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Recognition of Linguistic Ambiguity: An examination of First-year and Fourth-year students from Licenciatura en Lengua y Literatura Inglesas from Universidad de Chile

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*La cuerda del cometa
no se ve en el cielo,
se ve en la mano.*

Seishi

Dedicado a mi madre, Isabel, y mi novio, Cristóbal,
de quienes recibí siempre apoyo y amor incondicional.
Por todos estos años de compañía en este largo camino,
námaste.

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mis más sinceros y afectuosos agradecimientos.

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ABSTRACT

The phenomenon of *linguistic ambiguity* is complex, wide and unfortunately scarcely studied and explored. Nevertheless, the study of linguistic ambiguity, and particularly, the study of the *linguistic ambiguity recognition* or *resolution* may contribute to the study of language proficiency as it may be regarded as an indicator of language competence. The aim of the present research is to explore and establish the existence of possible connections between those two elements, language proficiency and linguistic ambiguity recognition, taking into account the impact of *frequency effects* on them. For this purpose the ability of recognising linguistic ambiguity in different statements was tested in three groups of English speakers: one control group of native speakers of English from the United States, and two groups of non-native speakers of English (first-year and fourth-year students) from the programme of Licenciatura en Lengua y Literatura Inglesas from Universidad de Chile. The obtained results presented evidence that led to conclude that the recognition of linguistic ambiguity in its three dimensions, namely phonological, lexical and syntactic, increases according to the level of language competence of the speakers, and therefore it may be considered as a valid indicator of language proficiency.

KEY WORDS: Linguistic Ambiguity, Recognition or Resolution of Linguistic Ambiguity, Language Proficiency, Frequency Effects in Linguistic Ambiguity Recognition, Phonological Ambiguity, Lexical Ambiguity, Syntactic Ambiguity.

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Introduction

The complex issue of language acquisition and language proficiency has been largely studied and analysed from different perspectives and theoretical approaches. One of them is *frequency* and its effects in language processing. According to Ellis (2002), language proficiency depends substantially on the frequency of exposure to elements and forms of a particular language. In this sense the fluent use of a language, and the involved knowledge, depends on previously experienced utterances. In the process of assessing language proficiency several elements and clues have been historically considered. Notwithstanding, the exploration of a particularly little studied phenomenon may contribute to shed light upon this matter. The phenomenon known as *linguistic ambiguity*, and more specifically the *recognition or resolution of linguistic ambiguity*, seems to be closely related to language proficiency, and therefore to frequency, according to the approach previously mentioned.

In general terms the phenomenon of linguistic ambiguity has been defined by some authors as words, phrases or sentences that express more than one meaning (Crystal, 1980) or as a phenomenon that operates at all linguistic levels in which one single phonological or written string is associated to more than one meaning (Kennedy, 2011). From that point of view linguistic ambiguity may be regarded as a wide and complex process that involves, suggests, and to some extent reveals particular linguistic skills. Consequently the recognition of linguistic ambiguity might be considered as an indicator that may reflect language proficiency and comprehension. Nevertheless, and even so, to date, there has been little research regarding the linguistic ambiguity phenomenon and recognition, and even less considering its three possible dimensions, namely, phonological, lexical and syntactic, and its relation with language proficiency. As a matter of fact, the mentioned proposal of subcategorization is controversial *per se* as there has not been consensus among researchers in relation to that point, and therefore some types of linguistic ambiguity have been merged or just omitted. That is the case of phonological ambiguity. Surprisingly in the majority of the cases the authors have not considered it as an independent subcategory, but as a part of lexical ambiguity, and in the remaining cases it has not been even mentioned, as in the

classifications of linguistic ambiguity proposed by Crystal (1980) and Richards et al. (1985). The obvious consequence of that mixture or omission is that in the phonological dimension research has been even more scarce than in the other two types of ambiguity.

The aim of the present research is to attempt to explore and establish possible connections between language proficiency and linguistic ambiguity recognition or resolution. For this purpose the ambiguity recognition performance of three groups of speakers of English was compared and contrasted. Two of them were students (first-year students and fourth-year students) from the Licenciatura en Lengua y Literatura Inglesas programme from Universidad de Chile, and the third one was a control group of native speakers of English from the United States. The research has been structured as follows: in section 2 the general concept of *ambiguity* is delimited and differentiated from other instances of plurality of meaning, and the concept of *linguistic ambiguity*, its subcategories and its *recognition* or *resolution* is approached and defined according to different authors. In sections 3 and 4 it is possible to find the objectives and research questions of the research, whereas in section 5 the methodology is described and explained. Results are presented in section 6, and the corresponding analysis and discussion of them is presented in section 7. Finally, in sections 8 and 9 conclusions are formulated, and limitations and suggestions for future research are stated.

