Specificity in lexical verbs:
a corpus-based lexicological study

by

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“When *I* use a word,” Humpty Dumpty said, in rather a scornful tone, “it means just what I choose it to mean – neither more nor less.”

“The question is,” said Alice, “whether you *can* make words mean so many different things.”

“The question is,” said Humpty Dumpty, “which is to be master – that’s all.”

Alice was too much puzzled to say anything; so after a minute Humpty Dumpty began again. “They’ve a temper, some of them – particularly verbs: they’re the proudest – adjectives you can do anything with, but not verbs – however *I* can manage the whole lot of them! Impenetrability! That’s what I say!”

(Lewis Carroll, *Through the looking glass*)

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ABSTRACT

Key words

Functional linguistics, cognitive linguistics, lexical verbs, lexical specificity, lexical diversity, semantic categories, Black South African English (BSAE)

Several theorists (amongst whom Halliday & Matthiessen, 2004:175) have stated that the verb (or the verbal group) is the core element in clauses and is largely responsible for the grammatical structure of language. In spite of this pivotal role that verbs fulfil in clauses, lexical specificity is rarely investigated in this class. Instead researchers prefer to investigate lexical specificity in the noun class.

It is against this background that the main purpose of this study is to investigate specificity in the lexical verbs of first language (L1) English users and Black South African English (BSAE) users. In order to achieve this aim the secondary aims of the study are:

(i) to develop a framework for the analysis of lexical specificity in the lexical verb word class

(ii) to compare specificity with regard to lexical verbs in L1 English and BSAE by using corpora, which allows one to firstly test the analysis framework on corpus data and secondly to determine whether or not lexical verbs in BSAE are less specific than lexical verbs in L1 English

(iii) to establish the reasons for the differences in lexical specificity with regard to lexical verbs between L1 English and BSAE English.

In order to achieve these aims, two corpora were used: the *Louvain Corpus of Native English Essays* (also known as LOCNESS) that consists of texts written by a subpopulation of L1 English users and the *Tswana Learner English Corpus* (also known as the TLE) that consists of texts written by a subpopulation of BSAE users. The results

obtained in this study were interpreted from both a systemic functional perspective and a cognitive perspective.

The initial quantitative results indicated that even though the BSAE users use lexical verbs (tokens) more frequently than L1 English users do, the BSAE users have fewer lexical verb lemmas (types) at their disposal than the L1 English users. Statistical tests determined that the mean type/token ratio between the two independent corpora is not only significant, but that the degree to which there is more specificity in the lexical verbs of the L1 English users than in the lexical verbs of the BSAE users is large.

Due to space constraints, the qualitative part of the study focused only on the communication verbs in LOCNESS and the TLE. In order to provide an in-depth overview of the communication verbs, the communication verbs were divided into five semantic subcategories (using frequency counts and semantic considerations). They are:

(i) [to say something in a particular manner]
(ii) [to say something in order to express one's feelings]
(iii) [to say something in order to convey information]
(iv) [to say something to someone in order to elicit a certain response]
(v) [to say something in response to something already said]

Each of these semantic categories in turn was divided into semantic subcategories to present a detailed insight into the communication verbs employed in both LOCNESS and the TLE.

In the study it was determined that there is overall more specificity in the lexical verbs of the L1 English users than in the lexical verbs of the L2 English users. It was also determined that there is overall more lexical diversity within the lexical verbs of the L1 English users. The following factors influenced the lexical specificity and lexical diversity in the corpora:

(i) In cases where more general communication verbs are elaborated by verbs containing manner elaborations, the BSAE users tend not to use the more specific verbs.

(ii) Communication verbs that usually play an important role in academic literacy (such as *summarise* and *argue*) are used to a lesser extent by the BSAE users than the L1 English users.

(iii) In cases where a communication verb could possibly belong to another semantic category (as is the case with the verbs *stress* and *maintain*) the BSAE users tend to avoid using the verbs as communication verbs.

(iv) Some communication verbs (such as *demand* and *beg*) acquired additional meanings in BSAE.

(v) Some essay topics in both LOCNESS and the TLE influenced the frequencies of some communication verbs in the respective corpora.

Considering the factors above, it was found that being a L2 English user means that English will not always function in the same contexts for the BSAE users as it would for the L1 English users. Therefore the vocabulary of the BSAE users will only be specific and diversified in those semantic categories needed to function in certain contexts.

Consequently, the findings of this study can be used to contribute to the development of pedagogical material in academic literacy courses being presented to BSAE users to create an awareness of the variation in English and all the contexts in which it can function. The findings can also be of value to researchers in the fields of lexicography and computational linguistics.

OPSOMMING

Sleutelwoorde

Funksionele linguistiek, kognitiewe linguistiek, leksikale werkwoorde, leksikale spesifisiteit, leksikale diversiteit, semantiese kategorieë, Black South African English (BSAE)

Verskeie teoretici (onder wie Halliday & Matthiessen, 2004:175) stel dat die werkwoord (of die werkwoordgroep) die sentrale elemente in klouse is en grootliks verantwoordelik is vir die grammatikale struktuur van taal. Ten spyte van dié belangrike rol wat werkwoorde in klouse speel, word leksikale spesifisiteit selde in hierdie klas ondersoek. Navorsers verkies eerder om leksikale spesifisiteit in die selfstandige naamwoordklas te ondersoek.

Dit is teen hierdie agtergrond dat die hoofdoel van die studie is om spesifisiteit in die leksikale werkwoorde van eerstetaal (T1) Engelse gebruikers en Black South African English (BSAE) gebruikers te ondersoek. Ten einde hierdie doel te bereik, is die sekondêre doelwitte van hierdie studie:

(i) om ’n raamwerk vir die analise van leksikale spesifisiteit in die leksikale werkwoordklas te ontwikkel
(ii) om spesifisiteit in die leksikale werkwoorde in T1-Engels en BSAE te vergelyk deur gebruik te maak van korpora wat die navorser eerstens in staat stel om die raamwerk vir die analise van leksikale spesifisiteit te toets op korpusdata, en tweedens om vas te stel of die leksikale werkwoorde in BSAE minder spesifiek is as die leksikale werkwoorde in T1-Engels
(iii) om die redes vir die verskil in leksikale spesifisiteit in die leksikale werkwoorde van T1-Engels en BSAE vas te stel.

Ten einde hierdie doelwitte te bereik is twee korpora gebruik, naamlik die *Louvain Corpus of Native English Essays* (beter bekend as LOCNESS) wat saamgestel is uit tekste wat deur ’n subpopulasie van T1-Engelse gebruikers geskryf is en die *Tswana Learner English Corpus* (beter bekend as die TLE) wat saamgestel is uit tekste wat deur ’n subpopulasie van BSAE-gebruikers geskryf is. Die resultate in hierdie studie is vanuit beide ’n sistemies-funksionele perspektief en ’n kognitiewe perspektief geïnterpreteer.

Die aanvanklike kwantitatiewe resultate het aangedui dat die BSAE gebruikers minder leksikale werkwoordlemmas (tekseenheidtipes) tot hulle beskikking het as die T1-Engelse gebruikers, alhoewel die BSAE-gebruikers meer gereeld van leksikale werkwoorde (tekseenhede) gebruik maak as T1-Engelse gebruikers. Statistiese toetse het bepaal dat die gemiddelde tekseenheidtipe/tekseenheid-ratio tussen die twee onafhanklike korpora nie net betekenisvol is nie, maar dat die mate waartoe daar meer spesifisiteit in die leksikale werkwoorde van die T1-Engelse gebruikers is as in die leksikale werkwoorde van BSAE gebruikers groot is.

As gevolg van beperkings ten opsigte van spasie, het die kwalitatiewe gedeelte van die studie slegs gefokus op die kommunikasiewerkwoorde in LOCNESS en die TLE. Ten einde ’n indiepte oorsig van die kommunikasiewerkwoorde te voorsien, is hierdie werkwoorde in vyf semantiese subkategorieë verdeel deur gebruik te maak van frekwensietellings en semantiese oorwegings. Dit sluit in:

(i) [om iets op ’n sekere manier te sê]
(ii) [om iets te sê om uiting te gee aan gevoelens]
(iii) [om iets te sê ten einde inligting oor te dra]
(iv) [om iets vir iemand te sê ten einde ’n sekere reaksie uit te lok]
(v) [om iets te sê in reaksie op iets wat reeds gesê is]

Elkeen van hierdie semantiese kategorieë is op sy beurt in semantiese subkategorieë verdeel ten einde ’n indiepte insig te verleen aan die kommuniekasiewerkwoorde wat in beide LOCNESS en die TLE gebruik word.

In hierdie studie is bevind dat daar inderdaad oor die algemeen meer spesifisiteit in die leksikale werkwoorde van T1-Engelse gebruikers is as in dié van die BSAE-gebruikers.

Daar is ook bevind dat daar oor die algemeen meer leksikale diversiteit in die leksikale werkwoorde van die T1-Engelse gebruikers voorkom. Die volgende faktore het die leksikale spesifisiteit en leksikale diversiteit in die korpora beïnvloed:

(i) In gevalle waar meer algemene kommunikasiewerkwoorde uitgebrei word deur werkwoorde wat uitbreidings ten opsigte van wyse bevat, verkies die BSAE-gebruikers om nié die meer spesifieke werkwoorde te gebruik nie.
(ii) Kommunikasiewerkwoorde wat gewoonlik ’n belangrike rol in akademiese geletterdheid speel (soos *summarise* en *argue*) word minder gebruik deur die BSAE-gebruikers as deur die T1-Engelse gebruikers.
(iii) In gevalle waar die kommunikasiewerkwoord moontlik aan ’n ander semantiese kategorie kan behoort (soos die geval is met *stress* en *maintain*) is die BSAE-gebruikers geneig om nié van die werkwoorde as kommunikasiewerkwoorde te gebruik nie.
(iv) Sommige kommunikasiewerkwoorde (soos *demand* en *beg*) het addisionele betekenisse in BSAE verkry.
(v) Sommige opstelonderwerpe in beide LOCNESS en die TLE het die frekwensie van sommige kommunikasiewerkwoorde in die onderskeie korpora beïnvloed.

In die lig van die faktore hierbo, is daar bevind dat om ’n T2-gebruiker te wees vir die BSAE-gebruikers beteken dat Engels in minder kontekste vir hulle gaan funksioneer as vir die T1-gebruikers. Daarom sal die woordeskat van die BSAE-gebruikers slegs spesifiek en gediversifiseer wees in daardie semantiese kategorieë wat benodig word om in sekere kontekste te funksioneer.

Die bevindinge in hierdie studie kan gevolglik gebruik word om ’n bydrae te lewer tot die ontwikkeling van pedagogiese materiaal in akademiese geletterdheidskursusse wat aan BSAE-gebruikers gebied word, sodat ’n bewustheid geskep kan word van die variasie in Engels en al die kontekste waarin dit kan funksioneer. Die bevindinge kan ook van waarde wees vir navorsers in die velde van leksikografie en rekenaarlinguistiek.

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TYPOGRAPHICAL CONVENTIONS

Lexical items are printed in italics, e.g. *move*

Meanings of linguistic forms are given between single quotes, e.g. ‘move’

Citations are given between double quotes

Names of categories are printed in small capitals, e.g. MOVE

Semantic attributes are given between square brackets, e.g. [obtaining something]

The first appearance of technical terms are printed in **bold**

Semantic abnormality is indicated by a *, e.g. *Nobody gave.

Words omitted from an example are indicated by <...>

Examples taken from LOCNESS are followed by (LOCNESS)

Examples taken from the TLE are followed by (TLE)

CHAPTER 1

INTRODUCTION

1.1 Problem statement

Lexical semantics can be studied in terms of all or any of the four lexical word classes, namely nouns, lexical verbs, adjectives and adverbs. However, an in-depth study cannot be done by traversing all these word classes. This study only focuses on the lexical verb, because Halliday and Matthiessen (2004:176) point out that the verb is the core element in the clause. Biber, Johansson, Leech, Conrad and Finegan (1999:63) emphasise this point by saying that lexical verbs denote actions, processes or states and serve to establish the relationship between the participants in an action, process or state. Tomasello (1992:6), for example, points out that a verb such as *give* designates an event involving at least three entities: the giver, the object given and the person given to. Each of these three entities undergoes a specific change of state. As these entities fulfil certain conceptual roles that play an integral role in the meaning of the verb, they can be seen as providing a "frame" for the structuring of larger linguistic structures. As a result verbs are largely responsible for the grammatical structure of language.

Working in Systemic Functional Linguistics (SFL), Halliday and Matthiessen (2004:175) point out that the clause consists of three components namely the process (realised by the verbal group), the participants involved in the process (realised by the nominal group) and the circumstance associated with the process (realised by the adverbial group and the prepositional phrase). These enable us to construe our experiences of the world and are therefore related to experiential meaning. The process is the core element in the clause as illustrated in Figure 1.1 below.

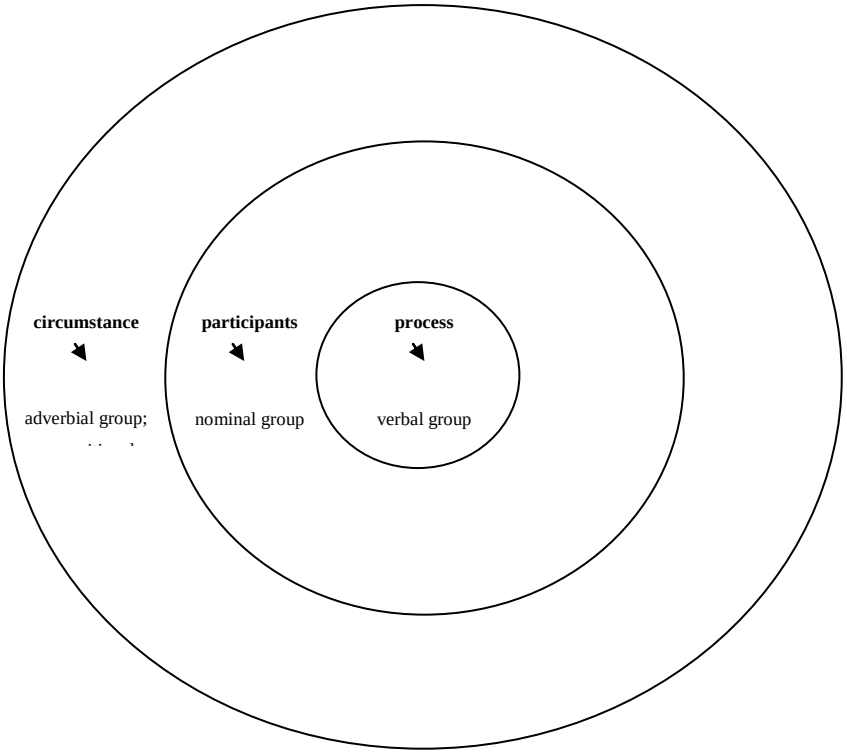


Figure 1.1: Central and peripheral elements in the experiential structure of the clause (Halliday & Matthiessen, 2004:176)

SFL distinguishes between six process types which enable us to construe experience (Halliday and Matthiessen, 2004:170-175). They are material processes, behavioural processes, mental processes, verbal processes, relational processes and existential processes. These process types enable us to not only construe outer experiences (the processes of the external world), but also inner experiences (the processes of consciousness). From the experiential perspective we generally focus on the lexical verb when investigating the process (Thompson, 2004:87).

Even though the verb is the core element in the clause, **lexical specificity**[1] is usually investigated in the noun class rather than the lexical verb class (Cruse, 1977; Rivero, 1977; Halliday and Matthiessen, 1999:83-89; Langacker, 2004). When Taylor (2003:50) investigates linguistic categorisation he gives a single example of lexical specification in verbal categories, but then goes on to pay attention to lexical specification with regard to

[1] Refer to Section 2.4 for a definition and discussion on lexical specificity.

nouns. Tomasello and Merriman (1995a:3-4) point out that "even though they are as natural as any other lexeme, verbs have been largely ignored". Tomasello and Merriman (1995a:1) create an awareness of the "obsession" with object labels and ask that investigators turn their attention to verbs. Since then there has been many publications on verbs (Tomasello & Merriman, 1995b; Faber & Usón, 1999; Altenberg & Granger, 2001, Lee, 2003; Newman & Rice, 2004; Nokkonen, 2006; Gagarina & Gülzow, 2006; Kipper, Korhonen, Ryant & Palmer, 2007; Ramchand, 2008; just to name a few). This study aims to contribute to this research on verbs.

Taylor (2003:48) and Halliday and Matthiessen (1999:84) distinguish between the following categories in terms of lexical specificity: the subordinate level category, the basic level category and the superordinate level category. The basic level is the "level of categorization which is cognitively and linguistically more salient than the others" (Taylor, 2003:48). According to Halliday and Matthiessen (1999:84) children tend to acquire lexical items in the basic level category first.

The theoretical tools that are available in SFL are not extensive enough to deal with all aspects of the concept of lexical specificity. Therefore this study also incorporates Cognitive Linguistic (CL) concepts to investigate specificity with regard to lexical verbs. The notion of categorisation by prototypes features strongly in CL. According to Langacker (1987:54, 1991:59) categorisation by prototypes takes place "where membership in a category is determined by perceived resemblance to typical instances". This study categorises the lexical verbs by means of prototypes.

The notion of lexical taxonomy is central to an investigation of lexical specificity. A lexical taxonomy is an organisation of words into classes and sub-classes on the basis of meaning (Halliday, 2004:8). This enables us to investigate the semantic relationships between the different words in terms of hyponymy, synonymy, and meronymy.

Halliday (2004:2) points out that every language has a vocabulary (lexicon) which forms part of the lexicogrammar. Halliday and Matthiessen (2004:43) represent lexicogrammar as a cline with two poles namely lexicology and grammar (illustrated in Figure 1.2 below).

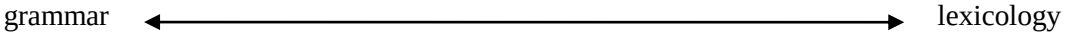


Figure 1.2: The lexicogrammar cline
(Halliday & Matthiessen, 2004:43)

Halliday (2004:2) goes on to say that the lexicogrammar of a language consists of a vast network of choices, through which a language construes its meanings. This study is situated at the lexicon pole, because only the lexical verb as realisation of "Event" (Halliday and Matthiessen, 2004:335-337) – and not the auxiliary and modal verbs – is researched.

It is important to base lexical research on large corpora, because, as Halliday (2004:17) points out, corpus-based lexicology research enables us to see with what semantic domains a word is associated and with what other words a specific word collocates. According to Teubert (2004:100) corpus linguistics studies languages on the basis of discourse. This enables researchers to describe how language and words are actually used.

In order to get a full grasp on the workings of lexical specificity in the lexical verb class, this study investigates lexical verbs in corpora of both first language English (hereafter L1 English) and Black South African English (hereafter BSAE)[2].

[2] Van Rooy (2000:ii) points out that the label BSAE has elicited criticism, because (a) "[t]o label this form of English as a form of South African English hides the connection between BSAE and other forms of English in Africa"; and (b) "[t]o label it Black is to reinforce the ethnic or racial naming practices that have been such a common practice in South Africa, with such dire consequences".

In response to the first point of criticism, Van Rooy (2000:ii) feels that it is important to regard BSAE as a form of South African English, because in doing so, it is acknowledged that "a unique linguistic melting pot has been developing in this country, where the different forms of English influence each other in all directions, alongside the interaction that exists between 'englishes' and other South African languages".

In response to the second point of criticism, Van Rooy (2000:ii) makes it clear that the term "Black" is intended to include "[n]ative Africans who speak a Bantu language as a first language, and who received their English language education in a township school from a BSAE speaking teacher." It is important to note that even though Indian and Coloured South Africans as well as Black speakers whose English resemble British or South African models are excluded from this definition, it is not implied that "there are no shared experiences of oppression, no shared cultural heritage". Instead this specific definition of BSAE is employed "to articulate a linguistic reality".

Van Rooy's (2000) argument is supported by Coetzee-Van Rooy and Van Rooy (2005) in their study on the labelling of South African English. In this study it was found that the participants used "a variety of labels, including the labels deemed as inappropriate by some South African linguists, for example, that of 'Black South African English'".

An important feature that needs to be investigated in these corpora is the frequency of the lexical verb as frequency is a possible indicator of salience (Dirven & Verspoor, 2004:30; Tuggy, 2005:238). Biber (2006:47) observes that verbs occur more frequently in spoken registers than written registers and Shaw and Liu (1998) and Terblanche (2009:47-48) point out that second language writers often write in a style that resembles spoken language. Table 1.1 below illustrates that the student writing register of BSAE (TLE) contains more verbs than the student writing register of L1 English (LOCNESS) and supports the claim that second language writers often write in a style that resembles spoken language.

	LOCNESS	**TLE**
Words in corpus	203 721	201 674
Verbs in corpus	39 832	45 636
Verbs in corpus per 100 000 words	19 552	22 629

Table 1.1: A comparison of the use of verbs
in the student writing registers of L1 English and BSAE

In the pilot study for this research it has come to light that there are more lexical verb lemmas in the category of high-frequency lexical verbs (verbs that occur more than 100 times per 100 000 words) in the TLE than in LOCNESS. In the category of low-frequency lexical verbs (verbs that occur less than once per 100 000 words), however, there are more lexical verb lemmas in LOCNESS than in the TLE. As there are fewer than 30 lexical verb lemmas in the high-frequency category and a few hundred lexical verb lemmas in the low-frequency category, this data suggests that BSAE does not permit the same range of expressive freedom as L1 English (even though BSAE users use verbs more often than L1 English users).

It has been pointed out in the literature on BSAE that BSAE users do not necessarily have the same experiences as L1 English users. Buthelezi (1995:243), for example, observe the following:

> Black South Africans share a cultural lifestyle whose norms and values are not necessarily the same as those of mother-tongue speakers of English. This extends to food, housing, means of transportation, shopping facilities and traditional occasions such as weddings and funerals. When the standard dialect fails to fulfil some of these communicative needs, a speech community will coin new words and expressions or adapt existing ones to express these ideas succinctly.

Makalela (2004:356-357, 363) also refers to the construal of experience when he explains how BSAE users share certain experiences that differ from the experiences of L1 English users creating a "new reality".

There are previous studies that touched on the vocabulary of BSAE. In their overview of the characteristics of BSAE, De Klerk and Gough (2002:364-365) list some loanwords from other South African languages that entered BSAE and also provide some examples of semantic extension resulting in new idiomatic expressions. Van Rooy (2008a) investigates the distribution of various word classes in a corpus of BSAE in his study of BSAE discourse patterns. A survey of the literature on BSAE, however, indicates that studies on lexical choice and semantics are still lacking in BSAE.

As it is not possible to do an in-depth study about lexical specification with regard to lexical verbs in all of the process types, this study investigates lexical specification with regard to lexical verbs in the semantic field of communication verbs (i.e. verbal processes).

1.2 Research questions

The discussion above leads to the following research questions:

(i) What should a framework for the analysis of lexical specificity in the lexical verb word class look like?

(ii) How does lexical specificity with regard to lexical verbs compare in L1 English and BSAE?

(iii) What are the reasons for the differences in lexical specificity with regard to lexical verbs between L1 English and BSAE?

1.3 Aims

The aims of this study are:

(i) To develop a framework for the analysis of lexical specificity in the lexical verb word class.

(ii) To compare lexical specificity with regard to lexical verbs in L1 English and BSAE by using corpora, which allows the researcher firstly to test the analysis framework on corpus data and secondly to determine whether or not lexical verbs in BSAE are less specific than lexical verbs in L1 English.

(iii) To establish the reasons for the differences in lexical specificity with regard to lexical verbs between BSAE and L1 English.

1.4 Approach

In this study the principles and concepts of Systemic Functional Linguistic (SFL) and Cognitive Linguistics (CL) are mainly employed to explain the data encountered, while the principles, concepts and practices of corpus linguistics are employed to analyse the data. A brief overview of each of these approaches is provided in the following sections.

1.4.1 A brief overview of Systemic Functional Linguistics (SFL)

In this study, which incorporates both SFL and CL, SFL provides tools for the semantic classification of verbs.

SFL is an approach that has developed significantly over the last forty years or so. Neale (2002:2) states that SFL has its roots in Firthian Linguistics, the Prague School and to some extent Saussurean linguistics. Halliday (1973:3) defines the functional approach to language as follows:

> A functional approach to language means, first of all, investigating how language is used: trying to find out what are the purposes that language serves for us, and how we are able to achieve these purposes through speaking and listening, reading and writing. But it also means more than this. It means seeking to explain the nature of language in functional terms: seeing whether language itself has been shaped by use, and if so, in what ways – how the form of language has been determined by the functions it has evolved to serve.

This idea of "how the form of language has been determined by the functions it has evolved to serve" runs like a golden thread through SFL and is emphasised by Halliday and Matthiessen (1999:xi) when they say that "[l]anguage evolved, in the human species, in two complementary functions: construing experience, and enacting social processes". This idea emphasises the point made earlier that should a language not fulfil the communicative needs of a speech community, that community will adapt the language to fulfil their communicative needs. It is from this perspective that this study will aim to establish the reasons for the differences in lexical specificity with regard to lexical verbs between L1 English and BSAE.

Neale (2002:3) points out that SFL is a descriptive theory that aims to "OBSERVE what language is like to establish a theory for DESCRIBING what language is like" (Neale's emphasis). From this perspective, SFL is a very useful approach in a corpus-linguistic study.

In this study SFL provides the researcher with semantic fields which assist in the analysis of the data. Here the work of Halliday and Matthiessen (1999, 2004) plays a central role. As pointed out in the problem statement, however, the theoretical tools that are available in SFL are not extensive enough to deal with all aspects of the concept of lexical specificity. Therefore this study also incorporates CL concepts in the analysis of the data.

1.4.2 A brief overview of Cognitive Linguistics (CL)

While SFL also distinguishes basic level, superordinate and subordinate categories, categorisation by prototypes is a notion that is discussed extensively in CL. Therefore it is

appropriate to give a brief overview of both SFL and CL. CL emerged in the 1970s as "a reaction against the dominant generative paradigm which pursues an autonomous view of language" (Ibbarretxe-Antuñano, 1999:15) and has been pioneered by Ronald W. Langacker (Taylor, 2002:3). CL, just as SFL, postulates that humans use language to "function in the physical and social world" (Taylor, 2002:9). Langacker (2008:4) formulates it as follows:

> [C]onceptualisation is grounded in physical reality: it consists in activity of the brain, which functions as an integral part of the body, which functions as an integral part of the world. Linguistic meanings are also grounded in social interaction, being negotiated by interlocutors based on mutual assessment of their knowledge, thoughts, and intentions.

Taylor (2002:9) emphasises the fact that CL is not just psychology applied to the study of language. Although CL studies the same things as any other theory (e.g. syntax, morphology, phonology, word meaning and discourse structure), CL aims to "render these accounts consonant with aspects of cognition which are well documented or self-evident". This approach will enable the researcher to not only describe and formalise the linguistic facts, but also to arrive at a more insightful explanation of the data.

An important concept in CL is salience. Taylor (2003:48) states that the basic level is the "level of categorization which is cognitively and linguistically more salient than the others". Frequency is potential evidence for salience, therefore this study also analyses the lexical verbs in the corpora in terms of frequency.

1.4.3 A brief overview of the corpus approach

Corpus linguistics is a methodology that has been developed during the 1960s (Teubert, 2004:107). When following this methodology one usually investigates language using a corpus, which is defined by Meyer (2002:xi) as "a collection of texts or parts of texts".

At this stage it is important to note that when saying one is going to incorporate corpus linguistics into one's study, one must make it clear that corpus linguistics cannot be equated with other paradigms in linguistics such as SFL and CL discussed in the previous

sections. Instead, it could be said that corpus linguistics is a methodology that can be used to analyse the actual use of language in natural texts.

One of the biggest advantages of corpus linguistics is that it enables one to "base one's analysis of language on real data – actual instances of speech or writing – rather than on data that are contrived or 'made-up'" Meyer (2002:xiii). Sinclair (1991:5) emphasises the importance of investigating natural language:

> Any instance of language depends on its surrounding context. The details of choice shown in any segment of a text depend – some of them – on choices made elsewhere in the text, and so no example is ever complete unless it is a whole text. Invented examples would, therefore, appeal for their authenticity to a non-existent context, which would eventually be evaluated by someone's intuition, with all the misleading consequences of that.

When employing corpus linguistics in one's studies, it is also important to take cognisance of the two ways in which corpora can be approached: on the one hand one can follow a corpus-based approach or on the other hand one can follow a corpus-driven approach. Tognini-Bonelli (2001:65) explains that the term *corpus-based* is used to refer to "a methodology that avails itself of the corpus mainly to expound, test or exemplify theories and descriptions that were formulated before large corpora became available to inform language study". On the other hand, Tognini-Bonelli (2001:84) points out that the term *corpus-driven* is used to refer to a methodology where the information is allowed to speak for itself:

> In a corpus-driven approach the commitment of the linguist is to the integrity of the data as a whole, and descriptions aim to be comprehensive with respect to corpus evidence. The corpus, therefore, is seen as more than a repository of examples to back pre-existing theories or a probabilistic extension to an already well defined system. The theoretical statements are fully consistent with, and reflect directly, the evidence provided by the corpus.

The corpus-based approach is largely followed in this study although there are also elements of the corpus-driven approach present as frequency distributions are expected to form the basic evidence for linguistic categories.

In this study then corpus linguistics is employed as a tool used to analyse the language use of L1 English users and BSAE users with regard to specificity in lexical verbs. The results of these analyses are then interpreted using the insights gained from SFL and CL.

1.5 Chapter division

Chapter 2 provides a theoretical overview of the most important concepts in SFL and CL relevant to this study. Based on these concepts, the framework for the analysis of lexical specificity is developed. Chapter 3 is dedicated to the methodology employed in this study. Here an overview is given of the most important concepts in corpus linguistics pertaining to this study after which the methodology that was employed is described. Chapter 4 presents not only the quantitative statistical data relevant to this study, but also the qualitative results that came to the fore using the framework developed in Chapter 2. The results of the analyses are also described and interpreted in this chapter. Chapter 5 provides a conclusion of the findings in the previous chapters. Recommendations for further research are also presented there.

CHAPTER 2

THEORETICAL FRAMEWORK

2.1 Introduction

Due to the lexicological nature of the study, the first purpose of this chapter is to provide an explanation of what is regarded as lexical items. The explanation takes into account the approaches of both SFL and CL. Secondly, one of the purposes of this study is to determine how lexical specificity with regard to lexical verbs compares in BSAE and L1 English. In order to achieve this purpose, an extensive overview is given on the concept of lexical specificity. The third purpose of this chapter is to provide an outline of the syntactic and semantic characteristics of verbs. According to Langacker (1972:36) a lexical analysis of a language is "intimately connected" with its syntactic analysis. Therefore the syntactic characteristics of verbs are discussed briefly, although the emphasis is on the semantic characteristics of verbs. Finally a framework is developed for the analysis of specificity in lexical verbs.

2.2 Lexical items

This study revolves around lexical items. Therefore it is important to define the concept for this study.

Langacker (2008:18) describes the standard conception of lexical items as follows:

> In the standard conception, lexical items are essentially syntactic atoms. They are "inserted" into particular slots at the bottom of syntactic tree structures ... The individual lexical items are continuous, self-contained and nonoverlapping. While they may be complex, their internal structure is morphological rather than syntactic. *Healthy*, for example, is analyzable into the component morphemes *health* and *-y*, (or, more tenuously, into

> *heal*, *-th*, and *-y*). Yet it functions syntactically as a simple adjective analogous to *big*.

Some lexical items, however, are larger than words and cannot be viewed as "syntactic atoms" (consider for example *get up, take up, take over*). Both SFL and CL acknowledge this fact (Halliday, 1985:63; Halliday & Matthiessen, 2004:351-354; Thompson, 2004:87; Langacker, 2008:21-22). Therefore grammar and lexicon are at the opposite ends of a cline. There are indeed many items that can clearly be placed at the lexicon end of the cline and vice versa, but the cline also allows for intermediate cases. Halliday and Matthiessen (2004:43) call this cline the **lexicogrammar cline**[3]. Halliday (2004:2) points out that the lexicogrammar of a language consists of a vast network of choices, through which a language construes its meanings.

2.3 Meaning

According to Saussure (1916/1972) people use words to describe the world and each word has its own capacity for reference. Saeed (1997:12) explains it as follows:

> [T]he meaning of linguistic expressions derives from two sources: the language they are part of and the world they describe. Words stand in a relationship to the world, or our mental classification of it: they allow us to identify parts of the world, and make statements about them.

This idea is also present in CL and SFL. In CL Geeraerts (2006:378) points out that "[s]emantic studies cannot ignore the experiential and cultural background of the language user". CL views language as one of the language user's cognitive tools to "interpret, order, retain, and express human experience" (Geeraerts, 2006:378). In SFL Halliday and Matthiessen (2004:29) postulate that language "construe[s] human experience":

[3] Cf. Figure 1.2 (p. 4).

> It names things, thus construing them into categories; and then, typically, goes further and construes the categories into taxonomies, often using more names for doing so.

Halliday and Matthiessen (2004:29) go on to say that language also provides us with a "theory of human experience, and certain of the resources of the lexicogrammar of every language are dedicated to that function". This function in SFL is known as the **experiential** function.

Halliday and Matthiessen (2004:175) point out that when working within the experiential function the clause consists of three components namely the process (realised by the verbal group), the participants involved in the process (realised by the nominal group) and the circumstances associated with the process (realised by the adverbial group and the prepositional phrase).[4] These enable us to construe our experiences of the world and are therefore related to experiential meaning.

SFL distinguishes between six process types which enable us to construe experience (Halliday and Matthiessen, 2004:170-175). They are material processes, behavioural processes, mental processes, verbal processes, relational processes and existential processes[5]. These process types enable us to not only construe outer experiences (the processes of the external world), but also inner experiences (the processes of consciousness). From the experiential perspective we generally focus on the lexical verb when investigating the process (Thompson, 2004:87).

2.4 Categorisation and lexical specificity

In the previous section it has already been mentioned that humans name things, categorise them and then construe the categories into taxonomies. Language thus becomes a tool that humans use to categorise the world and their experiences. In fact, Taylor (2003:xi) even goes as far as to state that "[h]uman beings are categorising creatures par excellence". As a result categories play an important role in CL. Lakoff (1987:5) points out that:

---

[4] Cf. Figure 1.1 (p. 2).

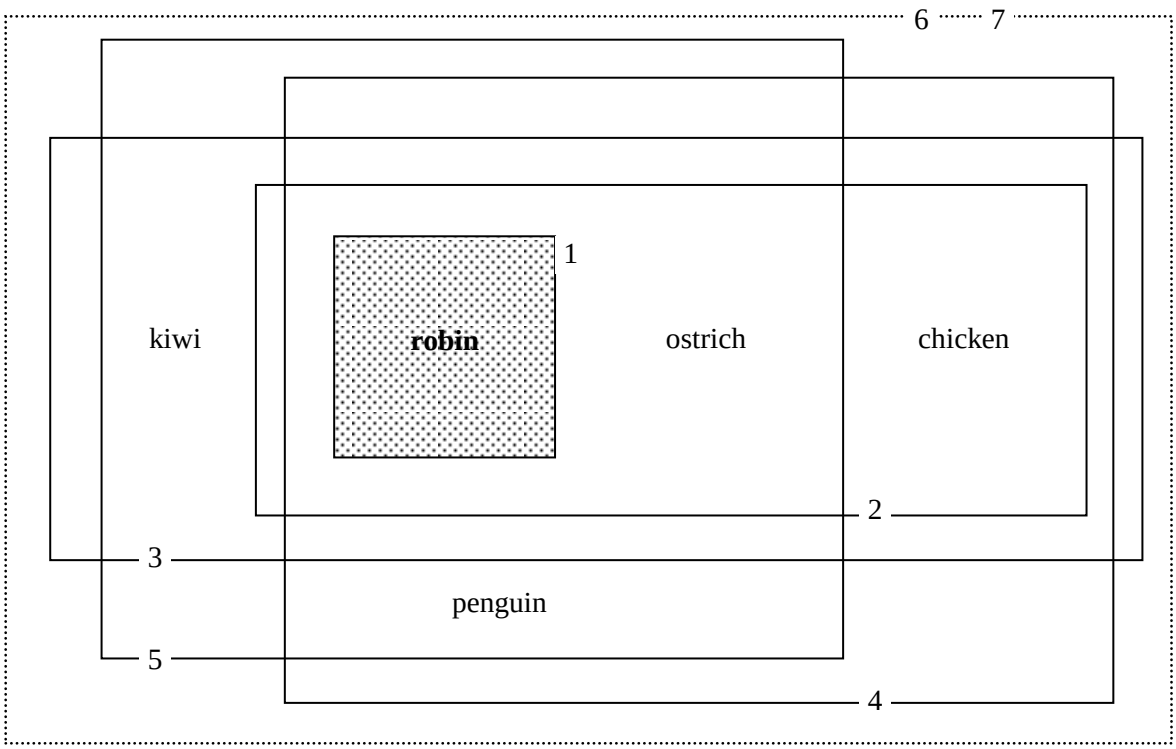
[5] The process types are described in more detail in Section 2.6.3.

> Categorization is not a matter to be taken lightly. There is nothing more basic than categorization to our thought, perception, action, and speech … Whenever we intentionally perform any *kind* of action, say something as mundane as writing with a pencil, hammering with a hammer, or ironing clothes, we are using categories.

In the classical approach[6] to categorisation a category is defined by a set of features shared by all members. Should an entity not share one of these features with the other members in the category then the entity cannot be a member of the category. This approach and its assumptions are probably best described by Katz and Postal's (1964:13-14) well-known example of the word *bachelor*. The meaning of *bachelor* can be represented in terms of four semantic features, namely [human], [male], [adult], and [never married]. In line with the first assumption mentioned above, any entity that exhibits these four semantic features can be represented by the word *bachelor*. Should any of these features not be present or have the wrong value (e.g. if an entity is [female] or [-adult]) then the entity cannot be represented by the word *bachelor*. This approach is also known as Componential Analysis (CA).

To illustrate how this approach becomes problematic, Geeraerts (2006:13, 14-16) takes a look at the literal meaning of the word *bird* (cf. Figure 2.1 below) from the point of view of Prototype Theory (PT).

[6] Taylor's (2003:20) term (which has two senses) is used here: (a) it goes back to Greek antiquity; and (b) it has dominated psychology, philosophy and (autonomous) linguistics.



1 being able to fly
2 having feathers
3 being S-shaped
4 having wings
5 not domesticated
6 being born from eggs
7 having a beak or bill

Figure 2.1: A definitional analysis of bird (Geeraerts, 2006:15)

In Figure 2.1 there are five entities, namely *kiwi*, *robin*, *ostrich*, *chicken* and *penguin*. Each of these entities is a candidate for category membership and is made up of certain features. In the classical approach one would say that for an entity to be a member of the category BIRD, the entity must exhibit the following criterial features[7]: it must be able to fly, it must have feathers, it must be S-shaped, it must have wings, it must not be domesticated, it must be born from eggs and it must have a beak or bill. If an entity does not exhibit every one of these criterial features, the entity does not qualify to be a member of the category. Therefore only the entity *robin* qualifies for membership in the category BIRD. In the classical approach all features are also weighted equally and so one member of a category cannot be a "better" instance than another member. It also means that the

[7] Bates and MacWhinney (1982:208-209) also use the term "criterial features" in their explanation of the classical approach to categorisation.

entity *ostrich* is in no way "closer" to membership in the category than the entity *penguin* which exhibits fewer features of the category BIRD than the entity *ostrich*.

Tuggy (2005:234), however, points out that in CL (unlike in the classical approach) categories "are defined in terms of gradual parameters, that is, they are matters of more-or-less rather than absolute, plus-or-minus dichotomies". This is also then a reference to the first of four characteristics of prototypicality as set out by Geeraerts (2006:9-10): "Prototypical categories cannot be defined by means of a single set of criterial (necessary and sufficient) attributes." In other words, the entity *penguin* will not be denied category membership because it does not exhibit all the necessary "criterial features". Secondly, prototypical categories exhibit a family resemblance structure. The entity *penguin* will therefore be allowed category membership as there is an overlap in the features that it exhibits with the prototypic member, *robin*. Thirdly, prototypical categories exhibit degrees of category membership. This means that the entity *robin* is a "better" instance of the category than *penguin*. Finally, prototypical categories are blurred at the edges. So even though it might be easy to define the prototype, it is more difficult to define the entities on the periphery.

An important concept that relates to this last characteristic of prototypicality is **vagueness** or **fuzziness**. Hampton (2007:3) argues that vagueness "generally relates to the question of whether or not, and to what degree an instance falls within a conceptual category". The entity *tomato* is an example of this phenomenon. Even though the tomato is scientifically regarded as belonging to the category FRUIT, it has the characteristics of a vegetable that enables people to use it as a vegetable more often than not. Therefore the entity *tomato* is on the periphery of the category FRUIT, and shares some characteristics with instances in the category VEGETABLE.

CL and SFL distinguish the following levels of categorisation (cf. Lakoff, 1987:46; Halliday and Matthiessen, 1999:84; Taylor, 2002:131-132; and Taylor, 2003:48): **subordinate** level category, **basic** level category and **superordinate** level category. The basic level can usually be found in the middle of taxonomic hierarchies as illustrated in Figure 2.2 on p. 22.

Rosch and Mervis (1975) found that basic level terms tend not to share features among themselves. Subordinate level terms, on the other hand, share features among themselves while superordinate level terms exhibit comparatively few nameable features. This suggests that basic level terms carry the most information. As a result the basic level is usually the "best example" or the "prototypical instance" of the category and it plays an important role in PT as it is the "level of categorisation which is cognitively and linguistically more **salient** than the others" (Taylor, 2003:48). Tuggy (2005:238) states that:

> This salience naturally results from many aspects of typical prototypes (e.g. their being the first learned and the most often encountered), and can be reasonably suspected of causing a number of others (e.g. their being the easiest to recall and the quickest to be assigned verbally to a category).

