG 1995]

> *4.1.2.3.N-BE-that*

Figure 3 shows the results for the construction N-BE-that.

[Insert Figure 3 here]

Example (19) exemplifies this construction.

> (19)   It was all amicable, as far as I could tell. My **guess** is that <u>Uncle Karl just didn't want to work as hard as Dad</u>. [FIC 1993]

In the case of N-BE-that, the situation is somehow reversed. *Guess* is the only noun that relies significantly on this construction. And, in the majority of cases, as the analysis of the determiners points out, guess tokens are those in which one does not have the default situation of a speaker who, in an actual discourse situation characterizes a fragment of speech of a speaker in a resource situation as an act having *F*-ing. Instead, one has identity of these two roles. The second noun in the list is *presumption* but, as can be seen from the chi-square analysis, the difference in the reliance on this construction between the two nouns is highly significant, which means that that construction occurs with *presumption*, but the noun is not attracted by it. The same holds true for all the other nouns in the corpus with *hint* that shows no occurrences with this construction.

Caffi and Janney (1994) include the N-BE-that construction among the so-called evidentiality devices which include all choices that regulate the truth value of what is expressed. The function of these devices is to reduce the commitment to a proposition, in the case of the constructions under analysis, to the one encoded in the that-clause. They are common with weak assertives and tend to occur with first-person determiners, most frequently the possessive my. They are basically used to underline the subjectivity/tentativeness of propositions. In fact, if one looks at example (19), the passage leaves the impression that the speaker is not particularly sure of the content of her message,

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[18] I am grateful to Gregory Conti (University of Perugia) for discussing this with me.

and thus she tries to reduce the responsibility using a weak assertive noun expressing subjectivity and/or tentativeness.

Moreover, the construction also has a focusing function (cf. Schmid, 2001) in that it directs the attention to the information given in the that-clause in which one finds the peak of prominence. This has the consequence that the noun in topical position is presented as old information, as something that is shared knowledge and that can, therefore, go unnoticed. As a result, as Schmid (2001) shows, the presuppositions triggered suggest beliefs and expectations that may lie outside the domains of knowledge and truth.

The same distribution, in broad lines, is confirmed for the construction N-BE-zero that. The results are reported in Fig. 4.

[Insert Figure 4 here]

4.1.2.4. Pro-BE-N

[Insert Figure 5 here]

Fig. 5 reports the results of compiled reliance for the pattern Pro-BE-N, exemplified in example (20).

> (20)   Those factors may be combining to create this highly volatile environment for discovering prices, he said. But for now, that is pure **conjecture** on my part. [NEWS 2008]

As Schmid (2000:309) rightly points out, this is the pattern with the most conspicuous characterizing potential. It highlights the characterization that the noun does. So, it makes sense that one finds it with *conjecture* for which the axiological parameter is important. *Assertion*, for which this parameter is not relevant, is at the opposite end of the ranking order.

Uses of this type are clear examples of unmarked distribution of topic and focus. In example (20) the noun *conjecture* makes up the focus of the clause that contains the new information. On the other hand, the leftmost noun phrase of the clause – the pro-form functioning as subject – must be regarded as referring to activated information. This means that the antecedent shell content is represented in short term memory, but not at the current center of attention. The most recurrent pro-form in the corpus is the demonstrative pronoun 'that'.

In quite a number of cases, in these types of construction there is an AdjP as a premodifier that reinforces the axiological aspect already encoded by the noun. So, for example, in the case of *allegation*, what the AdjPs found in this pattern share from the semantic point of view would seem to be a component of [ANOMALY] accompanied by a negative connotation, as can be seen in adjectives such as *spitting*, *damning*, *shocking*, *noxious*, *phony*, *outlandish*, *ugly*, *false*, *wrong*, *extraordinary*, *cheating* and similar. They all seem to put extra focus on the information. The occurrence of this type of premodifying AdjPs, i.e. AdjPs containing a head adjective with such semantic traits, is also explained by the fact that corpus data on *allegation* most often belong to the spoken register in COCA.