2. Theoretical Framework

2.1 The fine line between Ambiguity, Polysemy and Vagueness

Several efforts have been devoted, from different fields of knowledge as from linguistics and its sub-disciplines, on the subject of *ambiguity*. As a matter of fact the definition of the concept of ambiguity has not been an easy task, since the idea of ambiguity does not cover the whole range of phenomena in which the expression of more than one meaning in the same utterance is detected. *Polysemy* and *vagueness*, on the other hand, are the other two relevant linguistic phenomena that complete the scope of linguistic instances of plurality of meaning.

The attempt of setting boundaries between those three concepts, ambiguity, polysemy and vagueness, has concentrated major theoretical efforts, especially in the area of cognitive semantics. According to Tuggy, for instance, they can be considered as instances of plurality of meaning: “The difference between ambiguity and vagueness is a matter of whether two or more meanings associated with a given phonological form are distinct (ambiguous), or united as non-distinguished subcases of a single, more general meaning (vague)” (2006, p. 167). In this sense, and as explained by Crystal, “an ambiguous sentence is formulated as having more than one distinct structure; a vague sentence, on the other hand, permits an unspecifiable range of possible interpretations” (1980, p. 24). For its part, polysemy is conceived as an intermediate state between these two phenomena. Deane described that “In effect, the three types form a gradient between total semantic identity [vagueness] and total semantic distinctness [ambiguity]” (as quoted in Tuggy, 2006, p. 168)

2.2 Linguistic Ambiguity

The terms *ambiguity* and *ambiguous* have been generally used to make reference to a word, phrase or sentence which expresses more than one meaning (Crystal, 1980; Richards, Platt & Weber, 1985), or, in other words, as a phenomenon that operates at

all linguistic analysis levels, “characterized by the association of a single orthographic or phonological string with more than one meaning” (Kennedy, 2011, p.510). However, both terms may cover a wide range of linguistic phenomena. The forthcoming subsections are devoted to define and establish the categories of linguistic ambiguity that for the purpose of the present research are going to be taken into consideration.

2.2.1 Categories of Linguistic Ambiguity

Even though the concept of linguistic ambiguity has been a complex phenomenon to address, some authors have made an effort in order to establish a set of categories of linguistic ambiguity. According to the definition of ambiguity proposed by Crystal (1980) in *A First Dictionary of Linguistics and Phonetics* there are two types of linguistic ambiguity: grammatical or structural ambiguity (divided into phrase-structure ambiguity and transformational ambiguity) and lexical ambiguity. For their part Richards et al. (1985) in the *Longman Dictionary of Applied Linguistics* mention two types of ambiguity as well: Grammatical and Lexical Ambiguity. For his part Abraham (1981) included in his *Diccionario de Terminología Lingüística Actual* a category of linguistic ambiguity that the two already mentioned dictionaries do not consider: the phonological ambiguity. Kennedy (2011), on the other hand, proposed a more complex categorisation of linguistic ambiguity consisting of five subcategories: lexical, structural, phonological, transformational and scope ambiguity. Nevertheless, for the purpose of this research only phonological, lexical, and syntactic, grammatical or structural ambiguities are going to be considered.

2.2.1.1 Phonological Ambiguity

According to Abraham, and in very broad terms, the phonological ambiguity is produced when “se asigna la misma interpretación fonológica a estructuras superficiales de oraciones distintas” (1981, p. 57). In other words the phonological ambiguity is the result of words or lexical items with different meanings that are pronounced in the same way. Although the phonological aspect of this linguistic phenomenon has been tackled in several studies, in general it is the less defined and discussed one, mainly because of two reasons.