Lakoff and Johnson (1980:117) provide an experiential explanation for this psychological reality of the basic level when they say that "understanding takes place in terms of entire domains of experience and not in terms of isolated concepts". They explain it as follows:

> The fact that we have been led to hypothesize metaphors like LOVE IS A JOURNEY, TIME IS MONEY, and ARGUMENT IS WAR suggests to us that the focus of definition is at the level of basic domains of experience like love, time, and argument. These experiences are then conceptualized and defined in terms of other basic domains of experience like journeys, money and war.

Tuggy (2005:238) goes on to say that salience "is closely tied to (since it both results from and encourages) frequency of activation, and statistical counts of occurrence in usage provide a useful index to prototypicality". Downing (1980) conducted research regarding factors that influence lexical choice in narrative. In this research a film in which "a man picks pears, periodically climbing down the ladder on which he is standing to deposit his fruit in some baskets on the ground" was shown to subjects (Downing, 1980:90). The subjects then had to relate the events in the film in their own words. In this experiment Downing (1980:112) found that the subjects used basic level terms 93% of the time in their narratives whereas subordinate level terms and superordinate terms were

used only 5% and 2% of the time respectively. This supports the claims above that the basic level term is the prototypical instance of the category.

A concept which is closely related to frequency (of activation) is **entrenchment**. Entrenchment is a concept used by Langacker (2008:16) to explain how a structure becomes established as a unit (i.e. a lexical item). He explains this concept by referring to **automatisation**:

> **Automatization** is the process observed in learning to tie a shoe or recite the alphabet: through repetition or rehearsal, a complex structure is thoroughly mastered to the point that using it is virtually automatic and requires little conscious monitoring.
>
> (Langacker, 2008:16)

So the more frequently people use a specific structure, the more entrenched the structure becomes until it is established as a unit. Should the structure fall into disuse, however, there will be a negative impact on the degree of entrenchment of the structure. Semantic **bleaching** is a risk that goes hand in hand with entrenchment. Bybee (2007:271) describes bleaching as a "spiralling effect":

> Words or phrases that are much repeated lose their semantic force, which in a spiralling effect, allows them to occur more often which in turn conditions further semantic bleaching.

This suggests that lexical items with a high token frequency not only become entrenched, but can also undergo semantic bleaching.

Downing (1980) introduces the concept **codability** in her research. The categories that are "the most coded" are the categories that are used most frequently. Downing (1980:99) suggests that a language user has the freedom to refer to a particular referent in any number of ways, depending on the number of lexical items available to the language user and her familiarity with them:

> The codability of a given entity, then, is dependent not only on whether there exists an appropriate label for it in the language of the speaker, but also whether the speaker is aware of the label and willing to use it in a particular speech context.
>
> (Downing, 1980:101)

The language user's awareness and knowledge of different lexical items (i.e. ability to code certain categories) will thus influence the salience of different lexical items: if a language user is unaware of a certain lexical item, she will not be able to use the item and another item will be used in its stead.

In this study I will continuously refer to the different levels of categorisation as **lexical specificity**[8] (based on Cruse's use of the word in his article published in 1977 titled *The pragmatics of lexical specificity*). One can say that the lexical item *walk* (at the basic level) is more specific than the lexical item *move* (superordinate). Similarly the lexical items *toddle*, *saunter* and *amble* (subordinate) are more specific than the lexical item *walk*. When studying lexical specificity, it is important to keep in mind that one cannot understand the more specific lexical items such as *toddle*, *saunter* and *amble* without understanding the basic level lexical item *walk*. This means that if someone should use the more specific lexical item *saunter*, one can assume that she also has the basic level lexical item *walk* at her disposal. If, however, someone uses the basic level lexical item *walk*, one cannot assume that she also has the more specific lexical item *saunter* at her disposal. Wierzbicka (1996:10) attributes this fact to semantic complexity: While *walk* means [moving by way of putting one foot in front of the other], *saunter* has the added meaning of [walking unhurriedly with no apparent aim]. This example illustrates how the less specific term (one level up) is very useful in defining the more specific term. It can be notated as follows:

walk = *move* + attribute_x

saunter = *walk* + attribute_y

[8] Alternate terms for lexical specificity are **granularity** and **resolution** (Langacker, 2008:55) and **delicacy** (Halliday and Matthiessen, 2004:22-23).

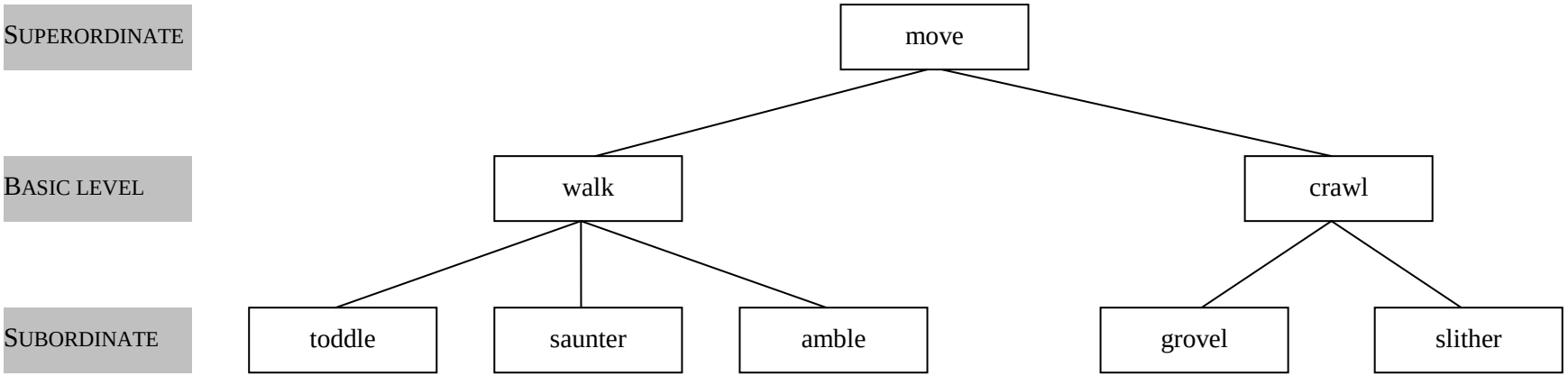


Figure 2.2: The position of the basic level in the taxonomic hierarchy of categorisation

In most theories one would say that *walk* and *crawl* are **hyponyms** of the superordinate *move*. In the same way it can be said that *toddle*, *saunter* and *amble* are hyponyms of the superordinate *walk*. Cruse (1986:88-92) provides tests to enable one to identify the relation of hyponymy. One of these tests uses the semantic relation of **unilateral entailment**. *X* unilaterally entails *Y* if *Y* is true whenever *X* is true. It is important to keep in mind that this entailment relation works in only one direction. When one considers Figure 2.2 (p. 22) again it could be said that:

> *I can WALK* unilaterally entails *I can MOVE*
>
> *I can SAUNTER* unilaterally entails *I can WALK*

But when working with verbs, Fellbaum and Miller (1990:565) point out that there are differences between nouns and verbs because "the organization of verbs in semantic memory differs from the organisation of nouns". Fellbaum (1998:79) reiterates this point when she says that "the semantic distinction between two verbs is different from the features that distinguish two nouns in a hyponymic relation". Lyons's (1977a:294) statement that "[v]erbs ... cannot be inserted into the formula '*x* is a kind of *y*' without prior nominalization" supports this idea. Fellbaum (1998:79) uses this statement made by Lyons to explain how the semantic relations that hold between verbs differ from the semantic relations that hold between nouns:

> The sentence frame used to test hyponymy between nouns, *An x is a y*, is not suitable for verbs, because it requires that *x* and *y* be nouns: *To amble is a kind of walk* is not a felicitous sentence ... [E]ven in their gerundive form, verbs and nouns differ. In the case of nouns, *kind of*, which makes the hierarchical relation explicit, can be omitted from the formula. Thus, speakers are quite comfortable with statements like *A horse is an animal* or *A spade is a garden tool*. However, they are likely to reject such statements such as *Ambling is walking* or *Mumbling is talking*, where the superordinate is not accompanied by some qualification.

Due to these differences in semantic relations, Fellbaum and Miller (1990:565; 566-567) and Fellbaum (1998:79) suggest that the semantic relation of troponymy holds between

verbs senses rather than the semantic relations of hyponymy. In this approach clusters of verbs are related to the "core verb" by a relation that can be expressed as follows:

> *To V_1 is to V_2 in some particular manner*.
>
> (Fellbaum & Miller, 1990:566; Fellbaum, 1998:79)

Fellbaum and Miller (1990:566) admit that one could refer to the relation above as hyponymy, but as verbs enter into semantic relations in ways that nouns do not, it is preferable to avoid the term hyponymy. Therefore it becomes clear that troponymy is to verbs as hyponymy is to nouns.[9]

Due to the semantic differences between nouns and verbs mentioned above, Fellbaum and Miller (1990) developed a system to describe the relations between verbs. Fellbaum (1998:70) refined this system.

The relational analysis starts with the concept of **entailment**. Entailment is the overarching principle used to organise verbs. Fellbaum (1998:76) defines entailment as the concept used "to refer to the relation between two verbs V_1 and V_2 that holds when the sentence *Someone V_1* logically entails the sentence *Someone V_2*." As pointed out earlier, entailment is a unilateral relation. One can therefore say that the verb *to walk* entails the verb *to move* because the statement "She is walking" entails the statement "She is moving". Thus, a contradiction would arise if we should say both that "She is walking" and "She is not moving". So the second statement necessarily holds if the first one does.

Fellbaum and Miller (1990:568) also point out that entailment includes "backward-looking presuppositions, so that *succeed* entails *try* and *arrive* entails *travel*". They refer to this phenomenon as the purpose or result relation:

> For example, *fatten* entails *feed*, *smoothe* entails *rub*, *iron* entails *press* (*down*), *sandpaper* entails *rub*, (*un*)*screw* entails *turn*, and so on, even though in some of these pairs the first verb presupposes the use of an instrument in the entailed activity.

[9] This distinction is not made by all theorists (cf. Cruse, 1986:88-89; Taylor, 2002:123-124).

The relationship that flows from entailment is **temporal inclusion**. Fellbaum and Miller (1990:568) define temporal inclusion with the following generalisation:

> If V_1 entails V_2, and if a temporal inclusion relation holds between them, then an acceptable is-a-part-of statement can be formed using V_1-ing and V_2-ing.

So for example one can say that *to saunter* entails to *walk* and *sauntering* is a part of *walking*. Or one can say that *to buy* entails *to pay* and *buying* is a part of *paying*. On the other hand, one can say *to mend* entails *to break*, but one cannot say that *mending* is a part of *breaking*.

Troponymy is the relationship that flows from entailment and temporal inclusion. *Saunter* and *walk* both meet the requirements of entailment and temporal inclusion (as illustrated above). These verbs are also **temporally coextensive**. In other words the time spent *sauntering* is a proper part of the time spent *walking*. As a result the semantic relation of troponymy also holds between these verbs. On the other hand verbs such as *sleep* and *snore* may meet the requirements of entailment and temporal inclusion, but they are not temporally coextensive.

Bi-troponymy is not a relationship identified by Fellbaum and Miller (1990) or Fellbaum (1998). Instead, this relationship is recognised and discussed by Neale (2002). This relation can be identified by the formula:

> To V_1 is to V_2 in some particular manner
>
> AND
>
> To V_2 is to V_1 in some particular manner

Neale (2002:233) points out that whereas troponymy is a type of entailment which only recognises mono-directional relations, bi-troponymy is a two-way relation. Neale then (2002:233) uses the verbs *crush* and *squeeze* to demonstrate this relationship. One can say that to *crush* is to *squeeze* in some particular manner and that to *squeeze* is to *crush* in some particular manner. On the other hand, one can say that to *saunter* is to *walk* in some

particular manner, but one cannot say to *walk* is to *saunter* in some particular manner. Thus the semantic relationship of bi-troponymy does not hold between *walk* and *saunter*. It is important then to recognise that whereas troponymy is a semantic relation of unilateral entailment, bi-troponymy is a semantic relation of **bilateral entailment**.

So far only verb pairs that are related by entailment and temporal inclusion have been discussed. However, there are also verbs that are related by entailment, but not by temporal inclusion (as illustrated above). Fellbaum (1998:82) points out that some "semantically opposed verbs are co-troponyms (sisters) whose opposition is contained in the manner that differentiates them from their shared superordinate". Verbs such as *ascend* and *descend*, for example, share the same superordinate, but they differ with regard to direction. Other verbs can also be semantically opposed and share an entailed verb, for example, *remember* and *forget* shares the superordinate *know*. These verbs are not related by temporal inclusion. Instead Fellbaum (1998:82) point out that they are related by "a kind of backward presupposition where the activity denoted by the entailed verb always precedes the activity denoted by the entailing verb".

The last relation that needs to be discussed is the **cause** relation. Fellbaum (1998:83) asserts that "[t]he cause relation picks out two verb concepts, one causative (like *give*), the other what might be 'resultative' (like *have*)". Causation can be recognised by the following formula:

If V_1 necessarily causes V_2, then V_1 also entails V_2.

Like the other entailment relationships (except bi-troponymy) cause is unidirectional: *giving* somebody an item causes her to *have* the item, but *having* an item does not entail that somebody *give* her the item.

The five kinds of lexical entailment discussed above are represented graphically in Figure 2.3 below:

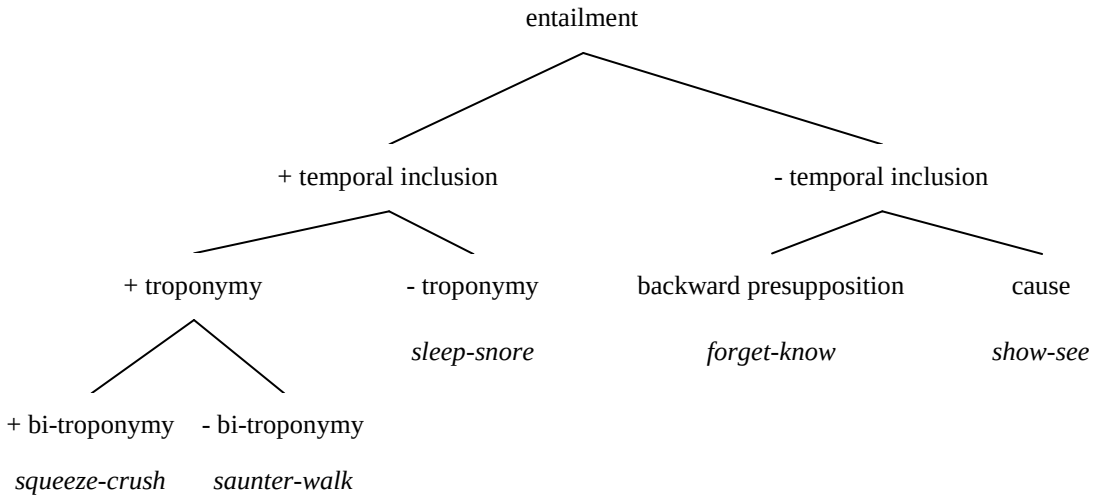


Figure 2.3: The relations among the kinds of lexical entailments between English verbs (Adapted from Fellbaum and Miller, 1990:569 and Fellbaum, 1998:84)

Fellbaum (1998:80) remarks that "[v]erb hierarchies constructed by means of the troponymy relation tend to have a more shallow, bushy structure than nouns". As a result there are rarely taxonomies that display more than four levels.

So far lexical specificity has been discussed in terms of taxonomies and the relationships that exist between words at different levels of the taxonomy. But CL also makes use of the concepts **schema** and **instance** to illustrate lexical specificity. Langacker (2008:55) states that the "converse of specificity is **schematicity**". One can thus say that WALK is schematic with respect to TODDLE. This relation of a schema to its instances is depicted in Figure 2.4 below:

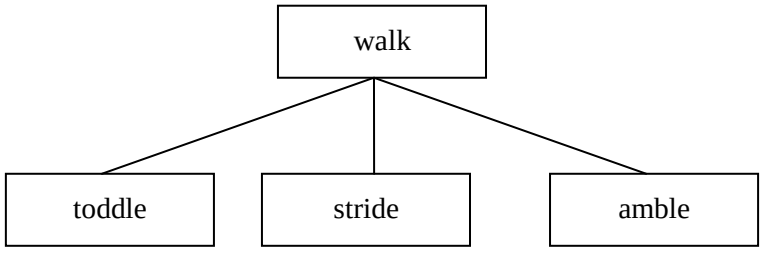


Figure 2.4: The relation between a schematic concept and some of its instances

Taylor (2002:124) avers that "[t]he schema is specified in relatively general terms" while "the instances flesh out the schema by adding additional specifications". Not all the instances flesh out the schema in the same way. The relation in Figure 2.4 can be generalised to the one depicted in Figure 2.5 below:

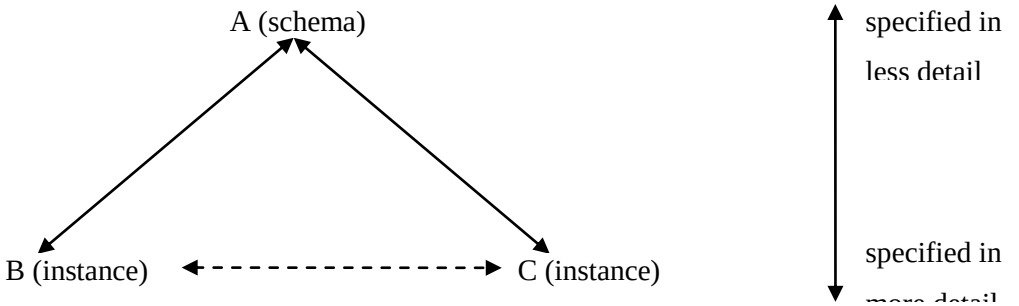


Figure 2.5: A schematic representation of the relation between a schema and its instances (Taylor, 2002:24, 125)

In Figure 2.5 A is **schematic** for B and C while B and C **instantiate**, or **elaborate**, A (this relationship is indicated by the solid lines). Taylor (2002:24) explains that although an instance **inherits** the specifications of the schema, it fleshes out the schema in more detail and in contrasting ways. This means that "the instances are related by **similarity**". (This relationship is indicated by the broken line.) So one could say that WALK is schematic for TODDLE and STRIDE while TODDLE and STRIDE instantiate WALK. As TODDLE and STRIDE inherit the specifications of WALK, they are related by similarity. Thus one can say that TODDLE and STRIDE are more specific than WALK and that MOVE is more schematic than WALK.

In short these schematic relations can be represented as follows: MOVE → WALK → STRIDE (read 'MOVE is schematic for WALK which is schematic for STRIDE') or STRIDE ← WALK ← MOVE (read 'STRIDE elaborates WALK which elaborates MOVE') and STRIDE ⇠⇢ TODDLE (read 'STRIDE is similar to TODDLE').

Taylor (2002:275) points out that schemas vary in strength: the more instances elaborate a schema, the more strength the schema gains (it becomes **established** or **entrenched**). Should a schema then be elaborated by many instances, the schema will tend to be highly entrenched. On the other hand, should a schema be elaborated by only a few instances,

the schema will tend to be weakly entrenched. A schema with only one instance will not be entrenched at all. Taylor (2002:275) goes on to say that underlying these claims "is the assumption that a linguistic unit – whether this be a schema or a fully specified linguistic expression – is strengthened (entrenched) each time it is used" (as discussed earlier in this section). This idea is reiterated by Bybee (2006:712) who points out that "grammatical meaning and grammatical form come into being through the repeated instances of language use".

2.5 Semantic and syntactic characteristics of verbs

As mentioned in Section 1.1, the verb plays a pivotal role in the clause because the clause is really all about the event or state the participants mentioned in the clause are involved in (Thompson, 2004:87). The aim of this section is to demonstrate how the semantic and syntactic characteristics of verbs are intertwined.

The first important aspect to discuss with regard to the semantic and syntactic characteristics of verbs is the concept of **valency patterns**. Fillmore and Atkins (1992:78) point out that:

> [e]ach lexical item, or idiomatized phrase, can be associated with what can be called its *valence description*, a description that specifies, in both semantic and syntactic terms, what the expression requires of its constituents and its context, and what it contributes to the structures that contain it. The most developed systems of valence description concern the grammar and meanings of verbs.

Biber *et al*. (1999:380-381) demonstrate how different verbs combine with specific patterns of clause elements to form valency patterns. There are basically five major patterns that can be identified, namely **intransitive**, **monotransitive**, **ditransitive**, **complex transitive**, and **copular** patterns. These five major patterns are set out and illustrated with examples in Table 2.1 below.

(a) **Intransitive**	
subject + verb	He$_{(subject)}$ ran$_{(verb)}$.
(b) **Monotransitive**	
subject + verb + direct object	These students$_{(subject)}$ are called$_{(verb)}$ the educational tourists$_{(direct\ object)}$ <...>. (TLE)
(c) **Ditransitive**	
subject + verb + indirect object + direct object	Nobody$_{(subject)}$ gave$_{(verb)}$ them$_{(indirect\ object)}$ life-saving information$_{(direct\ object)}$. (TLE)
(d) **Complex transitive**	
subject + verb + direct object + object predicative	He$_{(subject)}$ called$_{(verb)}$ it$_{(direct\ object)}$ a dynamic system$_{(object\ predicative)}$. (LOCNESS)
subject + verb + direct object + obligatory adverbial	You$_{(subject)}$ can put$_{(verb)}$ your life$_{(direct\ object)}$ in danger$_{(obligatory\ adverbial)}$. (TLE)
(e) **Copular verbs**	
subject + verb + subject predicative	I$_{(subject)}$ am$_{(verb)}$ concerned$_{(subject\ predicative)}$ <...> (LOCNESS)
subject + verb + obligatory adverbial	Her mother$_{(subject)}$ was$_{(verb)}$ in the bedroom$_{(obligatory\ adverbial)}$ <...> (TLE)

Table 2.1: Examples of the valency patterns identified by Biber et al. *(1999:380-381)*

In the pages following the section in which they list the various valency patterns, Biber *et al*. (1999:382-392) go on to consider how different verbs combine with different patterns of clause elements. Here it is important to note how the valency patterns are discussed in terms of the semantic domains identified by Biber *et al*. (1999:360-372)[10]. The word *give*, for example, is an activity verb that must combine with at least an indirect object and a direct object. This is demonstrated in Example 2.1 and Example 2.2.

[2.1] *Nobody gave.

In Example 2.1 one can see that the indirect object (the participant who is being given to) and the direct object (what is being given) are missing and so it is not really clear what is happening.

[2.2] Nobody gave them life-saving information. (TLE)

In Example 2.2, on the other hand, *give* combines with the indirect object *them* and the direct object *life-saving information*. This demonstrates that the activity verb *give* is always a transitive verb.

Levin (1993) dedicates part of her book, *English verb classes and alternations: A preliminary investigation* to the phenomenon of valency patterns. But instead of referring to the phenomenon as valency patterns, she refers to it as **alternations**. Levin (1993:2) maintains that verbs, as argument-taking elements, occur "with a range of possible combinations of arguments and adjuncts in various syntactic expressions". This means that verbs take different arguments in different ways (as illustrated in the examples above). It is from this point of view that she goes ahead and distinguishes a variety of alternations.

Levin (1993:14) hypothesises that the meaning of the verb determines the verb's syntactic behaviour. This is an important point that is reiterated by other theorists such as Tomasello (1992:6), Wierzbicka (1992:210), Fellbaum (1998:95) and Faber and Usón (1999:104), and it is from this point of view that Levin (1993) groups verbs together on

[10] These semantic domains are discussed in more detail in Section 2.6.2.

the grounds of alternation. Levin (1993:14) maintains that this hypothesis provides researchers with powerful tools with which they can investigate verb meaning and so develop a theory of lexical knowledge. She goes on to say that:

> [i]f the distinctive behavior of verb classes with respect to diathesis alternations arises from their meaning, any class of verbs whose members pattern together with respect to diathesis alternations should be a semantically coherent class: its members should share at least some aspect of meaning.

Tomasello (1992:6-7) also points out that syntactic devices also play an important role in terms of linguistically marking the conceptual roles that verbs create. He goes on to say that these conceptual roles may be regarded as "basically second order symbols because they indicate how the first-order symbols are to be construed (e.g. *John* is the initiator of the action or the recipient of the action)".

Biber *et al*. (1999:360-365) also allude to the above. In their discussion of the major semantic domains of single-word verbs they for example point out that material verbs, due to the fact that they "primarily denote actions and events that could be associated with choice", will usually take "a subject with the semantic role of agent". Mental verbs on the other hand "do not involve physical action and do not necessarily entail volition" and will therefore usually take a subject with the semantic role of recipient.

The same principles also play a role in the labelling of participants in SFL. That is why there are different labels for the participants of the different process types[11]. The material processes, for example, have an Actor and a Goal as illustrated in Example 2.3.

> [2.3] <...> a black robber$_{(\text{Actor})}$ shot$_{(\text{Process: material})}$ his pregnant wife$_{(\text{Goal})}$. (LOCNESS)

In the example above it becomes clear that the material process combines with two participants, namely the Actor (the "doer") and the Goal (the participants to whom the

[11] These processes are discussed in more detail in Section 2.6.3.

process is being "done to"). In this example, the verb fulfils the traditional requirements of a verb being "a doing word" (Thompson, 2004:90). While this definition is quite appropriate for material processes, it is not appropriate for the other processes in SFL as demonstrated in Example 2.4.

> [2.4] These pro-lifers$_{(\text{Senser})}$ feel$_{(\text{Process: mental})}$ that this is what people are doing$_{(\text{Phenomenon}).}$ (LOCNESS)

One can see in Example 2.4 that it cannot be said that the phrase *These pro-lifers* is the "doer" and that the phrase *that this is what people are doing* is the participant to whom the process are being done to. Therefore the verb *feel* is classified as a mental process rather than a material process where the Senser is the participant (usually human) who "senses" and the Phenomenon is "that which is felt" (i.e. that which impinges on the consciousness of Senser, thus removing the unilateral agentivity that is present in the material processes).

When organising the English verb lexicon, it is important to keep the discussion above in mind and not lose sight of the fact that the meaning of the verb determines the verb's syntactic behaviour. Therefore it comes as no surprise that Faber and Usón (1999:80) propose that the organisation of the English verb lexicon be based on "the distinction between **syntagmatic** and **paradigmatic relations**[12], or the complementary principles of combination and selection" (my emphasis) [cf. Saussure, 1916/1972:121-125; Barthes, 1964/1967:58-88]. Faber and Usón (1999:80) define syntagmatic and paradigmatic relations as follows:

> Syntagmatic relations are those holding between elements that occur in combination with one another in linear sequences, while paradigmatic relations are those based on the potentiality of occurrence of elements in such combinations.

[12] Initially Saussure (1916/1972) referred to the paradigmatic relations as **associative relations** while Barthes (1964/1967) referred to these relations as **system relations**.

Halliday and Matthiessen (2004:22), on the other hand, describe these relations as follows:

> Structure [syntagmatic relations] is the syntagmatic ordering in language: patterns, or regularities, in what *goes together with* what. System, by contrast, is ordering on the other axis: patterns in what *could go instead of* what. This is the paradigmatic ordering in language.
>
> (Halliday and Matthiessen's emphasis)

In Figure 2.6 the clauses are set out horizontally to demonstrate how the elements combine with one another to form syntagmatic relations (i.e. what *goes together with* what). Barthes (1964/1967:58) points out that these syntagmatic relations are "linear and irreversible" and therefore "two elements cannot be pronounced at the same time". In view of this statement it can be said that in Figure 2.6 "The man" cannot be uttered at exactly the same time as "walks" or "along the riverbed". What is more is that these elements have to appear in this syntactic order, because "each term here derives its value from its opposition to what precedes and what follows" (Barthes, 1964/1967:58). Should the element that is actually the Circumstance ("along the riverbed") appear in the Actor's place, the sentence would no longer make sense within the context.

syntagmatic relations

paradigmatic relations

Actor	Process: material	Circumstance
The man	walks	along the riverbed
The woman	walks	along the riverbed
The man	**ambles**	along the riverbed
The man	walks	**in the street**

Figure 2.6: Representation of syntagmatic and associative relations

In Figure 2.6 the paradigmatic relations are set out vertically (i.e. what *could go instead of* what). If one has a look at the column representing the processes, one can see that other

words (such as *amble*) can be associated with the word *walk*. This is the point that is of great importance for this study.

Saussure (1916/1972:122), Barthes (1964/1967:59) and Faber and Usón (1999:80) allude to the fact that syntagmatic and paradigmatic relations complement one another in discussions on meaning. As Saussure (1916/1972:122) describes it:

> ...a linguistic unit may be compared to a single part of a building, e.g. a column. A column is related in a certain way to the architrave it supports. This disposition, involving two units co-present in space, is comparable to a syntagmatic relation. On the other hand, if the column is Doric, it will evoke mental comparison with other architectural orders (Ionic, Corinthian, etc.) which are not in this instance spatially co-present. This relation is associative.[13]

As this study focuses on specificity in lexical verbs, the focus will be on the paradigmatic relations between verbs, because according to Halliday and Matthiessen (2004:22) it is in these paradigmatic relations that we find lexical specificity (or as they refer to it, delicacy). The information gained from this investigation can in turn be applied to investigate the syntactic properties of verbs.

The approach discussed above, however, poses some problems. Croft (2001:14-15) points out this approach is not appropriate when one wants to analyse phenomena such as idioms (cf. Fillmore, Kay & O'Connor, 1988). This can be attributed to the fact that the different types of properties of an utterance (i.e. its sound structure, its syntax and its meaning) are conveyed as separate components (cf. Figure 2.7 below) – with words being the only constructs that contain information cutting across all other components – and can therefore not be applied in the analysis of idioms which are "linguistic expressions that are syntactically and/or semantically idiosyncratic in various ways" because "they are larger than words, and hence cannot simply be assigned to the lexicon without some special mechanism".

[13] Saussure here uses the term *association* for what researchers later called *paradigmatic* following Jakobson (1965).

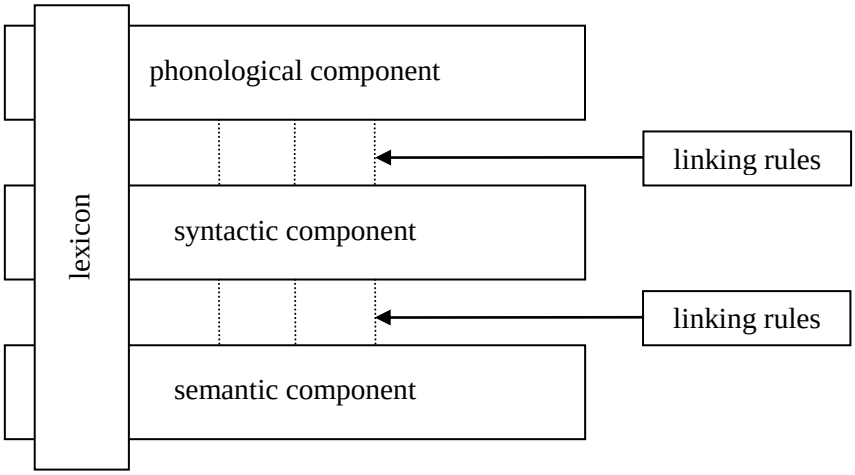


Figure 2.7: The componential model of the organisation of a grammar (Croft, 2001:15)

Therefore no clear distinction is made between the lexicon and the grammar in Construction Grammar (Goldberg, 1995:7). Instead "[c]onstructions are taken to be the basic units of language" (Goldberg, 1995:4) and can thus be regarded as "the same theoretical type of representation object as lexical items" (Croft, 2001:16). It is therefore important to take note that there is a continuum between the lexicon and syntactic constructions as pointed out by Croft (2001:17) and Langacker (2008:5)[14].

Goldberg (1995:30) encourages the investigation of the semantics associated with the entries located towards the lexicon-side of the lexicon-syntactic continuum mentioned above, because she believes that "[i]nterpretations that only involve the 'syntactically relevant' aspects of verb meaning, would leave us with severely underspecified interpretations". In this study then specificity in lexical verbs is investigated, but it is important to point out that in line with the Construction Grammar approach, phrasal verbs, for example, are also regarded as lexical verbs and that the meaning of all the lexical verbs are derived from the context in which they appear.

A good starting point in the investigation of the relations between verbs in terms of lexical specificity is the area of meaning to which the various verbs belong. Faber and

[14] Also refer to Section 2.2.

Usón (1999:80) feel that such an investigation "is crucial in the delimitation of its [verbs'] syntactic properties as well as in its relations with other lexemes".

2.6 Semantic categorisation of verbs

Fellbaum (1998:69) asserts that "[a] well-tested approach to the lexicon [...] is to view it in terms of semantic fields that contain the lexicalized concepts of conceptual fields". She goes on to say there are two good reasons for dividing the lexicon of the English verb lexicon into semantic fields. The first is that it provides an "initial, semantically based organisation of the thousands of polysemous verbs in the English lexicon". The second is that previous research has indicated that words that are linked by semantic and lexical relations usually belong to the same semantic field. In this section a very brief overview is given of the theories of Vendler (1957), Biber *et al*. (1999) and Halliday and Matthiessen (2004). Vendler's theory provides one with the tools to deal with the ambiguities of the same lexeme (i.e. polysemous lexemes). The theories of Biber *et al*. (1999) and Halliday and Matthiessen (2004), on the other hand, provide insight into the classification of verbs. These two theories are therefore compared to each other in order to find the theory which will be most useful in arriving at a framework for the analysis of specificity in lexical verbs in this study.

2.6.1 Vendler (1957)

Zeno Vendler is one of the first theorists who classified verbs according to their semantic attributes in his article "Verbs and times" published in 1957. This classification is based on the fact that verbs can express temporality which indicates the relevance of time to their use.[15] Vendler (1957:143) explains it as follows:

> The fact that verbs have tenses indicates that considerations involving the concept of time are relevant to their use. These considerations are not limited to the obvious discrimination between past, present, and future;

[15] Vendler (1957:143) makes it quite clear that verbs cannot only be described in terms of time alone. As Vendler puts it: "The presence or absence of an object, conditions, intended states of affairs, also enter the picture." In spite of these elements, he still feels that time plays a pivotal role and warrants separate treatment.

> there is another, a more subtle dependence on that concept: the use of a verb may also suggest the particular way in which that verb presupposes and involves the notion of time.

Vendler's first schema distinguishes **activity** terms and **accomplishment** terms (Vendler, 1957:144-146). These terms usually occur in cases where the verbs possess continuous tense (i.e. these verbs suggest that there are processes going on in time). Huddleston and Pullum (2002:120) point out that the main difference between activity and accomplishment terms is that activity terms are **atelic** while accomplishments are **telic**. The difference can be explained as follows. If one says that she is driving a car or sewing, one does not have any indication of how long the activity is going to carry on: she might keep driving or sewing for the next hour or she might stop in the next moment. These statements do not have a "set terminal point" or "climax" that has to be reached. Therefore one can ask questions such as, "For how long was she driving?" or "For how long was she sewing?". This schema represents activity terms and Vendler (1957:149) illustrates it as follows:

> "*A* was running at time *t*" means that time instant *t* is on *a* time stretch throughout which *A* was running.

These terms are thus known as activities and are atelic.

If, on the other hand, one says that she is driving to school or she is sewing a skirt, then it is implied that she will drive until she reaches the school or that she will sew until the skirt is completed. These statements do have a "set terminal point" or "climax" that has to be reached. Should she not reach this "set terminal point" or "climax" (i.e. complete the activities), the statements will be false. Therefore one would ask questions such as, "How long did it take to drive to school?" or "How long did it take to sew the skirt?" rather than "For how long was she driving?" or "For how long was she sewing?". This schema represents accomplishment terms and Vendler (1957:149) illustrates it as follows:

> "*A* was drawing a circle at *t*" means that *t* is on *the* time stretch in which *A* drew that circle.

These terms are thus known as accomplishments and are telic.

Vendler (1957:146) then turns to verbs that do not possess continuous tense and distinguishes **achievement** terms and **state** terms. He uses the words *knowing* and *recognising* as examples of states (Vendler, 1957:144-145). Even though these verbs possess the *-ing* suffix, one cannot answer the question, "What are you doing?" with "I am knowing" or "I am recognising" (compare with "I am running" or "I am working"). Therefore verbs such as *knowing* and *recognising* are not processes going on in time (unlike verbs such as *running* or *working*).

Vendler (1957:146) points out that even though verbs such as *knowing* and *recognising* do not indicate processes going on in time, "they may be predicated of a subject for a given time with truth or falsity". If one for example recognises someone, wins a competition or spots something, it occurs at a definitive moment. If, on the other hand, one knows something or loves somebody, it can occur over a short or long period of time. Vendler (1957:146-147) uses the following questions and answers to prove his point:

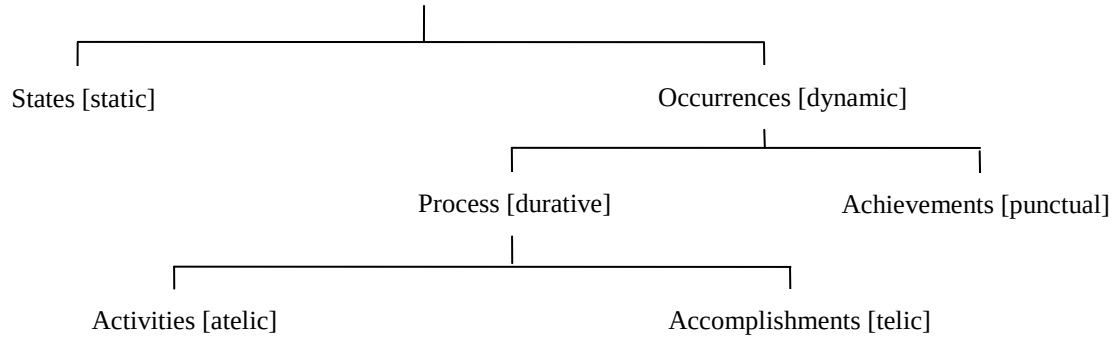
> "At what time did you reach the top?" ("At noon sharp") and "At what moment did you spot the plane?" ("At 10:53 A.M."); but "For how long did you love her?" ("For three years") and "How long did you believe in the stork?" ("Till I was seven"). [16]

The first examples represent achievement terms while the second set of examples represents state terms. Vendler (1957:149) illustrates achievement terms and state terms as follows:

> For achievements: "*A* won a race between t_1 and t_2" means that *the* time instant at which *A* won that race is between t_1 and t_2.
>
> For states: "*A* loved somebody from t_1 to t_2" means that at *any* instant between t_1 and t_2 *A* loved that person.

[16] Vendler (1957:147) points out that the word "for" indicates that a period of time has elapsed. So even if one might have a sentence such as, "I hesitated for one moment" time has still elapsed.

Huddleston and Pullum (2002:118-123) provide a visual representation of this theory in *The Cambridge grammar of the English language* and this visual representation is presented in Figure 2.8.



i.	*The flag is red. He likes her. They believed in God.*	[states]
ii.	*He's playing golf. He read to them. I had walked in the park.*	[activities]
iii.	*He's writing a note. He read the note. I had walked home.*	[accomplishments]
iv.	*I declare the meeting closed. I found the key. He had died.*	[achievements]

Figure 2.8: States, activities, accomplishments and achievements as represented by Huddleston and Pullum (2002:118)

Since Vendler published this article in 1957, other theorists, such as Lyons (1977b:483), Quirk, Greenbaum, Leech and Svartvik (1985:198-203), Croft (1993) and Saeed (1997:106-114) have used Vendler's terminology.

Vendler's theory is even adopted by and elaborated upon in CL when a distinction is made between **perfective** and **imperfective** verbs. Langacker (2008:147) points out that perfectives subsume Vendler's classification of accomplishment, achievement, and activity, whereas imperfectives subsume Vendler's classification of stative verbs. Langacker (2008:147) argues that:

> [T]hese terms reflect the conceptual characterization of perfectives being bounded in time, whereas imperfectives are not specifically bounded. Moreover, perfectives construe the profiled relationship as internally heterogeneous, involving some kind of change through time, while imperfectives construe it as homogeneous, the continuation through time of a stable situation.

Even though Vendler's 1957 article is not a recent publication, it is clear that his semantic categorisation of verbs is still very influential today.

2.6.2 Biber et al. (1999)

Biber *et al.* (1999:364) classify verbs into seven major semantic domains. Unlike Vendler's (1957) classification, this classification is not based on the temporality verbs express, but rather on the verbs' core meanings. As a result, these seven categories have the potential to form an initial semantic map which can facilitate the identification of troponomic relations between verbs.

The first major semantic domain is that of **activity**. Activity verbs usually denote volitional actions and events and can be either transitive (cf. Example 2.5) or intransitive (cf. Example 2.6).

[2.5] They kick the ball forward <...> (TLE)

[2.6] They just sat at home <...> (TLE)

But in some cases activity verbs are used for non-volitional actions (cf. Example 2.7).

[2.7] They just carry it [the disease] until they die. (TLE)

At this point it can be noted that the transitive constructions are telic whereas the intransitive constructions are atelic.

The second semantic domain is that of **communication**. Communication verbs are a special kind of activity verb that entail the activity of communicating (e.g. *say*, *ask*, *discuss*).

[2.8] I will briefly discuss the Prime Ministers' role <...> (LOCNESS)

[2.9] These persons write with such powerful emotion <...> (LOCNESS)

The third semantic domain is **mental** verbs. Mental verbs also denote activities, but these are activities experienced internally/mentally by language users. These activities do not involve physical action and are not always volitional. Mental verbs comprise **cognitive** meanings (e.g. *think*, *dream*), **emotional** meanings (e.g. *need*, *love*), **perception** (e.g. *see*, *smell*) and **receipt of communication** (e.g. *read*, *hear*).

[2.10] <...> I think they deserve a good and satisfying salary. (TLE)

[2.11] He examined states with the death penalty <...> (LOCNESS)

[2.12] Most people still remember the Rodney King incident. (LOCNESS)

[2.13] <...> men now really started to feel intimidated. (TLE)

The fourth semantic domain is that of **facilitation** or **causation**. Verbs of facilitation or causation indicate a new state of affairs that was brought about (e.g. *cause*, *enable*, *allow*). These verbs usually occur with a nominalised direct object or a complement clause which reports the action that was facilitated. When Biber *et al*. (1999:362) refer to this semantic domain, they simply speak about causative verbs.