> (21)   Five weeks before the Deepwater Horizon exploded on April 20th, BP and Halliburton knew something was potentially very wrong. That's the damning **allegation** from government investigators, who outline a pattern of failed safety tests and non-communication. [SPOK 2010]

4.2. Cluster analysis

[Insert Figures 6 and 7 here]

Figs. 6 and 7 show the results of the cluster analysis using the Euclidean and the Manhattan distance measure. As can be seen, the only difference lies in the way in which hint and conjecture are clustered, but no difference can be seen as far as all the other nouns in the group are concerned. Therefore, the Manhattan distance being more precise, the dendrogram that results from this metric will be discussed. As is well known, there is no single variable that, on its own, succeeds in assigning nouns to a cluster. Though more positions might be defensible, I will argue that three main blocks emerge from the cluster analysis.

First of all, in Fig. 7, the big cluster of [argument, supposition] clusters together first, then they cluster with [allegation] and later with [affirmation]. This sub-cluster then amalgamates with the sub-cluster [claim, statement]. The two sub-clusters then cluster with the sub-cluster [presumption, suggestion]. In cluster analytical terms, this means that [argument, supposition, allegation, affirmation, claim, statement] are more similar among themselves and more dissimilar to [presumption, suggestion]. Moreover, they all are more similar among themselves and dissimilar from [conjecture], which is the last to amalgamate. The vertical lines that link all the nodes in this rather big cluster are quite short, whereas the length of the vertical line that links it with [assertion, contention] is instead rather long. [assertion, contention] amalgamate early and so are very similar, but the height at which they cluster with [argument, supposition, allegation, affirmation, claim, statement, presumption, suggestion, conjecture] means that this cluster is very independent from the other large one. At a very short distance [hint] links to all the nouns clustered so far, which suggests that they are more similar among themselves and dissimilar from [hint]. Lastly, [guess] is added at a considerable distance from all the nouns in the group, as shown by the length of the vertical line. These final clustering steps suggest that *hint* and *guess* are the most dissimilar nouns in the group. This is especially true for *guess* that is the last to amalgamate. Summing up, the distribution of the noun clusters consists of one big group represented by [argument, supposition, allegation, affirmation, claim, statement, presumption, suggestion, conjecture], the cluster [assertion, contention], and the two outliers [hint] and [guess].

5. Ways of asserting

In this section, I discuss the variations the group of assertive nouns under study encode in the characterization of an utterance as having a specific *F*-ing, and I then motivate the structure of the category of nouns that conceptualize the speech act of asserting in English as was revealed by the analysis. The graphic representations are reported in Fig. 8. Furthermore, I illustrate how the results can help in identifying the most prototypical noun in the category, and represent the structure of the ways of asserting on the horizontal and vertical axes of categorization (Fig. 9).

[Insert Figure 8 here]

If one starts with the two sub-clusters of the rightmost node, [claim, statement] and [[[argument, supposition] allegation] affirmation]]] can be characterized on the cline ±informative - ±argumentative (Leech, 1983). *Claim* and *statement* are more neutral in their denotation, as well as the ones that occur most with Det-N, though they occur a lot with N-that as well. *Argument*, *supposition*, *allegation*, and *affirmation* are less neutral. Indeed, in the case of *allegation*, the axiological parameter is especially relevant. *Claim* and *statement* are also the nouns in which evidentiality constructions are less frequent. It is true that *claim* has to do with 'taking a stand', but not as much as *affirmation*. Affirming is usually opposed to denying and *affirmation*, like *argument*, conceptualizes a defending speech act. In the case of *allegation*, the speech act conceptualized does not have the burden of proof the speech acts conceptualized by the other nouns in this group have

(in *supposition* the content is presented as true for the purpose of the argument). However, even if it is weaker than the others as far as the assertoric commitment is concerned, still, the utterance-act it conceptualizes has some truth, and speaker is ready to prove it and, if proven, which it is not at the moment of speaking, there can be consequences. The following example is a case in point.