First, simply due to a matter of immediateness and proximity. Considering that most of the time speech fulfils those two characteristics, it is easier to disambiguate an oral utterance by asking the speaker, a possibility that is much less probable in the case of a written text. Second, this category is often labelled by some authors as a sub-category of lexical ambiguity (Bussman, 1998, Richards et al., 1985), as homophony is practically the only phonological aspect mentioned by them. However, in 1973 Shultz and Pilon stated that this type of ambiguity “occurs when a given phonological sequence can be interpreted in more than one way” (p. 728), also making the distinction of two distinctive agents: “either a confusion about the boundaries between words or the condition of homophony were two historically distinct words happen to have similar pronunciations” (p. 728); that is to say, *juncture* and *homophony*. It is important to mention that, as homophony is closely linked to both sounds and lexical items, this sub-category could be considered as a component of phonological and lexical ambiguity as well.

To begin with, *homophony* is described in the *Dictionary of Linguistics and Phonetics* as “A term used in semantic analysis to refer to words (i.e. lexemes) which have the same pronunciation, but differ in meaning.” (Crystal, 2008, p. 231). As it was previously stated, and taking into account that this is a characteristic proper of lexemes, it is sometimes considered as a factor that produces lexical ambiguity. However, given that ambiguity is produced by these words in an oral context, homophones are contemplated in the present research mainly as agents of phonological ambiguity. An example of this phenomenon could be the words ‘threw’ and ‘through’, which are clearly distinct in a written context, but when given orally, both are pronounced as /θru:/.

As it has been stated, another factor that produces phonological ambiguity is *juncture*. According to *The Cambridge Dictionary of linguistics* *juncture* corresponds to “The phonetic features linking successive speech segments where there is a grammatical boundary” (Brown and Miller, 2013, p. 245), that is to say, the suppression of pauses between lexical items, as in the case of *a name* and *an aim*. Bussman stated that this feature is habitually but not necessarily realised as a pause (1998, p. 611). In that case, and considering a context of everyday connected speech, both phrases are transcribed as

/əneɪm/. There have been some authors who refer to the result of this phenomenon as *oronyms*. This concept was coined by Pinker and related to “strings of sound that can be carved into words in two different ways” (1994, p.160), or in other words, lexical items or groups of them that can be expressed with the same pronunciation, but that carry a different meaning. One example of this occurrence would be the phrases *the stuff he knows* and *the stuffy nose*, where both phrases can be transcribed as /stʌfɪnəʊz/. In this case, there is also another phenomenon involved, which is the use of *weak forms*. Weak forms are not scarce in everyday speech, therefore the pronunciation of the word ‘he’ is commonly expressed as /i/ instead of /hi:/.

2.2.1.2 Lexical Ambiguity

As a starting point, the type of ambiguity known as lexical ambiguity may be defined as the one produced by the possible alternative meanings derived from an individual lexical item (Crystal, 1980), or in other words, the result of a particular word that has more than one meaning (Richards et al., 1985). In consequence, the ambiguity operating at lexical level of language involves multiple interpretations of a lexical form (Cruse, 1986). In relation to this last point it would be useful and relevant to make a distinction between the concepts of lexeme, lexical unit and lexical form. According to Cruse, "a lexeme is a family of lexical units; a lexical unit is the union of a single sense with a lexical form" and for its part, a lexical form "is an abstraction from a set of forms (or alternatively—it is a family of word forms) which differ only in respect of inflections" (1986, p.86). In this sense, a word is ambiguous if it involves two lexical units with unrelated meaning, but that have an identical lexical form.

There exist several examples of lexical ambiguity, as the widely known case of *bank*, in which a lexical form is associated to several different meanings (i.e. river edge, financial institution, a pile or mass of clouds, etc.). Lesser known but equally illustrative is the case of *ball*, in which a single lexical form may either denote a round object which is used for several sports, or it can be used to refer to a large formal dancing party. In order to clarify this point let us consider and analyse a sentence, for example the one proposed by

Crystal “I found the table fascinating” (1980, p. 24). In this sentence it is possible to distinguish two possible meanings. On the one hand, the sentence may be interpreted as *the object called table is fascinating*. On the other hand, the same sentence can be understood as *that type of scheme called table is fascinating*. The ambiguity in this case is the result of the two meanings of *table*: *object of furniture* and *table of figures*. Another illustrative example may be the one provided by Kennedy:

FRY: Something I've always been meaning to ask you: How did you manage to keep Nancy for so long?