[2.14] In Africa there are many elements that cause poverty <...> (TLE)

[2.15] The lifting of trade barriers between the member states will enable the free movement of trade. (LOCNESS)

The fifth semantic domain is verbs of **simple occurrence**. These verbs report events that occur which cannot be ascribed to any volitional activity. When Biber *et al*. (1999:364) refer to this semantic domain, they simply speak about **occurrence** verbs.

[2.16] South Africa has become the world of blood. (TLE)

The sixth semantic domain is verbs of **existence** or **relationship**. Verbs of existence or relationship signal a state that exists between entities. One of the most common types of verbs of existence or relationship is copular verbs. Copular verbs typically perform a linking function (cf. Example 2.17). There are other verbs, however, that signal a

particular relationship between entities (e.g. *contain*, *include*) (cf. Example 2.18). Biber *et al*. (1999:364) refer to these verbs as existence verbs.

[2.17] There is no food in the house. (TLE)

[2.18] Most of them stay in the rural areas. (TLE)

The seventh semantic domain is **aspectual verbs**. Aspectual verbs signal a stage of progress of another event or activity (e.g. *start*, *stop*, *begin*) that is reported in a complement clause.

[2.19] Our officials must start thinking properly. (TLE)

[2.20] De Gualle <...> soon began to show who was in charge. (LOCNESS)

Biber *et al*. (1999:361) warn the reader to tread carefully when classifying verbs into their respective semantic domains, as some verbs may have multiple meanings from different semantic domains. The verb *get*, for example, can denote a volitional activity and will then belong to the semantic domain of activity (e.g. the verb *get* in Example 2.21 can be replaced with the verb *obtain*). On the other hand it can also denote a mental activity in which case it will then belong to the mental domain (e.g. the verb *get* in Example 2.22 can be replaced with the verb *understand*).

[2.21] A journalist's job is to get the story no matter what. (LOCNESS)

[2.22] You get the idea. (LOCNESS)

Biber *et al*. (1999:365-372) discuss the distribution of the semantic domains above quite extensively. They point out that the most common verbs are not distributed evenly across the seven semantic domains and that 50% of all common verbs are activity verbs. There are also quite a few mental (19%) and communication (13%) verbs but the other semantic domains – i.e. existence (8%), occurrence (5%), causative (4%) and aspectual (3%) verbs – occur less frequently.

2.6.3 Halliday and Matthiessen (2004)

Halliday and Matthiessen's description of the **experiential** function in SFL has been mentioned earlier in Section 1.1 and Section 2.3. Within the experiential function the clause consists of three components namely the **process** (realised by the verbal group), the **participants** involved in the process (realised by the nominal group) and the **circumstance** associated with the process (realised by the adverbial group and the prepositional phrase) (cf. Figure 1.1, p. 2).[17] These enable us to construe our experiences of the world and are therefore related to experiential meaning.

SFL distinguishes six process types within the experiential function (Halliday & Matthiessen, 2004:170-175). They are material processes, behavioural processes, mental processes, verbal processes, relational processes and existential processes. These process types enable us to not only construe outer experiences (the processes of the external world), but also inner experiences (the processes of consciousness). Halliday and Matthiessen (2004:172) give a visual representation of their model (cf. Figure 2.9 below) and describe it as follows:

> [The figure] represents process type as a semiotic space, with different regions representing different types. The regions have core areas and these represent prototypical members of the process types; but the regions are continuous, shading into one another, and these border areas represent the fact that the process types are fuzzy categories.[18]

[17] As this study focuses on the process (the lexical verb to be more specific), only a brief overview will be given on the role of the participants in the discussion of each of the six process types.

[18] For more on fuzzy categories, refer to Section 2.4.

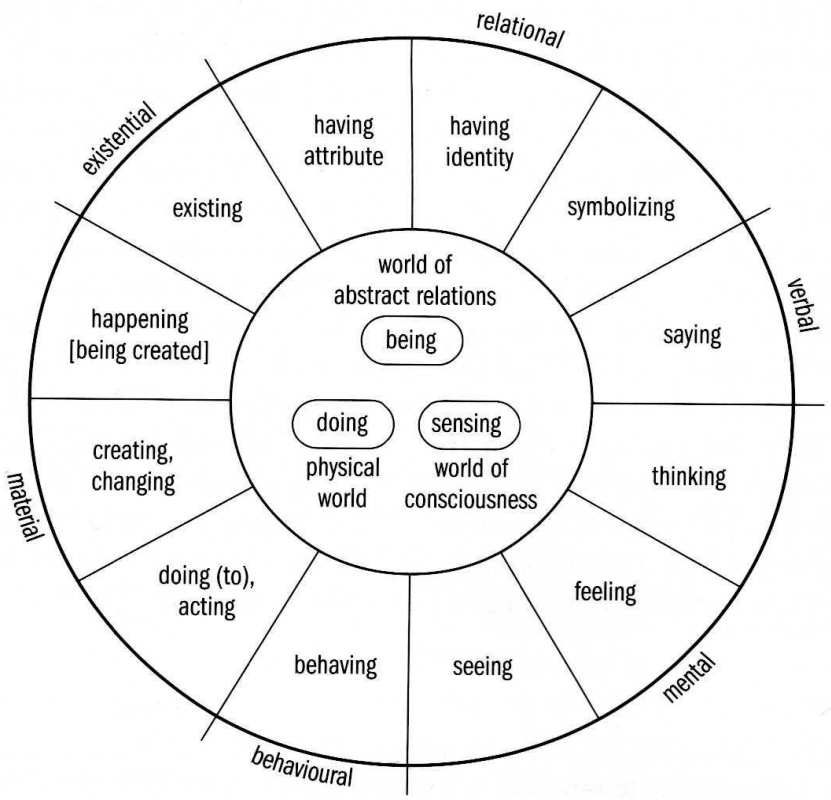


Figure 2.9: The grammar of experience: types of process in English (Halliday & Matthiessen, 2004:172)

Halliday and Matthiessen's six process types also have the potential to form an intital semantic map which can facilitate the identification of troponomic relations between verbs. It can be used as an alternative to Biber *et al.*'s classification discussed in Section 2.7.2 above.

Material processes are processes of "doing-&-happening" and they enable language users to construe their outer experiences. As Halliday and Matthiessen (2004:179) put it: "A 'material' clause construes a quantum of change in the flow of events as taking place through some input of energy". Example 2.23 illustrates how material processes have two participants: an **Actor** and a **Goal**. The actor is the "doer" of the action whereas the goal is the one "being done to".

[2.23] The storm <...>$_{(\text{Actor})}$ destroys$_{(\text{Process: material})}$ the city$_{(\text{Goal})}$ <...> (LOCNESS)

Halliday and Matthiessen's material processes can to a large extent be related to Biber *et al*.'s activity verbs as both these categories denote actions and events and are concerned with the language users' experience of their external world. In both these classifications the participants display the same characteristics. On the one hand the actor is the doer in Halliday & Matthiessen's classification whereas the subject (with the semantic role of agent) fulfils the same role in Biber *et al*.'s classification. On the other hand the goal is the one "being done to" in Halliday and Matthiessen's classification whereas the object fulfils the same role in Biber *et al*.'s classification.

But Biber *et al*. also distinguish verbs of occurrence which would be classified as material verbs by Halliday and Matthiessen. If one should consider the verb *develop* in Example 2.24 below:

[2.24] We already know that it is inevitable that when someone becomes infected with HIV, it is going to develop into AIDS, and they are going to die. (LOCNESS)

Biber *et al*. will regard the verb *develop* as an occurrence verb, whereas Halliday and Matthiessen will regard the verb as a creative material verb.

Similarly Biber *et al*. distinguish causative verbs which would also be classified as material verbs by Halliday and Matthiessen. If one should consider the verb *help* in Example 2.25 below:

[2.25] The arts also help people <...> (LOCNESS)

Biber *et al*. will regard the verb *help* as a causative verb, whereas Halliday and Matthiessen will regard the verb as a transformative material verb.

While material processes are concerned with language users' experience of their external world, **mental** processes are concerned with language users' experience of their inner world. As Halliday and Matthiessen (2004:197) put it: "a 'mental' clause construes a quantum of change in the flow of events taking place in our own consciousness". Example 2.26 illustrates how mental processes have two participants: a **Senser** ("the one

that senses" according to Halliday and Matthiessen, 2004:201) and the **Phenomenon** (that which is sensed):

[2.26] Camus$_{(Senser)}$ recognises$_{(Process:\ Mental)}$ that such logic and reaction are not possible outcomes of this line of thinking$_{(Phenomenon)}$. (LOCNESS)

Halliday and Matthiessen's mental processes can be related to Biber *et al*.'s mental verbs as both these categories denote actions and events experienced internally/mentally by the language users. Here it is interesting to note that Halliday and Matthiessen distinguish the same kind of mental categories as Biber *et al*. namely **perceptive**, **cognitive**, **desiderative** and **emotive** (cf. Section 2.6.2).

Relational processes set up relations between two concepts. Two kinds of relationships can be identified here. Firstly, the **Carrier** can be ascribed an **Attribute**[19]. In such a case the relational process will characterise. Secondly, a relationship of identity can exist between the **Value** and the **Token**. Example 2.27 illustrates an attributive relational clause while Example 2.28 illustrates an identifying relational clause:

[2.27] The prison system$_{(Carrier)}$ is$_{(Process:\ relational,\ attrib)}$ outdated$_{(Attribute)}$ <...> (TLE)

[2.28] Soccer$_{(Token)}$ is$_{(Process:\ relational,\ ident)}$ their work$_{(Value)}$ <...> (TLE)

It is not always simple to distinguish between attributive relational clauses and identifying relational clauses. Thompson (2004:99) points out that the key test is reversibility: while identifying clauses are reversible, attributive clauses are not.

Halliday and Matthiessen's relational processes can be related to Biber *et al*.'s verbs of relationship as both these categories signal a particular relationship between entities.

[19] Thompson (2004:96) points out that neither of the experiential terms "process" and "participant" is really appropriate for this category. With regard to the term "process" nothing is really happening. And even though there are always two concepts (one on each side of the process) there is only one participant (i.e. the carrier).

Behavioural processes are located at the boundary between material and mental processes. Halliday and Matthiessen (2004:248) define these processes as processes that are "(typically human) physiological and psychological behaviour, like breathing, coughing, smiling, dreaming and staring". These processes have no clearly defined characteristics and therefore they are the least distinct processes of all the process types. The participant who is 'behaving' is labelled as the **Behaver**. More often than not, the pattern that is used most frequently is that of **Behaver** and **Process** as illustrated in Example 2.29.

[2.29] Nobody$_{(\text{Behaver})}$ is laughing$_{(\text{Process: behavioural})}$. (LOCNESS)

Here it can be noted that behavioural processes are largely atelic and intransitive. The interesting thing about behavioural processes is that they can not only to some extent be related to Biber *et al*.'s activity verbs, but also to Biber *et al.*'s mental verbs. A verb such as *coughing* could be classified as an activity verb in Biber *et al*.'s terminology, but a verb such as *dreaming* could be classified as a mental verb. This is captured by the fact that behavioural processes are situated between the material and mental categories in Halliday and Matthiessen's model (cf. Figure 2.9).

Verbal processes are described as verbs of saying (Halliday and Matthiessen, 2004:252). Verbal processes are located at the boundary between the mental and relational processes. Halliday and Matthiessen (2004:253) assert that there are innumerable discourse uses of verbal processes and list a few of these uses: they contribute to the creation of narrative; they allow one to attribute information to sources; and they enable one to quote and report from other sources.

At least one participant, the **Sayer**, is present in any verbal process, although it may not always be explicitly mentioned. Other participants that may be involved is the Receiver, the Target, the Verbiage and the Circumstance called Matter. The **Receiver** is the participant to whom the saying is addressed (cf. Example 2.30), but it need not always be mentioned.

[2.30] <...> Kaliayev$_{(\text{Sayer})}$ explains$_{(\text{Process: verbal})}$ to the Grand Duchess$_{(\text{Receiver})}$ <...> (LOCNESS)

Should the verbal process be directed at, instead of addressed to, another participant, one would rather refer to the participant as the **Target** (cf. Example 2.31).

[2.31] <...> we$_{(Sayer)}$ criticize$_{(Process: verbal)}$ other universities$_{(Target)}$ <...> (TLE)

Thompson (2004:101) states that the Target can be distinguished from the Receiver in two main ways: the Target need not be human and the Receiver may be a different entity than the Target. The **Verbiage** is basically the message that is stated (cf. Example 2.32).

[2.32] <...> Camus$_{(Sayer)}$ tries to explain$_{(Process: verbal)}$ what is meant by the absurd$_{(Verbiage)}$ <...> (LOCNESS)

Halliday and Matthiessen's verbal processes can be related to Biber *et al.*'s communication verbs as both these categories signal that communication is taking place.

Existential processes "represent that something exists or happens" (Halliday & Matthiessen, 2004:256). Thompson (2004:104) points out that existential processes are usually recognisable because "the Subject is 'there'". The only participant present in existential processes is the **Existent**. The Existent is the entity or event which 'exists' (cf. Example 2.33).

[2.33] There is$_{(Process: existential)}$ a very big difference$_{(Existent)}$.

Halliday and Matthiessen's existential processes can be related to Biber *et al.*'s verbs of existence as both of these categories signal a state that exists between entities.

Figure 2.10 below provides summary of the system of processes discussed in this section together with their participants as illustrated by Halliday and Matthiessen (2004:173).

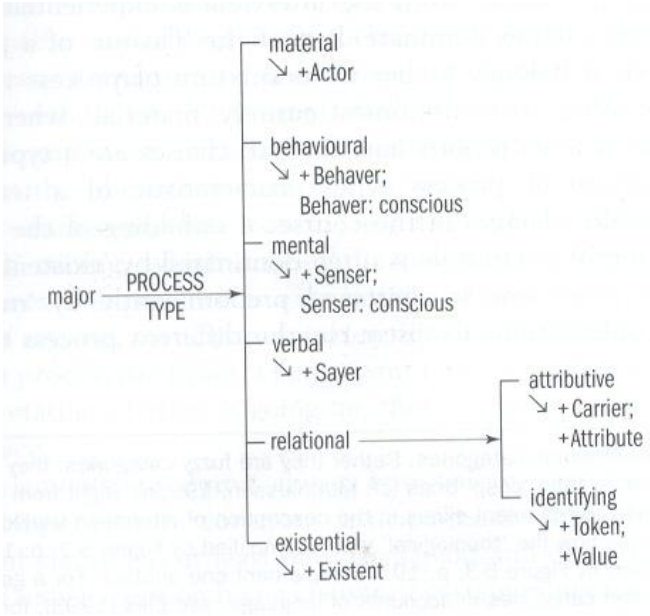


Figure 2.10: The system of process types
(Halliday & Matthiessen, 2004:173)

2.6.4 Synthesis

In the discussion above it has become clear that there are some similarities between the semantic categories presented by Biber *et al*. and the semantic categories presented by Halliday and Matthiessen. These similarities are expressed visually in Table 2.2 below:

Biber *et al.*	causative	occurrence	activity	mental	communication	existence or relationship	aspectual
Halliday and Matthiessen	material		behavioural	mental	verbal	existence	relationship

Table 2.2: Summary of the classification of verbs into semantic domains

As this study takes place against the background of SFL, Halliday and Matthiessen's (2004) model of process types will be employed. This model could also later provide an appropriate framework for the analysis of the syntactic roles of verbs against the background of SFL. Halliday and Matthiessen's (2004) model of process types is also more systematic, providing clearer criteria for the respective categories and also incorporates most of Biber *et al*.'s (1999) categories.

2.7 Speech Act Theory

As this study focuses on the communication verbs in L1 English and BSAE, Speech Act Theory (SAT) plays an important role in the analysis and interpretation of the results. Therefore a brief overview of the theory is provided here.

Austin (1962) was the first person to point out that three types of acts are performed whenever language is used by language users, namely locutionary, illocutionary and perlocutionary acts.

According to Austin (1962:92-98, 108) a **locutionary act** can be regarded as the act of saying something. Schiffer (1972:88) summarises the locutionary act as described by Austin (1962) as follows:

> A *locutionary act* is an act *of* saying something, and to perform an act of saying something – in the full normal sense of 'saying something' – involves uttering noises (the "phonetic act") of certain types belonging to and as belonging to a certain vocabulary, conforming to and as conforming to a certain grammar (the "phatic" act), and with a certain sense and reference, which together are equivalent to meaning (the "rhetic" act).
>
> (Schiffer's emphasis)

Austin (1962:98) points out that when a locutionary act is performed, it follows that an illocutionary act is performed. Although Austin does not explicitly define the concept **illocutionary act**, theorists such as Schiffer (1972:89) point out that "[a]n illocutionary act is an act one performs *in* saying something, as opposed to an act *of* saying something" (Schiffer's emphasis).

Austin (1962) identified five illocutionary acts, namely verdictive, expositive, exercitive, behabitive and commissive. Searle (1976:1), however, feels that this classification is in some respects not adequate. Therefore he reclassifies the illocutionary acts. Searle's (1976) taxonomy is made up of representatives, directives, commissives, expressives and declarations.

In this taxonomy **representatives** "commit[s] the speaker (in varying degrees) to something's being the case" (Searle, 1976:10). Searle (1976:11) points out that the simplest way to test whether an utterance is a representative or not is to "literally charactarize it (*inter alia*) as true or false". Representatives include verbs such as *state* and *hypothesise*.

Directives are attempts made "by the speaker to get the hearer to do something" (Searle, 1976:11). These attempts may be modest (i.e. the speaker may invite the hearer to do something) or it may be very fierce (i.e. the speaker may insist that the hearer do something). Therefore directives include verbs such as *invite* and *insist*.

Searle (1976:12) argues that he finds Austin's definition of **commissives** unexceptionable. Therefore he appropriates this category for his taxonomy, but states clearly that some of the commissive verbs identified by Austin (such as *shall, intend* and *favour*) do not belong to this category. Commissive then are defined by Searle (1976:12) as "those illocutionary acts whose point is to commit the speaker (again in varying degrees) to some future course of action". Commissives include verbs such as *promise* and *vow*.

Expressives are used to "express the psychological state specified in the sincerity condition about a state of affairs specified in the propositional content" (Searle, 1976:12). In simpler terms it can be said that expressives states the speaker's feelings. Expressives include verbs such as *deplore* and *congratulate*.

Searle (1976:13) points out that the defining characteristic of **declarations** is "that the successful performance of one of its members brings about the correspondence between the propositional content and reality". This means that if someone is appointed as chairman, then that person is chairman. If two people are pronounced man and wife, then they are married. Therefore declarative verbs include verbs such as *appoint* and *pronounce.*

The **perlocutionary act** is the hearer's response to the speaker's utterance. Should the speaker for example warn the hearer of impending danger and the hearer responds to this

warning by attempting to avoid the danger, then the hearer performed a perlocutionary act.

Hancher (1979:1) provides the following example to illustrate the relation between the concepts mentioned above:

> Simply to utter the sentence 'Shut that door' is to perform a locutionary act. To address that sentence to an appropriate person in appropriate circumstances (e.g. near an open door) with the intention of ordering him to shut the door, and thereby communicating that intention, is to perform an illocutionary act (the act of ordering). Getting that person to shut the door, or, alternatively, making him angry, are different perlocutionary acts that you might perform by performing those locutionary and illocutionary acts.

In the analysis of the communication verbs in this study, it is especially the illocutionary acts that are of great importance: the illocutionary acts assist in the attempts to organise the communication verbs.

2.8 Arriving at a framework

Over the years, there have been many theorists who arrived at theories in an attempt to organise the lexicon. While some of these theories seemed to be successful, other theories seemed to be less so. In arriving at a framework that can be used to facilitate the analysis of specificity in the lexical verb class, many of these theories had to be taken into consideration. In the sections that follow, an attempt will be made to explain how other theories that attempted to organise the lexicon had been taken into consideration while arriving at the framework.

2.8.1 Semantic fields

A common term that can be found in the literature on the organisation of the lexicon is the term **semantic field**. A thorough study of the literature, however, makes one aware that different theorists have different ideas about what a semantic field actually is.

Some of the first attempts at arriving at a semantic organisation of words entailed the binary feature analysis that is typically found in Componential Analysis (CA). Faber and Usón (1999:68) maintain that "[w]hen CA was most popular, linguists hoped that it would enable them to ultimately arrive at a set of universal features". As was pointed out in Section 2.4, however, CA posed its own set of problems and CA is no longer employed in many theories.

The term "semantic field" is also found in Generative Linguistics (GL). Jackendoff (1990:26) identifies the basic categories EVENT and STATE. These categories in turn can be cross-classified by four semantic fields:

> In the spatial field, a Thing is located spatially; in possessional, a Thing belongs to someone; in ascriptional, a Thing has a property; in scheduling, an Event is located in a time period.

Faber and Usón (1999:72) explain the concept as follows:

> [T]he function BE is used to represent four categories of STATE, which Jackendoff calls *semantic fields*. By extending spatial conceptualizations into non-spatial domains, he distinguishes BE_{Loc} (location in space), BE_{Temp} (location in time), BE_{Ident} (ascription of a property in locational terms), and BE_{Poss} (possession as location). In the same way, he also distinguishes between GO_{Loc}, GO_{Temp}, GO_{Ident}, and GO_{Poss}

Faber and Usón (1990:72) point out that Jackendoff's model is at a disadvantage, because it has very little internal structure:

> Although verbs within a particular class are frequently distinguishable by some feature corresponding to Manner (e.g. *walk* vs. *run*), Jackendoff says little or nothing about the differentiation between such verbs in his description of conceptual organization.

In CL the organisation is based on PT (also discussed in Section 2.4). In PT, a prototype is identified (i.e. an instance that is the best example of that category), but other instances

that display less features of the category than the prototype are not denied membership. Instead, the instances in the category are graded in terms of membership.

Fellbaum (1998:91) points out that a lexicon structured in terms of semantic fields can act as an alternative to the model employed in WordNet. She goes on to say that although semantic fields somewhat resemble the field-like domains of WordNet, the two types of organisation are different. Whereas "the meaning of a word in a given field arises from similarity and contrast relations between it and other words in that field", the lexemes are grouped into sets of synonyms or "synsets" in WordNet. Fellbaum also goes on to say that "semantic field analysis usually employ both paradigmatic and syntagmatic relations", but that syntagmatic relations do not form part of the network structure WordNet. Instead, the syntagmatic relations tend "to be part of the parenthetical material accompanying most synsets".

Faber and Usón (1999:75) do not agree with Fellbaum that semantic fields are based on both paradigmatic and syntagmatic relations and refer to the work of Lehrer and Kittay (1992:6) where they explicitly state that semantic fields are "limited to paradigmatic notions" and that it is due to this deficiency that some theorists do not employ the concept of semantic field, but rather employ the concept of **frames**. The problem however is that Fillmore and Atkins (1992:76-77), who are staunch supporters of frame semantics, state that "[s]emantic analysis within field theories posit systems of paradigmatic and syntagmatic relationships connecting members of selected sets of lexical items". This means that even those who oppose the concept of semantic fields acknowledge that it is not necessarily just limited to paradigmatic notions and that it can be employed in syntactic analyses.

Fillmore and Atkins (1992:76-77) feel that frame semantics can be distinguished from field semantics, because frame semantics takes into account that "a word's meaning can be understood only with reference to a structured background of experience, beliefs, or practices, constituting a kind of conceptual prerequisite for understanding the meaning". By making this statement, Fillmore and Atkins (1992:76-77) are suggesting that semantic field theory does not regard experience, beliefs, or practises as important. But Lehrer and Kittay (1992:3-4) quite clearly state that:

> Semantic field theory makes a meaning claim that the meanings of words must be understood, in part, in relation to other words that articulate a given content domain and that stand in the relation of affinity and contrast to the word(s) in question. Thus to understand the meaning of the verb *sauté* requires that we understand its contrastive relation to *deep fry*, to *broil*, *boil*, and also to affinitive terms like *cook* and the syntagmatic relations to *pan*, *pot*, and the many food items one might sauté.

Here it becomes clear that semantic field theory not only acknowledges that relationships between different words exist, but that these relationships are dependent on the language users' knowledge of these words and their ability to relate them to their experiences, beliefs and practices. It is also stated in Section 1.1 and Section 2.3 that the role that experience, beliefs and practices play in the construction and understanding of meaning is significant. By employing semantic fields instead of semantic frames, however, does not necessarily suggest that one does not take the role of experience, beliefs and practises into account. In this study, words are still studied within context (as can be seen in Section 3.4). Employing semantic frames as way of researching specificity in lexical verbs would not be viable, as semantic frames require one to also take other word classes, such as nouns and adjectives, into account. By employing semantic fields, on the other hand, one has the resources of theories such as PT at hand which enables one to analyse a specific group of words in terms of lexical specificity.

In this study then semantic fields are regarded in terms of Lehrer and Kittay's (1992:3) view that semantic fields entail "the idea that words applicable to a common conceptual domain are organized within a semantic field by relations of affinity and contrast" (e.g. synonymy and hyponymy) that are discussed in Section 2.4. These semantic fields enable theorists to theorise about semantic organisation, categorisation and word meaning (Lehrer and Kittay, 1992:3). In this study the lexical verbs will be classified into semantic fields using Halliday and Matthiessen's (2004) six process types[20].

[20] Cf. Section 2.6.3.

2.8.2 Unique beginners

One of the most popular ways to classify a lexicon is by identifying a single **superordinate lexeme** for the lexicon. Although this approach could be plausible in the classification of a noun lexicon, several theorists have noticed that there is not a single superordinate lexeme[21] that can head the entire verb lexicon. Pulman (1983:107), for example, suggests that the verbs *be* and *do* can fulfil the role of superordinate lexemes. But allowing only *be* and *do* to act as unique beginners, however, is not always appropriate, because they are highly polysemous (as pointed out by Fellbaum, 1998:71). The Oxford Advanced Learner's Dictionary (2001:85-86, 341-343) for example distinguishes 15 senses for *be* and 26 senses for *do*. Lyons (1977a:294), on the other hand, suggests that verbs such as *act*, *move*, *become*, *make*, *get*, and *be* which have many hyponyms, can act as superordinate lexemes.

Gradually theorists started using the concept of semantic fields to assist them in the organisation of the lexicon, and superordinate lexemes were assigned to these semantic fields.

One theorist who follows this approach is Anna Wierzbicka. Wierzbicka suggests that the verb lexicon is structured and organised according to semantic fields (listed below) and she explicates the **semantic primitives** (which appear next to the semantic fields in brackets) that characterise such semantic fields

(i) mental predicates (*think*, *know*, *want*, *feel*, *see*, *hear*)
(ii) speech (*say*)
(iii) actions, events and movement (*do*, *happen*, *move*)
(iv) existence and life (*be – there is*/*are –* and *live*)

(Wierzbicka, 1996)

[21] Whereas Lyons (1997a:298) refers to the lack of "a single superordinate lexeme", Pulman (1983:107) refers to the absence of "a unique beginner". Fellbaum (1998:71) in turn uses the concept of "a single root verb" and also Pulman's term "unique beginner".

From a functional perspective, Faber and Usón (1999:88) also suggest semantic fields, each with its own superordinate terms or multiword phrases (which appear next to the semantic fields in brackets):

(i) existence (*to be*)
(ii) change (*to become different*)
(iii) possession (*to have/give*)
(iv) speech (*to say*)
(v) emotion (*to feel*)
(vi) action (*to do/make*)
(vii) cognition/mental perception (*to know/think*)
(viii) movement (*to move – go/come*)
(ix) general perception (*to become aware – notice/perceive*)
(x) sense perception (*to see/hear/taste/smell/touch*)
(xi) position (*to be/stay/put*)

In this study it proved to be problematic to attempt to assign unique beginners (as provided in different theories) to the various semantic fields. The unique beginners did not always suit the reality of the different corpora and as a result another solution had to be found. The solution lies in the basic level (prototypical) terms.

In Section 2.4, it was stated that the prototypical terms are those terms that are cognitively and linguistically more salient than the other terms. It was also stated that salience is closely linked to frequency of activation and so statistical counts of occurrence in the usage of a term can provide a useful index to prototypicality. Using this correlation the prototypical instances were identified in the two corpora using frequency counts (the instances that were used most frequently, tended to be the prototypical instances). These prototypical instances were then regarded as unique beginners.

In some cases, however, the frequency counts did not provide accurate information regarding the prototypical instances. Therefore careful meaning analysis was also done (in the context in which the words occurred in the corpora) and considered together with the information gained from the frequency counts.

2.8.3 Arriving at a framework for the analysis of specificity in lexical verbs

In this section a description is provided of the framework used to analyse specificity in the lexical verbs found in LOCNESS and the TLE. Throughout this description references are made to the theories discussed earlier in this chapter which contributed to the formation of the framework.

The first step in the framework for analysing specificity in lexical verbs is to classify the lexical verbs into the six semantic fields (i.e. material, behavioural, mental, communication, relational and existential)[22]. As was pointed out earlier in Section 2.6, when classifying the lexical verbs into the various semantic fields two objectives are fulfilled simultaneously: first one obtains an initial, semantically based organisation of all the lexical verbs and especially of the polysemous verbs; and second one obtains groupings of all the lexical verbs that are linked by semantic relations.

Once all the lexical verbs have been classified into the six semantic fields, the prototypical instances in the communication verbs were identified using frequency counts and semantic considerations[23] respectively. The rest of the verbs in this semantic field were organised taxonomically[24] below the relevant prototypical instances once again taking into account both frequency counts and semantic considerations. Troponymy, as discussed in Section 2.4, played an especially important role here.

2.9 Conclusion

SFL and CL provide many insights into language which have to be taken into account in this study.

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[22] Cf. Section 2.6.3 and Section 2.6.4.

[23] When classifying the verbs into the various hierarchies the context in which each of the verbs occurred were followed up using the Concordance Tool in WordSmith Tools.

[24] The taxonomical structure plays an important role here: the higher up a word occurs in the hierarchy, the less specific the instance is, while the lower down a word occurs in the hierarchy the more specific the instance is (cf. Figure 2.5).

As this is a lexicological study, it is important to realise that the concept “lexical item” does not necessarily only entail single words. It may also entail expressions such as “take over”. Therefore one has to keep in mind that some lexical items are larger than individual words.

It is also important to note that there is an important relationship between language and experience: language is used to construe our experiences of the world. As humans, we use language to not only name things, but also to categorise these things and ultimately arrange these categories into taxonomies. As a result CL developed theories such as the PT to describe the manner in which we use taxonomies in language to construe our experiences of the world.

Lexical verbs have certain semantic and syntactic characteristics which enable the researcher to group verbs together that share certain semantic links with one another. These characteristics are employed to arrive at a framework for the analysis of specificity in lexical verbs in L1 English and BSAE respectively.

Ultimately it is the theoretical concepts used in SFL and CL and the characteristics of verbs that enable the researcher to investigate the semantic relations between lexical items and to determine the different levels of specificity in the lexical verb class.

CHAPTER 3

METHODOLOGY

3.1 Introduction

As the title implies, this study is a corpus-based lexicological study. The first purpose of this chapter is to describe corpus linguistics as a research method. In order to achieve this purpose an explanation is given of what the concept "corpus" entails. Thereafter it is necessary to investigate the assumptions present in corpus linguistics. The second purpose of this chapter is to give a description of the corpora used in this study. The third purpose of this chapter is to describe how the data was analysed in this study.

3.2 Corpus linguistics as research method

Teubert (2004:107) states that corpus linguistics is a fairly new approach to language which emerged during the 1960s, at the same time that Noam Chomsky published *Aspects of the theory of syntax*. Chomsky (1965:47-59) dismissed corpora as a source of linguistic knowledge as he felt that linguists should attempt to model language competence[25] rather than performance[26]. Thus Chomsky reignited the age-old empirical[27]-rationalist[28] debate in linguistics.

[25] The term "competence" is used to refer to the language user's knowledge of his/her language.

[26] The term "performance" is used to refer to the actual use of language in concrete situations.

[27] Empiricism is an approach where knowledge in a subject is obtained by analysing external data (such as corpora as is the case in this study).

[28] Rationalism is an approach where knowledge in a subject is obtained by introspection rather than analysing external data.

One of Chomsky's arguments is that corpora encourage linguists to model language performance instead of language competence and as a result it can only partly account for the true model of language as it can be influenced by a range of other external factors:

> Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance.
>
> (Chomsky, 1965:3)

Although it is true that language can be influenced by a range of external factors, the utmost care is taken in the compilation of corpora to acknowledge these external factors. Meyer (2002:30-54) asserts that not only must aspects such as the overall length of the corpus, the types of genres, the length of individual text samples, and so on be considered, but the sociolinguistic variables (e.g. gender and age) should also be considered when corpora are compiled.

Chomsky (1965:4) also points out that there is an infinite range of sentences in language. It is important to point out that corpus linguists realise that language consists of an infinite range of sentences even though corpora consist of a finite range of sentences. This is in line with Langacker's (1972:15) view that empirical science is incomplete (i.e. corpora are incomplete). However, it is very important to note that the finite (but large) approximation of corpus linguistics is no less adequate than Chomsky's data. In fact, the advantages of corpus linguistics are pointed out by several theorists. Bybee (2007:7), for example, points out that "[c]orpus studies often reveal quantitative patterns that are not available to introspection but that are likely to be important to the understanding of how speakers store and access units of language". McEnery and Wilson (2001:103) also point out that "[e]mpirical data enable the linguist to make statements which are objective and based on language as it really is". Empirical data also enables linguists to study language varieties (as this study investigates lexical verbs in L1 English and Black South African English).

From the discussion above it becomes clear that corpus linguistic studies provide linguists with data that is not attainable through introspection. This data is indispensable when theorising about language. McEnery and Wilson (2001:12), however, warn that although corpus linguistic studies provide linguists with data that is not attainable through introspection, "we must not eschew introspection entirely" as it enables linguists to spot ungrammatical structures and ambiguous structures.

The analysis of corpora is also especially important in SFL. One of the aims of SFL is to demonstrate how language users use language (cf. Section 1.4.3). And what better way is there to establish this than to do an empirical study and analyse corpora? Halliday and Matthiessen (2004:34), for example, feel that one cannot theorise about language without analysing corpora:

> The corpus is fundamental to the enterprise of theorizing language. Until now, linguistics has been like physics before 1600: having little reliable data, and no clear sense of the relationship between observation and theory.

From a functional perspective, it is therefore essential to analyse corpora in order to demonstrate how language users use language. As this study aims to describe how L1 language users and BSAE language users use lexical verbs from a functional and cognitive perspective, it is a good idea to incorporate a corpus analysis into the study.

Another problem initially experienced in corpus linguistics is the problem of data processing. During the 1960s, linguists did not have technology at their disposal to analyse corpora. As a result humans had to work through the corpora. This was a very expensive (many analysts had to be employed), time-consuming (all the data had to be perused carefully by the human analysts), and less-than-accurate (the human analysts became tired and made mistakes) endeavour. Today linguists have computers at their disposal that can analyse millions of words in a fraction of the time it takes humans to do analysis. Hunston (2002:3) states that the most readily available software packages can be used to process data from a corpus in three ways: "showing frequency, phraseology, and collocation". In this study frequency plays a big role as mentioned in Chapter 2.

Kennedy (1998:8-9) asserts that three different activities can be identified within corpus linguistics. While some researchers compile and mark corpora, other researchers develop tools with which corpora can be analysed. In addition, some researchers are descriptive linguists who analyse corpora and describe language. In this study the researcher belongs to the third group of researchers who make use of the corpora compiled by other researchers and the tools developed by other researchers to describe certain language varieties.

3.2.1 What is a corpus?

Basically a corpus is a collection of texts which "represents, very roughly and partially, a speaker's experience of language" (Hunston, 2002:3). In corpus linguistics, however, not any collection of texts can be regarded as a corpus. Bowker and Pearson (2002:9) point out that "[a] corpus can be described as a *large* collection of *authentic* texts that have been gathered in *electronic* form according to a *specific set of criteria*" (my emphasis). In this definition Bowker and Pearson list four characteristics of a corpus.

The first characteristic of a corpus is that it has to be large. Bowker and Pearson (2002:45) admit that "the adjective 'large' is rather vague" and unfortunately there are no set rules regarding the ideal size of a corpus. Basically 'large' means more texts than one can easily collect and read in printed form. At the beginning of a corpus-building project it is decided how many samples and how many words are to be collected and so a pre-defined grand total of samples and words are arrived at (McEnery and Wilson, 2001:30-31). This kind of corpus is known as a finite corpus.

The second characteristic of a corpus is that it is authentic. This means that the texts actually have to be taken from real-life situations where people are going about their business as usual. This is a typical characteristic of empirical research and it prohibits the creation of texts by linguists through introspection (as is the case with rationalist research).

The third characteristic of a corpus is that it has to be electronic. As pointed out earlier, corpora in early corpus linguistics referred to printed text. But with the advent of the computer, this is no longer the status quo and corpora are now electronic. An electronic

corpus enables the researcher to analyse the corpus with special software packages. These software packages can save the researcher a lot of time as he/she does not have to read through whole texts with a pen or highlighter to mark relevant sections. Instead the software packages search for the relevant sections. However, it is very important to keep in mind that the software packages can only analyse the data and it is the responsibility of the researcher to interpret the data.

The fourth characteristic of a corpus is that it has to meet a specific set of criteria. Here it is very important to keep in mind that a corpus does not consist of a random collection of texts. Each corpus is compiled according to a specific set of explicit criteria so that it can be representative of the language or language variety being researched. The issue of maximal representativeness is also emphasised by theorists such as McEnery and Wilson (2001:30,103) and Teubert and Čermáková (2004:113). According to these theorists a corpus should be carefully sampled so that it is maximally representative of the language variety being studied. Hunston (2002:2) reiterates that this careful design of a corpus distinguishes it from a library or an electronic archive.

3.2.2 Corpora in lexical studies

Corpora play an important role in lexical studies. McEnery and Wilson (2001:106) point out that lexicographers used empirical data before corpus linguistics came into being as a discipline:

> Samuel Johnson, for example, illustrated his dictionary with examples from literature, and in the nineteenth century the *Oxford English Dictionary* made use of citation slips to study and illustrate word usage.

This practice still continues today, but technology has advanced in such a way that researchers can retrieve all the examples of usage of a lexical item from a corpus consisting of millions of words in a matter of seconds with software such as WordSmith Tools. This, for example, enables lexicographers to produce and revise dictionaries and thesauri more often than before, providing users with up-to-date information about the language (McEnery and Wilson, 2001:107).

Atkins and Levin (1995) describe how the analysis of corpora can contribute to research in lexical studies. In their paper they investigate the verbs in the semantic class SHAKE. Although Atkins and Levin (1995) discuss examples of *quake*, *quiver*, *shiver*, *shudder*, *tremble*, *shake* and *vibrate*, only *quake* and *quiver* will be discussed here for the purposes of illustration. Atkins and Levin (1995:86) point out that dictionaries traditionally say that *quake* and *shiver* are intransitive verbs. These intransitive verbs are usually semantically classified as behavioural verbs (i.e. verbs that reflect psychological or physiological behaviour). However, when investigating the verbs *quake* and *quiver* in a 50-million-word subset of the main Oxford Corpus of Current English, Atkins and Levin (1995:108) found that the verbs *quake* and *quiver* can in fact sometimes take a direct object making these verbs transitive verbs. Atkins and Levin (1995:86) quote the following examples from their corpus:

[3.1] ... she saw a glint, it quaked her bowels, the steel of a cut-throat razor ...

[3.2] The brave young hedgehog did not quiver a quill.

In the examples above it is clear that here the transitive verbs (in contrast with the intransitive verbs) would rather be semantically classified as material verbs.

Information, other than the semantic information mentioned above, can also be obtained from corpora with reasonable ease. In this study, for example, part-of-speech tagging enabled the researcher to isolate all the lexical verbs while frequency counts provided valuable insight into issues such as prototypicality and entrenchment.

This discussion illustrates that corpus analysis can provide useful information on how words are used by people to reflect their experiences. The insights gained from these lexicological studies can in turn be used to update and create dictionaries, thesauri, and other language resources.

3.3 A description of the corpora in this study

A corpus can be compiled from written or spoken texts. Both the corpora analysed in this study are compiled from written texts.

The *Louvain Corpus of Native English Essays* (also known as LOCNESS) and the *Tswana Learner English Corpus* (also known as the TLE). LOCNESS consists of 189 essays (totalling 203 965) words written by L1 English speakers from England and America.[29] These written essays were largely scanned to make this corpus available electronically.

The TLE, on the other hand, consists of 519 essays (totalling 201 244 words) written by L1 Setswana speakers from South Africa and Botswana (Granger, Dagneaux, Meunier & Paquot, 2009:38 and Van Rooy, 2009:198-199). The TLE forms part of the *International Corpus of Learner English* (ICLE). These essays were retyped to make this corpus available electronically.

Whereas the TLE consists of argumentative essays, LOCNESS consists of argumentative essays as well as literature examination papers. Although the themes and topics represented in the two corpora may not be exactly the same (and may also explain certain results in the analysis), it is important to note that the TLE together with other corpora representing L2 English was taken up in ICLE so the features of L2 English can be compared to the L1 English represented in LOCNESS.

3.4 Part-of-speech tagging

Meyer (2002:87) states that the first part-of-speech tagger was developed by Greene and Rubin in order to assign part-of-speech labels to the Brown Corpus. Since then many other part-of-speech taggers have been developed, amongst which the various versions of the *Constituent Likelihood Automatic Word-tagging System* (CLAWS) program.

McEnery and Wilson (2001:135) point out that "[t]he development of reliable part-of-speech taggers has had a significant impact upon corpus linguistics". Part-of-speech taggers assign words in the corpora to their appropriate word class. McEnery and Wilson (2001:135) state that the systems which have been developed so far make the traditional basic part-of-speech distinctions (i.e. noun, verb, adjective, adverb, etc.), and also

[29] More information about LOCNESS is available at http://cecl.fltr.ucl.ac.be/Cecl-Projects/Icle/LOCNESS1.htm. (Date of access: 1 November 2010.)

supplement these distinctions with additional relevant information (e.g. person and number).