> (22)   We never charged that the CIA itself provided the weapons or technology that was sent to Iraq. In each instance, the providers were private companies or arms dealers. We stand by our **allegation** that <u>the CIA facilitated those shipments</u>. [SPOK 1991]

Moving to the cluster [presumption, suggestion], the level of tentativeness increases, and these nouns are instead characterized by the dimension 'not sufficient justification', at the time of the utterance. Indeed, it seems that the main feature that distinguishes the nouns belonging to these two groups is the doubt or trust in the truth of the assertion. Following Leech (1983), the main difference is that between tentative versus confident assertions.
[conjecture] is the most tentative of the nouns belonging to this block. It has, like *allegation*, an axiological component. *Conjecture* is also the most complex noun in terms of behavioral profile. The syntactic structures it occurs with are numerous and varied.
[assertion, contention] show the highest commitment to the truth of the proposition. *Assertion* occurs only in the most frequent syntactic structures that are present in the behavioral profile of all the nouns in the corpus, whereas *contention* also occurs in the existential construction. *Contention* is also rare as a shell noun. It counts only 87 occurrences of shell noun usage out of the 200 examples extracted from the corpus for each noun.
[hint] is rather dissimilar from all the other nouns. As already stated, it is neither a declaration, nor a speculation. Rather, it could be construed as an allusion in lieu of an explicit statement. It is the only noun in which there is a complete backgrounding of the speaker, as shown by the fact that it never occurs with the first type of determiners but has a high percentage of use of Type 4. It counts only 49 tokens of shell noun usage in the corpus and half of them rely on Det-N for their occurrence.
Lastly, [guess] shows the least assertoric commitment – association of belief, truth and knowledge. It ranks last in the N-that complementation pattern and first in the N-BE-that and N-BE-zero that. The subjective and tentative component associated with the noun is clearly expressed in the predominance of Type 1 determiners.
Of the nouns belonging to the corpus under study, *assertion* qualifies as the most prototypical assertive noun, namely as the best example of the category that includes all the nouns under study. As already stated, a prototype (i) maximizes the number of attributes shared by members of the category; (ii) minimizes the number of attributes shared with members of other categories; (iii) is used to define the other terms in the lexical domain through explicitation, i.e., its definition is included in the definition of the other members of the lexical domain.
As for (i), *assertion* occurs only in the most recurrent constructions found for the assertive nouns under study – as shown in Table 4 – and shows the second highest reliance score with the pattern N-that which is undoubtedly the one that characterizes this type of nouns.

[Insert Table 4 here]

It is not possible in this article to look at criterion (ii) in detail. However, if one considers that in Schmid (2000), what distinguishes, among the others, commissive and directive nouns from assertive nouns is the generalized use of *to*-infinitive with commissive and directive nouns, this construction never shows up with assertion, whereas it does occur in the corpus with *argument*,

claim, *presumption* and *suggestion*.[19] Moreover, the fact that all the other nouns show a behavioral profile with a syntactic complexity that is higher than that of *assertion* lends argument to the centrality of *assertion*.

Lastly, it is true that *assertion* is used in the definition of all the other nouns belonging to the corpus. *Assertion* is also the noun linked to the verb 'assert', which is the primitive assertive, and which names the illocutionary force of assertions (Searle and Vanderveken, 1985).

Fig. 9 spells out the details of the analysis on the horizontal and vertical axes of categorization.

[Insert Figure 9 here]

6. Conclusion

This paper has reported a fine-grained study of a group of illocutionary nouns belonging to the group of assertive nouns. The noun behavioral profiles have been investigated using descriptive and exploratory statistics.

From the descriptive point of view results show that (i) the complementation patterns found for the nouns under investigation are more articulated than the patterns found in Schmid (2000); (ii) constructional possibilities are part of the semantic-pragmatic meaning of the noun, and (iii) there is a correlation between semantic-pragmatic similarity and distributional similarity.

From the theoretical point of view – though, obviously, further data are necessary – the results emerging from the study seem to give support to the view that complementation and complement selection are semantic (see Givón, 1990; Dik, 1997), thus highlighting the necessity of a more fine-grained analysis of the onomasiological organization of the lexicon to explain the combinatorial properties on the syntagmatic axis.

At the same time, the results on linguistic patterns lend support to what philosophy states about the commitment to belief, truth, and knowledge that defines assertive speech acts, thus showing the potential for descriptive English research to be applied across disciplinary boundaries.

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[19] *Suggestion* characterizes a speech act that is a hybrid between an assertive and a directive, and therefore it makes sense that the noun occurs with *to*-infinitive.

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