LAURIE: I've never been nancy, John. (2011, pp. 511)

In this case the ambiguity relies in the use of a single lexical form (i.e. the name Nancy) having two different senses: a proper name and the British slang term *nancy*, which means weak or effeminate when used as an adjective.

2.2.1.3 Syntactic, Grammatical or Structural Ambiguity

In general terms, and according to *The Oxford Dictionary of Pragmatics*, the syntactic ambiguity corresponds to the “Ambiguity through the assignment of two or more different syntactic structures to a single string of words in a sentence.” (2012, p. 298). This type of ambiguity is the most widely discussed one (Crystal, 1980, p. 23), and there exist different subdivisions and subtypes. According to the definition of syntactic or grammatical ambiguity proposed by Crystal in his *A First Dictionary of Linguistics and Phonetics*, there are two subtypes of grammatical ambiguity: phrase-structure ambiguity and transformational ambiguity. On the one hand, the phrase-structure ambiguity is characterised by “alternative CONSTITUENT STRUCTURES [that] can be assigned to a construction” (p.23). For example, in the sentence “New houses and shops” (p. 23), the adjective “new” can modify the constituents *houses* or *shops*. On the other hand, the transformational ambiguity is described as alternative semantic representations being shown “only by relating the ambiguous sentence to different structures” (p. 23), as in “visiting speakers can be awful”, where it might be the case that “it is awful to visit

speakers” or “speakers who visit are awful”. In relation to this, and according to Lyons, two utterances count as utterances of the same sentence if and only if "(i) they are identical at the grammatical and phonological (or orthographic) levels of representation, and (ii) the forms of which they are composed are forms of the same lexemes" (1977, p. 397). This basically means that a sentence is structurally ambiguous not because it contains a single lexeme that has several distinct meanings, but because the syntactic relations between the constituents of a sentence have two or more possibilities. Another sentence that may contribute to elucidate this point is the widely known example given by Chomsky:

Flying planes can be dangerous.

In this example the lexeme *flying* can be interpreted as the gerund form of a verb in a verb phrase, thus meaning "to fly planes", or as an element of a noun phrase, meaning "planes, which fly".

2.3 Linguistic Ambiguity Resolution or Recognition

The issue of linguistic ambiguity resolution or recognition is unavoidably related to language proficiency, and language proficiency, in accordance with some approaches, depends to a large degree on frequency and previously experienced utterances. In this sense, and according to Ellis, “the knowledge underlying fluent use of language is not grammar in the sense of abstract rules or structure but a huge collection of memories of previously experienced utterances.” (2002, p. 166). Thereby, and as language learning depends on exposure and frequency, the resolution or recognition of ambiguity is also closely related to frequency. For its part frequency is considered as a key determinant of acquisition “because “rules” of language, at all levels of analysis (from phonology, through syntax, to discourse), are structural regularities that emerge from learners’ lifetime analysis of the distributional characteristics of the language input” (Ellis, 2002).

The forthcoming sub-sections are devoted to approach the resolution of linguistic ambiguity from the perspective of frequency and other relevant concepts as priming, having in mind the nature of the ambiguity, that is to say, lexical, syntactical, or phonological.

2.3.1 Approaches to Phonological Ambiguity Resolution

Considering that phonological ambiguity has not been studied in depth, previous resolution of this kind of ambiguity is very limited as well. Shultz and Pilon (1973) carried out a study with children separated into groups by age, and they found that the ability to detect phonological ambiguity was the first to appear. However, it is important to consider that they were native hearers of the English language, and research in L2 contexts is even scarcer. Contrary to native hearers, it seems that this type of ambiguity presents more difficulties for non-natives. Recently, research in aural perception was carried out by Vásquez and Vivanco, in which occurrences of decoding mistakes made by Chilean students of English as a foreign language were identified and classified. There the researchers also express the importance of the speed of delivery of the speaker, register and style of the spoken text (2014), which are other factors less related with the phenomenon of ambiguity but that are highly implied in an oral context as well. Having worked with native listeners of Chilean Spanish for years, Vásquez and Vivanco have identified a series of typical phonological disambiguation problems. Along with some problems at other levels, one of the most common difficulties for non-native speakers of English when listening to oral texts is “misplacement of phonetic juncture” (2014, p. 121), that is to say, the difficulty to identify the end of a word and the beginning of the following one.