It is important to realise that part-of-speech tagging is not 100 percent accurate all the time. Biber, Conrad and Reppen (1998:262) ascribe this to the fact that natural language is quite complex. Therefore it can become quite difficult for the system to accurately tag texts. In spite of this, there are many taggers that are reported to display an accuracy of "in the mid to high 90 percent range" (Biber *et al*., 1998:262).

With such a high degree of accuracy, McEnery and Wilson (2001:140) state that corpora can be wholly automatically annotated without human correction. This saves time which in turn also reduces expenses.

The corpora analysed in this study (LOCNESS and the TLE) were tagged with CLAWS4. The system was developed by UCREL at Lancaster using the C7-tagset.[30] Van Rooy and Schäfer (2002) evaluated the accuracy of various taggers on the TLE and found that CLAWS was the most accurate part-of-speech tagger with an accuracy of 96%.

In order to determine the extent to which CLAWS effectively tagged the verbs in the TLE, the precision and recall were calculated. Van Rijsbergen (1975:9) defines **precision** as "the ratio of the number of relevant documents retrieved to the total number of documents retrieved" and **recall** as "the ratio of the number of relevant documents (both retrieved and not retrieved)". In the context of this study then precision will give an indication of how many of the verbs that CLAWS tagged as verbs were indeed verbs, while recall will give an indication of how many of the verbs were tagged as verbs. Precision and recall are calculated as follows:[31]

[30] More information about CLAWS is available at http://ucrel.lancs.ac.uk/claws/. (Date of access: 1 November 2010.)

[31] The information to do these calculations was obtained from Van Rooy and Schäfer who collected this information in the research done for their 2002-article.

$$\text{precision} = \frac{\text{\# of words tagged as verbs - \# of words tagged incorrectly as verbs}}{\text{\# of words tagged as verbs}}$$

$$= \frac{254\text{-}8}{254}$$

$$= 0.97$$

$$\text{recall} = \frac{\text{\# of words tagged as verbs - \# of words tagged incorrectly as verbs}}{\text{\# of words tagged as verbs - \# of words tagged incorrectly as verbs + \# of verbs tagged as something else}}$$

$$= \frac{254\text{-}8}{254\text{-}8+6}$$

$$= 0.98$$

The results above indicate that 97% of the words that were tagged as verbs were indeed verbs, while 98% of the actual verbs were indeed tagged as verbs. These numbers indicate that it is safe to continue working with CLAWS as the part-of-speech tagger in this study.

From the discussion above, it is clear that it would not be possible to conduct this study without tagging the corpora with a part-of-speech tagger. The part-of-speech tagging allows the researcher in this study to isolate and investigate the lexical verbs in the different corpora.

3.5 Corpus analysis

The purpose of the corpus analysis is twofold: firstly, it assists in the evaluation of the framework (as discussed in Section 2.8.3); and secondly, it assists in determining whether or not there is less lexical specificity in BSAE than in L1 English.

The first step in the corpus analysis was to isolate the lexical verbs in the part-of-speech tagged corpora using the WordList-tool in the analysis software suite, WordSmith Tools and Microsoft Excel and frequency lists (containing the verbs and their frequencies) were created.

The verbs in the respective frequency lists were then lemmatised. In this study the term *lemma* refers to the base form of each word, disregarding inflectional morphemes. For example, *think*, *thinks*, *thought* and *thinking* are all realisations of a single lemma, *think*. The lexical verb lemmas were then sorted in Microsoft Excel according to their normalised frequency counts and categorised as follows:

- Lemmas that occur more than 100 times per 100 000 words (high-frequency lexical verbs).
- Lemmas that occur 1-100 times per 100 000 words (medium-frequency lexical verbs).
- Lemmas that occur less than once per 100 000 words[32] (low-frequency lexical verbs).

To determine to which semantic categories the lexical verbs belong in L1 English and BSAE respectively, the lexical verb lemmas were classified according to Halliday and Matthiessen's (2004:170-173) process types. It is important to note that many words have multiple meanings in different semantic domains. Biber (2006:246) points out that this is especially true of the most common words. For example, a lexical verb such as *get* can express either a physical activity or a mental process. Concordances in which the meaning of the verb can be considered in context were made with the *Concordance*-tool in *WordSmith Tools* in order to distinguish between the process types to which such lexical verbs may belong. Where a verb lemma belongs to more than one process type the lemma list was edited to reflect each process type to which the lemma belong separately. As it is not possible to do an in-depth study about lexical specification with regard to lexical verbs in all of the process types, the lexical verbs were sorted according to the process types they belong to and the researcher only investigated lexical specification with regard to lexical verbs in the communication verbs.

[32] When the frequency counts in this study were normalised, the following formula was employed: [number of occurrences of instance]/[number of words in corpus] x 100 000. Should an instance such as *prohibit* then occur only once in the TLE, for example, the calculation will be: [1]/[201 244] x 100 00 = 0.5. This means that the instance *prohibit* occurs less than once per 100 000 words in the TLE and can therefore be classified as a low-frequency lexical verb.

Further semantic classification within the semantic category of communication verbs was done. During this process the communication verbs in LOCNESS and the TLE were ordered taxonomically within these semantic categories and as the need arose, semantic subclassification took place. Thus, specificity in the lexical verb class was determined in LOCNESS and the TLE employing the framework described in Section 2.8.3. The process of developing this framework was a recursive process, as the initial drafts of the framework had to be evaluated and revised (using the data in the frequency lists) until the framework described in Section 2.8.3 was complete. The framework described in Section 2.8.3 is thus the final version of the framework employed to determine whether there is less lexical specificity in BSAE than in L1 English with regard to lexical verbs. The data findings were then interpreted with specific reference to the theories of SFL and CL.

In the framework it is important to distinguish lexical specificity and **lexical diversity**. Whereas lexical specificity refers to the depth in the hierarchy (as discussed in Section 2.4), lexical diversity reflects the type/token ratio at a specific level of specificity. It is important to make this distinction, because although there may not be any lemmas employed at the deeper levels of lexical specificity, it does not necessarily mean that a less extensive range of lemmas is employed at the less specific levels of specificity.

It should be pointed out that both quantitative[33] and qualitative[34] analyses were employed in this study. When the frequency lists containing all the lexical verb lemmas were compiled, quantitative analysis was employed. When these lemmas were classified semantically, qualitative analysis was employed. The results of this qualitative analysis were then quantified when the lemmas were counted within the various semantic categories. Qualitative analysis was once again employed when the communication verbs were further classified semantically. The results of the qualitative analysis were once again quantified when the lemmas were counted within the more detailed semantic categories.

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[33] Quantitative data is any data that can be measured on a natural numerical scale (Steyn, Smit, Du Toit & Strasheim, 1994:7; McClave & Sincich, 2000:9).

[34] Qualitative data is any data that cannot be measured on a natural numerical scale (Steyn *et al.*, 1994:7; McClave & Sincich, 2000:9).

3.6 Conclusion

Corpus linguistics is a research method which enables researchers to describe language (as it is used by language users in "real life") objectively. This research method is especially appropriate in SFL as one of the aims of SFL is to determine how language users use language.

Initially corpus linguistics was a very time-consuming research method which, as a result, received a lot of criticism. Since the advent of the computer, however, corpus linguistics enables researchers to, for example, compile a word list of a corpus in a matter of seconds.

Before a collection of texts can be regarded as a corpus and analysed accordingly, one has to ensure that it meets the following requirements: it has to contain a large number of words; the texts included in the corpus have to be authentic; the texts have to be compiled electronically; and it has to meet certain criteria to ensure maximal representativeness.

In lexical studies it can be quite useful to use part-of-speech tagging to tag the corpora. Part-of-speech tagging played an especially important role in this study as it allowed the researcher to isolate all the lexical verbs in the two corpora. WordSmith Tools not only allowed the researcher to compile wordlists of the lexical verbs and to obtain their frequency counts, but also to take semantic considerations into account when analysing the lexical verbs. As a result the data in this study could be analysed both qualitatively and quantitatively.

CHAPTER 4

RESULTS, ANALYSES AND INTERPRETATION

4.1 Introduction

In determining the levels of specificity, frequency plays an important role. The first purpose of this chapter, therefore, is to present the frequency results. This provides a comparison of the specificity in lexical verbs in LOCNESS and the TLE at the most global level. The second purpose of this chapter is to provide examples from the corpora to qualitatively support, illustrate and expound on the results of the quantitative analysis. For this purpose the theories and concepts discussed in Chapter 2 are employed. In the last section of this chapter the results of the previous sections are interpreted and a conclusion is presented.

4.2 Determining lexical specificity: an initial analysis

One of the objectives of this study is to determine whether or not the lexical verbs in the TLE are less specific than the lexical verbs in LOCNESS. A quantitative analysis is the first step in determining this.

4.2.1 Data analysis procedure

The first step in the statistical analysis of the data was to normalise the word frequencies of LOCNESS and the TLE as the two corpora are not exactly the same size (LOCNESS contains 203 965 words whereas the TLE contains 201 244 words). It is important though to point out that the corpora are similarly sized and can therefore be compared to each other.

The second step in the statistical analysis of the data was to determine the type/token ratio. The type/token ratio is calculated by dividing the number of types[35] by the number of occurrences (i.e. tokens[36]). Meunier (1998:32) points out that "[a] high type/token ratio results from use of many different words in a text, and therefore implies that there is little repetition". In the context of this study then, a high type/token ratio implies that there are many different verbs used in the texts with little repetition (which might be a good indication of a high level of specificity).

In order to determine the frequency counts in both corpora, the type/token ratio in both LOCNESS and the TLE were determined. Firstly, lists of all the lexical verbs in LOCNESS and the TLE were compiled using the WordList-function in WordSmith Tools. These lists were then used to count the number of tokens in LOCNESS and the TLE respectively. The verbs in these lists were then lemmatised. The lemma counts obtained from these lists were then exported to Microsoft Excel where the "countif + 1"-function was used to count all the types (cf. McEnery & Wilson, 2001:82). The type/token ratio for LOCNESS and the TLE were then calculated using the number of types and the number of tokens counted in LOCNESS and the TLE respectively.

4.2.2 Results

In terms of frequency, it is interesting to note that more verbs occur overall in the TLE than in LOCNESS. In spite of this, the mean type/token ratio for LOCNESS is 66.61 (n=189; SD=14.63) whereas the mean type/token ratio for the TLE is 53.58 (n=519; SD=9.84). This means that for every 100 verbs the L1 English users use 67 different verb lemmas in LOCNESS while the BSAE users only use 54 different verb lemmas for every 100 verbs in the TLE. In other words the L1 English users employ 13.03 more different verb lemmas per 100 verbs in LOCNESS than the BSAE users employ in the TLE. This suggests that there is more specificity in the lexical verbs of LOCNESS than in the lexical verbs of the TLE. But in order to determine whether this difference in the dependent variable (i.e. the mean type/token ratio between the two independent corpora) is

[35] 'Type' here refers to the number of unique verb lemmas in the respective corpora.

[36] 'Token' here refers to the number of verbs in the respective corpora.

statistically significant, a t-test was performed. The statistical significance of this difference in the mean type/token ratio is t=13,56 (df=706; p=0.0000001) which indicates that the difference in the mean type/token ratios between LOCNESS and the TLE is statistically significant.

Whereas the t-test indicates whether the difference in the mean type/token ratios is statistically significant (i.e. that the result is not due to chance), Cohen's d' (Cohen, 1977:9-10) measures the effect size (ES). Cohen (1977:9-10) points out that the concept can be defined as "the degree to which the phenomenon is present in the population" or "the degree to which the null hypothesis is false". Cohen (1977:10) goes on to say that:

> [W]hen the null hypothesis is false, it is false to some specific degree, i.e., *the effect size* (ES) *is some specific nonzero value in the population*. The larger this value, the greater the *degree* to which the phenomenon under study is manifested.
>
> (Cohen's emphasis)

It can therefore be said that whereas the t-test enables one to determine a significance level that reflects whether the relationship could be due to chance, the ES determines the strength of the relationship in question.

In order to determine the degree to which there is more specificity in the lexical verbs of LOCNESS than the TLE, Cohen's d' is calculated for the mean type/token ratio of both LOCNESS and the TLE:

$$d' = \frac{m_1 - m_2}{\sigma}$$

where

> $\mathbf{m_1}$ and $\mathbf{m_2}$ = population means
>
> $\boldsymbol{\sigma}$ = the standard deviation of either population (since they are assumed equal)

Therefore it could be said that:

$$d' = \frac{66.61495 - 53.57780}{14.63245}$$

$$= \frac{13.03715}{14.63245}$$

$$= 0.891$$

Cohen (1977:12) proposes three levels of ES: small (d' = 0.2-0.5), medium (d' = 0.5-0.8) and large (d' > 0.8). This means that the results of Cohen's d' (d' = 0.891) not only refutes the null hypotheses of no difference in specificity in the lexical verbs of LOCNESS and the TLE quite strongly, but also confirms that the degree to which there is more specificity in the lexical verbs of LOCNESS than the lexical verbs of the TLE is large.

These numbers quantitatively show that the L1 users employ significantly more verb lemmas in LOCNESS than the BSAE users in the TLE even though there are more verbs in the TLE than in LOCNESS. This information confirms that there is more specificity in the lexical verbs in LOCNESS than in the TLE.

4.3 Determining lexical specificity: an in-depth analysis

Once the initial results suggested that there is more specificity in the lexical verb class in LOCNESS than in the TLE, a more in-depth analysis was conducted using the information provided by the frequency lists compiled in WordSmith Tools and Microsoft Excel. These results illuminated the initial quantitative results.

The lexical verb lemmas were sorted in Microsoft Excel according to their normalised frequency counts and categorised according to these counts (cf. Section 3.5). From this it came to light that whereas there are more lexical verb lemmas in the high-frequency category in the TLE than in LOCNESS, the situation is reversed in the medium-frequency and low-frequency categories as illustrated in Figure 4.1 below:

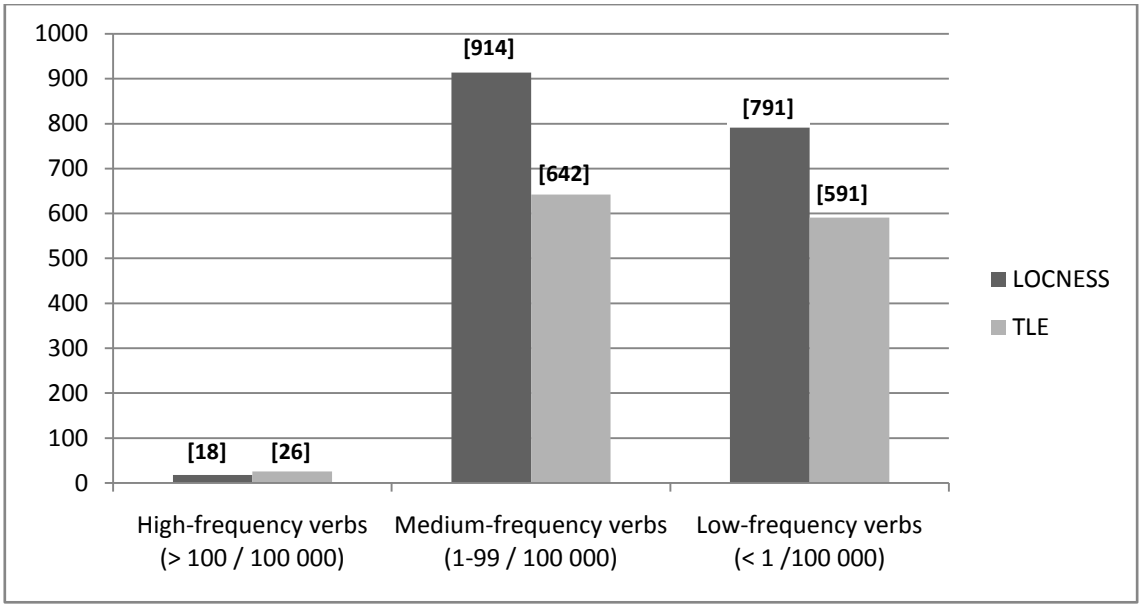

Figure 4.1: A comparison of the frequency categories between LOCNESS and the TLE

The high-frequency verbs in both the TLE and LOCNESS are listed in Table 4.1. Whereas there are only 18 high-frequency verbs in LOCNESS, there are 26 high-frequency verbs in the TLE.

The high frequency of the verbs *play* and *pay* in the TLE can be attributed to essay topics. The majority of the cases in which the verbs *play* and *pay* occur in the TLE is with reference to the essay topic "South African soccer players should be **paid** more to ensure that they **play** in South Africa" (my emphasis):

[4.1] Despite the fact that overseas countries use sophisticated training appliances they also **pay** their soccer players good money or salaries. (TLE)

[4.2] As compared to other countries, we **pay** our players peanuts. (TLE)

[4.3] South African soccer players should be **paid** more to ensure that they **play** in South Africa. (TLE)

[4.4] I do not know why do other countries have so much money to buy a person who **play** good soccer <...> (TLE)

High-frequency lexical verbs in LOCNESS (# of verbs per 100 00 words)	High-frequency lexical verbs in the TLE (# of verbs per 100 000 words)
be 2 976.49	be 3 163.82
have 442.23	have 718.03
make 302.50	do 485.98
see 199.05	go 371.69
take 198.56	get 298.64
do 195.13	play 264.85
say 170.62	make 258.89
give 152.48	know 254.91
go 151.01	take 251.44
want 145.12	pay 213.67
use 144.14	use 213.17
show 135.32	think 206.71
become 132.38	give 193.79
believe 127.96	say 186.34
feel 122.08	want 183.86
think 108.35	come 179.88
know 103.45	cause 152.55
come 101.00	see 152.05
	work 136.65
	look 129.90
	end up 121.25
	live 120.75
	become 109.82
	try 107.33
	help 105.84
	find 105.34

Table 4.1: List of high-frequency verbs in LOCNESS and the TLE

The high frequency of the verb *work* in the TLE can also be attributed to the essay topics "South African soccer players should be paid more to ensure that they play in South Africa" (where playing soccer professionally is regarded as work) and "Poverty is the cause of the HIV/AIDS epidemic in Africa" (where the issue of not having a job and being able to work, which in turn leads to poverty, is touched upon):

> [4.5] Some sponsorships such as Rothman cup should be brought back because it has a lot of money and each and every team **work** together to win that first prize, the competition become too high and also the standard of football improves. (TLE)

[4.6] Many people are going for prostitute not because the like, it's because of not **working**. (TLE)

The high-frequency verbs also demonstrate how different performative verbs are used in the TLE and LOCNESS respectively for framing statements. In LOCNESS, for example, the verbs *show*, *believe* and *feel* are used for this purpose:

[4.7] This example **showed** how a company was willing to give in at first and build a relationship before they worried about profit <...> (LOCNESS)

[4.8] In 1978 the European Court of Justice made a clear statement **showing** the extent to which it felt member states had ceded sovereignty to the concept of a single Europe <...> (LOCNESS)

[4.9] They **believe** that if Britain signs away the sterling and becomes part of "The Single Market" that her sovereignty would be lost. (LOCNESS)

[4.10] However I **believe** this difference in political stance is a less important factor in the British unease about 1992 than is the more deeprooted notion of Britain's being self-contained. (LOCNESS)

[4.11] They **feel** that grass will improve the university. (LOCNESS)

[4.12] I just **feel** we should not have a curfew period. (LOCNESS)

In the TLE, on the other hand, the verbs *look* and *find* are used to frame statements:

[4.13] <...> because if we can **look** at the other side of criminality, it is because men are just relaxing and want other people to do the work for them. (TLE)

[4.14] When **looking** at economical factors it is crucial to understand how economic factors affects the genders. (TLE)

[4.15] Sometimes you **find** that the poor kids is been raped by someone who knows that she/he got AIDS/HIV. (TLE)

[4.16] Sometimes you **find** that most young girls of ages between fourteen and twenty five are the supporters of their family <...> (TLE)

As far as the presence of the verbs *cause* and *help* is concerned in the high-frequency list of the TLE, Van Huyssteen and Van Rooy (2003) point out that the causative construction in BSAE is frequently encoded lexically rather than in a verb-predicate structure:

[4.17] It is clear that nowadays the Hiv/Aids in Africa is **caused** by poverty. (TLE)

[4.18] This is one other important factor which **causes** the HIV/AIDS epidemic to rise in this continent. (TLE)

[4.19] Therefore the prisons will indeed be of importance to **help** to overcome this problem of criminals. (TLE)

[4.20] Young people will also get counselling to **help** them cope with the situation at their different homes <...> (TLE)

Van Rooy (2008b:352) found that aspectual meanings are more salient in BSAE and that especially the termination of an event is made salient by means of lexical expressions such as *end up*. This finding corresponds to the occurrence of not only the verb *end up* in the high-frequency list of verbs in the TLE, but also the verb *try* and to a certain extent the verb *get*:

[4.21] They **end up** leaving school at its early stages because of hunger and mostly because of not payment of school fees. (TLE)

[4.22] They **end up** being HIV positive. (TLE)

[4.23] When they arrived there they **tried** to start a better life <...> (TLE)

[4.24] You will find that we are **trying** to solve a problem with a problem <...> (TLE)

[4.25] This prostitute continues sleeping with other man and they also **get** infected because of these poor person. (TLE)

[4.26] I would personally blame those people who are ignorant to such exposure because through their ignorance innocent people **get** involved in the process. (TLE)

The distribution of all the lexical verbs in both LOCNESS and the TLE across the various semantic fields are provided in Table 4.2. The results presented in this table basically correspond to Biber *et al*.'s (1999:365) findings. They point out that "English generally makes more distinctions (as represented by different verbs) among activity verbs than in any other domain". This corresponds to the fact that the most lemmas in both LOCNESS and the TLE occur in the material verbs. Biber *et al*. (1999.365) go on to say that "[i]n addition to activities, speakers of English frequently report on their own opinions, wants, and feelings, and on those of other people using ... mental verbs". This is confirmed by the fact that the semantic field of mental verbs consist of the most lemmas after the activity verbs.

Thus far, it has been pointed out on several occasions that across the semantic fields, the TLE contains more tokens than LOCNESS (except in the semantic field of communication verbs), but less types than LOCNESS which is an indication of less lexical specificity in the TLE than in LOCNESS. Therefore it is interesting to note that in the semantic field of behavioural verbs there are fewer types in LOCNESS than in the TLE which is an indication of less specificity in this semantic category in LOCNESS than in the TLE. In all the other semantic fields, however, LOCNESS draws on a more diverse range of types than the TLE.

	LOCNESS (# of verbs per 100 000 words)	LOCNESS (# of lemmas)	LOCNESS Type/token ratio	LOCNESS (% of total # of lexical verbs)	TLE (# of verbs per 100 000 words)	TLE (# of lemmas)	TLE Type/token ratio	TLE (% of total # of verbs)
material	6 418.75	1 100	17.14	43.89	8 134.40	919	11.30	49.47
relational/existential[37]	4 971.44	216	4.34	33.99	5 407.86	111	2.05	32.89
mental	2 189.10	235	10.74	14.97	2 195.34	166	7.56	13.35
communication	1 017.33	149	14.65	6.96	586.35	89	15.18	3.57
behavioural	28.93	18	62.22	0.20	119.26	19	15.93	0.73
# of lexical verbs	**14 625.55**	**1 718**			**16 443.21**	**1 304**		

Table 4.2: The distribution of the lexical verbs in LOCNESS and the TLE respectively across the semantic fields

[37] The relational and existential verbs are grouped together here, as the most frequently used lexical verb in both LOCNESS and the TLE is the verb *be* and it can fulfil either a relational or existential role.

In order to gain more in-depth insight into the lexical verbs employed in both LOCNESS and the TLE, specificity in the lexical verbs was investigated in the semantic field of communication verbs using the framework presented in Section 2.8.3. It may be argued that the semantic field of communication verbs is not a good field in which to conduct an investigation into lexical specificity as this is the only category where the TLE displays fewer tokens than in LOCNESS. But this a-typical characteristic of the semantic field results in a slightly higher type-token ratio in the TLE than in LOCNESS (as illustrated in Table 4.2) and allows the TLE the best chance to show its own lexical specificity in comparison to LOCNESS.

4.3.1 Specificity in communication verbs

Communication verbs play such an important role because human beings are speaking beings in the sense that they use sounds to covey meaning. Therefore Wierzbicka (1987:2) says that "*homo sapiens* is really *homo significans*, a being who lives on expression and communication of meaning". As a result, she goes on to say, verbs referring to speech constitute one of the most important areas of the vocabulary of any language and she explains that this is particularly true of languages such as English that "function as vehicles of life in complex modern societies" (Wierzbicka, 1987:3). By comparing lexical specificity in the communication verbs of L1 English and BSAE writing, one will therefore be able to determine how L1 English users and BSAE users communicate meaning in complex modern societies.

In terms of frequency, the results (set out in Table 4.2) show that 6.97% of all the lexical verbs in LOCNESS are communication verbs whereas 3.59% of all the lexical verbs in the TLE are communication verbs. In addition, while there are 149 communication verb lemmas in LOCNESS, there are only 89 communication verb lemmas in the TLE. These results suggest two things: Firstly, when comparing the proportion of lexical verbs that are communication verbs in the respective corpora, it can be deduced that BSAE users do not employ communication verbs to the extent that L1 English users employ communication verbs. This finding is supported by Van Rooy (2008a:291) who, in his multidimensional analysis of student writing in BSAE, found that Quirk *et al.*'s (1985:1180-1183) public and suasive verbs (which form part of Halliday and Matthiessen's verbal processes and Biber's corresponding notion of communication verbs

discussed in Section 2.6) "occur with significantly lower frequency in the TLE than in LOCNESS)". Secondly, when comparing the amount of communication verb lemmas in the respective corpora, it can be deduced that there might be less lexical specificity in the communication verbs of BSAE than in the communication verbs of L1 English. In order to illuminate and expound on these deductions, lexical specificity within the field was investigated in both LOCNESS and the TLE.

As the semantic field of communication verbs is so large, it was decided that the field had to be subdivided into more specific semantic categories. After carefully considering the communication verbs in both corpora, five main semantic categories were identified:

(i) [to say something in a particular manner] instantiated by verbs such as *state*, *shout*, *mumble* and *stress*

(ii) [to say something in order to express one's feelings or opinions] instantiated by verbs such as *thank*, *commend*, *complain*, *chastise* and *tease*

(iii) [to say something in order to convey information] instantiated by verbs such as *introduce*, *argue*, *object*, *advocate*, *discuss*, *summarise*, *comment* and *agree*

(iv) [to say something to someone in order to elicit a certain response] instantiated by verbs such as *forbid*, *instruct*, *propose*, *suggest*, *mention*, *advertise*, *question* and *ask*

(v) [to say something in response to something already said] instantiated by verbs such as *refuse*, *agree* and *rebut*

Figure 4.2 below illustrates that there are more tokens in each of the semantic categories in LOCNESS than in the TLE except in the semantic category [to say something to someone in order to elicit a certain response] where there are slightly more tokens in the TLE than in LOCNESS.

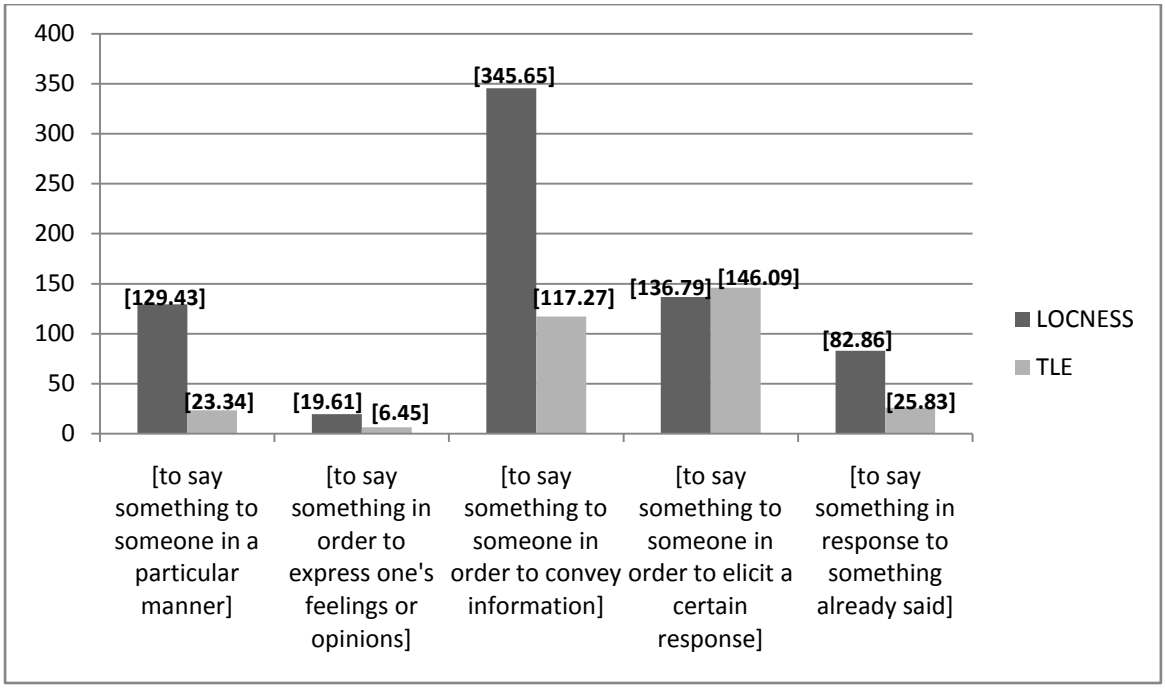

Figure 4.2: A comparison of the frequency of verbs belonging to the main semantic categories of communication verbs between LOCNESS and the TLE

On the other hand, Figure 4.3 below illustrates that there are more lemmas in LOCNESS than in the TLE in each of the five semantic categories.

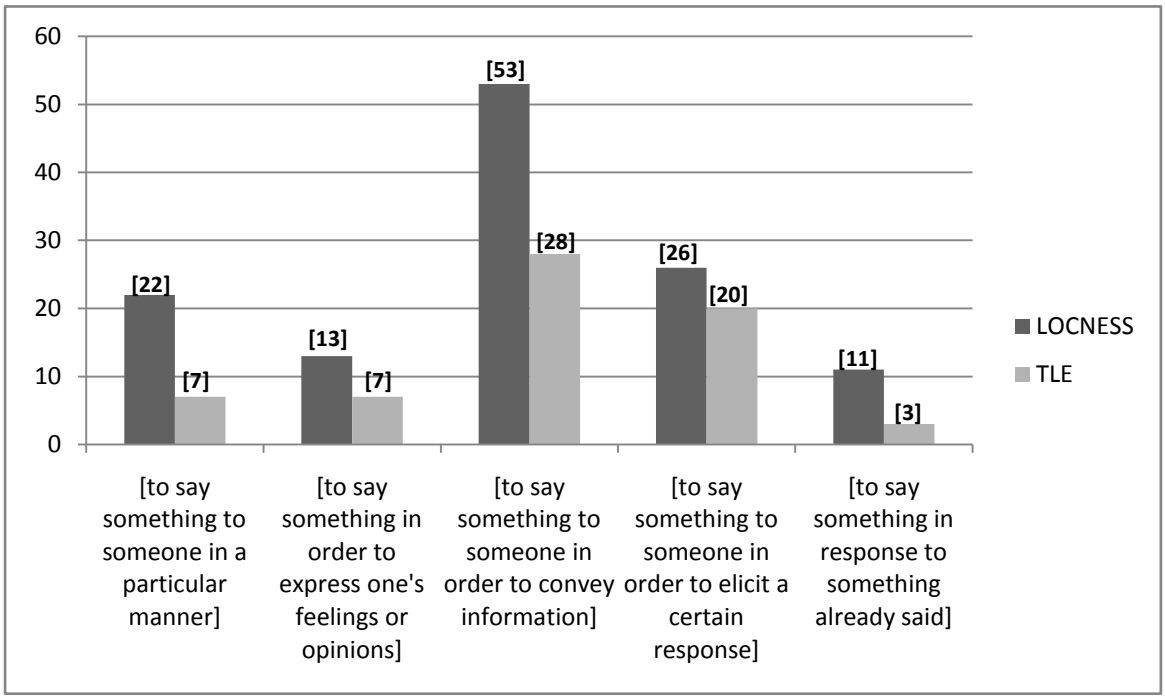

Figure 4.3: A comparison of the number of verb lemmas belonging to the main semantic categories of communication verbs between LOCNESS and the TLE

Here it is noteworthy that although there are more tokens in the semantic category [to say something to someone in order to elicit a certain response] in the TLE than in LOCNESS, there are still fewer lemmas in the TLE than in LOCNESS in this semantic category. This indicates there is still more lexical specificity in LOCNESS than in the TLE.

The semantic categories are typically headed by the high-frequency verb *say* (which occurs 170.62 times per 100 000 words in LOCNESS and 186.34 times per 100 000 words in the TLE). Therefore *say* can be regarded as the unique beginner of the communication verbs.

These semantic categories are presented visually in the Addenda.[38] Each of the five semantic categories mentioned above can in turn be semantically divided into more specific subcategories. These categories are discussed in the sections that follow.

[TO SAY SOMETHING IN A PARTICULAR MANNER]

The semantic category [to say something in a particular manner] is instantiated by five semantic subcategories. They are:

(i) [to say something in a formal manner] instantiated by the verbs *state* (which in turn is elaborated by the troponyms *contend*, *assert* and *insist*), *declare* (which in turn is elaborated by the troponyms *proclaim*, *avow* and *pronounce*), *announce* and *address*

(ii) [to say something in a firm manner] instantiated by the verbs *stress* and *emphasise*

(iii) [to say something in a loud voice] instantiated by the verb *shout* (which in turn is elaborated by the troponyms *call out*, *clamour*, *bellow*, *exclaim* and *scream*)

(iv) [to say something in a soft and indistinct voice] instantiated by the verbs *mumble* and *murmur*

(v) [to say something in such a manner as to raise doubt about something or someone] instantiated by the verb *question*

[38] The meanings of the linguistic forms provided in all of the analyses are derived from the *Oxford Advanced Learner's Dictionary*, the *South African Concise Oxford Dictionary*, the *Longman Dictionary of Contemporary English* and the electronic dictionary *WordWeb*.

The first and second semantic subcategories mentioned above pertain to the style in which something is communicated (i.e. formally and firmly) whereas the third and fourth semantic subcategories both pertain to the loudness in the speaker's voice when communicating (i.e. loudly and softly). The fifth semantic category displays certain epistemic qualities. A visual representation of the levels of specificity in this semantic category is provided in Addendum A and the frequency results for the various semantic subcategories are presented in Table 4.3.

The semantic subcategory [to say something in a formal manner] constitutes 10.8% of the communication verbs in LOCNESS and only 3.22% of the communication verbs in the TLE. Whereas the semantic category is instantiated by four lemmas (which in turn are further elaborated by six lemmas) in LOCNESS, the semantic category is only instantiated by two lemmas (which in turn are further elaborated by one lemma) in the TLE. These numbers suggest that the semantic subcategory [to say something in a formal manner] is not only used less frequently by BSAE users in the TLE, but that there is also less lexical diversity in the TLE at both levels of specificity in this category.

The semantic subcategory [to say something in a formal manner] is instantiated by the verb *state* (which in turn is elaborated by the troponyms *contend, assert* and *insist*). These verbs are regarded as **representatives** in Speech Act Theory. Searle (1976:10) points out that the "purpose of the members of the representative class is to commit the speaker (in varying degrees) to something's being the case, to the truth of the expressed proposition".

These verbs also lend certain formalness to the language users' utterances as illustrated in the following examples:

[4.27] It's factual just as Helen, the Director of School of Social work, **stated** that married women are the most people who run a high risk of contracting HIV/AIDS. (TLE)

	LOCNESS (# of verbs per 100 000 words)	LOCNESS (# of lemmas)	LOCNESS (% of total # of communication verbs)	TLE (# of verbs per 100 000 words)	TLE (# of lemmas)	TLE (% of total # of communication verbs)
[to say something in a formal manner]	110.31	11	10.8	18.88	4	3.22
[to say something in such a manner as to raise doubt about something or someone]	8.83	1	0.87	0.99	1	0.17
[to say something in a firm manner]	4.90	2	0.48	2.48	1	0.42
[to say something in a loud voice]	4.41	6	0.43	0.99	1	0.17
[to say something in a soft and indistinct voice]	0.98	2	0.10	0.00	0	0.00
Total	**129.43**	**22**	**12.68**	**23.34**	**7**	**3.98**

Table 4.3: The distribution of lexical verbs within the category [to say something to someone in a particular manner]

[4.28] The main argument supporting capital punishment **contends** that it is the most effective deterrent for these crimes. (LOCNESS)

[4.29] Dr A.W. Liley, known as the father of fetology by right-to-lifers **asserts**, <quote> (LOCNESS)

[4.30] The NAB also **insisted** that broadcasters already have responded to concerns over violence on television. (LOCNESS)

The semantic subcategory [to say something in a formal manner] is also instantiated by the verb *declare* (which in turn is elaborated by the troponyms *proclaim*, *avow* and *pronounce*). These verbs, however, are regarded as **declarations** in Speech Act Theory. Searle (1976:13) points out that "[i]t is the defining characteristic of this class that the successful performance of one of its members brings about the correspondence between the propositional content and reality, successful performance guarantees that the propositional content corresponds to the world" (i.e. these expressions change the belief systems in the world by their very utterance).

[4.31] Pompidou **declared** that the presidency would continue to be the seat of decision-making. (LOCNESS)

[4.32] Newt Gingrich, the Speaker of the House, now **proclaims**, <quote>. (LOCNESS)

[4.33] Dora and Kaliayev are constrained by their commitment to the Organisation not to **avow** their love for each other. (LOCNESS)

Whereas the verb *state* and its troponyms (the representatives) are just formal in style, the verb *declare* and its troponyms (the declarations) are not just formal in style but also more institutional/official in style. In Example 4.31, for example, Pompidou successfully performs the act of declaring the presidency as the seat of decision-making and so the presidency continues to be the seat of decision-making (cf. Searle, 1976:13).

It is also interesting to note that the air of formalness provided by these communication verbs is supported by the titles of the persons communicating the facts (i.e. the Sayer).

Dr A.W. Liley in Example 4.29, for instance, is regarded as the "father of fetology" by right-to-lifers. In Example 4.32, Newt Gingrich is the Speaker of the House whereas Helen in Example 4.27 is referred to as the Director of the School of Social Work. The titles of these Sayers, together with the communication verbs in the semantic subcategory [to say something in a formal manner], communicates the importance and veracity of the information communicated. It also reflects an awareness of the importance of institutional authority in the culture of both LOCNESS and the TLE.

As pointed out earlier, the semantic subcategory [to say something in a formal manner] is used more frequently by L1 English users in LOCNESS than by BSAE users in the TLE. For every one instantiation of this category occurring in LOCNESS, only 0.17[39] instantiations occur in the TLE. This can be attributed to the fact that whereas the troponyms *contend* and *assert* (which elaborate *state*), *declare* (and its troponyms *proclaim*, *avow* and *pronounce*) and the elaboration *announce* occur in LOCNESS, it never occurs in the TLE. Other instances in this category, such as *state* (and its elaboration *insist*) as well as *address* are used to a lesser extent in the TLE than in LOCNESS. Therefore it could be said that although the same level of specificity occurs in both LOCNESS and the TLE, there is less lexical diversity at the different levels of specificity in the TLE than in LOCNESS in the semantic subcategory [to say something in a formal manner].

The semantic subcategory [to say something in a firm manner] (elaborated by the verbs *stress* and *emphasise*) constitutes 0.48% of all the communication verbs in LOCNESS whereas it constitutes 0.42% of all the communication verbs in the TLE. The semantic subcategory is elaborated by two lemmas in LOCNESS (*stress* and *emphasise*) whereas it is elaborated by one lemma in the TLE (*emphasise*). Here it is important to note that *stress* and *emphasise* can be regarded as an example of bi-troponymy in the semantic field of communication verbs as it can be said that "to *stress* is to *emphasise* in some particular manner" and it can be said that "to *emphasise* is to *stress* in some particular manner".

[39] The frequencies of the various instances of the semantic subcategories as used by BSAE users in the TLE are expressed proportionally in terms of the frequencies of the various instances of the semantic subcategories as used by the L1 English users in LOCNESS.

In this semantic subcategory it is interesting to note that whereas the verb *stress* occurs 3.92 times per 100 000 words in LOCNESS as a communication verb, it never occurs in the TLE as a communication verb. On the other hand, the verb *emphasise* is only used 0.98 times per 100 000 words in LOCNESS whereas it is employed 2.48 times per 100 000 words in the TLE. This can be attributed to the fact that the verb *stress* can be used both as a communication verb and a mental verb as illustrated in the examples below:

[4.34] People with HIV/AIDS or the victim of HIV/AIDS they should not **stress** themselves <...> (TLE)

[4.35] <...> so young people get **stressed** if they don't have work <...> (TLE)

[4.36] The also **stress** the possibility of fires in coal and oil burning plants. (LOCNESS)

[4.37] The supporters **stress** that nuclear power is very cost efficient in the long run (LOCNESS)

[4.38] To draw the attention of his people to the absurdity of life, he **stresses** the uncertainty of their lives <...> (LOCNESS)

The verb *stress* is used as a mental verb in Examples 4.34 and Example 4.35 to refer to [an emotional state where someone is not relaxed]. In Example 4.36, Example 4.37 and Example 4.38 the verb *stress* is used as a communication verb [to say something in a firm manner]. The verb *stress*, however, is not used by BSAE users in the TLE [to say something in a firm manner]. Its synonym, *emphasise*, is used in its stead:

[4.39] <...> I strongly **emphasise** that universities should be theoretical, but have a practice too. (TLE)

[4.40] This must be **emphasised** that they should consult these centres. (TLE)

In light of the examples above, one might argue that the verb *stress* is more forceful but also less formal, whereas the verb *emphasise* is more formal but also somewhat less emphatic than the verb stress.