On the other hand, Ellis states that those elements related to boundary information are definitely more accurate to disambiguate when used together with *phonotactics*. This strategy is one of the most useful resources to resolve phonological ambiguity (2002). However, phonotactics is not acquired consciously, but emerges as the speakers learn the respective language. In general terms, the way in which we process speech starts with the recognition of the initial word phonemes and a set with similar patterns is activated immediately. Thus, the mentioned set starts narrowing down as more information is added

to the speech. However, the system does not consist in putting words *in* or *out* this set of words, but in activating first the frequent words, easier and faster than infrequent ones (Ellis, 2002). The effect of this process is a slower recognition of low-frequency lexical items, as the frequent ones obtain the majority of the hearer's attention.

2.3.2 Approaches to Lexical Ambiguity Resolution

Lexical ambiguity resolution has emerged as a major concern in recent decades, especially in L1 context. Studies on the processing of lexical ambiguity, both in L1 and L2 contexts, have been mainly focused on the impact of context in the resolution of ambiguity as well as the role of frequency of meaning on this phenomenon. In relation to frequency, for instance, it is relevant to indicate that the process of recognition and production of words "is a function of their frequency of occurrence in the language" (Ellis 2002, p.152) and therefore, as stated by Kirsner in 1994, the frequency of words may have an impact on the accuracy and speed in lexical recognition process (as quoted in Ellis, 2002, p. 152). Some possible implications that could be inferred from those findings on lexical ambiguity recognition could be that if a particular word has a higher level of frequency in discourse its possibilities of disambiguation may be higher as well.

Another approach to the problem of lexical ambiguity has been the study of *homonyms* processing, issue by means of which various models of lexical ambiguity processing have been proposed (i.e. exhaustive access model, selective access model, ordered access model, reordered access model and the context-sensitive model). Research outcomes of homonym processing studies are varied, showing in which ways relative frequency of meanings, time course and the nature of context affect the processing of lexical ambiguity. Nonetheless, the studies focused on L2 have been more oriented to the use of methods aiming at exploring the factors having an influence on homonym processing than the processing of resolution of lexical ambiguity as such.

The issue of lexical ambiguity has been approached and studied from the phenomenon *priming* as well. The experiments carried out to study the development of

second-language lexicon revealed that priming is highly similar, for various lexical relationships in proficient L2 speakers, to the results obtained by a control group of native speakers (Frenck-Mestre & Pynte, 1997). Moreover the same study also pointed out another important research outcome related to exploring priming of dominant and subordinate meanings of homographs. Priming was found for both possible meanings, either by proficient bilinguals working in their second language, and for native control subjects, but only dominant meanings were found by a group of intermediate L2 speakers. However, the pattern of these results is consistent with the one found in the first experiment: priming processes are highly similar between proficient bilinguals and native control subjects.

2.3.3 Approaches to Syntactic, Grammatical or Structural Ambiguity Resolution

As in the previous case of lexical disambiguation, frequency can be considered as a key concept in the syntactical ambiguity resolution as well. According to Bod:

the productive units of natural language cannot be defined in terms of a minimal set of rules, constraints, or principles, but rather they need to be defined in terms of a large redundant set of previously experienced structures with virtually no restriction on size or complexity. (As quoted in Ellis, 2002, p. 164).

In this sense the syntactical or grammatical knowledge cannot be considered as a mere acquisition of previously set rules. The acquisition of a given grammar is more related to previously experienced structures, and to the frequency of exposure to them. According to Ellis “The sensitivity of morphosyntax, language comprehension, production, and grammaticality to patterns of frequency of usage has important implications for the structure of the grammatical system” (2002, p. 163). This way of understanding the process of acquisition of a particular grammar has relevant implications in the process of recognition of syntactic ambiguity as well. The detection of syntactic ambiguity in some occasions may depend on the level of frequency of a particular combination of words, that

is to say that some utterances may be interpreted with the most common or frequent meaning. Another interesting phenomenon related to frequency and the resolution of syntactic ambiguity is *formulaic language*. According to Ellis formulas can be defined as “lexical chunks that result from binding frequent collocations.” (2002, p. 155) and the reception and production of language are “mediated by learners’ representations” (2002, p. 156) of those chunks. For this reason formulaic language may play an important role in relation to syntactic disambiguation as the interpretation of many utterances may be influenced, in Sinclair’s words, by “semi-preconstructed phrases that constitute single choices” (As quoted in Ellis, 2002, p. 155). Apparently that could be the case of utterances as *An old friend of mine* or *He saw a man eating fish*. In the first case *old friend* can be understood as somebody that has been a friend of mine for a long period of time, but also as a friend of mine that is old (elder). However, the first interpretation of *old friend* tends to be more common as the expression has a higher frequency. In the second case *a man eating fish* can be understood as a man that saw another man that was eating a fish, or a fish that eats men. Nevertheless something similar to the previous case occurs: the first interpretation of *a man eating fish* tends to be more common as that particular expression has apparently a higher frequency as well. Another possible phenomenon that may contribute to explain this particular way of processing information could be *syntactic priming*. According to Pickering (1999) “the act of processing an utterance with a particular form facilitates processing a subsequent utterance with the same or a related form” (p. 136). That may explain why people tend to process similar utterances with resembling forms or structures in a similar way.

3. Objectives

The present section is devoted to the presentation of the General and Specific Objectives of the study.

3.1 General Objectives

- 1- To determine which of the three groups that participated in the study (First-year, fourth-year students and native speakers of English) was more proficient in the detection of linguistic ambiguity.
- 2- To establish the difference in the linguistic ambiguity recognition rate between first-year students and fourth-year students.
- 3- To determine the difference in the linguistic ambiguity recognition rate between fourth-year students and native speakers of English.

3.2 Specific Objectives

- 1- To determine which type of ambiguity (phonological, lexical or syntactic) was the most difficult to recognise by the three groups.
- 2- To establish which format (listening or reading) turned out to be the most difficult to decode.
- 3- To determine if there is a difference in the rate of disambiguation between first-year students and fourth-year students.

4. Research Questions

According to the objectives presented above, the three research questions posed are:

- 1- Which type of linguistic ambiguity is more difficult to detect?
- 2- Which of the three groups of participants has better results?

- 3- Does the format of the test generate in any manner an additional difficulty for the participants?

5. Methodology

The purpose of the present section is to provide a complete and exhaustive description of the participants that took part in the study, the different instruments that were developed during the process, the procedures involved, and finally how the data analysis was carried out.

5.1 Participants

The two main groups that were compared were Chilean university students of English. There was also a smaller group of native speakers of English, which helped us to compare the performances of the previous two groups. The participants chosen for this research were men and women of no specific age nor certain socioeconomic origin.

5.1.1 First and fourth year students

The two groups of participants chosen for this study were students from the programme Licenciatura en Lengua y Literatura Inglesas from first and fourth year. Each group was composed by twenty five students of the corresponding level, average students from the programme. This means subjects who had not had previous studies of English apart from school, namely institute or university classes, or studies abroad. In terms of high school, the only requirement was that they had studied in a regular school, that is to say, not a bilingual one. Besides, the facts of having a bilingual family or having lived abroad were also considered as out of the expected characteristics as well.

5.1.2 Native speakers of English

A group of ten native speakers of English participated as a control group. All of them were young American students from the University of Stanford who study different programmes in the United States and who have spent a few weeks in Chile. Most of them were female and just one of them was male.

5.2 Instruments

In regard to the instruments, it is relevant to mention that two tests were developed and applied: a pre-test and a final test. The pre-test was applied to eight second-year and third-year students from the programme of Licenciatura en Lengua y Literatura Inglesas in Universidad de Chile. The main purpose of the pre-test was to detect possible mistakes in the instructions, or sentences that could lead to unnecessary confusions, as sentences containing distractors that could divert the focus on the ambiguous elements. The pre-test consisted of 39 statements or sentences (See Appendix A for more information about the selected and used statements), mainly taken from *Lexical and structural ambiguity in humorous headlines* by Chiara Bucaria, and they were subsequently arranged into two sections. The first one was a listening section where the participants had to carefully listen to 13 previously recorded statements and detect possible phonological ambiguities. Among these 13 statements 3 of them were not ambiguous and they were used as distractors. The participants had the opportunity of listening to each sentence five times. Fifteen seconds were left between repetitions. This section of the test was of controlled duration: the exercise was completed in 15 minutes approximately. The second section was a reading section where the participants had to read 26 statements and detect possible lexical and/or syntactic ambiguities. Among these 26 statements 6 of them were not ambiguous and as in the previous section they were used as distractors. The participants had not time limit to answer this section, although the average response time was of 30-40 minutes approximately. Finally, and in order to be able to detect possible errors in the instructions, or unnecessary distractors, or even technical problems as the volume of the reproductions, a section of “Observaciones” or comments was included at the end of the pre-test. In this

section the participants could make comments of different nature about the pre-test. All comments and suggestions were considered in the design of the final test.