The semantic subcategory [to say something in a firm manner] is used more frequently by L1 English speakers in LOCNESS than by BSAE users in the TLE. For every one instantiation of this category occurring in LOCNESS, only 0.51 instantiations occur in the TLE. As *emphasise* and *stress* are bi-troponyms, it cannot be said that there is more specificity in the semantic subcategory [to say something in a firm manner] in LOCNESS than in the TLE. It can, however, be said that there is less lexical diversity in the TLE than in LOCNESS as the verb *stress* is not used as a communication verb by the BSAE users in the TLE as opposed to the L1 English users in LOCNESS who use both the verbs *stress* and *emphasise* in the semantic subcategory [to say something in a firm manner].

In LOCNESS the semantic subcategory [to say something in a loud voice] constitutes 0.43% of all the communication verbs whereas it only constitutes 0.17% of the communication verbs in the TLE. In the semantic subcategory [to say something in a loud voice] the unique beginner of this category, *shout*, is the only instantiation employed by the BSAE users in the TLE:

[4.41] <...> otherwise you will get a teacher **shouting** at the child who is experiencing a problem at home <...> (TLE)

[4.42] First he came late at night, started to **shout** at me because I would tell him that he has a bad breath. (TLE)

The unique beginner occurs 0.49 times per 100 000 words in LOCNESS whereas it occurs 0.99 times per 100 000 words in the TLE. The more specific elaborations *call out*, *clamour* and *bellow* are singletons (i.e. they only occur once in the corpus) in LOCNESS, but *exclaim* occurs 0.98 times per 100 000 words while *scream* occurs 1.47 times per 100 000 words.

The semantic subcategory [to say something in a loud voice] is used more frequently by L1 English users in LOCNESS than by BSAE users in the TLE. For every one

instantiation of this category occurring in LOCNESS, only 0.22 instantiations occur in the TLE. As the BSAE users only uses the more general verb *shout* in this semantic category and never use any of the more specific terms employed by the L1 English users in LOCNESS, it could be said that there is less lexical specificity in the semantic subcategory [to say something in a loud voice] in the TLE than in LOCNESS.

The semantic subcategory [to say something in a soft and indistinct voice] does not occur in the TLE at all and it only constitutes 0.1% of all the communication verbs in LOCNESS. The category is instantiated by the instances *mumble* and *murmur* in LOCNESS which can be regarded as bi-troponyms:

[4.43] Still another child **murmurs** the words automatically as she thinks about what kickball team she wants to be in during recess. (LOCNESS)

[4.44] As the students **mumble** the memorised lines, a child in the back of the classroom stares out the window. (LOCNESS)

Here it is important to mention that the verbs *murmur* and *mumble* are singletons in LOCNESS and that both these verbs are used with reference to one of the essay topics presented to the L1 English users: “Prayer in schools”.

Upon taking the factors mentioned above into consideration, it becomes clear that the semantic subcategory [to say something in a soft and indistinct voice] only occurs in LOCNESS due to an essay topic presented to the L1 English users. Due to this very minor difference in representational content of the two corpora, it cannot be said that there is less lexical specificity in the TLE than in LOCNESS in this semantic subcategory.

The semantic subcategory [to say something in such a manner as to raise doubt about something or someone] constitutes 0.87% of the communication verbs in LOCNESS whereas it only constitutes 0.17% of the communication verbs in the TLE. The only instantiation in this semantic category is the verb *question*.

This semantic subcategory ([to say something in such a manner as to raise doubt about something or someone]) is related to epistemic modality which "refers to the speaker or writer's attitude in terms of certainty, doubt, actuality and precision towards a proposition" (Magocha, 2010:73). Halliday and Matthiessen (2004:618) refer to this issue as modality and says that modality "refers to the area of meaning that lies between yes and no – the intermediate ground between positive and negative polarity". It can therefore be said that the Sayer creates an attitude of doubt in the Target in this semantic category as illustrated in Example 4.45 and Example 4.46 below:

[4.45] Many people **question** whether mandatory drug testing is ethical or whether it is a violation of athletes rights to privacy. (LOCNESS)

[4.46] In this case, Einstein **questioned** Newton's laws and theories and ended up creating a new discovery in the laws of physics. (LOCNESS)

Upon considering the examples above, it could be said that the verb *question* can to a certain extent be regarded as a representative, which foregrounds not the authority of the Sayer (as is the case with the verb *state* and its elaborations), but evaluates the veracity of the representation.

The semantic subcategory [to say something in such a manner as to raise doubt about something or someone] occurs more frequently in LOCNESS than in the TLE. For every one instantiation of this category occurring in LOCNESS, only 0.11 instantiations occur in the TLE. In spite of this it cannot be said that there is more lexical specificity in LOCNESS than in the TLE.

Overall there is less lexical specificity in the TLE than in LOCNESS in one of the semantic subcategories present in the category [to say something in a particular manner]: [to say something in a loud voice]. The semantic subcategory [to say something in such a manner as to raise doubt about something or someone] has the same level of specificity in both LOCNESS and the TLE, and although it is used less frequently in the TLE, the same lexical diversity can be found in this category. In the semantic subcategory [to say something in a firm manner] it can only be said that the verb *emphasised* is preferred over its bi-troponym *stress* in the TLE as *stress* could also belong to the semantic category of

mental verbs. In the semantic category [to say something in such a manner as to raise doubt about something or someone] the instantiation *question* occurs in both LOCNESS and the TLE and therefore it cannot be said that there is more specificity in this semantic subcategory in LOCNESS than in the TLE. The semantic subcategory [to say something in a soft and indistinct voice] does not occur in the TLE, but it is important to keep in mind that it only occurs in LOCNESS due to an essay topic presented to the L1 English speakers.

The fact that the semantic category [to say something in a particular manner] constitutes 11.81% of the communication verbs in LOCNESS and merely constitutes 3.81% of the communication verbs in the TLE, suggests the BSAE users in the TLE may find ways to express manner of saying in other ways than expressing it lexically in the verb. This can quite clearly be observed in the semantic category [to say something in a loud voice]. None of the instances in this semantic category occurs in the TLE. Instead, the manner of saying is expressed syntactically through manner adverbials or by inference from context only. This is illustrated in the following examples:

[4.47] One day James the man came home, told my mother that he wants to leave school. My mother was shocked to hear what he just said, she couldn't believe it. My son! she said <...> (TLE)

[4.48] Therefore, I strongly say that the people who commit a crime should be sent to rehabilitation centres instead of prison for punishment as they would be aggravating the situation. (TLE)

In Example 4.47 the loudness of the mother's voice (due to surprise) is not reflected in the word *said* (as would have been the case if the word *exclaimed* was used). It is instead reflected in the exclamation mark. In Example 4.48 the fact that the Sayer says in a firm manner that criminals should be sent to rehabilitation centres and not prison is not reflected in the word *say* (as would have been the case if the word *stress* or *emphasise* was used). The manner in which the statement is made is rather reflected in the word *strongly* which precedes the word *say*. These examples support the fact that the BSAE users tend not to express the manner of saying lexically in the verb.

[TO SAY SOMETHING IN ORDER TO EXPRESS ONE'S FEELINGS OR OPINIONS]

Five semantic subcategories can be found in the category [to say something in order to express one's feelings or opinions]. They are:

(i) [to say that one approves of someone or something] instantiated by the verbs *commend, compliment, applaud* and *praise* (which in turn is elaborated by the troponyms *hail, acclaim* and *extol*)
(ii) [to say that one does not approve of someone's actions] instantiated by the verbs *chastise* and *scold*
(iii) [to say that one is not satisfied with something] instantiated by the verb *complain*
(iv) [to say something to express one's feelings towards someone else in an unkind manner] instantiated by the verbs *tease, mock* and *ridicule*
(v) [to express gratitude] instantiated by the verb *thank*

The verbs in the semantic category [to say something in order to express one's feelings or opinions] basically cover the **expressives** in Speech Act Theory. Searle (1976:12) points out that "[t]he illocutionary point of this class is to express the psychological state specified in the sincerity condition about a state of affairs specified in the propositional content". Searle (1976:12) also points out that "[i]n performing an expressive, the speaker is neither trying to get the world to match the words nor the words to match the world, rather the truth of the expressed proposition is presupposed".

A visual representation of the levels of specificity in the semantic category [to say something in order to express one's feelings or opinions] is provided in Addendum B and the frequency results for the various semantic subcategories are presented in Table 4.4.

	LOCNESS (# of verbs per 100 000 words)	LOCNESS (# of lemmas)	LOCNESS (% of total # of communication verbs)	TLE (# of verbs per 100 000 words)	TLE (# of lemmas)	TLE (% of total # of communication verbs)
[to say that one approves of someone or something]	5.88	7	0.58	1.49	2	0.25
[to say that one does not approve of someone's actions]	0.49	1	0.05	0.50	1	0.09
[to say that one is not satisfied with something]	1.47	1	0.14	2.48	1	0.42
[to say something to express one's feelings towards someone else in an unkind manner]	8.33	3	0.82	0.99	2	0.17
[to express gratitude]	3.43	1	0.34	0.99	1	0.17
Total	**19.61**	**13**	**1.93**	**6.45**	**7**	**1.10**

Table 4.4: The distribution of lexical verbs within the category [to say something in order to express one's feelings or opinions]

The semantic subcategory [to say that one approves of someone or something] constitutes 0.58% of the verbs in LOCNESS and 0.25% of the verbs in the TLE. Whereas this semantic subcategory is instantiated by four lemmas (one of which is elaborated by three lemmas) in LOCNESS, the semantic category is only instantiated by two lemmas in the TLE (none of which are elaborated).

The four verb lemmas that instantiate the semantic subcategory [to say that one approves of someone or something] are *commend*, *compliment*, *applaud* and *praise* all of which have the semantic meaning of [saying that one approves of someone or something]:

[4.49] I **commend** the group PAW, and those teachers and librarians who fought for these author's rights. (LOCNESS)

[4.50] The problem with this is that students tease other students about trying to become "the teacher's pet" and this makes them not want to **compliment** teachers. (LOCNESS)

[4.51] A cancer patient is **applauded** for hanging on from day to day <...> (LOCNESS)

[4.52] I am not **applauding** prostitution, or any form of crime but can you live in plastic home? (TLE)

[4.53] Parents are quick to jump on teachers when they do wrong but are slow in **praising** teachers when they are right. (LOCNESS)

[4.54] When rehabilitation time is over, the criminals should be **praised** for having co-operated with the counsellors. (TLE)

Whereas the more general instances of *applaud* and *praise* are employed by BSAE users in the TLE, the more specific instances that elaborate the verb *praise* (i.e. *hail*, *acclaim* and *extol* which have the added meaning of [praising someone or something with enthusiasm]) are not employed by the BSAE users in the TLE:

[4.55] Charles Barkley is **hailed** as a wonderful icon for children to respect <...> (LOCNESS)

[4.56] He has been widely **acclaimed** as the wittiest and most perceptive author of the 'roman philosophique'. (LOCNESS)

[4.57] Feminists, following Friedan's logic, **extolled** the glamour, self-enhancement, and personal satisfaction of pursuing a career. (LOCNESS)

The semantic subcategory [to say that one approves of someone or something] occurs more frequently in LOCNESS than in the TLE. For every one instantiation of this semantic subcategory occurring in LOCNESS, only 0.25 instantiations occur in the TLE. This can be attributed to the fact that the majority of the instances found in this semantic subcategory are not employed by the BSAE users in the TLE. The results above illustrate that there is not only more lexical specificity in the semantic subcategory [to say that one approves of someone or something] in LOCNESS than in the TLE, but also more lexical diversity.

The semantic subcategory [to say that one does not approve of someone's actions] constitutes 0.05% of the verbs in LOCNESS whereas it constitutes 0.09% of the verbs in the TLE. The semantic subcategory is instantiated by the verbs *chastise* and *scold*:

[4.58] In their physical forms, they **chastise** each other and put aside their love for each other <...> (LOCNESS)

[4.59] And the public has the tendency of **scolding** players <...> (TLE)

It is interesting to note that the verb *chastise* occurs as a singleton only in LOCNESS, whilst the verb *scold* occurs as a singleton only in the TLE. However, as there are fewer verbs in the semantic field of the communication verbs in the TLE, the semantic subcategory [to say that one does not approve of someone's actions] makes up a bigger part of the communication verbs in the TLE than it does in LOCNESS.

Considering the discussion above it can be said that the same level of lexical specificity and lexical diversity are found in the semantic subcategory [to say that one does not approve of someone's actions] in both LOCNESS and the TLE.

The semantic subcategory [to say that one is not satisfied with something] constitutes 0.14% of the communication verbs in LOCNESS and 0.42% of the communication verbs in the TLE. This semantic subcategory is instantiated by the verb *complain*:

[4.60] They said there was a need for greater cultural awareness and **complained** that administrators built these centres in places where they would not get too much attention. (LOCNESS)

[4.61] Most of the club owners **complain** about the standard of soccer in our country. (TLE)

[4.62] Other women also **complained** that there is no unity among sex workers. (TLE)

As there is only one instance in the semantic subcategory [to say that one is not satisfied with something] and this category is employed in both LOCNESS and the TLE, it can be said that the same level of specificity and lexical diversity occurs in LOCNESS and the TLE.

The semantic subcategory [to say something to express one's feelings towards someone else in an unkind manner] constitutes 0.82% of the verbs in LOCNESS and 0.17% of the verbs in the TLE. However, whereas this semantic subcategory is instantiated by three verb lemmas in LOCNESS (i.e. *tease*, *mock* and *ridicule*), it is only instantiated by two verb lemmas in the TLE (i.e. *tease* and *mock*):

[4.63] The problem with this is that students **tease** other students about trying to become "the teacher's pet" and this makes them not want to compliment teachers. (LOCNESS)

[4.64] They were punished, tormented and **teased** but that was like infiltrating their minds and brains with criminal ideas. (TLE)

[4.65] Voltaire **mocked** them by saying that the masons would probably be celebrating as they would earn a great deal for rebuilding the city <...> (LOCNESS)

[4.66] What happens is that criminals are punished almost every day, **mocked** by their wardens <...> (TLE)

[4.67] Voltaire uses the character of Pangloss to represent the optimism viewpoint and he uses Pangloss as a vehicle for **ridiculing** the philosophy. (LOCNESS)

Upon considering the fact that there is only one level of specificity in the semantic subcategory [to say something to express one's feelings towards someone else in an unkind manner] and that verbs from the level of specificity is employed in both LOCNESS and the TLE, it can be said that the same level of specificity occurs in both LOCNESS and the TLE. The verbs found at this level of specificity in the TLE, however, are not lexically as diverse as the verbs found at the same level of specificity in LOCNESS.

The final semantic subcategory, [to express gratitude], constitutes 0.43% of the communication verbs in LOCNESS and only 0.17% of the communication verbs in the TLE. This semantic subcategory is instantiated by the verb *thank* in both LOCNESS and the TLE:

[4.68] Parquette doesn't even **thank** him for his gift <...> (LOCNESS)

[4.69] As for religion, the people required nothing from God, then merely prayed to **thank** him for their perfect world. (LOCNESS)

[4.70] This royalty is say as the way to **thank** the tribe of Mafikeng for allowing them to mine in their land. (TLE)

As the instantiation of the semantic subcategory [to express gratitude], *thank*, is employed in both LOCNESS and the TLE, it can be said that the same level of lexical specificity and lexical diversity occur in this semantic subcategory in both LOCNESS and the TLE.

After considering the various semantic subcategories in the semantic category [to say something to express one's feelings or opinions] some interesting syntactic issues were discovered. In this semantic category, the Target is salient in four of the five semantic subcategories: [to express gratitude], [to say that one approves of someone or something]; [to say that one does not approve of someone's actions] and [to say something to express one's feelings towards someone else in an unkind manner]. This illustrated by syntactically analysing some of the Examples mentioned above:

[4.68] Parquette$_{(Sayer)}$ doesn't even **thank**$_{(Process: verbal)}$ him$_{(Target)}$ for his gift$_{(Verbiage)}$ <...> (LOCNESS)

[4.51] A cancer patient$_{(Target)}$ is **applauded**$_{(Process: verbal)}$ for hanging on from day to day$_{(Projection)}$ <...> (LOCNESS)

[4.58] <...> they$_{(Sayer)}$ **chastise**$_{(Process: verbal)}$ each other$_{(Target)}$ <...> (LOCNESS)

[4.65] Voltaire$_{(Sayer)}$ **mocked**$_{(Process: verbal)}$ them$_{(Target)}$ <...> (LOCNESS)

In the semantic subcategory [to say that one is not satisfied with something], however, the Target is not as salient:

[4.61] Most of the club owners$_{(Sayer)}$ **complain**$_{(Process: verbal)}$ about the standard of soccer in our country$_{(Verbiage)}$. (TLE)

[4.62] Other women$_{(Sayer)}$ also **complained**$_{(Process: verbal)}$ that there is no unity among sex workers$_{(Projection)}$. (TLE)

Here it is interesting to note that the semantic subcategory [to say that one is not satisfied with something] is not only the only subcategory in which the Target is not salient, but that this is also the semantic subcategory that is used more frequently by BSAE users in the TLE.

Overall it can be said that the semantic category [to say something in order to express one's feelings or opinions] constitutes 1.93% of the communication verbs in LOCNESS and 1.1% of the communication verbs in the TLE. There is less specificity in one of the

semantic subcategories, [to say that one approves of someone or something]. In the semantic subcategories [to say that one does not approve of someone's actions], [to say that one is not satisfied with something] and to [express gratitude] the same level of specificity can be found in both LOCNESS and the TLE. Although it can be said that the same level of specificity is found in the semantic subcategory [to say something to express one's feelings towards someone else in an unkind manner], there is less lexical diversity in the TLE than in LOCNESS in this semantic category.

[TO SAY SOMETHING IN ORDER TO CONVEY INFORMATION]

Eighteen subcategories can be found in the category [to say something in order to convey information]. They are:

(i) [to say something to someone in order to make them aware of it] instantiated by the verb *argue*

(ii) [to say something in order to express an opinion] instantiated by the verbs *comment* and *remark*

(iii) [to say that one supports something] instantiated by the verb *advocate* (which in turn is elaborated by the troponym *preach*)

(iv) [to say that one does not support something] instantiated by the verbs *object*, *protest* and *remonstrate*

(v) [to say that someone is guilty of wrongdoing] instantiated by the verb *accuse* (which in turn is elaborated by the troponym *charge*)

(vi) [to say that one has the same opinion as someone else] instantiated by the verb *agree*

(vii) [to say that one does not have the same opinion as someone else] instantiated by the verb *disagree*

(viii) [to say something to someone which has not been touched upon in the conversation before] instantiated by the verbs *introduce* and *point out* (which in turn is elaborated by the troponyms *inform* and *notify*)

(ix) [to say something to someone, receiving feedback and responding to the feedback] instantiated by the verb *discuss* (which in turn is elaborated by the troponyms *negotiate* and *debate*)

(x) [to say something to someone in order to indicate fault] instantiated by the verb *criticise* (which in turn is elaborated by the troponyms *denounce* and *malign*)

(xi) [to say something to someone in order to give an account of what happened or what something looks like] instantiated by the verbs *describe* (which in turn is elaborated by the troponyms *recount* and *portray*) and *report*

(xii) [to say something to someone which adds to existing information] instantiated by the verb *add* (which in turn is elaborated by the verbs *elaborate*, *expound*, *explain* and *clarify*)

(xiii) [to say something to someone, listing the main points pertaining to it] instantiated by the verb *summarise*

(xiv) [to say that something is the case] instantiated by the verbs *admit* (which in turn is elaborated by the troponyms *confess* and *concede*), *confirm* (which in turn is elaborated by the troponyms *verify*, *affirm*, *vouch* and *profess*), *assure* and *maintain*

(xv) [to say that something is not the case] instantiated by the verb *deny* (which in turn is elaborated by the troponyms *refute* and *negate*)

(xvi) [to say something to someone which one believes to be the truth] instantiated by the troponyms *claim* and *purport*

(xvii) [to say that something might happen] instantiated by the verbs *predict* (which in turn is elaborated by the troponym *prophesise*) and *promise* (which in turn is elaborated by the troponyms *pledge* and *swear*)

(xviii) [to say that something bad might happen] instantiated by the verb *warn*

The first two semantic subcategories, [to say something to someone in order to make them aware of it] and [to say something in order to express an opinion], have the basic intention of conveying information. The semantic subcategories [to say that one supports something], [to say that one does not support something] and [to say that someone is guilty of wrongdoing] also have the basic intention of conveying information, but can also be regarded as being interactive. It can also be noted that within the system of polarity (cf. Halliday & Matthiessen, 2004:22) the semantic subcategory [to say that one supports something] is positive, whereas the semantic subcategory [to say that one does not support something] is negative. The semantic subcategories [to say that one has the same opinion as someone else], [to say that one does not have the same opinion as someone else], [to say something to someone which has not been touched upon in the

conversation before] and [to say something to someone, receiving feedback and responding to the feedback] all have certain interactive characteristics. Here the semantic subcategory [to say that one has the same opinion as someone else] is positive in the system of polarity, whereas the semantic subcategory [to say that one does not have the same opinion as someone else] is negative. The semantic subcategory [to say something to someone in order to indicate fault has the basic intention of conveying information, but the information being conveyed may be subjective. On the other hand, the semantic subcategory [to say something to someone in order to give an account of what happened or what something looks like] has the basic intention of conveying information, but the information being conveyed tends to be more objective. The semantic subcategory [to say something to someone, listing the main points pertaining to it] also has the basic intention of conveying information, but has the added function of operating on the verbiage. The rest of the semantic subcategories [to say that something is the case], [to say that something is not the case], [to say something to someone which one believes to be the truth], [to say that something might happen] and [to say that something bad might happen] not only have the basic intention of conveying information but are also related to epistemic modality (cf. Magocha, 2010:73). In the system of polarity the semantic subcategory [to say that something is the case] is positive, whereas the semantic subcategory [to say that something is not the case] is regarded as negative. A visual representation of the levels of specificity in the semantic category [to say something in order to convey information] is provided in Addendum C and the frequency results for the various semantic subcategories are presented in Table 4.5.

The semantic subcategory [to say something to someone in order to make them aware of it] constitutes 4.87% of the communication verbs in LOCNESS whereas it constitutes 0.51% of the communication verbs in the TLE. This semantic subcategory is only instantiated by the verb *argue* which has the semantic meaning [of saying something to someone in order to make them aware of it, providing evidence in support]:

[4.71] Proponents of genetic research **argue** that the research would be valuable, for it can screen for disease carrying genes. (LOCNESS)

[4.72] Animal researchers also **argue** that if research was to be banned, where would the line be drawn? (LOCNESS)

	LOCNESS (# of verbs per 100 000 words)	LOCNESS (# of lemmas)	LOCNESS (% of total # of communication verbs)	TLE (# of verbs per 100 000 words)	TLE (# of lemmas)	TLE (% of total # of communication verbs)
[to say something to someone in order to make them aware of it]	49.52	1	4.87	2.98	1	0.51
[to say something in order to express an opinion]	3.43	2	0.34	0.50	1	0.09
[to say that one supports something]	9.81	2	0.96	4.47	1	0.76
[to say that one does not support something]	3.92	3	0.39	0.50	1	0.09
[to say that someone is guilty of wrongdoing]	11.28	2	1.11	1.49	1	0.25
[to say that one has the same opinion as someone else]	3.92	1	0.39	38.26	1	6.53
[to say that one does not have the same opinion as someone else]	6.37	1	0.63	7.45	1	1.27

	LOCNESS (# of verbs per 100 000 words)	LOCNESS (# of lemmas)	LOCNESS (% of total # of communication verbs)	TLE (# of verbs per 100 000 words)	TLE (# of lemmas)	TLE (% of total # of communication verbs)
[to say something to someone which has not been touched upon in the conversation before]	24.51	4	2.41	8.94	1	1.52
[to say something to someone, receiving feedback and responding to the feedback]	42.16	3	4.14	7.45	4	1.27
[to say something to someone in order to indicate fault]	9.81	3	0.96	5.47	1	0.93
[to say something to someone in order to give an account of what happened or what something looks like]	53.93	4	5.30	6.46	2	1.10
[to say something to someone which adds to existing information]	33.83	5	3.33	7.95	3	1.36

	LOCNESS (# of verbs per 100 000 words)	LOCNESS (# of lemmas)	LOCNESS (% of total # of communication verbs)	TLE (# of verbs per 100 000 words)	TLE (# of lemmas)	TLE (% of total # of communication verbs)
[to say something to someone, listing the main points pertaining to it]	1.47	1	0.14	0.00	0	0.00
[to say that something is the case]	43.63	10	4.29	4.47	4	0.76
[to say that something is not the case]	10.79	3	1.06	0.50	2	0.09
[to say something to someone which one believes to be the truth]	30.89	2	3.04	8.94	1	1.52
[to say that something might happen]	4.90	5	0.48	8.45	2	1.44
[to say that something bad might happen]	1.47	1	0.14	2.98	1	0.51
Total	**345.65**	**53**	**33.98**	**117.27**	**28**	**20.00**

Table 4.5: The distribution of lexical verbs within the category [to say something to someone in order to convey information]

[4.73] One could **argue** that these women can get decent jobs and they do not have to resort to such measures. (TLE)

[4.74] And the Education International (EI) has **argued** that the AIDS epidemic has highlighted huge disparities in the quality of education both within countries and between them. (TLE)

When the frequency of the occurrence of the verb *argue* is considered, one can see that the lexical item is employed in both LOCNESS and the TLE which means that both L1 users and BSAE users have access to it. But whereas this verb is employed 49.52 times per 100 000 words in LOCNESS, it is merely used 2.98 times per 100 000 words in the TLE. The question then is why, if both the L1 users and the BSAE users have access to the verb *argue*, the L1 users find much more reason to do so than the BSAE users. This phenomenon may be attributed to the fact that the rhetorical function of a performative verb (such as *argue*) is used to make argumentation more explicit. Argumentation is one of the aspects that play a very important role in academic literacy as pointed out by Louw (2006:151) and Louw (2009). Van Rooy & Terblanche, 2009:243-244) have also pointed out that there is a difference in the academic literacy skills of L1 English users and BSAE users. Considering this, the fact that the verb *argue* does not occur as frequently in the TLE as in LOCNESS could be indicative of argumentations skills that are not as developed in the BSAE as it is in L1 English.

Upon considering the semantic category [to say something to someone in order to make them aware of it], it becomes clear that even though the only instance present in the semantic category is used less frequently by BSAE users in the TLE than L1 English users in LOCNESS, the same level of lexical specificity and lexical diversity is present in LOCNESS and the TLE.

The semantic subcategory [to say something in order to express an opinion] constitutes 0.34% of the communication verbs in LOCNESS and 0.09% of the communication verbs in the TLE. This semantic subcategory is instantiated by the verbs *comment* and *remark* of which only *comment* occurs in both LOCNESS and the TLE:

[4.75] One doctor **commented** that Prozac <quote>. (LOCNESS)

[4.76] Her husband will not **comment** because this is the only way of getting money for food and clothes in their house while he is unemployed. (TLE)

[4.77] <...> Dora **remarks** that it is easier to die for life's contradictions than to live them. (LOCNESS)

[4.78] The nave Candide **remarks** on how the sea and climate are much better here than in Europe <...> (LOCNESS)

The verb *comment* is a singleton in both LOCNESS and the TLE. There are, however, several instances of the verb *remark* in LOCNESS that does not occur in the TLE at all. As *comment* and *remark* both occur at the same level of specificity, it cannot be said that there is less lexical specificity in the TLE than in LOCNESS. It can, however be said that there is less lexical diversity in the TLE than in LOCNESS.

The semantic subcategory [to say that one supports something] constitutes 0.96% of the communication verbs in LOCNESS and 0.76% of the communication verbs in the TLE. This semantic subcategory is instantiated by the verb *advocate* which in turn is elaborated by the verb *preach*. Here the more general instance is not employed by the BSAE users in the TLE. Instead the more specific instance *preach* is used 1.52 times in the TLE for every time it is used in LOCNESS:

[4.79] Those that **advocate** the two-model approach not only provide effective reasoning, but also give real evidence to support their claims. (LOCNESS)

[4.80] By his portrayal of guilt and remorse, then, Sartre is condemning such manifestations of Bad Faith, and **advocating** individual freedom. (LOCNESS)

[4.81] Nuclear power advocates **preach** that the cost of coal and oil burning is 50 percent more expensive to operate than nuclear power are in the New England area. (LOCNESS)

[4.82] The more equality is **preached**, the more things deteriorate. (TLE)

[4.83] Despite the fact that AIDS messages are being **preached** every day, he seemed not to care. (TLE)

It is interesting to note that the verb *preach* is used by BSAE users in the TLE only in connection with the essay topics, "Poverty is the cause of the HIV/AIDS epidemic in Africa" and "Feminists have done more harm to the cause of women than good". When considering the instances where the word *preach* is used in the TLE, it is almost as if a negative connotation is attached to the verb: the Receivers of the information have heard the information so many times before that they find the way in which the information is delivered annoying or boring. The result is that they start ignoring the information being relayed. This is a clear example of innovation that takes place through elaboration in the TLE. This leads one to reconsider whether the BSAE users have the more general instance *advocate* at their disposal (even though this is what theory suggests as pointed out earlier), purely on the basis of the connotative meaning that can be attached to the more specific term *preach*. Therefore one cannot say with any certainty whether there are less lexical specificity and lexical diversity in the TLE than in LOCNESS in the semantic subcategory [to say that one supports something].

The semantic subcategory [to say that one does not support something] constitutes 0.39% of the communication verbs in LOCNESS whereas it constitutes 0.09% of the communication verbs in the TLE. This semantic subcategory is instantiated by the verbs *object*, *protest* and *remonstrate*:

[4.84] The employee would not **object** to wherever sexual activity the master is posing. (TLE)

[4.85] However, there are, of course, those who **object** to this one monetary system; Margaret Thatcher being one of the many. (LOCNESS)

[4.86] Many religious leaders **object** to the plan on religious grounds to pre-marital sex and believe that schools should steer away from promiscuous sexual conduct. (LOCNESS)

[4.87] This is not the only instance when animal rights activists **protested** the practice of euthanasia on animals. (LOCNESS)

[4.88] This can be proven through examples in history where citizens of the U.S. **protested** and sometimes even became violent when the taking of a life was allowed by the law. (LOCNESS)

[4.89] It is therefore, far too late to **remonstrate** against the gradual loss of sovereignty in the United Kingdom and time to accept the part we must play in the single market of Europe. (LOCNESS)

Whereas the verb *object* is employed 0.51 times by BSAE users in the TLE for every time it is used by L1 English users in LOCNESS, the verbs *protest* and *remonstrate* do not occur in the TLE at all. This results in a situation where the same level of specificity can be found in both LOCNESS and the TLE in this semantic subcategory although there is not as much lexical diversity in the TLE as in LOCNESS.

Earlier it was said that the semantic subcategory [to say that one supports something] is positive in the system of polarity instantiated by verbs such *advocate*. On the other hand, the semantic subcategory [to say that one does not support something] instantiated by the verbs such as *object* is negative in the system of polarity. As a result these verbs can to a certain extent be regarded as antonyms.

The semantic subcategory [to say that someone is guilty of wrongdoing] constitutes 1.11% of the communication verbs in LOCNESS and 0.25% of the communication verbs in the TLE. This semantic subcategory is instantiated by the verb *accuse* which in turn is elaborated by the troponym *charge*:

[4.90] In a 1987 case, the court **accused** him of improperly removing evidence after he shot a suspect. (LOCNESS)

[4.91] I mean mistakes happen and one could be **accused**. (TLE)

[4.92] <...> this biological mother was **charged** with her son's murder. (LOCNESS)

[4.93] In December, Kevorkian was **charged** with first-degree murder <...> (LOCNESS)

The verb *accuse* only occurs once in the TLE whereas the more specific verb *charge* does not occur in the TLE at all. As a result the semantic subcategory [to say someone is guilty of wrongdoing] occurs 0.13 times in the TLE for every time it occurs in LOCNESS. The results also indicate that there is not only less lexical specificity in the TLE than in LOCNESS in this semantic category, but that there is also less lexical variety in the TLE than in LOCNESS.

The semantic subcategory [to say that one has the same opinion as someone else] constitutes 0.39% of the communication verbs in LOCNESS whereas it constitutes 6.53% of the communication verbs in the TLE. This semantic subcategory is only instantiated by the verb *agree*:

[4.94] But many **agree** that the game was so well noticed because it is so rare to see a women's game on television. (LOCNESS)

[4.95] I fully **agree** with the topic that poverty is the cause of the HIV/AIDS epidemic in Africa.

As the verb *agree* occurs in both LOCNESS and the TLE it can be said that the same level of lexical specificity and lexical diversity exist in this semantic subcategory in both corpora.

The semantic subcategory [to say that one does not have the same opinion as someone else] constitutes 0.63% of the communication verbs in LOCNESS while it constitutes 1.72% of the communication verbs in the TLE. This semantic subcategory is only instantiated by the verb *disagree*:

[4.96] Many people feel that the Bible is just a conglomeration of fairytales to explain a few things humans may question. I **disagree** with this viewpoint. (LOCNESS)

[4.97] But I tend to **disagree** that there is no longer a place for dreaming and imagination. (TLE)

As the verb *disagree* occurs in both LOCNESS and the TLE it can be said that the same level of lexical specificity and lexical diversity exist in this semantic subcategory in both corpora.

The instantiations of the two semantic subcategories [to say that one has the same opinion as someone else] and [to say that one does not have the same opinion as someone else], *agree* and *disagree* can be regarded as antonyms where *agree* takes the positive meaning of [saying that one has the same opinion as someone else] and *disagree* takes the negative meaning of [saying that one does not have the same opinion as someone else].

When considering the use of the verbs *agree* and *disagree* in the TLE, it is interesting to note that almost all of the uses of the verbs are used where they communicate whether they agree or disagree with the topic they decided to write about. In Example 4.98 the writer is agreeing with the statement made in the topic "Poverty is the cause of the HIV/AIDS epidemic in Africa". In Example 4.97 the writer disagrees with the statement made in the topic "Some people say that in our modern world, dominated by science, technology and industrialization, there is no longer a place for dreaming and imagination". In fact many of the essays in the TLE start or conclude with the phrase "I agree with the topic" or "I disagree with the topic":

[4.98] I **agree** with the topic that poverty causes HIV and AIDS. (TLE)

[4.99] So by saying this I do **agree** with the topic <...> (TLE)

[4.100] I **agree** with this topic because it is true that most university degree are theoretical. (TLE)

[4.101] I **disagree** with the topic that says that poverty is the cause of the HIV/AIDS epidemic in South Africa. (TLE)

[4.102] I think I **disagree** with this topic because in the university student learn more than at the technicons and colleges. (TLE)

This phenomenon can be attributed to the way in which the assignment was formulated for the BSAE users:

> Please write an argumentative essay of about 500 words on any ONE of the following topics. You must decide whether you **agree** or **disagree** with the formulated viewpoint, and explain your viewpoint with attention to the reasons for your particular viewpoint.
>
> (My emphasis)

This, together with the fact that the essays in the TLE were largely written in class without sources, accounts for the fact that the verb *agree* is used 9.76 times in the TLE for every time it is used in LOCNESS and that the verb *disagree* is used 1.17 times in the TLE for every time it is used in LOCNESS.

The semantic subcategory [to say something to someone which has not been touched upon in the conversation before] constitutes 2.41% of the communication verbs in LOCNESS and 1.52% of the communication verbs in the TLE. The category is instantiated by the verbs *introduce* and *point out* which in turn is elaborated by the troponyms *inform* and *notify*:

[4.103] The character of Martin is used to **introduce** the opposite views to optimism <...> (LOCNESS)

[4.104] He **introduces** some historical information that enforces his ideas <...> (LOCNESS)

[4.105] They also **point out** faults in the solutions. (LOCNESS)

[4.106] Statisticians, however, **point out** that persuasiveness of a statistic lies in its ability to be factually verified. (LOCNESS)

[4.107] But, the law states that families only need to be **notified** of patients request of death. (LOCNESS)

[4.108] Athletes are **notified** in advance that they will be tested. (LOCNESS)

The verbs *introduce*, *point out* and *notify* do not occur in the TLE at all. The verb *inform*, however, is employed 1.52 times more by BSAE users in the TLE than by the L1 English users in LOCNESS:

[4.109] One will find that these people have not access to radio, television, AIDS centres or organisations and medical centres which **inform** people about this epidemic. (TLE)

[4.110] Immediately when it is your first month and they will write and **inform** you that you haven't put any money and they close the account. (TLE)

[4.111] <...> any doctor will **inform** you that Alcohol has proven time and time again to be more detrimental to the mind and body than Marijuana. (LOCNESS)

This suggests that the instance *inform* is more entrenched in the BSAE users vocabulary than any of the other instances in the semantic subcategory.

Considering the results above, it can be said that there is the same level of lexical specificity in LOCNESS and the TLE in the semantic subcategory [to say something to someone which has not been touched upon in the conversation before], but less lexical diversity with the instance *inform* being the only instance present in the semantic subcategory.

The semantic subcategory [to say something to someone, receiving feedback and responding to the feedback] constitutes 4.14% of the communication verbs in LOCNESS and constitutes 1.27% of the communication verbs in the TLE. The category is instantiated by the verb *discuss* which in turn is elaborated by the verbs *negotiate* and *debate*:

[4.112] At the start of the play "Les Mains Salles", Louis and Olga are **discussing** whether Hugo should be allowed back into the party. (LOCNESS)

[4.113] The youth can form a youth forum and **discuss** issues that can improve the situation with possible solutions. (TLE)

[4.114] The best time for the unions was between 1968 and 1973 when they could **negotiate** collective contracts for their members <...> (LOCNESS)

[4.115] If our continent could **negotiate** investments with other countries, by allowing them to manufacture businesses it could be much better. (TLE)

[4.116] The righteousness of this point is **debated** well by the supporters of adoptive parents. (LOCNESS)

[4.117] People who were otherwise "aware" could have been misled into letting down their guard in matters of protection while the issue was being **debated**. (TLE)

All of the verbs in the semantic subcategory [to say something to someone, receiving feedback and responding to the feedback] occur in both LOCNESS and the TLE. As a result the same level of lexical specificity and lexical diversity can be observed in LOCNESS and the TLE.

The semantic subcategory [to say something to someone in order to indicate fault] constitutes 0.96% of the communication verbs in LOCNESS while it constitutes 0.93% of the communication verbs in the TLE. The category is instantiated by the verb *criticise* which in turn is elaborated by the verbs *denounce* and *malign*:

[4.118] We can therefore assume that Voltaire is attacking Optimism in its context of a system, just as he **criticises** other systems in the book <...> (LOCNESS)

[4.119] In the UN, South Africa was **criticised** for that apartheid policy. (TLE)

[4.120] Voltaire's character Pangloss is the mouthpiece for philosophical optimism and what happens to him serves to **denounce** optimism. (LOCNESS)

[4.121] "The Spectator" took it upon themselves recently to **malign** a member of the University of South Carolina English department. (LOCNESS)

Example 4.118 and Example 4.119 illustrate how the verb *criticise* has the semantic meaning of [saying something to someone in order to indicate fault]. Example 4.121 illustrates how the more specific verb *malign* has the added meaning of [publically being criticised].

The more specific instances *denounce* and *malign* do not occur in the TLE which leads to the semantic subcategory [to say something to someone in order to indicate fault] being used 0.56 times in the TLE for every time it is used in LOCNESS. This also means that there is less lexical specificity and lexical diversity in the TLE than in LOCNESS.

The semantic subcategory [to say something to someone in order to give an account of what happened or what something looks like] constitutes 5.3% of the communication verbs in LOCNESS while it only constitutes 1.1% of the communication verbs in the TLE. The category is instantiated by the verbs *describe* and *report*. The verb *describe* is in turn elaborated by the troponyms *recount* and *portray*:

[4.122] In the first scene, the disguised Jupiter **describes** to Oreste how the whole town is constantly in mourning <...> (LOCNESS)

[4.123] The types of materials **described** cannot be recycled and should not be placed in regular garbage <...> (LOCNESS)

[4.124] Poverty can be **described** as lack of basic needs or necessities. (TLE)

[4.125] One can **describe** being poor as having no many. (TLE)

[4.126] Warren Farrell, a noted psychologist, **recounts** a story in which the main character pays a high price for adhering to gender-based codes of success. (LOCNESS)

[4.127] <...> the daughter of a pope <...> **recounts** a life history of unspeakable misfortune. (LOCNESS)

[4.128] Caesonia and Cherea also **portray** Caligula in a positive light <...> (LOCNESS)

[4.129] Jupiter is **portrayed** as the god of guilt and death <...> (LOCNESS)

[4.130] Some faculty have been reluctant to **report** cases of cheating. (LOCNESS)

[4.131] <...> they **reported** the matter of the rapes to the police. (TLE)

Examples 4.122 to 4.125 illustrate how the verb *describe* is used to give an account of what happened or what something looks like. *Describe* occurs 20.10 times per 100 000 words in LOCNESS whereas it merely occurs 1.49 times per 100 000 words in the TLE. The verb *recount* can be said to be more specific than the verb *describe* as the Sayer is remembering something and is describing it from memory. In Example 4.126, for example, Warren Farrell is remembering a story and describing what happened in the story, whereas in Example 4.127 the daughter of a pope provides a description of a life history of unspeakable misfortune as she remembers it. The verb *portray* is also more specific than the verb *describe* as the Sayer is describing someone from her perspective. In Example 4.129, for example, the Sayer describes Jupiter as the god of guilt and death as that is how the Sayer perceives Jupiter.

The verbs *recount* and *portray* occur less frequently than *discuss* in LOCNESS with 1.47 instances per 100 000 words of *recount* and 20.59 instances per 100 000 words of *portray*. These high frequencies can be ascribed to the fact that some of the topics in LOCNESS pertain to literature which lead to discussions and descriptions.

The verb *report* differs slightly from the verb *describe* in the sense that one is expected to provide an account of what happened or what something looks like. People are for example usually expected to report crimes that are committed as illustrated in Example 4.130 and Example 4.131. *Report* occurs 11.77 times per 100 000 words in LOCNESS and 4.97 times per 100 000 words in the TLE.

As the more specific instances *recount* and *portray* do not appear in the TLE, it can be said that there is not only less lexical specificity in the TLE than in LOCNESS in the

semantic subcategory [to say something to someone in order to give an account of what happened or what something looks like], but also less lexical diversity.

The semantic subcategory [to say something to someone which adds to existing information] constitutes 3.33% of the communication verbs in LOCNESS and 1.36% of the communication verbs in the TLE. The category in instantiated by the verb *add* which in turn is elaborated by the verbs *elaborate*, *expound*, *explain* and *clarify*:

[4.132] "When somebody declares war against your culture" he **adds**, "they're either going to back off or they're going to have a war." (LOCNESS)

[4.133] But Martin **adds** "faut-il que les passagers du vaisseau prissent aussi." (LOCNESS)

[4.134] He **added** that tourism remains one of the key sectors within the provincial economy that has the potential to create jobs, provide black empowerment and employment opportunities and to a large extent to attract foreign direct investment. (TLE)

[4.135] They could have strengthened the argument by **elaborating** on the strongest point that they have made in their claim. (LOCNESS)

[4.136] In this essay I am going to **elaborate** on the importance of soccer and how it changes one's life to a unique life. (TLE)

[4.137] Pangloss then **expounds** on this theory throughout the tale <...> (LOCNESS)

[4.138] The professor could hardly speak English well enough to **explain** her syllabus. (LOCNESS)

[4.139] Parents at home need to sit down with their children **explain** to them the facts of life <...> (TLE)

[4.140] Tables and charts do not make an essay that is exciting to read, however, they do help to **clarify** the text. (LOCNESS)

From the examples above it becomes clear that whereas the verb *add* only has the meaning of [adding more information to something already said] (cf. Examples 4.132 to 4.134), the more specific instances *elaborate*, *expound*, *explain* and *clarify* have some added meanings (cf. Examples 4.135 to 4.140). Here it can be noted, however, that the elaboration takes place in slightly different manners. The verbs *explain* and *clarify* mean to [give someone more information **so they can understand more clearly**] (cf. Examples 4.138 to 4.140], and while the verbs *elaborate* and *expound* could also have the meaning of [giving more information] it does not necessarily just have meaning of [giving someone more information so they can understand more clearly]. It could also have the meaning of [giving more information **in order to support one's argument**] (cf. Examples 4.135 to 4.137].

In the semantic category of [giving more information in order to support one's argument] the verbs *elaborate* and *expound* are equally salient in LOCNESS occurring 1.47 times per 100 000 words. In the TLE, however, *elaborate* is the most salient verb occurring only 0.50 times per 100 000 words (i.e. once in the entire corpus) with the verb *expound* that does not occur at all. In the semantic category of [giving someone more information so they can understand more clearly] the verb *explain* is by far the more salient verb in LOCNESS occurring 26.97 times per 100 000 words whereas the verb *clarify* only occurs 1.96 times per 100 000 words. In the TLE it is observed that the verb *explain* occurs 6.46 times per 100 000 words in the TLE and the verb *clarify* does not occur at all. This means that the BSAE users only use the most salient verb in the respective semantic categories. Although this does not lead to less lexical specificity in the semantic subcategory [to provide more detail to something already said] in the TLE than in LOCNESS, it does result in less lexical diversity at the most specific level in the TLE.

The semantic subcategory [to say something to someone, listing the main points pertaining to it] constitutes 0.14% of the communication verbs in LOCNESS whereas this category does not occur in the TLE at all. The category is instantiated by the verb *summarise*:

[4.141] The creationist position is **summarized** well in one anonymous quote <quote> (LOCNESS)

[4.142] To **summarise**, our feelings of sympathy and possible admiration for Calligula are evoked by the way in which Camus develops Caligula's argument and reasoning as logical and correct within the limitations of his initial misunderstanding of the concept to absurdity. (LOCNESS)

In Example 4.141 the Sayer points out that the creationist position can be summarised in one quote while the Sayer in Example 4.142 summarises everything that has been said before in a single sentence. Louw (2006:151) and Louw (2009) point out that cohesion, paragraph structure and argumentation are vital in academic literacy. The verb *summarise* can be used to support argumentation and promote cohesion. The fact that this verb does not occur at all in the TLE as in LOCNESS, could be indicative of argumentation skills that are not as developed in the BSAE as it is in L1 English.

The semantic subcategory [to say that something is the case] constitutes 4.29% of the communication verbs in LOCNESS and 0.76% of the communication verbs in the TLE. The category is instantiated by the verbs *admit* (which in turn is elaborated by the verbs *confess* and *concede*), *confirm* (which in turn is elaborated by the verbs *verify*, *affirm*, *vouch* and *profess*), *assure* and *maintain*:

[4.143] They **admit** that racism is wrong and should be alleviated. (LOCNESS)

[4.144] I **admit** that HIV/AIDS is caused by poverty most of the time. (TLE)

[4.145] He is guilty and needs to **confess** his sins. (LOCNESS)

[4.146] Both sides **concede** their weaknesses. (LOCNESS)

The fact that the verb *admit* sometimes has the added meaning of [**unwillingly** saying that something is the case] can be seen in Example 4.144 and is supported by the conditional "most of the time". This added meaning of [unwillingness] can be seen more strongly when considering the verb *concede* in Example 4.146. Here the more specific instances *confess* and *concede* do not occur in the TLE. Example 4.143 and Example 4.144 can be regarded as prime examples of underspecification as far as the lexical verbs are concerned as the verb *concede* could have been used instead of the verb *admit*.

The instances *confirm* and *assure* present an interesting case. The verb *confirm* has the meaning [to say that something is the case] whereas the verb *assure* sometimes has the added meaning of [saying that something is the case, **setting someone's mind at rest**] as illustrated in the following examples:

[4.147] This, he **confirmed**, would be typical of any constitution in a traditionally democratic Western society. (LOCNESS)

[4.148] This **confirm** that indeed the welcome campaign is on its way to bring North West in particular to a true tourist destination. (TLE)

[4.149] In order for these people to be sure that nuclear power is a good alternative to conventional power, they need to be **assured** that it is safe and more economical. (LOCNESS)

[4.150] Even the correctional services must pull up their socks and **assure** people and community in general that, whenever a prisoner is set free, he comes out being a better person. (TLE)

The more specific instances *verify*, *affirm*, *vouch* and *profess*, however, within the context of the sentences employed in both LOCNESS and the TLE, inherit the semantic meanings and syntactic structure of *confirm*.

[4.151] I was in seventh grade at the time and I can **verify** that the battle for improvement of race relationships was both won and lost by implementing this program. (LOCNESS)

[4.152] Very few members of parliament are willing to openly and unreservedly **affirm** their support for the idea of a fully integrated Europe. (LOCNESS)

[4.153] <...> the only quality team that the Mountaineers could **vouch** that they had beaten were the Miami Hurricanes. (LOCNESS)

[4.154] In the last presidential election, George Bush **professed** that our country needed to strengthen its moral values. (LOCNESS)

The more specific instances *verify*, *vouch* and *profess* are not found in the TLE at all whereas one instance of the verb *affirm* can be found.

The last instance to be found in the semantic subcategory [to say that something is the case] is the verb *maintain*:

[4.155] But Dora **maintains** that if Kaliayev had thrown the bomb, then the Organisation would have lost its support. (LOCNESS)

[4.156] He **maintains** that religion is more of a personal matter and it is not necessary to bring it into public spaces. (LOCNESS)

Here it is important to note that the verb *maintain* can also be classified as an activity verb. So even though the verb *maintain* occurs frequently as an activity verb in the TLE, it does not ever occur as a communication verb. It can therefore be assumed that even though the verb *maintain* in fact does occur in the vocabulary of BSAE users, it is classified as an activity verb and not as a communication verb.

As verbs in this semantic subcategory occur both in LOCNESS and the TLE at both levels of specificity, it can be said that the same level of specificity can be found in both LOCNESS and the TLE. The BSAE users, however, do not employ all the verbs to the extent that the L1 English users do at both levels of specificity, therefore it can be said that there is less lexical diversity in the TLE in the semantic subcategory [to say that something is the case] than in LOCNESS.

The semantic subcategory [to say that something is not the case] constitutes 1.06% of the communication verbs in LOCNESS whereas it constitutes 0.09% of the communication verbs in the TLE. The category is instantiated by the verb *deny* (which in turn is elaborated by the verbs *refute* and *negate*):

[4.157] No one will **deny** that the best place for a child is with his family <...> (LOCNESS)

[4.158] This is a concept that does not have much evidence to support it and therefore easily be **refuted**. (LOCNESS)

[4.159] However, this too is **negated** if we take the view that Hugo joined the party to merely take on an identity. (LOCNESS)

[4.160] I am going to **negate** the statement or topic in my discussion. (TLE)

The verb *deny* has the semantic meaning of [saying that something is not the case] as illustrated in Example 4.157. Its instantiations *refute* and *negate* has the added semantic meaning of [providing evidence to support one's case] as illustrated in Examples 4.158 to 4.160. As pointed out earlier in the case of *forbid* and *prohibit*, it can be assumed that the BSAE user who employed the more specific verb *negate* in the TLE has the verb *deny* at his disposal.

Although the same level of specificity is present in the semantic subcategory [to say that something is not the case] in both the TLE as in LOCNESS, there is less lexical diversity as the verb *refute* does not occur in the TLE.

In the system of polarity the semantic subcategory [to say that something is the case] is positive whereas the semantic subcategory [to say that something is not the case] is negative. As a result one can, for example, regard *admit* (an instantiation of the semantic subcategory [to say that something is the case]) and *deny* (an instantiation of the semantic subcategory [to say that something is not the case]) as antonyms.

The semantic subcategory [to say something to someone which one believes to be the truth] constitutes 3.04% of the communication verbs in LOCNESS whereas it constitutes 1.52% of the communication verbs in the TLE. The category is instantiated by the verbs *claim* and *purport*:

[4.161] Opponents of the death penalty **claim** that it is not only ineffective, but also immoral and unethical. (LOCNESS)

[4.162] There are lot of people who are not working, **claiming** that there is no work <...> (TLE)

[4.163] More ambiguity lies in Article 16 which **purports** to give wide-reaching powers to the President in a state of national emergency. (LOCNESS)

The verb *claim* is used 0.29 times by BSAE users in the TLE for every time it is used by L1 English users in LOCNESS while the verb *purport* is not employed by BSAE users at all. This means that although the same level of specificity exists between LOCNESS and the TLE, there is less lexical diversity in the TLE than in LOCNESS in the semantic subcategory [to say something to someone which one believes to be the truth].

The semantic subcategory [to say that something might happen] constitutes 0.48% of the communication verbs in LOCNESS while it constitutes 1.44% of the communication verbs in the TLE. The category is instantiated by the verbs *predict* (which is elaborated by the verb *prophesise*) and *promise* (which is elaborated by the verbs *pledge* and *swear*):

[4.164] Although one cannot **predict** the future events dealing with genetic research, most readers would be doubtful of humanity being responsible with its genetic knowledge. (LOCNESS)

[4.165] He may, in **prophesising** this kingdom be found guilty and his head be put on a platter for all to see as John the Baptists was <...> (LOCNESS)

[4.166] Baltimore offered him a new 200 million dollar stadium, a 50 million dollar relocation fee, **promised** sell-outs for the next 10 years <...> (LOCNESS)

[4.167] They would **promise** the lady heaven and earth and the lady easily fall into his hands with the hope that she will be able to take care of her family <..> (TLE)

[1.168] These older men **promise** to them money so that they can buy everything they want. (TLE)

[4.169] Each physician must **pledge** to adhere to the Hippocratic oath while performing their duties as a physician to society. (LOCNESS)

[4.170] And is it moral for doctors who have been **sworn** to abide by the Hippocratic Oath to turn their backs to that oath and perform abortions? (LOCNESS)

In this semantic subcategory the more specific instances *prophesise*, *pledge* and *swear* do not occur in the TLE. In part this can be attributed to the fact that the BSAE users never need to communicate the more specific meaning of [promising something formally and solemnly] as is the case in LOCNESS where references are made to the Hippocratic oath. As a result the verb *promise* is more entrenched in the vocabulary of BSAE users and therefore it is used 8.11 times in the TLE for every time it is used in LOCNESS.

As the verbs *prophesise*, *pledge* and *swear* do not occur in the TLE, it can be said that there is less lexical specificity in the TLE than in LOCNESS as well as less lexical diversity at the most specific level in the TLE than in LOCNESS in the semantic subcategory [to say something might happen].

The semantic subcategory [to say that something bad might happen] constitutes 0.14% of the communication verbs in LOCNESS and 0.51% of the communication verbs in the TLE. The category is instantiated by the verb *warn* which is used 2.03 times in the TLE for every time it is used in LOCNESS. This can to a certain extent be ascribed the essay topic "Poverty is the cause of the HIV/AIDS epidemic in Africa". When discussing this topic students make many references to instances where people are warned against the epidemic as illustrated below:

[4.171] The government have tried to **warn** the people about this disease <...> (TLE)

[4.172] Outside countries tried by many ways to invest in Africa, for people to up rise their standard of living, to literate them and to **warn** them about the diseases HIV/AIDS. (TLE)

[4.173] Like myself, they **warn** me about HIV/AIDS when I was 12 years. (TLE)

As the verb *warn* occurs in both LOCNESS and the TLE, it can be said that the same level of lexical specificity and lexical diversity are present in both LOCNESS and the TLE.

Overall it can be said that there is less lexical specificity in the TLE than in LOCNESS in five of the semantic subcategories of the category [to say something to someone in order to convey information]: [to say that someone is guilty of wrongdoing], [to say something to someone in order to indicate fault], and [to say something to someone to give an account of what happened or what something looks like]. In the rest of the categories the same level of specificity occurs in the TLE as in LOCNESS. It is important, however, to mention that although the same level of specificity can be found in thirteen of the categories, the same level of lexical diversity cannot be found in the TLE as in LOCNESS, especially at the deeper level of specification (cf. especially the semantic subcategory [to say that something is the case]).

Overall the instances of the semantic category [to say something to someone in order to convey information] occur 0.34 times in the TLE for every time it occurs in LOCNESS. This suggests that the BSAE do not convey information in the same manner as the L1 English users are. This observation is supported by Van Rooy (2008a:287) who found that "in the TLE, the writers focus less on the transfer of information than in LOCNESS".

[TO SAY SOMETHING TO SOMEONE IN ORDER TO ELICIT A CERTAIN RESPONSE]

Six subcategories can be found in the category [to say something to someone in order to elicit a certain response]. They are:

(i) [to tell someone to do something] instantiated by the verb *instruct* (which in turn is elaborated by the troponyms *order*, *command* and *decree*)

(ii) [to tell someone not to do something] instantiated by the verb *forbid* (which in turn is elaborated by the troponym *prohibit*)

(iii) [to say something to someone in order to obtain something] instantiated by the verb *ask* (which in turn is elaborated by the troponyms *question, enquire*, *request*, *beg*, *plead*, *appeal*, *invite* and *call for*)

(iv) [to say something to someone in order to direct their attention to a certain place] instantiated by the verbs *refer to* (which in turn is elaborated by the troponym *allude to*) and *mention*

(v) [to say something to someone, drawing their attention to it] instantiated by the verb *advertise*

(vi) [to say something to someone so they can consider it] instantiated by the verbs *propose*, *advise*, *recommend* and *suggest* (which in turn is elaborated by the troponyms *hint* and *imply*)

In the semantic category [to say something to someone in order to elicit a certain response] the first semantic subcategory [to tell someone to do something] can be regarded as positive, whereas the second semantic subcategory [to tell someone not to do something] can be regarded as negative in the system of polarity (cf. Halliday & Matthiessen, 2004:22). All the verbs in the semantic category [to say something to someone in order to elicit a certain response] basically cover the **directives** in Speech Act Theory. Searle (1976:11) points out that directives "are attempts (of varying degrees, and hence, more precisely, they are determinates of the determinable which includes attempting) by the speaker to get the hearer to do something". Following this point of view, one can say that the first three semantic categories ([to tell someone to do something], [to tell someone not to do something] and [to say something in order to obtain something]) are employed to seek direct action from the Target. On the other hand, the fourth, fifth and sixth semantic subcategories ([to say something to someone in order to direct their attention to a certain place], [to say something to someone, drawing their attention to it] and [to say something to someone so they can consider it]) are used to seek indirect action from the Target.

A visual representation of the levels of specificity in the semantic category [to say something to someone in order to elicit a certain response] is provided in Addendum D and the frequency results for the various semantic subcategories are presented in Table 4.6.

The semantic subcategory [to tell someone to do something] constitutes 0.63% of the communication verbs in LOCNESS and 0.42% of the communication verbs in the TLE. Whereas the semantic category is elaborated by four lemmas in LOCNESS, the semantic category is only elaborated by one lemma in the TLE. These numbers indicate that the semantic subcategory [to tell someone not to do something] is not only used less frequently by BSAE users in the TLE, but that there is also less specificity in this category.

	LOCNESS (# of verbs per 100 000 words)	LOCNESS (# of lemmas)	LOCNESS (% of total # of communication verbs)	TLE (# of verbs per 100 000 words)	TLE (# of lemmas)	TLE (% of total # of communication verbs)
[to tell someone to do something]	6.37	4	0.63	2.48	1	0.42
[to tell someone not to do something]	8.33	2	0.82	0.50	1	0.09
[to say something in order to obtain something]	62.27	10	6.12	70.56	10	12.03
[to say something to someone in order to direct their attention to a certain place]	26.48	3	2.60	30.31	2	5.17
[to say something to someone, drawing their attention to it]	0.98	1	0.10	4.47	1	0.76
[to say something to someone so they can consider it]	32.36	6	3.18	37.77	5	6.44
Total	**136.79**	**26**	**13.45**	**146.09**	**20**	**24.91**

Table 4.6: The distribution of lexical verbs within the category [to say something to someone in order to elicit a certain response]

The semantic subcategory [to tell someone to do something] is instantiated by the verb *instruct*. Whereas the verb *instruct* occurs in both LOCNESS and the TLE, its troponyms (*order*, *command* and *decree*) only occur in LOCNESS:

[4.174] If I can be given a chance to change the style of African universities, I will **instruct** all of them to cater student for job-oriented subjects. (TLE)

[4.175] All three parties have been **instructed** not to reveal the information to anyone who did not need to know about it. (LOCNESS)

[4.176] He espouses death, **orders** arbitrary killings and thereby conducts the politics of the land based on the concept of quantitative ethics. (LOCNESS)

[4.177] He also **commands** for the stores of grain to be shut and for famine to hit the land. (LOCNESS)

[4.178] Then, when he goes back to Olga, he finds that the murder need never have taken place as Moscow has now **decreed** that the Party follow just such a line of compromise. (LOCNESS)

The verb *instruct* occurs more frequently in the TLE than in LOCNESS. For every one occurrence of *instruct* in LOCNESS, there are 1.27 occurrences in the TLE. It could be argued that as the BSAE users do not have the more specific troponyms *order, command* and *decree* at their disposal, they use the more schematic verb *instruct* more often than the L1 English users do. As the authoritativity becomes more salient in the troponyms *order*, *command* and *decree*, it can be assumed that the authoritativity is not expressed lexically in the semantic subcategory [to tell someone to do something] in the TLE. On the one hand this can be attributed to the observation made earlier in the discussion of the semantic category [to say something to someone in a particular manner] where the BSAE users do not find expressing the manner of telling lexically in the verb as important. The authority could however be coded syntactically in the Subject or the passive *by*-phrase or it can be inferred from the context. In Example 4.174 the writer regards himself as the authority (as can be inferred from the context), and it is coded as such in the Subject.

Another issue that is important to consider here is the issue of entrenchment: The more an instance is activated, the more entrenched it becomes in the language employed by the users (Langacker, 2008:16). Some of these instances that are so entrenched in the vocabulary of BSAE users undergo semantic bleaching. Bybee (2007:271) explains that semantic bleaching takes place when words that are entrenched – and are repeated frequently – lose their semantic force. Semantic bleaching can be illustrated with the verb *tell*. *Tell* is a medium-frequency verb in both LOCNESS (with a frequency of 44.13 per 100 000 words) and the TLE (with a frequency of 63.60 per 100 000 words). This means that 2.14% of the communication verbs in LOCNESS consist of the word *tell* whereas 5.45% of the communication verbs in the TLE consist of the word *tell*. When one takes into account that communication verbs are not only employed less frequently by BSAE users in the TLE but that there are also fewer verb lemmas in the communication verbs of the BSAE users than the L1 English users, it becomes clear that the instance *tell* could be used more frequently by the BSAE users in the TLE instead of more specific instances. This is possible because *tell* is a highly polysemous verb and can therefore express many meanings. In the following example *tell* has the specific meaning of [telling someone to do something]:

[4.179] They will be **told** to give way to the demands of anyone who has money in order to survive. (TLE)

In the case of Example 4.179 *tell* has the specific meaning of [telling someone to give way to the demands]. Within the context of this example *order* is a troponym of *tell* and can therefore replace *tell* without changing the meaning of the utterance (with the exception of making the utterance more specific). As *tell* does not have the added elaboration to its meaning of [to tell someone to do something in an authoritative manner], *tell* is not as specific as *order* and some of the semantic force of the utterance is lost.

In the case of Example 4.180 *tell* can also be replaced by its more specific troponym *order*, but here it can be argued that the authority can be inferred from the Subject (i.e. “The so-called prison guide”).

[4.180] The so-called prison guide would tie their hands at the backs and **tell** them to eat. (TLE)

As the more specific verbs *order*, *command* and *decree* are found in LOCNESS but not in the TLE, it can be said that there is less lexical specificity in the TLE than in LOCNESS as well as less lexical diversity at the more specific level in the TLE than in LOCNESS.

As pointed out earlier, the semantic subcategory [to tell someone to do something] can be regarded as positive in the system of polarity (i.e. the Sayers tell the Targets **to do** something), whereas the semantic subcategory [to tell someone not to do something] can be regarded as negative in the system of polarity (i.e. the Sayers tell the Targets **not to do** something). This means that the verbs *prohibit* and *decree*, for example, can to a certain extent be regarded as antonyms.

The semantic subcategory [to tell someone not to do something] constitutes 0.82% of the communication verbs in LOCNESS and only 0.09% of the communication verbs in the TLE. In this category in can be observed that while there is no instance of the verb *forbid* in the TLE, there is at a more specific level the instance of *prohibit*:

[4.181] Trade unions were legalised in 1884, although they were not allowed to form meetings or have a place on the factory floors and public services, including railways were at first **forbidden** to unionise. (LOCNESS)

[4.182] He kills her brother for **forbidding** him to marry her. (LOCNESS)

[4.183] The Constitution does not **prohibit** gun control. (LOCNESS)

[4.184] The FDA **prohibited** the sale of thalidomide <...> (LOCNESS)

[4.185] One of the articles titled that I have read, indicated that a Bill that was passed **prohibited** unprotected sex and the intentional transmission of HIV/AIDS. (TLE)

Here one has to keep in mind that in theory the assumption is that if users use the instantiation of the schema (in this case *prohibit*), they do have access to the schema (in

this case *forbid*) (Cruse, 1977:153). So it is assumed that BSAE users also have access to the verb *forbid* (even though it cannot be expressed proportionally in the taxonomy). It is also worth noting that whereas the verb *forbid* has the meaning [to tell someone not to do something], the instantiation *prohibit* has the added, more specific meaning of [**an authority** telling someone not to do something]. In Example 4.182 it is the FDA who prohibited the sale of thalidomide whereas in Example 4.183 it is a bill that has been passed which prohibits unprotected sex and the intentional transmission of HIV/AIDS.

When considering the results discussed above, it is clear that even though the semantic category [to tell someone not to do something] occurs more frequently in LOCNESS than in the TLE, it cannot be said that there is more lexical specificity in LOCNESS in the category than in the TLE. It is, however, in view of the avoidance of counter-acting statements known from elsewhere (e.g. Henning, 2006:88 who found that there is a low frequency of counterfactual adverbials in the TLE compared to LOCNESS) interesting to see the supporting evidence coming from the really low frequency of this rhetorical option in the TLE (0.5 words per 100 000 words), compared to the higher frequency in LOCNESS (8.33 words per 100 000 words).

The semantic subcategory [to say something in order to obtain something] constitutes 6.12% of the communication verbs in LOCNESS and 12.03% of the communication verbs in the TLE.

Here it is important to mention that the verb *question* occurs not only in the semantic subcategory [to say something in order to obtain something], but also in the semantic category [to say something in order to raise doubt about something or someone]. Example 4.186 illustrates how the verb is used to ask for information (in this case information about what had upset Amy) whereas Example 4.187 illustrates how the verb is used to raise doubt about a certain issue (in this case government initiatives):

[4.186] Amy's mother **questioned** her to try and understand what had upset her so much (LOCNESS).

[4.187] The people were seldom in a position to **question** government initiatives. (TLE)

In the semantic subcategory [to say something in order to obtain something] the verb *question* occurs 4.9 times per 100 000 words in LOCNESS, but it never occurs in the TLE. On the other hand the verb *enquire* occurs 0.49 times per 100 000 words in LOCNESS and 1.49 times per 100 000 words in the TLE. The more frequent use of the verb *enquire* in the TLE than in LOCNESS and the total absence of the verb *question* can be explained from two perspectives. In the first place it could be said that the use of *enquire* instead of *question* could be possible avoidance of ambiguity as noted earlier in connection with the use of *emphasise* instead of *stress*. In the second place the phenomenon can be explained from a cultural perspective. As pointed out earlier, *question* can also belong to the semantic subcategory [to say something in order to raise doubt about a certain issue]. Due to this connotation, the BSAE users might regard the verb *request* as more polite than the verb *question*. As Magocha (2010:166) puts it: "[R]equesting is an act that is not reproachable, but rather praiseworthy. Although the writer is imposing on the audience, he or she is doing so in a manner that is socially acceptable (*respectfully*) and therefore obliges the audience to comply." This is illustrated in the following examples:

[4.188] There are too many people coming to bank and some **enquiring** about savings, fixed deposit, loans and withdrawings. (TLE)

[4.189] The third one is that when you **enquire** balance it charges R2,75 from that particular R50 they said they keep it for you. (TLE)

[4.190] She has to look for favourable interest rates which will be added to her account depending on the amount she has save and she has to **enquire** when the interest is added <...> (TLE)

When considering all of the examples above, it is important to take note that the people enquiring are expecting direct action from the Target (i.e. teleological use): in this case they expect to obtain information. In Example 4.188 too many people want information regarding the various products available at the bank; in Example 4.189 the person expects to receive information regarding the balance on his/her account; and finally in Example 4.190 she wants to obtain information regarding the date at which interest is added to the savings in her account.

The verb *request* also belongs to the semantic subcategory [to say something in order to obtain something]. Here the more specific instance *demand* occurs 1.09 times more frequently in the TLE than in LOCNESS making it one of the few examples where the more specific instance is used more frequently in the TLE than LOCNESS:

[4.191] SAFA should arrange with companies to **request** them to assist the clubs or sponsor them. (TLE)

[4.192] Another type of euthanasia is when a patient **requests** that the doctor provide no more treatment. (LOCNESS)

[4.193] If only people can be given the skills on how to provide for themselves and stop **demanding** jobs from the government. (TLE)

[4.194] It is therefore unjust of present players to **demand** to be paid more than they are getting. (TLE)

[4.195] If medical conduct to end the patient's life is prohibited, the patient is allowed maximum opportunity to change his mind and **demand** treatment. (LOCNESS)

From the examples above it is clear that the verb *request* is used to ask for something politely and formally. In these cases the Targets are not necessarily expected to answer favourably as they are under no obligation to the Sayers. Instead the Sayers rely on the goodwill of the Targets to respond favourably to their requests. The verb *demand* on the other hand is used to request something in an insistent manner; as if what is being requested are the Sayers' right. In these cases the Targets are expected to answer favourably as the Sayers believe that what they are requesting (i.e. jobs, more pay and treatment) is their right. In South Africa it could be said that the verb *demand* is much more salient as it acquired additional context-specific senses, such as its association with demands for political rights or demands made by trade unions. This phenomenon is in line with Buthelezi's (1995:244) observation that the overall political experiences of the BSAE users influences their language.

The verb *beg* also occurs 2.03 times more frequently in the TLE than in LOCNESS. It is interesting to note that the verb *beg* used is only in the TLE in the context of one of the essay topics presented to the BSAE users: "South African soccer players should be paid more to ensure that they play in South Africa":

[4.196] They do as they want, because they know that they will be **begged** to come and play. (TLE)

[4.197] These soccer players should not be **begged** and paid more in return for the sake of playing for their own country. (TLE)

When Example 4.196 and Example 1.197 are considered, it could be argued that the BSAE users attach a negative connotation to the verb *beg*. The BSAE users feel that South African soccer players should not be begged to play soccer for their own country (i.e. soccer players should play soccer because they are proud of their country and not because they want more money). Therefore the verb is used frequently to emphasise the undesirability of a situation where soccer players are coerced to play soccer by offering them more money.

The verb *plead* also occurs more frequently in the TLE than in LOCNESS (being employed 4.06 times more frequently in the TLE). In both instances where the verb *plead* is used in the TLE it is used in relation to one of the essay topics provided to the BSAE users: "Poverty is the cause of the HIV/AIDS epidemic in Africa." In both cases the BSAE users believe that the problem of poverty (and the accompanying problem of HIV/AIDS) can be solved by pleading for help from the first world countries and the government respectively:

[4.198] The solution to this is that if governments of Africa get together and **plead** for help from the first world countries. (TLE)

[4.199] I personally think or **plead** to the Government to help those people in the rural areas because they suffer the most. (TLE)

It is interesting to note the syntactic specification in Example 4.199. Here the Sayer not only **thinks** that the people in the rural areas should be helped, he also **pleads** with the government to help these people. De Klerk and Gough (2002:369) point out that BSAE users sometimes feel that "they are not expressing their ideas clearly in the linguistic forms to which they are restricted and needing to repeat themselves in order to get their message across". One of the ways in which the BSAE users express themselves more clearly is by using the word *or*. Botha (2006) investigated this *or*-phenomenon in the noun phrases of written BSAE. In her research Botha found that the extending function (i.e. that is associated with the introduction of something "new") dominates in BSAE as opposed to the elaborative function (i.e. that is associated with further characterising or clarifying something that has already been introduced). Example 4.199 above is an example of the extending function.

The emotion involved in pleading for help is illustrated in the examples above, and especially in Example 4.200 below:

> [4.200] She will also have to sit in the lonely jail cell and hear the two small voices she once heard each day before the incident, the two voices that were **pleading** and crying for help as the boys were trapped inside the car. (LOCNESS)

All of the instances in the semantic subcategory [to say something in order to obtain something] (with the exception of the instance *question* where one asks for information which can be regarded as an object and the instance *call for* where one asks for something to happen which can also be regarded as an object) are used in cases where Sayers want to say something in a particular manner as already illustrated in the instances of *request*, *beg*, and *plead*. When one for example wants to ask for something in a serious and heartfelt manner, one will use the verb *appeal*:

> [4.201] When the person attempting suicide is crying out, whom is he or she appealing to? Most of the time he or she is **appealing** to his or her family or friends. (LOCNESS)

When on the other hand one wants to ask someone in a friendly and formal manner to go somewhere or to do something, one will use the verb *invite*:

[4.202] People are **invited** to write or call in to the shows to discuss their personal lives with millions of viewers. (LOCNESS)

Upon considering the results above, it becomes clear that the verbs in the semantic subcategory [to say something in order to obtain something] is used frequently by BSAE users. In terms of Van Rooy's (2010) argument that new varieties of English will develop language conventions grounded in actual language use, this provides opportunity for the (new and somewhat different) conventionalisation of a couple of lexical items such as *demand* and *beg* discussed above. Thus, the distance between L1 English and BSAE in this semantic subcategory is not so great and it can be said that the same level of specificity is present in both LOCNESS and the TLE.

In LOCNESS the subcategory [to say something to someone in order to direct their attention to a certain place] constitutes 2.6% of the communication verbs whereas it constitutes 5.17% of the communication verbs in the TLE. In LOCNESS the subcategory is instantiated by the verbs *refer to* (which is elaborated by the troponym *allude to*) and *mention*. The troponym *allude to*, however, does not occur in the TLE.

In the semantic subcategory [to say something to someone in order to direct their attention to a certain place], the instance *mention* occurs 19.88 times per 100 000 words in the TLE whereas it only occurs 9.32 times per 100 000 words in LOCNESS. This phenomenon can be attributed to entrenchment that can cause other instances to be used less frequently. In the same semantic category [to say something to someone in order to direct their attention to a certain place], the instance *refer to* is used 15.69 times per 100 000 words in LOCNESS whereas it is only used 10.44 times per 100 000 words in the TLE. The more specific instance *allude to*, which occurs 1.47 times per 100 000 words in LOCNESS does not occur in the TLE. It could therefore be argued that as the instances *refer to* and *allude to* are not as entrenched in BSAE, the instance *mention* is used more frequently.

Although the semantic subcategory [to say something to someone in order to direct their attention to a certain place] occurs 1.14 times in the TLE for every time it occurs in LOCNESS, the L1 English users use more lexical resources than the BSAE users. As a result there is more lexical specificity in LOCNESS than in the TLE in this semantic subcategory. The fact that the category occurs more frequently in the TLE than in LOCNESS with a smaller range of resources than LOCNESS, is indicative of less lexical specificity in the TLE than in LOCNESS,

The semantic category [to say something to someone, drawing their attention to it] is elaborated by the instance *advertise*. In LOCNESS this semantic subcategory constitutes 0.10% of the communication verbs, whereas it constitutes 0.76% of the communication verbs in the TLE.

The frequent use of this instance in the TLE can be related to an essay topic given to the BSAE users: "Most university degrees are theoretical and do not prepare students for the real world." In response to this topic, many BSAE users addressed the issue of how it is easier to apply for a job that is advertised if one has more practical experience:

[4.203] Therefore when job advertisements are **advertise** they normally say for example: We are looking for an Economist with 1-2 years' working experience. (TLE)

[4.204] The most painful issue about their degrees is that, when organisations **advertise** post, that is vacant post, they would always specify the issue of experience. (TLE)

[4.205] Some of the jobs that are **advertised** in some newspapers by some employees will need only you if you are computer literate. (TLE)

Thus the instance *advertise* is used more frequently by BSAE users in the TLE than by L1 English users in LOCNESS. As *advertise* is the only verb that instantiates the semantic subcategory [to say something to someone, drawing their attention to it] and is present in both LOCNESS and the TLE, it can be said that the same level of lexical specificity and lexical diversity can be found in LOCNESS and the TLE.

The semantic subcategory [to say something to someone so they can consider it] constitutes 3.18% of the communication verbs in LOCNESS and 6.44% of the communication verbs in the TLE. This subcategory is instantiated by the verbs *propose, advise, recommend* and *suggest* (which is specified in more detail by the verbs *hint* and *imply*).

When considering the instances in this semantic subcategory one notices that the instance *advise* is used 25.36 times more by the BSAE users in the TLE than by the L1 English users in LOCNESS. This phenomenon can be ascribed to the essay topic presented to the BSAE users in the TLE: "**Advise** a friend on which bank to choose when opening a savings account" (my emphasis). When this clause is considered, one can see that this is an imperative clause in which the verb *advise* occupies the theme position. As a result many BSAE users regarded this as the "point of departure of the[ir] message" (Halliday & Matthiessen, 2004:64) leading to the frequent use of the verb *advise* in the TLE:

[4.206] Firstly I would **advise** a friend to choose a bank <...> (TLE)

[4.207] In this essay I am going to talk about how I **advised** my friend, Gabo to choose which bank when she wanted to open a savings account. (TLE)

[4.208] I will also **advise** my friend to look at different products offered at the bank. (TLE)

Another instance in the category [to say something to someone so they can consider it] which is used more frequently by BSAE users in the TLE than by L1 English users in the TLE is the instance *recommend* which occurs 5.06 times more in the TLE than in LOCNESS. This phenomenon can also be attributed to an essay topic presented to the BSAE users in the TLE. This essay topic reads: "Most university degrees are theoretical and do not prepare students for the real world." When considering the views expressed in cases where this topic is discussed, it comes to light that the speakers do not only support the statement that most university degrees do not prepare students for the real world, they also want to make certain recommendations so the state of affairs can be addressed:

[4.209] So I **recommend** introductions of practice in universities so that they produce ready graduates for work. (TLE)

[4.210] I **recommend** 1½ of theory and 1½ of practicals to make the degree more simpler <...> (TLE)

[4.211] If university degrees are theoretical, I totally condemn the criteria they have chosen and **recommend** that this system should be changed <...> (TLE)

The high frequency of the verbs *advise* and *recommend* in the TLE can therefore be attributed to the rhetorical structure of this subset of essays in which the BSAE users are trying to persuade the readers to understand their point of view. Once the writers have persuaded the readers to understand their point of view, the performative verbs *advise* and *recommend* allow them to introduce pragmatic directives (i.e. the writers are telling the authorities to "introduce practice in universities", to "introduce 1½ of theory and 1½ of practicals in universities" and to "change this system [of theoretical degrees being theoretical]").

The other instances of the semantic subcategory [to say something to someone so they can consider it] (i.e. *propose* and *suggest*) occur more frequently in LOCNESS than the TLE. The following examples illustrate the use of the instance *propose* in both LOCNESS and the TLE:

[4.212] Ellen Ingram and Jon B. Ellis **propose** another example of the inner struggle in the publication, Death Studies. (LOCNESS)

[4.213] Under the fourth republic reforms were **proposed** but because of the multi-party governments who had to face internal struggles all the time, they failed in most cases to be passed. (LOCNESS)

[4.214] This statement is a true resemblance of the re-awakening and revival of new interest in learning, that is African Renaissance, which the State President have been **proposing** all along. (TLE)

[4.215] Can anyone please **propose** a bill that emphasise the suggestion above? (TLE)

The following examples illustrate the use of the verb *suggest* and its instantiations *hint* and *imply* in both LOCNESS and the TLE:

[4.216] This **suggests** that increased availability of marijuana would reduce alcohol consumption. (LOCNESS)

[4.217] She **suggests** that he could his power to better use by implementing measures that would make the world a better place <...> (LOCNESS)

[4.218] I **suggest** that universities should have more practical than theory and people would be able to work or even be self-employed. (TLE)

[4.219] Scipion helps to evoke sympathy for Caligula in that he changes from being totally opposed to the Emperor at the beginning to trying himself to find out the truth that Caligula has **hinted** to him. (LOCNESS)

[4.220] The whole reasoning behind this punishment is full of holes which **implies** that justice and capital punishment can't coexist. (LOCNESS)

[4.221] By this statement it **implies** that some people know that there is a virus called HIV or AIDS, but because there are no jobs they have to make a living by prostitution. (TLE)

As the verb *imply* occurs at the deeper level of specificity in the TLE, it can be said that the same level of lexical specificity is present in both LOCNESS and the TLE in the semantic subcategory [to say something to someone so they can consider it]. But as the verb *hint* does not occur in the TLE at the deeper level of specificity, it can be said that the same level of lexical diversity that can be found in LOCNESS cannot be found in the TLE.

In light of the discussion above it could be said that although the subcategory [to say something to someone so they can consider it] occurs more frequently in the TLE than in

LOCNESS due to certain essay topics, the same level of specificity is present in LOCNESS and the TLE.

Earlier, in Section 2.5, it has been pointed out that the semantic and syntactic characteristics of verbs are intertwined. Throughout this section, in which the semantic category [to say something to someone in order to elicit a certain response] is discussed, the majority of the examples illustrate that the Target – which "construes the entity that is targeted by the process of saying" (Halliday & Matthiessen, 2004:255) – in this semantic subcategory is most salient (i.e. a Target can be identified). The examples below have been quoted earlier on in the discussion, but are now repeated to demonstrate how the semantic and syntactic characteristics in this semantic category are intertwined:

[4.174] I(Sayer) will instruct(Process: verbal) **all of them**(Target) to cater student for job-oriented subjects(Projection). (TLE)

[4.206] Firstly(Circumstance) I(Sayer) would advise(Process: verbal) **a friend**(Target) to choose a bank(Projection) <...> (TLE)

[4.208] I(Sayer) will also advise(Process: verbal) **my friend**(Target) to look at different products offered at the bank(Projection). (TLE)

The Target, however, does not only have to take the position of direct object; it can also take the position of subject of a passive clause, as illustrated in the examples below:

[4.175] **All three parties**(Target) have been instructed(Process: verbal) not to reveal the information(Projection). (LOCNESS)

[4.179] **They**(Target) will be told(Process: verbal) to give away to the demands(Verbiage) <...> (TLE)

In some semantic subcategories, such as [to say something to someone so they can consider it] the Target becomes less salient:

[4.209] I(Sayer) ... recommend(Process: verbal) that this system should be changed(Projection) <...> (TLE)

[4.214] This$_{(Sayer)}$ suggests$_{(Process:\ verbal)}$ that increased availability of marijuana would reduce alcohol consumption$_{(Projection)}$. (LOCNESS)

Overall it can be said that there is less lexical specificity in the TLE than in LOCNESS in three of the semantic subcategories present in the category [to say something to someone in order to elicit a certain response]: [to tell someone to do something], [to say something to someone in order to direct their attention to a certain place] and [to say something to someone so they can consider it]. In the remaining semantic subcategories, [to tell someone not to do something], [to say something in order to obtain something], [to say something to someone, drawing their attention to it] and [to say something in order to raise doubt about something or someone], the same level of specificity can be found in both LOCNESS and the TLE. In some semantic subcategories where the verbs of that category are used more frequently in the TLE than in LOCNESS, it is due to the essay topics presented to the language users (e.g. in [to say something to someone, drawing their attention to it]).

With the semantic category [to say something to someone in order to elicit a certain response] constituting 14.32% of the communication verbs in LOCNESS and 25.08% of the communication verbs in the TLE, this is the only semantic category that occurs more frequently in the TLE than in LOCNESS. This indicates that the TLE users place a lot of emphasis on the interactive/dialogic nature of language. This corresponds with Van Rooy and Terblanche's (2009:247) finding that the language in TLE displays "a range of very typical **informal style** features" and a high degree of involvement.

[TO SAY SOMETHING IN RESPONSE TO SOMETHING ALREADY SAID]

Four subcategories can be found in the category [to say something in response to something already said]. They are:

(i) [to say something in response to a question asked] instantiated by the verbs *answer* and *reply*

(ii) [to say to someone that one will do what one was asked to do] instantiated by the verbs *agree* and *consent*)

(iii) [to say to someone that one will not do what one was asked to do] instantiated by the verb *refuse* (which in turn is elaborated by the verb *veto*)

(iv) [to make a counterstatement in response to a statement already made] instantiated by the verb *rebut*

(v) [to reproduce words] instantiated by the verbs *quote* and *repeat* (which in turn are elaborated by the verbs *cite* and *recite*)

It is interesting to note that backward-looking presupposition is to a certain extent present in some instances between the semantic category [to say something in response to something already said] and the previous semantic category [to say something to someone in order to elicit a certain response]. To *answer* (which is part of the semantic category [to say something in response to something already said]) entails to *ask* (which is part of the semantic category [to say something to someone in order to elicit a certain response]). As pointed out in Section 2.4 this phenomenon is referred to as the purpose or result relation. There is, however, in some instances also backward-looking presupposition present between the semantic category [to say something in order to convey information] and the semantic category [to say something in response to something already said]. To *rebut* (which is part of the semantic category [to say something in response to something already said]) entails *to argue* (which is part of the semantic category [to say something in order to convey information]).

A visual representation of the levels of specificity in the semantic category [to say something in response to something already said] is provided in Addendum E and the frequency results for the various semantic subcategories are presented in Table 4.7.

The semantic subcategory [to say something in response to a question asked] constitutes 1.4% of the communication verbs in LOCNESS and 1.1% of the communication verbs in the TLE. The semantic subcategory is elaborated by two lemmas (*answer* and *reply*) in LOCNESS, but only one lemma (*answer*) in the TLE:

> [4.222] When **answering** these questions we find that what is being practised is only the opposite. (TLE)

	LOCNESS (# of verbs per 100 000 words)	LOCNESS (# of lemmas)	LOCNESS (% of total # of communication verbs)	TLE (# of verbs per 100 000 words)	TLE (# of lemmas)	TLE (% of total # of communication verbs)
[to say something in response to a question asked]	14.22	2	1.40	6.46	1	1.10
[to say to someone that one will do what one was asked to do]	25.00	2	2.46	2.48	1	0.42
[to say to someone that one will not do what one was asked to do]	27.46	2	2.70	16.89	1	2.88
[to make a counterstatement in response to a statement already made]	0.98	1	0.10	0.00	0	0.00
[to reproduce words]	15.20	4	1.50	0.00	0	0.00
Total	**82.86**	**11**	**8.16**	**25.83**	**3**	**4.40**

Table 4.7: The distribution of lexical verbs within the category [to say something in response to something already said]

[4.223] That person must **answer** questions that the Psychologist is going to ask. (TLE)

[4.224] In a survey taken across the USA, different people **answered** the question <...> (LOCNESS)

[4.225] The more attempts to **answer** these questions, the more ways in which it is debated. (LOCNESS)

[4.226] Dora **replies** that the killing of the Grand-Duc would have furthered their cause, yet the murder of children would be futile and would bring disfavour to their cause. (LOCNESS)

[4.227] In response to this Mr Fernandez **replied**, <direct speech>. (LOCNESS)

When considering the concordance files of both *answer* and *reply* it would seem as if the verb *answer* is more entrenched in the vocabulary of the BSAE users than the verb *reply*.

Although the semantic subcategory [to say something in response to a question asked] occurs less frequently in the TLE than in LOCNESS there is the same level of lexical specificity in LOCNESS and the TLE. As the verb *reply* does not occur in the TLE, there is less lexical diversity in the TLE than in LOCNESS.

The second semantic subcategory, [to say to someone that one will do what one was asked to do], constitutes 2.46% of the communication verbs in LOCNESS but a mere 0.42% of the communication verbs in the TLE. The category is instantiated by the verbs *agree* and *consent*:

[4.228] So this sex workers, because they need money, they just have to **agree** so that they can get paid by their clients. (TLE)

[4.229] Other players don't want to came to play for the national team even if their teams have **agreed** to allow them to come <...> (TLE)

[4.230] Hlicon **agrees** to help him in his search <...> (LOCNESS)

[4.231] The patient was tested competent and she fully **consented** to the process. (LOCNESS)

The BSAE users in the TLE use the verb *agree* 1.77 times more frequently than the L1 English users in LOCNESS. It can be assumed that as the BSAE users do not have the verb *consent* at their disposal, the alternative verb *agree* has become more entrenched in their vocabulary. This means that although the same level of lexical specificity is present in the TLE as in LOCNESS in the semantic subcategory [to say to someone that one will do what one was asked to do, there is less lexical diversity in this semantic category in the TLE than in LOCNESS.

Whereas the semantic subcategory [to say to someone that one will do what one was asked to do] is positive in the system of polarity, the following semantic subcategory, [to say to someone that one will not do what one was asked to do], is negative in the system of polarity. It can therefore be said that the elaboration *agree* in the semantic subcategory [to say to someone that one will do what one was asked to do] can be regarded as an antonym of the verb *refuse* which is an elaboration of the semantic subcategory [to say to someone that one will not do what one was asked to do].

The semantic subcategory [to say to someone that one will not do what one was asked to do] constitutes 2.7% of the communication verbs in LOCNESS and 2.88% of the communication verbs in TLE. The subcategory is elaborated by the verb *refuse* which is further specified by the verb *veto*, but whereas both lemmas occur in LOCNESS only the lemma *refuse* occurs in the TLE:

[4.232] <...> so it asked one of its European Community partners and NATO allies, namely Belgium, to sell it some of its stocks. Belgium, under the premiership of Wilfred Martens **refused** despite the fact that Britain among others was engaged in an operation to combat the naked aggression of Iraq <...> (LOCNESS)

[4.233] Most of these sex workers cannot suggest condoms, because they are not well educated or they can't **refuse** offers from Migrant workers. (TLE)

[4.234] Poverty make people to work as prostitutes so that they can have an income to keep life going, so that they don't die of hunger. They will go so far as to sleep without protection because they have no choice to **refuse** an offer. (TLE)

[4.235] This would result in the ability of individual nations to **veto** key decisions being restricted. (LOCNESS)

These examples demonstrate that the verb *refuse* has the semantic meaning of [saying to someone that one will not do what one was asked to do]. In Example 4.232, for example, Belgium refused to sell some of its stocks upon request while sex workers cannot refuse offers from migrant workers in Example 4.23. The use of the verb *refuse* in the TLE in Example 4.233 and Example 4.234 are counter-examples to the general trend of avoiding counter-statements mentioned earlier, but there is a specific rhetorical function that sanctions the use of the verb in these examples. In both examples the difficult situations in which people find themselves are mentioned (e.g. lack of education and poverty). By using the verb *refuse* the writers are explaining these people's actions.

The verb *veto* elaborates the verb *refuse* with the meaning of [refusing to let someone do as was asked to do, **using one's official authority**]. When considering the fact that the verb *veto* does not occur in the TLE, it might at first glance seem as if the BSAE users in the TLE do not have the instance *veto* at their disposal, but if one carefully considers the instances where the verb *refuse* occurs, one notices that the more specific meaning of *veto* [to refuse to let someone do as was asked to do, using one's official authority] is not appropriate in any of the contexts in which the verb *refuse* is used in the TLE. One can therefore not say with any certainty whether the BSAE users have the verb *veto* at their disposal or not and as a result whether there is less lexical specificity and less lexical diversity in the TLE than in LOCNESS in the semantic subcategory [to say to someone that one will not do what one was asked to do.

The fourth semantic category [to make a counterstatement in response to a statement already made] is instantiated by the verb *rebut* which only occurs in LOCNESS and constitutes 0.1% of the communication verbs in LOCNESS:

[4.236] The argument against capital punishment presents a clear and sensible case that **rebuts** the main claims of the advocates of the death penalty. (LOCNESS)

[4.237] The idea of pre-ordination which seems to underlie the philosophy of optimism is also **rebutted** by Voltaire. Once again he does not do so explicitly, merely by exposing the fallacy of the argument. (LOCNESS)

In both the examples mentioned above, it is clear that the verb *rebut* is used to convey the fact that a counterstatement is made in response to a statement already made, making it clear that the Sayer does not agree with the argument.

In view of the avoidance of counter-acting statements mentioned earlier, it is interesting to see more evidence coming from the fact that the semantic subcategory [to make a counterstatement in response to a statement already made] does not occur in the TLE. This indicates that there is a semantic constant in the way the BSAE users argue in the TLE.

The fifth semantic subcategory [to reproduce words] only occurs in LOCNESS and constitutes 1.5% of the verbs in this corpus:

[4.238] First of all he is supporting his reasoning by **quoting** from the Bible. (LOCNESS)

[4.239] He **repeats** this like a child all the way through. (LOCNESS)

[4.240] The authors **cite** examples of how this system could fail. (LOCNESS)

[4.241] If the government actually writes a universal prayer for students to **recite**, there will be no meaning in the prayer to those who **recite** it. (LOCNESS)

Interestingly enough, there are seven occurrences of the verb *recite* in LOCNESS and once again all these instances are related to the essay topic "Prayer in schools" presented to the L1 English users (illustrated in Example 4.240). It seems as if all the L1 English users here use the verb *recite* to communicate the fact that forcing children to recite

prayers will not make them believe the words they are reciting (i.e. reciting prayers without believing is a meaningless act). It could therefore be said that to recite something in this context has the added meaning of [not necessarily believing in what one is saying].

When considering the distribution of the verbs in the semantic subcategory [to reproduce words], one has to keep in mind that the essays in the TLE were written in class and without references to sources unlike some of the essays in LOCNESS. This may also explain why this particular semantic subcategory does not occur in the TLE.

Upon considering how the semantic and syntactic characteristics of verbs are intertwined in this semantic category, the following was noticed. In this semantic category the Target is not as salient as in the semantic category [to say something to someone in order to elicit a certain response]. Instead the Verbiage – "the function that corresponds to what is said, representing at as a class of thing rather than as a report or quote" (Halliday & Matthiessen, 2004:255) – and the Projection – "(a) a proposition, realized by a finite clause ... or (b) a proposal, realized by a perfective non-finite clause" (Halliday & Matthiessen, 2004:255-256) – are more salient. Below are some examples quoted earlier on in the discussion to demonstrate this statement:

[4.230] Hlicon$_{(Sayer)}$ agrees$_{(Process:\ verbal)}$ **to help him in his search**$_{(Target)}$ <...> (LOCNESS)

[4.231] <...> she$_{(Sayer)}$ fully$_{(Circumstance)}$ consented$_{(Process:\ verbal)}$ **to the process**$_{(Verbiage)}$. (LOCNESS)

[4.237] **The idea of pre-ordination which seems to underly the philosophy of optimism**$_{(Verbiage)}$ is also rebutted$_{(Process:\ verbal)}$ by Voltaire$_{(Sayer)}$. (LOCNESS)

[4.223] That person$_{(Sayer)}$ must answer$_{(Process:\ verbal)}$ **questions**$_{(Verbiage)}$ <...> (TLE)

This can be related to the fact that the semantic categories [to say something to someone in order to elicit a certain response] and [to say something in response to something already said] form an (incipient) cause relation. This means that the focus in the semantic category [to say something to someone in order to elicit a certain response] is on the

Target, while the Target (now classified as the Sayer in the semantic category [to say something in response to something already said]) responds to the Projection in the semantic category [to say something to someone in order to elicit a certain response] with a Verbiage in the semantic category [to say something in response to something already said].

Overall the verbs from the semantic category [to say something in response to something already said] constitute 8.16% of the communication verbs in LOCNESS while it constitutes 4.40% of the communication verbs in the TLE. Two of the semantic subcategories ([to make a counterstatement in response to a statement already made] and [to reproduce words]) do not occur in the TLE. The same level of specificity occurs in LOCNESS and the TLE in two of the semantic subcategories ([to say something in response to a question asked] and [to say to someone that one will do what one was asked to do]. In the semantic subcategory [to say to someone that one will not do what one was asked to do] there is less lexical specificity in the TLE than in LOCNESS, but it has been determined that it would not have been appropriate to use the verb *veto* in any one of the contexts where the verb *refuse* was used.

4.4 Conclusion

An initial quantitative analysis of the data revealed that although the BSAE users employ more tokens (i.e. use lexical verbs more frequently) than the L1 English users do, they have fewer types (i.e. lexical verb lemmas) at their disposal. A t-test determined that the difference in mean type/token ratio between the two independent corpora is significant. Cohen's d' was used to measure the strength of the mean type/token ratio relationship and it revealed that the degree to which there is more specificity in the lexical verbs of LOCNESS than the lexical verbs of the TLE is **large**.

An in-depth qualitative analysis of the communication verbs followed. The lexical verbs in the semantic field of communication were analysed as this was the only field in which the type-token ratio in the TLE was not lower than in LOCNESS. This allowed the TLE the best chance to show its own lexical specificity in comparison to LOCNESS.

After studying the communication verbs in both LOCNESS and the TLE, the following semantic fields within the field of communication verbs were identified:

(vi) [to say something in a particular manner]
(vii) [to say something in order to express one's feelings]
(viii) [to say something in order to convey information]
(ix) [to say something to someone in order to elicit a certain response]
(x) [to say something in response to something already said]

In order to refine the results, more semantic subfields were identified in each of the semantic fields listed above and lexical specificity was then studied within each one of these semantic categories. An overview of the results is provided in Table 4.8.

In LOCNESS the frequency counts, together with their semantic characteristics, indicate that the verb *say* is the unique beginner of the communication verbs (as mentioned in Section 4.3.1). As a result all the semantic categories in the communication verbs are headed by the verb *say*.

It is important to take note that the unique beginner *say* occur more frequently in the TLE than in LOCNESS. (*Say* occurs 186.34 times per 100 000 words in the TLE whereas it occurs 170.62 times per 100 000 words in LOCNESS) This, together with the fact that there are 586.35 communication verbs per 100 000 words in the TLE (made up of 89 lemmas) as opposed to the 1 017.33 communication verbs per 100 000 words in LOCNESS (made up of 149 lemmas), indicate that the verb *say* is more entrenched in the TLE than in LOCNESS.

Although troponymy is the most prominent form of entailment encountered in the analyses above, backward presupposition can also be found in the results. If the semantic categories [to say something in response to something already said] and [to say something to someone in order to elicit a certain response] are considered, one can see that an instance such as *answer* (from the semantic category [to say something in response to something already said]) entails *ask* (from the semantic category [to say something to someone in order to elicit a response]). This means that if one uses the verb *answer*, one can presuppose that a question was *asked*. In the same way it can be said that the verb

rebut (from the semantic category [to say something in response to something already said]) entails the verb *argue* (from the semantic category [to say something in order to convey information]), i.e. one can only *rebut* if an argument has already been made.

When considering Table 4.8 below it is clear that overall there is more lexical specificity in LOCNESS than in the TLE; overall there is more lexical diversity in LOCNESS than in the TLE; and overall the semantic categories occur more frequently in LOCNESS than in the TLE. It is important to note, however, that the degree of lexical specificity is not always the same in all the semantic categories in LOCNESS and the TLE.

In the semantic category [to say something in a particular manner], there are two levels of specificity in LOCNESS in most of the semantic subcategories. In the TLE, however, only one instance can be found at the second level of specificity (i.e. *insist* in the semantic subcategory [to say something in a formal manner]. This means that the degree of extension of the prototype in the TLE is much smaller than in LOCNESS.

In the discussion of the semantic subcategory [to say something in particular manner] it was found that the BSAE users tend not to express the manner of saying lexically in the verb. When the semantic subcategory [to say something in a loud voice] is for example considered, the more specific instance *exclaim* with the added manner elaboration [to say something in a loud voice, **often with surprise or joy**] is never used. Instead this manner of saying tends to be expressed syntactically through manner adverbials or by inference from context only. This was illustrated in Example 4.47 and Example 4.48. Therefore it can be argued that the difference in the degree of extension of the prototype between LOCNESS and the TLE is a lexical difference.

In the semantic category [to say something in order to express one's feelings or opinions], only one level of specificity can be found with the exception of the semantic subcategory [to say that one approves of someone or something] where two levels of specificity can be found. In the TLE this second level of specificity is not attested. But as far as lexical diversity is concerned, the TLE is well-represented (to the extent that the verb *scold* is present in the semantic subcategory [to say that one does not approve of someone's actions] in the TLE and not in LOCNESS).

Semantic category	Most lexical specificity in LOCNESS or the TLE		Most lexical diversity in LOCNESS or the TLE		Occurs most frequently in LOCNESS or the TLE	
	LOCNESS	**TLE**	**LOCNESS**	**TLE**	**LOCNESS**	**TLE**
[to say something in a particular manner]						
[to say something in a formal manner]	☒	☒	☒	☐	☒	☐
[to say something in such a manner as to raise doubt about something or someone]	☒	☒	☒	☒	☒	☐
[to say something in a firm manner]	☒	☒	☒	☐	☒	☐
[to say something in a loud voice]	☒	☐	☒	☐	☒	☐
[to say something in a soft and indistinct voice]	☒	☐	☒	☐	☒	☐

Semantic category	Most lexical specificity in LOCNESS or the TLE		Most lexical diversity in LOCNESS or the TLE		Occurs most frequently in LOCNESS or the TLE	
	LOCNESS	**TLE**	**LOCNESS**	**TLE**	**LOCNESS**	**TLE**
[to say something in order to express one's feelings]						
[to say that one approves of someone or something]	☒	☐	☒	☐	☒	☐
[to say that one does not approve of someone's actions]	☒	☒	☒	☒	☒	☒
[to say that one is not satisfied with something]	☒	☒	☒	☒	☐	☒
[to say something to express one's feelings towards someone else in an unkind manner]	☒	☒	☒	☐	☒	☐
[to express gratitude]	☒	☒	☒	☒	☒	☐

Semantic category	Most lexical specificity in LOCNESS or the TLE		Most lexical diversity in LOCNESS or the TLE		Occurs most frequently in LOCNESS or the TLE	
	LOCNESS	**TLE**	**LOCNESS**	**TLE**	**LOCNESS**	**TLE**
[to say something in order to convey information]						
[to say something to someone in order to make them aware of it]	☒	☒	☒	☒	☒	☐
[to say something in order to express an opinion]	☒	☒	☒	☐	☒	☐
[to say that one supports something]	☒	☒	☒	☐	☒	☐
[to say that one does not support something]	☒	☒	☒	☐	☒	☐
[to say that someone is guilty of wrongdoing]	☒	☐	☒	☐	☒	☐
[to say that one has the same opinion as someone else]	☒	☒	☒	☒	☐	☒
[to say that one does not have the same opinion as someone else]	☒	☒	☒	☒	☐	☒

Semantic category	Most lexical specificity in LOCNESS or the TLE		Most lexical diversity in LOCNESS or the TLE		Occurs most frequently in LOCNESS or the TLE	
	LOCNESS	**TLE**	**LOCNESS**	**TLE**	**LOCNESS**	**TLE**
[to say something to someone which has not been touched upon in the conversation before]	☒	☒	☒	☐	☒	☐
[to say something to someone, receiving feedback and responding to the feedback]	☒	☒	☒	☒	☒	☐
[to say something to someone in order to indicate fault]	☒	☐	☒	☐	☒	☐
[to say something to someone in order to give an account of what happened or what something looks like]	☒	☐	☒	☐	☒	☐
[to say something to someone which adds to existing information]	☒	☒	☒	☐	☒	☐
[to say something to someone, listing the main points pertaining to it]	☒	☐	☒	☐	☒	☐
[to say that something is the case]	☒	☒	☒	☐	☒	☐
[to say that something is not the case]	☒	☒	☒	☐	☒	☐

Semantic category	Most lexical specificity in LOCNESS or the TLE		Most lexical diversity in LOCNESS or the TLE		Occurs most frequently in LOCNESS or the TLE	
	LOCNESS	**TLE**	**LOCNESS**	**TLE**	**LOCNESS**	**TLE**
[to say something to someone which one believes to be the truth]	☒	☒	☒	☐	☒	☐
[to say that something might happen]	☒	☐	☒	☐	☐	☒
[to say that something bad might happen]	☒	☒	☒	☒	☐	☒

Semantic category	Most lexical specificity in LOCNESS or the TLE		Most lexical diversity in LOCNESS or the TLE		Occurs most frequently in LOCNESS or the TLE	
	LOCNESS	**TLE**	**LOCNESS**	**TLE**	**LOCNESS**	**TLE**
[to say something to someone in order to elicit a certain response]						
[to tell someone to do something]	☒	☐	☒	☐	☒	☐
[to tell someone not to do something]	☒	☒	☒	☐	☒	☐
[to say something in order to obtain something]	☒	☒	☒	☐	☐	☒
[to say something to someone in order to direct their attention to a certain place]	☒	☐	☒	☒	☐	☒
[to say something to someone about something, drawing their attention to it]	☒	☒	☒	☒	☐	☒
[to say something to someone so they can consider it]	☒	☒	☒	☐	☐	☒

Semantic category	Most lexical specificity in LOCNESS or the TLE		Most lexical diversity in LOCNESS or the TLE		Occurs most frequently in LOCNESS or the TLE	
	LOCNESS	**TLE**	**LOCNESS**	**TLE**	**LOCNESS**	**TLE**
[to say something in response to something already said]						
[to say something in response to a question asked]	☒	☒	☒	☐	☒	☐
[to say to someone that one will do what one was asked to do]	☒	☐	☒	☐	☒	☐
[to say to someone that one will not do what one was asked to do]	☒	☐	☒	☒	☒	☐
[to make a counterstatement in response to a statement already made]	☒	☐	☒	☐	☒	☐
[to reproduce words]	☒	☐	☒	☐	☒	☐

Table 4.8: An overview of the lexical specificity, lexical diversity and frequency present within the various semantic categories in the communication verbs of LOCNESS and the TLE

Although the degree of extension of the prototype is almost as big in the TLE as it is LOCNESS in the semantic category [to say something in order to express one's feelings or opinions], this semantic category occurs less frequently in the TLE than in LOCNESS. This can be attributed to the fact that the verbs at the more specific level with manner elaborations are not employed. So, for example, the verb *praise* with the meaning [to say that one approves of someone or something] is elaborated by the verb *acclaim* that has the added manner elaboration of [to praise someone or something **with enthusiasm**] are not employed by the BSAE users. Therefore it can be argued that the difference in the degree of extension of the prototype between LOCNESS and the TLE is a lexical difference.

In the semantic category [to say something in order to convey information] one mostly finds two levels of specification in LOCNESS. The same level of specificity can mostly be found in the TLE throughout, but it is important to point out that the lexical diversity at the more specific levels is not as extensive in the TLE as in LOCNESS. There are, however, some interesting aspects of lexical specificity in this semantic category that need to be considered.

In the semantic subcategory [to say something is the case] there are some prime examples of underspecification in the TLE that have been touched upon the discussion. In the discussion it has been pointed out in some examples that the use of the more general verb *admit* in some utterances in the TLE could have been replaced with the verb *concede*.

In the semantic subcategory [to say something to someone which adds to existing information], the more specific verbs *elaborate, expound, explain* and *clarify* are not used as frequently by the BSAE users in the TLE as by the L1 English users in LOCNESS. This can be attributed to the fact that these verbs display certain manner elaborations. The verbs *elaborate* and *expound* are elaborated by [giving someone more information **in order to support one's argument**] whereas the verbs *explain* and *clarify* are elaborated by [giving someone more information **so they can understand more clearly**].

On the other hand the verb *advocate* at the more general level is not employed by the BSAE users in the TLE in the semantic subcategory [to say that one supports something]. Instead the verb *preach* at the more specific level is employed more frequently in by the BSAE users in the TLE than by the L1 English users in LOCNESS. Although the high

frequency of the more specific verb *preach* may be due to an essay topic, it is also an example of specific semantic innovation in the BSAE. Usually the verb *preach* has the semantic meaning [to advocate something in a serious manner]. In the TLE, however, the verb *preach* has the added meaning that what is being advocated is most likely going to be ignored.

Some essay topics in the TLE resulted in verbs such as *agree* and *disagree* occurring more frequently in the TLE than in LOCNESS. In other cases some essay topics pertaining to literature in LOCNESS resulted in verbs such as *recount* and *portray* occurring more frequently in LOCNESS than in the TLE.

Verbs that are closely related to academic literacy also yielded interesting results. The verb *summarise* in the semantic subcategory [to say something to someone, listing the main points pertaining to it] and the verb *argue* in the semantic subcategory [to say something to someone in order to make them aware of it] are examples of such verbs. Whereas the verbs *summarise* and *argue* are employed by L1 English users in LOCNESS, it is not employed by the BSAE users in the TLE at all.

The instances of the semantic category [to say something to someone in order to convey information] are employed less frequently by the BSAE users in the TLE than by the L1 English users in LOCNESS. As pointed out earlier, this suggests that the BSAE users do not focus on the transfer of information to the extent that the L1 English users do.

Two levels of lexical specificity can be found in most of the semantic subcategories of the semantic category [to say something to someone in order to elicit a certain response] in LOCNESS. The same levels of specificity can to some extent also be found in the TLE, but in some semantic subcategories such as [to tell someone to do something] and [to tell someone something in order to direct their attention to a certain place] the more specific instances cannot be found in the TLE. In spite of this, there is almost as much lexical diversity in the TLE as in LOCNESS in this semantic category. What is more is that the semantic category [to say something to someone in order to elicit a certain response] is the one category in the field of communication verbs that occurs more frequently in the TLE than in LOCNESS. This leads to a situation where the degree of extension of the

prototype is almost as big in the TLE as it is in LOCNESS in the semantic category [to say something to someone in order to elicit a certain response].

There are several points of interest in the semantic category [to say something to someone in order to elicit a certain response]. The first is that theorists (amongst whom Henning, 2006:88) have pointed out that BSAE users usually avoid counter-acting statements. This finding is supported by the fact that there is a really low frequency in the rhetorical option in the TLE in the semantic subcategory [to tell someone not to do something] compared to the much higher frequency of instances in LOCNESS.

Van Rooy's (2010) argument that new varieties of English will develop language conventions grounded in actual language use was confirmed when the verbs *demand* and *beg* were investigated in the semantic subcategory [to say something in order to obtain something]. It was determined that the verb *demand* is more salient in the TLE than in LOCNESS and is used in the context of demanding political rights or demands made by trade unions. The verb *beg*, on the other hand, is used to communicate an undesirable situation where soccer players are enticed to play soccer by offering them more money.

In the semantic subcategory [to say something to someone in order to direct their attention to a certain place] it was determined that the category is employed more frequently by the BSAE speakers in the TLE than by the L1 English speakers in LOCNESS. In spite of this, the BSAE speakers used a smaller range of resources than the L1 English speakers. In the discussion it was pointed out that this state of affairs is indicative of less lexical specificity in the TLE than in LOCNESS. This supports the quantitative approach to pre-determine whether there is indeed less lexical specificity in the TLE than in LOCNESS before the verbs were classified semantically.

In the semantic subcategory [to say something to someone so they can consider it], the verbs *advise* and *recommend* occur more frequently in the TLE than in LOCNESS. While investigating these verbs it was pointed out that this state of affairs can be attributed to the rhetorical structure of the essays in which the BSAE users are trying to persuade the readers to understand their point of view. This finding is also supported by Van Rooy (2008a:295) who found that the rhetorical function is persistent in BSAE.

The results gained from the semantic category [to say something to someone in order to elicit a certain response] correspond to Van Rooy's (2008a:300) finding that:

> BlSAfE is characterised by a strong interpersonal as opposed to informational focus, and certain specific linguistic resources of the English language sometimes serve different discourse functions in the TLE than in LOCNESS. Taken together, the evidence from the TLE suggests cultural styles that motivate a finding of indigenisation in a new setting.

Finally it can be said that the semantic category [to say something to someone in order to elicit a certain response] is the only semantic category to occur more frequently in the TLE than in LOCNESS. This emphasises the interactive/dialogic nature of language in BSAE in the TLE.

In the last semantic category, [to say something in response to something already said], two levels of specificity can be found in most of the semantic subcategories in LOCNESS. This is the one semantic category, however, in which the TLE does not display a second level of specificity in any of the semantic subcategories. Even on the first level of specificity, there is not as much lexical diversity in the TLE as in LOCNESS. As a result the degree of extension of the prototype in the semantic category [to say something in response to something already said] is much smaller in the TLE than in LOCNESS. This can mainly be attributed to the fact that LOCNESS contained literary essays that encouraged the L1 English users to use verbs such as *cite* and *quote*.

An interesting point that arose in the semantic category [to say something in a particular manner] and the semantic category [to say something in order to convey information] is that if a certain communication verb also belongs to another semantic category, then that verb will not be used as a communication verb in the TLE. This was the case with the verb *stress* (that can either be a communication verb or a mental verb) as well as the verb *maintain* (that can either be a communication verb or a material verb). This also contributes to the fact that there is sometimes less lexical specificity and lexical diversity in the TLE than in LOCNESS.

The following important factors that play a role in the lexical specificity and lexical diversity in both LOCNESS and the TLE can be summarised as follows:

(i) In cases where more general communication verbs are elaborated by communication verbs containing manner elaborations, the BSAE users tend not to use the more specific communication verbs.

(ii) Communication verbs that usually play an important role in academic literacy (such as *summarise* and *argue*) are used to a lesser extent by the BSAE users than the L1 English users.

(iii) In cases where a communication verb could possibly belong to another semantic category (as is the case with the verbs *stress* and *maintain*) the BSAE users tend to avoid using the verbs as communication verbs.

(iv) Some communication verbs (such as *demand* and *beg*) acquired additional meanings in BSAE.

(v) Some essay topics in both LOCNESS and the TLE influenced the frequencies of some communication verbs in the respective corpora.

The analyses, discussion and interpretation above have demonstrated that there is indeed more lexical specificity in LOCNESS than in the TLE.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this study the objective was to determine whether there is less lexical specificity in BSAE than in L1 English. To reach this objective a theoretical overview was presented of the most important concepts pertaining to this study, e.g. the concept of lexical item, the relationship between language and experience which results in important theories such as the Prototype Theory, and the semantic and syntactic characteristics of lexical verbs. These concepts allowed the researcher to arrive at a framework for the analysis of specificity in lexical verbs in L1 English and BSAE respectively. In order to apply this framework corpus linguistic methods were applied to investigate the corpora. The results of the analyses were presented and interpreted mainly from a systemic functional and cognitive perspective. In the sections that follow in this chapter the framework employed to analyse the data is evaluated and a summary of the findings in the previous chapters is provided, referring to the research questions provided in Chapter 1 throughout. Finally the implications of the study are considered.

5.1.1 The initial problem statement

In Chapter 1 it was found that although research has been done on the vocabulary of BSAE users, none of these studies investigate lexical specificity and semantics in BSAE, except perhaps De Klerk (2003) whose study had certain limitations in that it did not for example always consider the semantic attributes of words and mainly focussed on frequency counts.

In Chapter 1 the following research questions were formulated which had to be answered in this dissertation:

(i) What should a framework for the analysis of lexical specificity in the lexical verb word class look like?

(ii) How does lexical specificity with regard to lexical verbs compare in L1 English and BSAE?

(iii) What are the reasons for the differences in lexical specificity with regard to lexical verbs between BSAE and L1 English?

The first research question is answered in Section 5.1.2 below when an evaluation of the framework is provided. The second and third research questions are answered in Section 5.1.3.

5.1.2 Evaluation of the framework

The first step in the framework for analysing specificity in the lexical verbs was to classify the lexical verbs into the six semantic fields (i.e. material, behavioural, mental, communication, relational and existential). As a single verb lemma can belong to more than one of these six semantic fields, concordances had to be made with these lemmas in order to determine how many of the occurrences should be classified as belonging to one semantic field and how many of the occurrences should be classified as belonging to another semantic field. Different entries were then created for the single lemma to indicate that it belongs to more than one semantic category. This turned out to be a fruitful effort as it provided the researcher with an initial, semantically based organisation of all the lexical verbs (including the polysemous verbs).

As the scope of this study did not allow for the analysis of all six semantic fields, only the communication verbs were studied in depth. The verbs in both LOCNESS and the TLE were considered and more specific semantic categories were identified in order to group the various communication verbs together that are linked by specific semantic relations.

In Section 2.7.3 it was argued that the unique beginners would be identified using the frequency counts of the various verbs as well as their semantic attributes.

Organising the verbs hierarchically proved to be especially fruitful as it allowed the researcher to spot the levels of specificity with ease and to describe the semantic relations between the verbs in more detail.

It can therefore be said that applying the framework set out in Section 2.7.3 of this study proved to be successful.

5.1.3 Findings

The results and analyses of the results indicated that overall there is indeed less lexical specificity in the TLE than in LOCNESS, especially at those levels where the more specific elaborations occur in terms of manner. There is overall also less lexical diversity in the TLE than in LOCNESS, not only at the most specific levels but also at some of the more general levels of specificity.

It was found that the following factors influenced the lexical specificity and lexical diversity in the corpora:

(i) In cases where more general communication verbs are elaborated by communication verbs containing manner elaborations, the BSAE users tend not to use the more specific communication verbs.
(ii) Communication verbs that usually play an important role in academic literacy (such as *summarise* and *argue*) are used to a lesser extent by the BSAE users than the L1 English users.
(iii) In cases where a communication verb could possibly belong to another semantic category (as is the case with the verbs *stress* and *maintain*) the BSAE users tend to avoid using the verbs as communication verbs.
(iv) Some communication verbs (such as *demand* and *beg*) acquired additional meanings in BSAE.
(v) Some essay topics in both LOCNESS and the TLE influenced the frequencies of some communication verbs in the respective corpora.

The results of this study have also demonstrated that being a L2 English user means that English will not always function in the same contexts for the BSAE users as it would for

the L1 English users. Therefore the vocabulary of the BSAE users will only be specific and diversified in those semantic categories needed to function in certain contexts.

5.1.4 Implications of the study

Theorists (amongst whom Conrad, 2004 and Nesselhauf, 2004) point out that studies such as the present one can be used to contribute towards the improvement of pedagogic material and also to create an awareness of variation in language with L2 English users. In the South African context then it would mean that this study could be used to contribute to the pedagogic material currently being used in academic literacy courses presented to BSAE speakers and to make them aware of the variation in language and how it can be used in various contexts. But in order to maximise the contribution, future studies need to be done in which specificity in the lexical verbs belonging to the other semantic categories (and perhaps even the other lexical words, i.e. nouns, adjectives and adverbs) also be investigated.

The present study could also be useful for researchers studying computational linguistics and lexicography. Faber and Usón (1999:18) point out that:

> The close interrelation between psychology and language also has had a direct repercussion on computational linguistics. One of the goals of cognitive science has always been the elaboration of rules as well as representation which will explain both the way humans think and the way computers work.

The insights in this study regarding the semantic relations between communication verbs in both L1 English and BSAE can therefore in some way contribute to a computational lexicon. These insights could be of similar use to lexicographers.

5.2 Conclusion

The aim of this study was to develop a framework for the analysis of lexical specificity in the lexical verb word class and to compare lexical specificity with regard to lexical verbs in L1 English and BSAE using this framework. The results indicated that there is less

specificity in the lexical verbs of BSAE users than L1 English users and that this state of affairs can mainly be attributed to the fact that as L2 English users, English functions in other contexts for BSAE users.

The framework developed in this study can now be used to analyse other lexical words in the same corpora in terms of lexical specificity. Those results, together with the results of this study, can be used to contribute to the improvement of pedagogic material in academic literacy courses and to make BSAE users more aware of variation in language.

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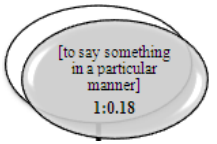
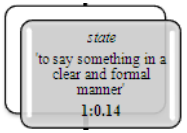
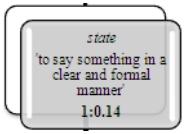
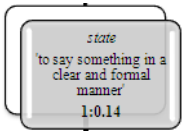
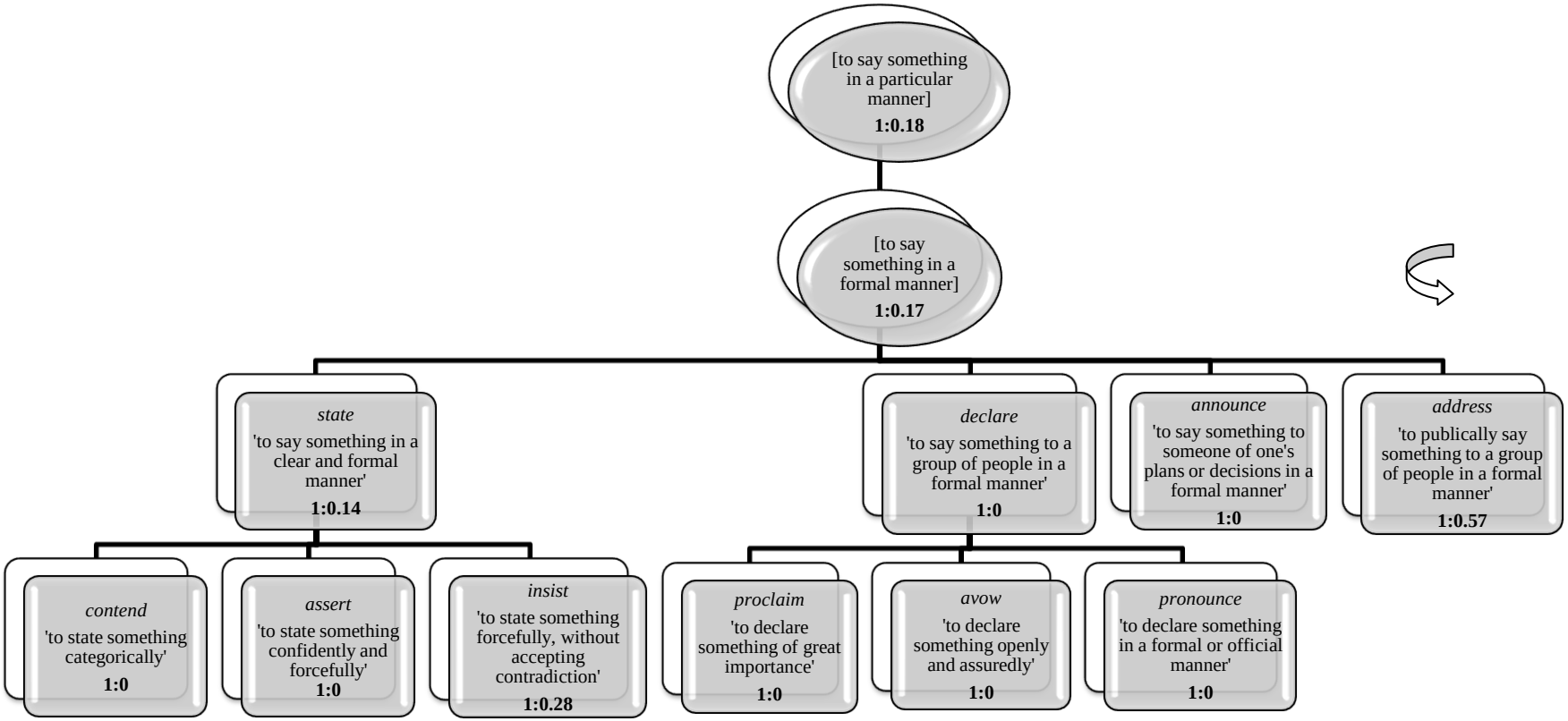
LEGEND FOR ADDENDA

Semantic attributes are given between square brackets in circles, e.g. [to say something in a particular manner]	
Meanings of linguistic forms are given between single quotes in squares, e.g. 'to say something in a clear and formal manner'	
Lexical items are printed in italics, e.g. *state*	
The frequencies of the various semantic categories/subcategories/instances as used by BSAE users in the TLE are expressed proportionally in terms of the frequencies of the various instances of the semantic subcategories as used by the L1 English users in LOCNESS at the bottom of the various categories/subcategories/instances in bold, e.g. **1:0.14**	

The semantic category continues on the following page.	
The semantic category continues from the previous page.	

ADDENDUM A

INSTANTIATIONS OF THE SEMANTIC CATEGORY [TO SAY SOMETHING IN A PARTICULAR MANNER]

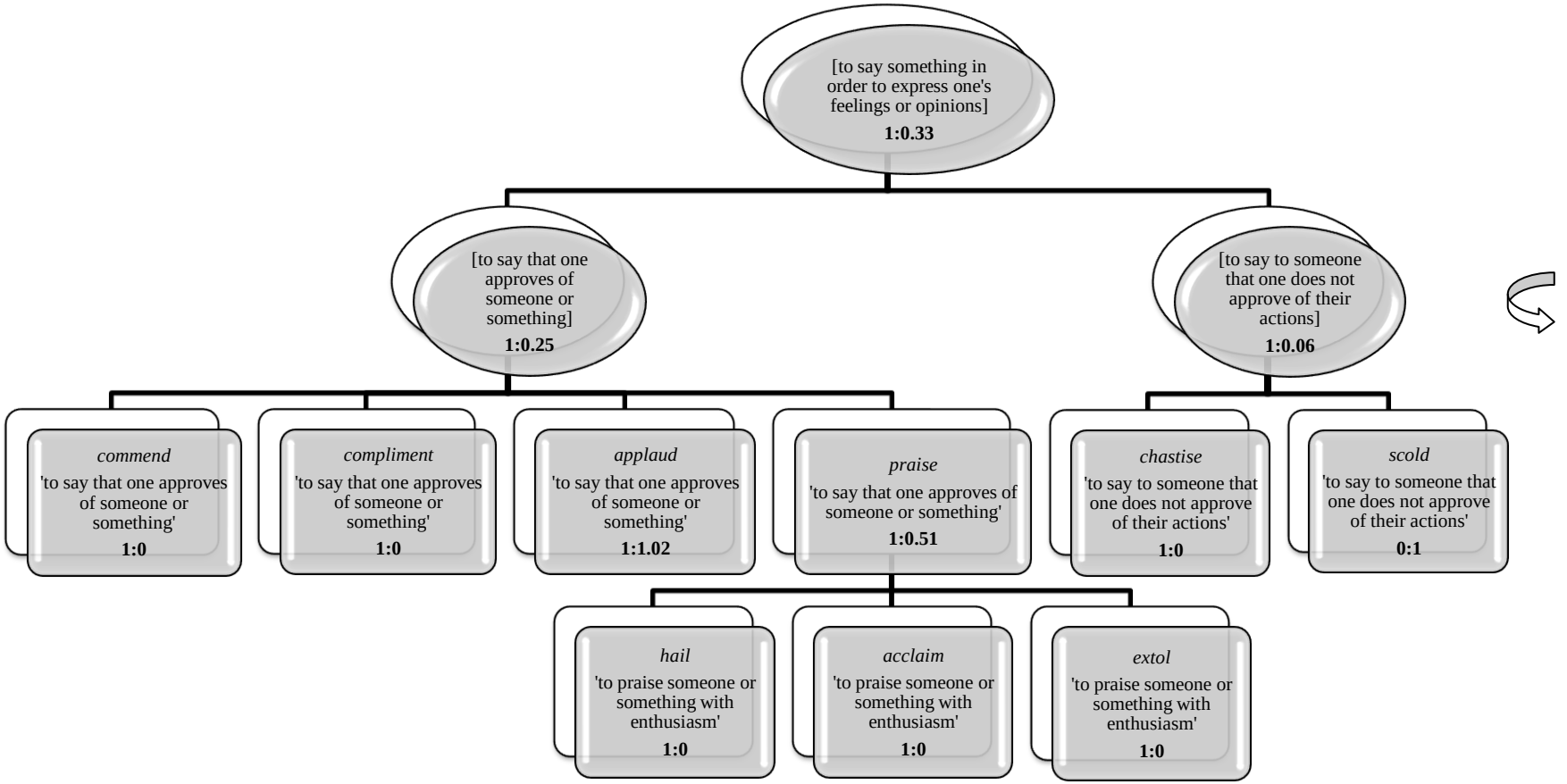


[to say something in a particular manner]
1:0.18
[to say something in a firm manner]
1:0.51
[to say something in a loud voice]
1:0.22
stress
'to say something in a firm manner'
1:0
emphasise
'to say something in a firm manner to single it out as important'
1:2.53
shout
'to say something in a loud voice'
1:2.02
call out
'to shout something, often with surprise or joy'
1:0
clamour
'to shout something in order to get something'
1:0
bellow
'to shout something loudly without restraint'
1:0
exclaim
'to shout something, often with surprise or joy'
1:0
scream
'to shout something loudly without restraint'
1:0

[to say something in a particular manner]
1:0.18
[to say something in a soft and indistinct voice]
1:0
[to say something in such a manner as to raise doubt about something or someone]
1:0.51
mumble
'to say something in a soft and indistinct voice'
1:0
murmur
'to say something in a soft and indistinct voice'
1:0
question
'to say something in such a manner as to raise doubt about something or someone'
1:0.11

ADDENDUM B

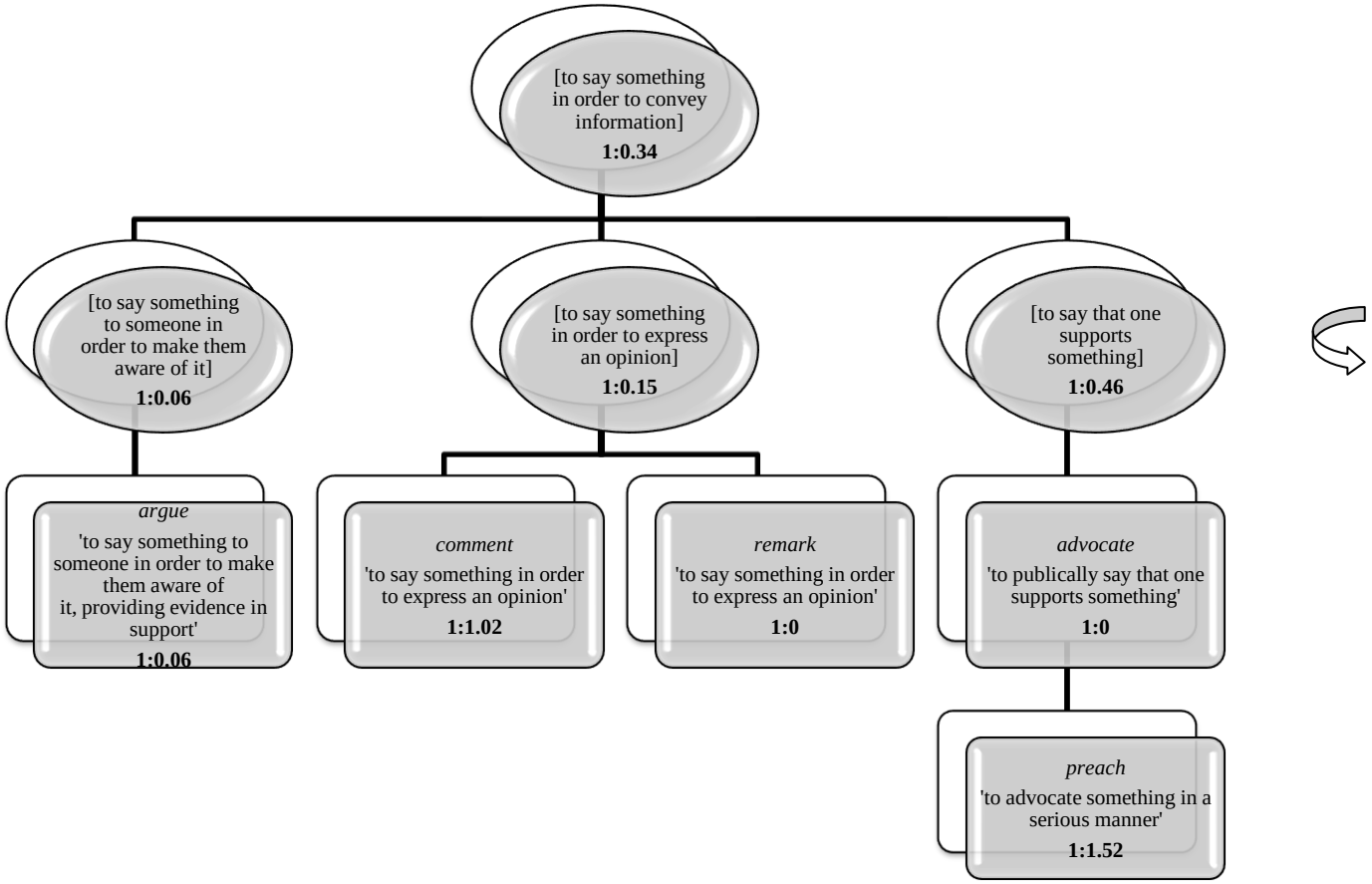
INSTANTIATIONS OF THE SEMANTIC CATEGORY [TO SAY SOMETHING IN ORDER TO EXPRESS ONE'S FEELINGS OR OPINIONS]



[to say something to express one's feelings or opinions]
1:0.33
[to say that one is not satisfied with something]
1:1.69
[to say something to express one's feelings towards someone else in an unkind manner]
1:0.12
[to say that one is thankful for something]
1:0.29
complain
'to say that one is not satisfied with something'
1:1.69
tease
'to say something to express one's feelings towards someone else in an unkind manner'
1:1.02
mock
'to say something to express one's feelings towards someone else in an unkind manner'
1:0.20
ridicule
'to say something to express one's feelings towards someone else in an unkind manner'
1:0
thank
'to express gratitude'
1:0.29

ADDENDUM C

INSTANTIATIONS OF THE SEMANTIC CATEGORY [TO SAY SOMETHING IN ORDER TO CONVEY INFORMATION]

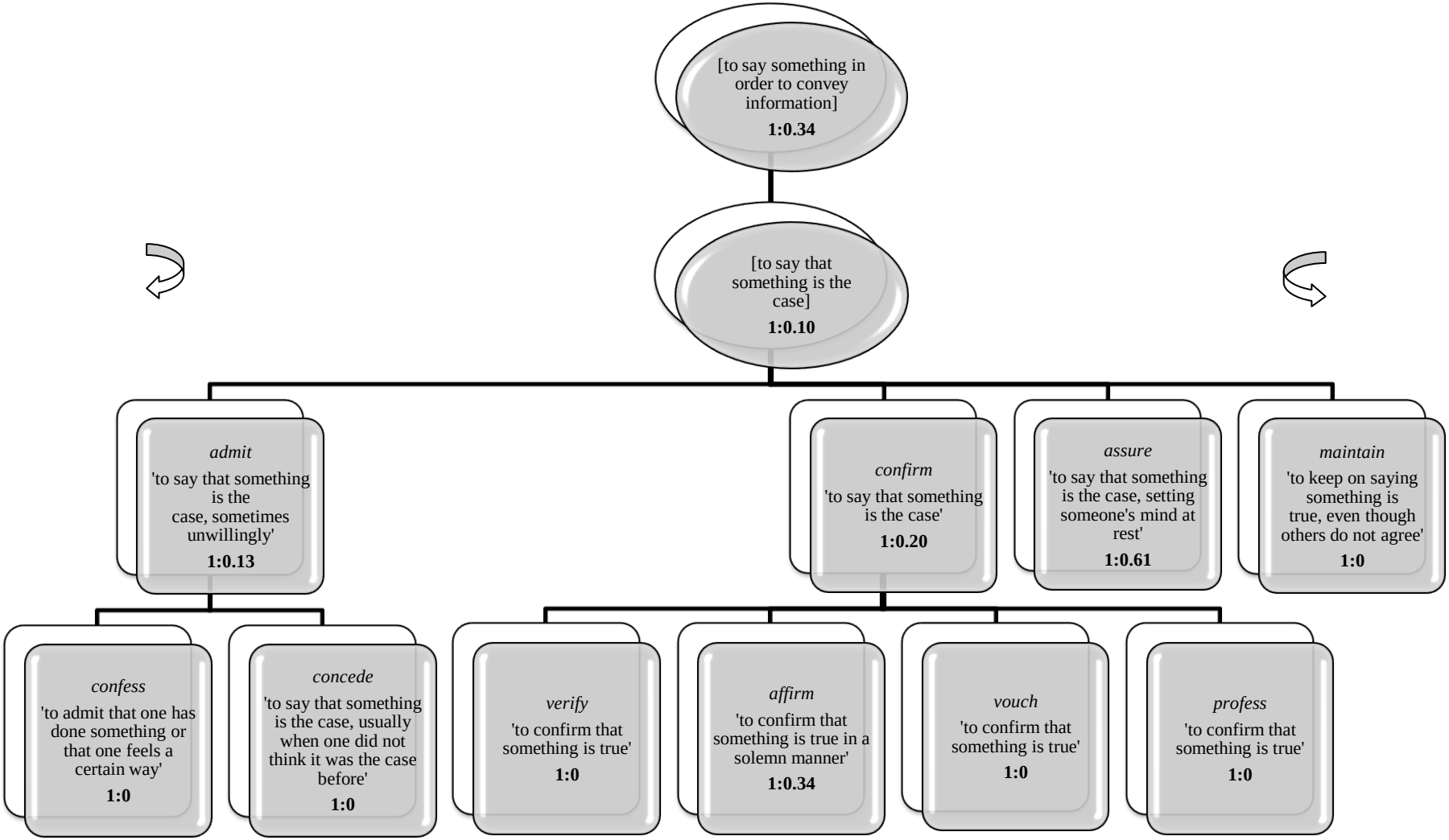


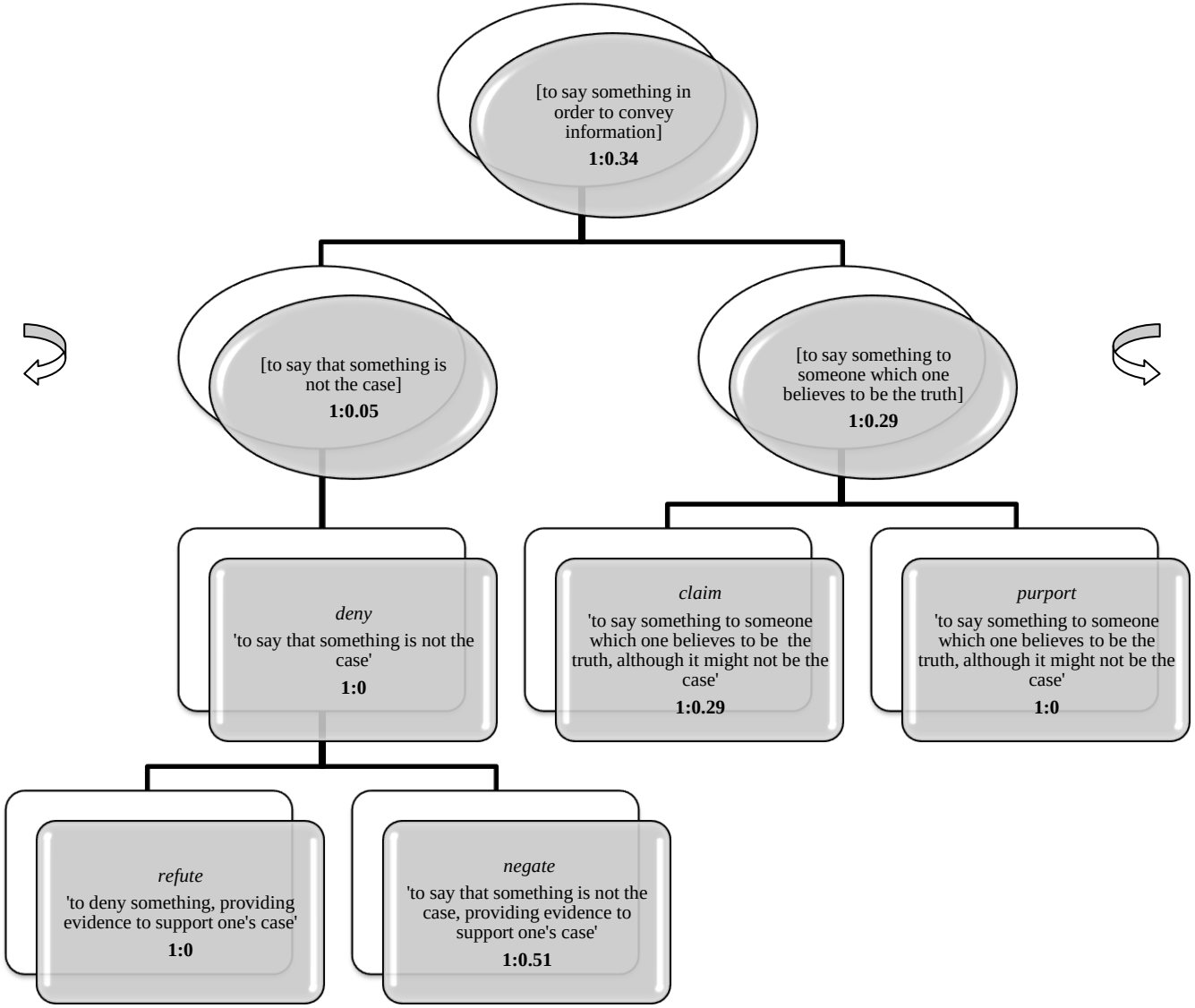
[to say something in order to convey information]
1:0.34
[to say that one does not support something]
1:0.13
[to say that someone is guilty of wrongdoing]
1:0.13
object
'to say that one does not support something'
1:0.51
protest
'to say that one does not support something'
1:0
remonstrate
'to say that one does not support something'
1:0
accuse
'to say that someone is guilty of wrongdoing'
1:0.15
charge
'to formally accuse someone of something'
1:0

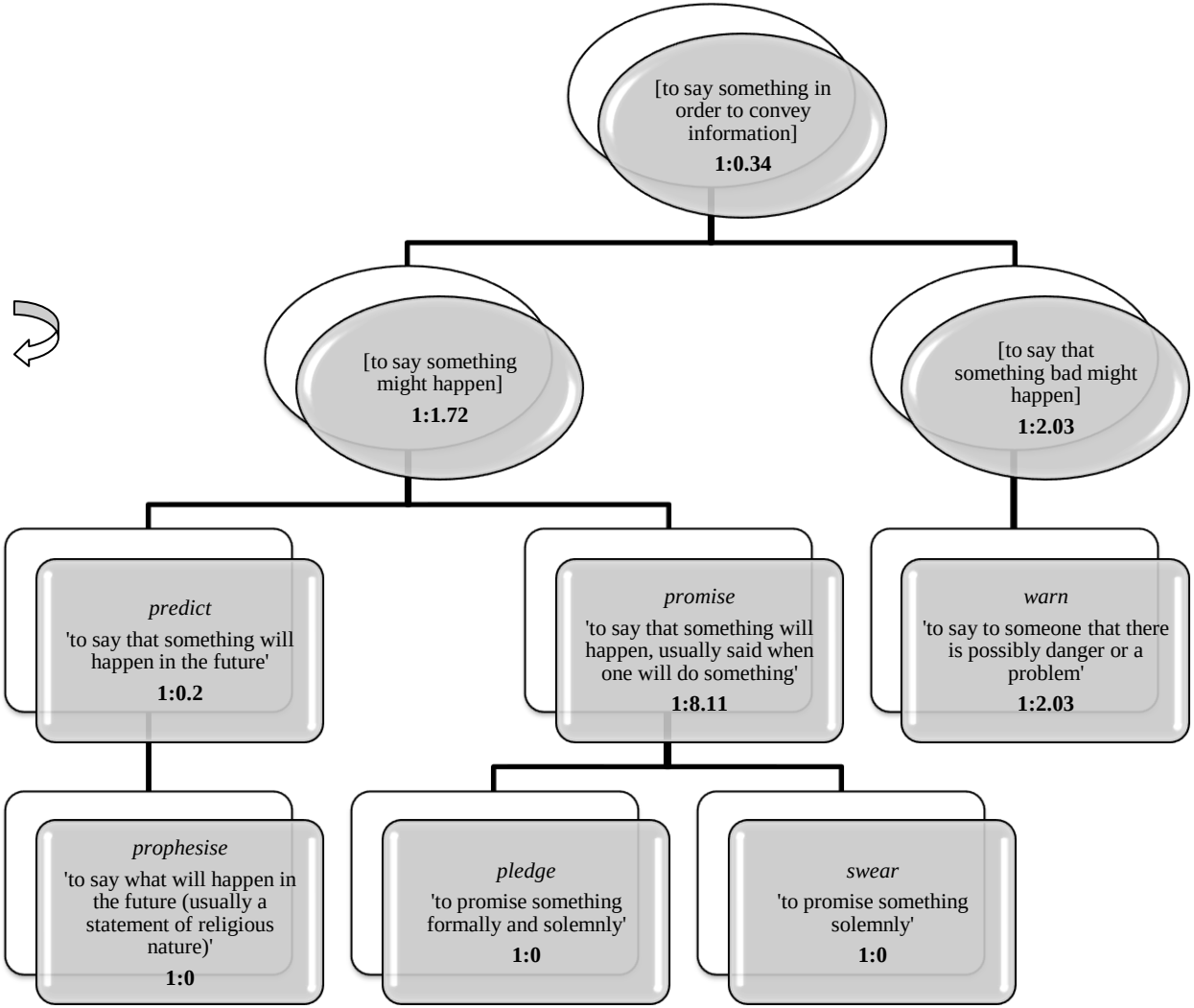
[to say something in order to convey information]
1:0.34
[to say that one has the same opinion as someone else]
1:9.76
[to say that one does not have the same opinion as someone else]
1:1.17
[to say something to someone which has not been touched upon in the conversation before]
1:0.36
agree
'to say that one has the same opinion as someone else'
1:9.76
disagree
'to say that one does not have the same opinion as someone else'
1:1.17
introduce
'to say something to someone which has not been touched upon in the conversation before'
1:0
point out
'to say something to someone to make them aware of it'
1:0
inform
'to provide someone with information to make them aware of something'
1:1.52
notify
'to inform someone of something in a formal manner'
1:0

[to say something in order to convey information]
1:0.34
[to say something to someone, receiving feedback and responding to the feedback]
1:0.18
[to say something to someone in order to indicate fault]
1:0.56
discuss
'to say something to someone, receiving feedback and responding to the feedback'
1:0.18
criticise
'to say something to someone in order to indicate fault'
1:0.66
negotiate
'to discuss something in order to reach an agreement'
1:0.34
debate
'to discuss something publically (usually two opposing views are presented in the discussion)'
1:0.10
denounce
'to criticise something or somebody strongly'
1:0
malign
'to criticise something or somebody publically'
1:0

[to say something in order to convey information]
1:0.34
[to say something to someone in order to give an account of what happened or what something looks like]
1:0.12
[to say something to someone which adds to existing information]
1:0.23
[to say something to someone, listing the main points pertaining to it]
1:0
describe
'to say something to someone in order to give an account of what happened or what something looks like'
1:0.07
report
'to say something to someone in order to give an account of what happened or what something looks like (usually obligatory)'
1:0.42
add
'to say something to someone in order to provide more detail to something already said'
1:0.51
summarise
'to say something to someone, listing the main points pertaining to it'
1:0
recount
'to say something to someone in order to give an account of what happened or how something used to be (usually from memory)'
1:0
portray
'to say something to someone in order to give an account of what someone looks like'
1:0
elaborate
'to provide more detail to something already said'
1:0.34
expound
'to provide more detail to something already said'
1:0
explain
'to provide someone with more information so they can understand more clearly'
1:0.24
clarify
'to provide someone with more information so they can understand more clearly'
1:0

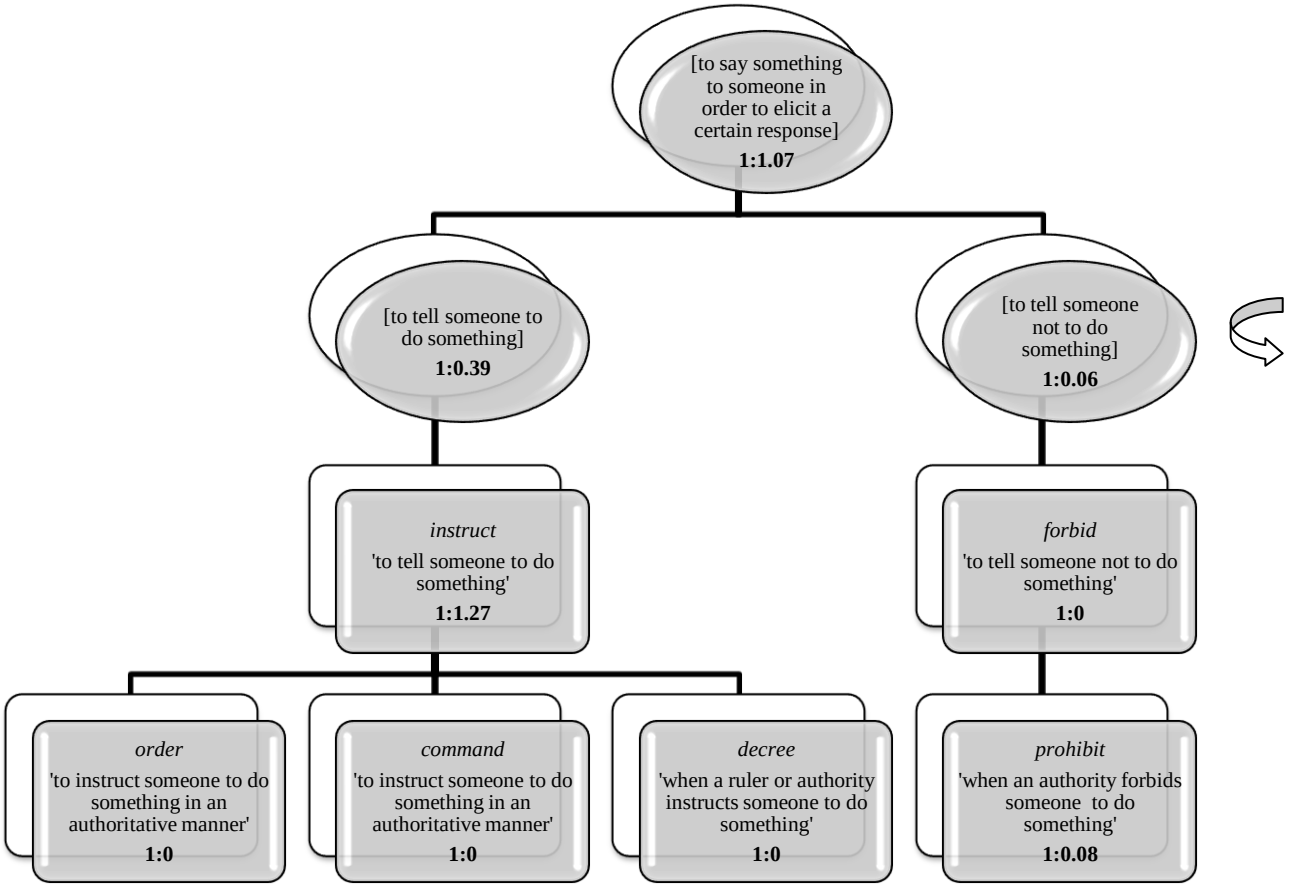

[to say something in order to convey information]
1:0.34
[to say that something is the case]
1:0.10
admit
'to say that something is the case, sometimes unwillingly'
1:0.13
confess
'to admit that one has done something or that one feels a certain way'
1:0
concede
'to say that something is the case, usually when one did not think it was the case before'
1:0
confirm
'to say that something is the case'
1:0.20
verify
'to confirm that something is true'
1:0
affirm
'to confirm that something is true in a solemn manner'
1:0.34
vouch
'to confirm that something is true'
1:0
profess
'to confirm that something is true'
1:0
assure
'to say that something is the case, setting someone's mind at rest'
1:0.61
maintain
'to keep on saying something is true, even though others do not agree'
1:0

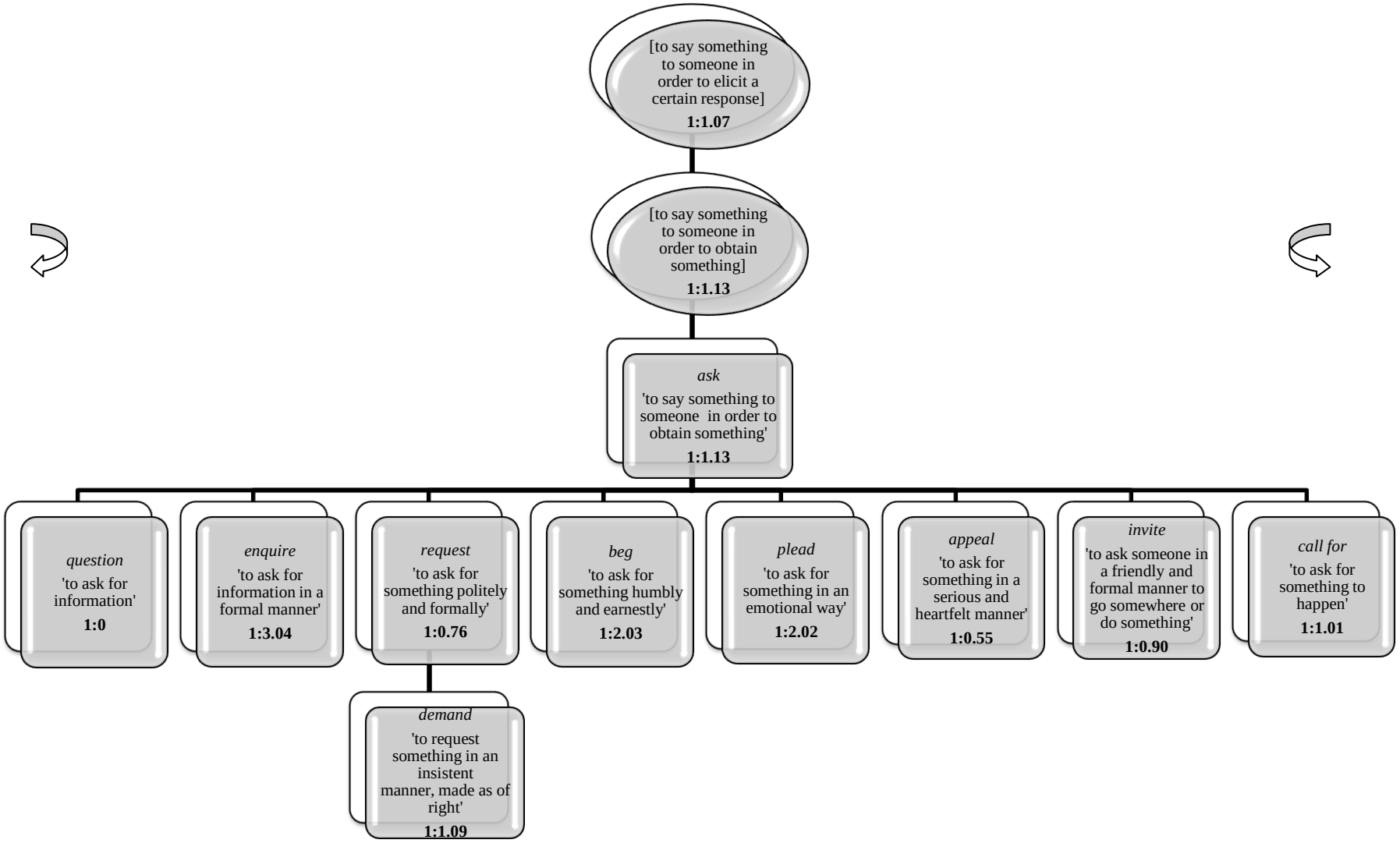

[to say something in order to convey information]
1:0.34
[to say that something is not the case]
1:0.05
[to say something to someone which one believes to be the truth]
1:0.29
deny
'to say that something is not the case'
1:0
claim
'to say something to someone which one believes to be the truth, although it might not be the case'
1:0.29
purport
'to say something to someone which one believes to be the truth, although it might not be the case'
1:0
refute
'to deny something, providing evidence to support one's case'
1:0
negate
'to say that something is not the case, providing evidence to support one's case'
1:0.51


[to say something in order to convey information]
1:0.34
[to say something might happen]
1:1.72
[to say that something bad might happen]
1:2.03
predict
'to say that something will happen in the future'
1:0.2
promise
'to say that something will happen, usually said when one will do something'
1:8.11
warn
'to say to someone that there is possibly danger or a problem'
1:2.03
prophesise
'to say what will happen in the future (usually a statement of religious nature)'
1:0
pledge
'to promise something formally and solemnly'
1:0
swear
'to promise something solemnly'
1:0

ADDENDUM D

INSTANTIATIONS OF THE SEMANTIC CATEGORY [TO SAY SOMETHING TO SOMEONE IN ORDER TO ELICIT A CERTAIN RESPONSE]



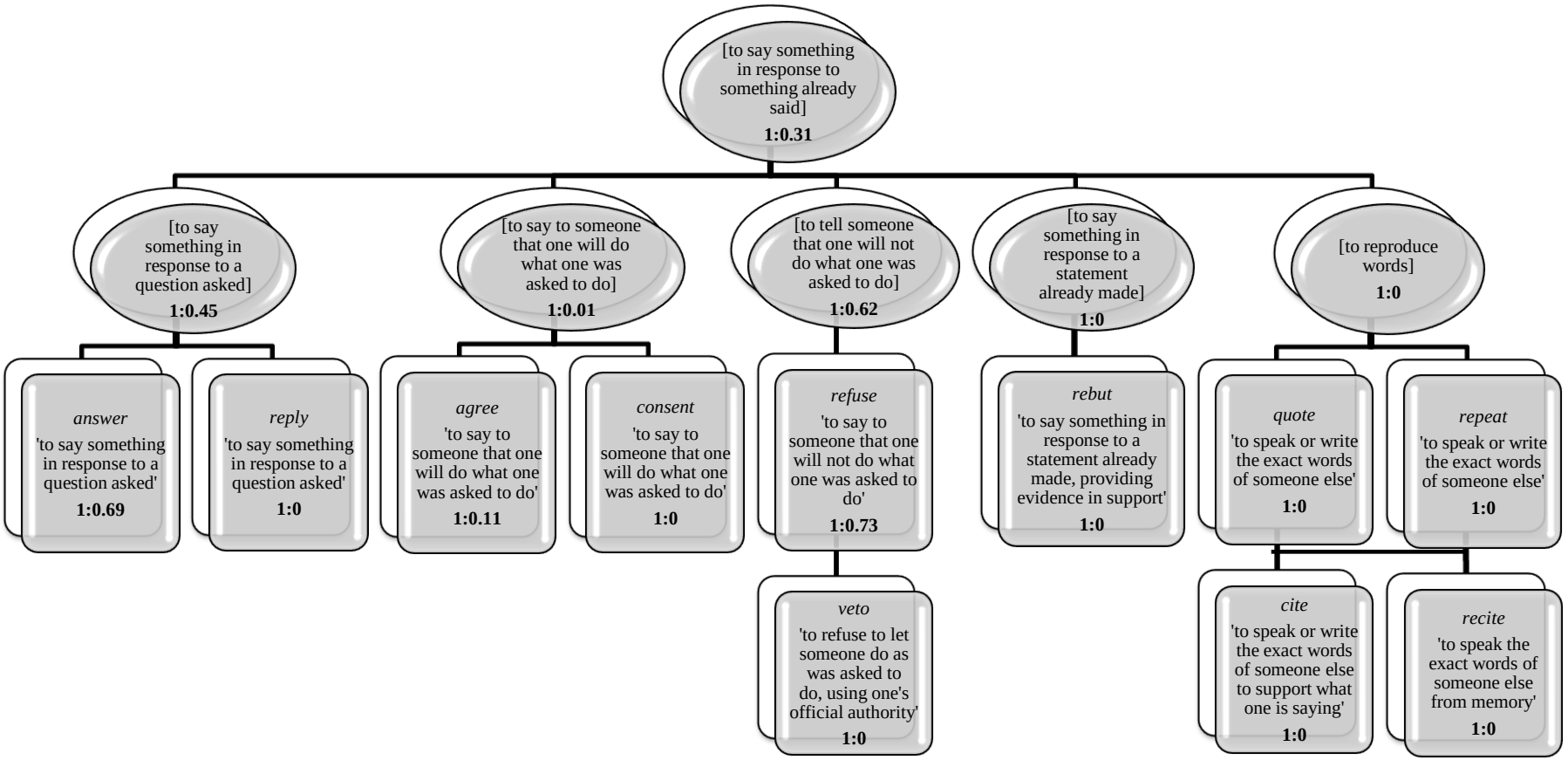

[to say something to someone in order to elicit a certain response]
1:1.07
[to say something to someone in order to obtain something]
1:1.13
ask
'to say something to someone in order to obtain something'
1:1.13
question
'to ask for information'
1:0
enquire
'to ask for information in a formal manner'
1:3.04
request
'to ask for something politely and formally'
1:0.76
beg
'to ask for something humbly and earnestly'
1:2.03
plead
'to ask for something in an emotional way'
1:2.02
appeal
'to ask for something in a serious and heartfelt manner'
1:0.55
invite
'to ask someone in a friendly and formal manner to go somewhere or do something'
1:0.90
call for
'to ask for something to happen'
1:1.01
demand
'to request something in an insistent manner, made as of right'
1:1.09

[to say something to someone in order to elicit a certain response]
1:1.07
[to say something to someone in order to direct their attention to a certain place]
1:1.14
[to say something to someone, drawing their attention to it]
1:4.56
refer to
'to say something to someone in order to direct their attention to a certain place'
1:0.67
mention
'to briefly say something to someone in order to direct their attention to a certain place'
1:2.13
advertise
'to say something to someone about something, drawing their attention to it'
1:1.56
allude to
'to briefly refer to something'
1:0

[to say something to someone in order to elicit a certain response]
1:1.07
[to say something to someone so they can consider it]
1:1.17
propose
'to say something to someone so they can consider it'
1:0.18
advise
'to say something to something so they can consider it'
1:25.36
recommend
'to say something to someone so they can consider it'
1:5.06
suggest
'to say something to someone so they can consider it'
1:0.38
hint
'to suggest something indirectly'
1:0
imply
'to suggest something indirectly'
1:0.38

ADDENDUM E

INSTANTIATIONS OF THE SEMANTIC CATEGORY [TO SAY SOMETHING IN RESPONSE TO SOMETHING ALREADY SAID]



ALPHABETICAL LIST OF COMMUNICATION VERBS AND THEIR MEANINGS

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acclaim	to praise someone or something with enthusiasm
accuse	to say that someone is guilty of wrongdoing
add	to say something to someone in order to provide more detail to something already said
address	to publically say something to a group of people in a formal manner
admit	to say that something is the case, sometimes unwillingly
advertise	to say something to someone about something, drawing their attention to it
advise	to say something to someone so they can consider it
advocate	to publically say one supports something
affirm	to confirm that something is true in a solemn manner
agree[1]	to say that one has the same opinion as someone else
agree[2]	to say to someone that one will do what one was asked to do
allude	to briefly refer to something
announce	to say something to someone of one's plans or decisions in a formal manner
answer	to say something in response to a question asked
appeal	to ask for something in a serious and heartfelt manner
applaud	to say that one approves of someone or something
argue	to say something to someone in order to make them aware of it, providing evidence in support

ask	to say something in order to obtain something
assert	to state something confidently and forcefully
avow	to declare something openly and assuredly
beg	to ask for something humbly and earnestly
bellow	to shout something loudly without restraint
call for	to ask for something to happen
call out	to shout something, often with surprise or joy
charge	to formally accuse someone of something
chastise	to say to someone that one does not approve of their actions
cite	to speak or write the exact words of someone else
claim	to say something to someone which one believes to be the truth, although it might not be the case
clamour	to shout something in order to get something
clarify	to give someone more information so they can understand more clearly
command	to instruct someone to do something in an authoritative manner
commend	to say that one approves of someone or something
comment	to say something in order to express an opinion
complain	to say that one is not satisfied with something
compliment	to say that one approves of someone or something
concede	to say that something is the case, usually when did one did not think it was the case before
confess	to admit that one has done something or that one feels a certain way

confirm	to say that something is the case
consent	to say to someone that one will do what one was asked to do
contend	to state something categorically
criticise	to say something to someone in order to indicate fault
debate	to discuss something publically (usually two opposing views are presented in the discussion)
declare	to say something to a group of people in a formal manner
decree	to instruct someone to do something in an authoritative manner
demand	to request something in an insistent manner, made as of right
denounce	to criticise something or somebody strongly
deny	to say that something is not the case
describe	to say something to someone in order to give an account of what happened or what something looks like
disagree	to say that one does not have the same opinion as someone else
discuss	to say something to someone, receiving feedback and responding to the feedback
elaborate	to provide more detail to something already said
emphasise	to say something in a firm manner to single it out as important
enquire	to ask for information in a formal manner
exclaim	to shout something, often with surprise or joy
explain	to give someone more information so they can understand more clearly
expound	to provide more detail to something already said
extol	to praise someone or something with enthusiasm

forbid	to say to someone not to do something
hail	to praise someone or something with enthusiasm
hint	to suggest something indirectly
imply	to suggest something indirectly
inform	to provide someone with information to make them aware of something
insist	to state something forcefully, without accepting contradiction
instruct	to tell someone to do something
introduce	to say something to someone which has not been touched upon in the conversation before
invite	to ask someone in a friendly and formal manner to go somewhere or do something
malign	to criticise something or somebody publically
mention	to briefly say something to someone in order to direct their attention to a certain place
mock	to say something to express one's feelings towards someone else in an unkind manner
mumble	to say something in a soft and indistinct voice
murmur	to say something in a soft and indistinct voice
negate	to say that something is not the case, providing evidence to support one's case
negotiate	to discuss something in order to reach an agreement
notify	to inform someone of something in a formal manner
object	to say that one does not support something
order	to instruct someone to do something in an authoritative manner

plead	to ask for something in an emotional way
pledge	to promise something formally and solemnly
point out	to say something to someone to make them aware of it
portray	to say something to someone in order to give an account of what someone looks like
praise	to say that one approves of someone or something
preach	to advocate something in a serious manner
predict	to say that something will happen in the future
proclaim	to declare something of great importance
profess	to confirm that something is true
prohibit	when an authority forbids someone to do something
promise	to say that something will happen, usually said when one will do something
pronounce	to declare something in a formal or official manner
prophesise	to say what will happen in the future (usually a statement of religious nature)
propose	to say something to someone so they can consider it
protest	to say that one does not support something
purport	to say something to someone which one believes to be the truth, although it might not be the case
question	to say something in such a manner as to raise doubt about something or someone
question	to ask for information
quote	to speak or write the exact words of someone else

rebut to say something in response to a statement already made, providing evidence in support

recite to speak the exact words of someone else from memory

recommend to say something to someone so they can consider it

recount to say something to someone in order to give an account of what happened or how something used to be (usually from memory)

refer to to say something to someone in order to direct their attention to a certain place

refuse to say to someone that one will not do what one was asked to do

refute to deny something, providing evidence to support one's case

remark to say something in order to express an opinion

remonstrate to say that one does not support something

repeat to speak or write the exact words of someone else

reply to say something in response to a question asked

report to say something to someone in order to give an account of what happened or what something looks like (usually obligatory)

request to ask for something politely and formally

ridicule to say something to express one's feelings towards someone else in an unkind manner

scold to say to someone that one does not approve of their actions

scream to shout something loudly without restraint

shout to say something in a loud voice

state to say something in a clear and formal manner

stress to say something in a firm manner

suggest to say something to someone so they can consider it

summarise to say something to someone, listing the main points pertaining to it

swear to promise something solemnly

tease to say something to express one's feelings towards someone else in an unkind manner

thank to express gratitude

verify to confirm that something is true

veto to refuse to let someone do as was asked to do, using one's official authority

vouch to confirm that something is true

warn to say to someone that there is possibly danger or a problem