In the design of the final test some important considerations were taken into account. Regarding the listening part, for instance, two changes were introduced. The first one is related to the number of repetitions: it was reduced to four, as during the application of the test it was possible to detect that five repetitions were excessive and the majority of the participants finished the task in the third or fourth repetition. The second change was the replacement of the utterance “Some others/mothers I’ve seen on the street” (/ˈsʌmʌðəs/ in the first case, and /ˈsʌmmʌðəs/ in the second one) as that particular case of juncture was not as transparent as in the other sentences.

In relation to the reading section of the test it is relevant to mention that two changes were made as well. In the first case the word "Squad", in the sentence *Squad helps dog bite victim*, was replaced by "People" resulting *People help dog bite victim*. In the second case the word "had" in the sentence *The teacher had twenty students today* was replaced by "penalized" resulting in *The teacher penalized twenty students today*. In both cases the changes were made in order to avoid diverting the focus to trivial elements. In the case of "Squad" the word was replaced as several participants did not know the meaning of the word and that led to confusions. In the case of "had" it was replaced because some participants understood the meaning of "had" as "eating", similar to what occurs in "having breakfast", for instance. As that sentence was not meant to be ambiguous (it was a distractor) the word was changed for one with a more evident and neutral meaning ("penalized"). Regarding the internal organization of the final test it remained the same as in the pre-test: a listening section and a reading section. In the first one the participants had to carefully listen to 13 previously recorded statements and detect possible ambiguities. Among these 13 statements 3 of them were not ambiguous and they were used as distractors. In the reading section the participants had to read 26 statements and detect possible ambiguities. Among these 26 statements 6 of them were not ambiguous and as in the previous section they were used as distractors. It is important to mention that in the case of the native speakers of English the instructions of the test were in English, whereas in the

case of the other two groups they were in Spanish. The purpose of that was to make easier the understanding of the instructions. Besides at the end of the test an “Observaciones” or comments section was included for the participants to make comments of different nature about the test.

5.3 Procedures

The pre-test and the final test were applied in a similar fashion. The participants were asked to participate voluntarily in their free time, so the test was given in several different occasions, between July and October in the faculty of Filosofía y Humanidades of Universidad de Chile. First and fourth-year students were the first taking the test, and the natives took it at the end.

The instructions were written at the beginning of the test, also making the distinction between the two sections: listening and reading. Besides, those instructions were also read aloud and every doubt was solved before and during the actual application. The listening section was the first part of the test, where the participants had around 15 minutes to answer thirteen questions. The oral utterances were recorded by a lecturer of the university, with an RP accent, and presented in an audio format to all of the participants. On the other hand, the reading section had no time limit to answer, therefore the participants could access to every sentence as many times as they wanted and as long as they wanted. The participants were expected to answer by paraphrasing the original statement into as many different meanings as they found. They were able to write in English or Spanish, as simply as possible but at the same time trying to make clear the meaning or meanings found.

5.4 Analysis

The analysis of the results was carried out according to different parameters, mainly the frequency of the words *per se* and frequency in terms of sentence context. Two

frequency lists were consulted in order to determine whether there was a possible relation between the rate of linguistic ambiguity recognition and the frequency of the words. These lists were *Longman communication 3000* from the *Longman dictionary of contemporary English*, and *Word frequency data* from *Corpus of Contemporary American English* (COCA). In this study, the main comparison was established between the three groups. Also, the results were contrasted in relation to the types of categories of ambiguity. Due to their nature, the statements of the listening section were analysed in terms of phonological ambiguity. Regarding the reading section of the test, half of the statements were revised according to lexical ambiguity and the other half to the syntactical one.

In general terms, the answers were considered as *correct* when the participant was able to identify the ambiguity, even when the sense or meaning of rest of the utterance could be not as accurate as expected. When a single answer that remained as unclear as the original statement was obtained, the frequency of meaning was the parameter to categorise. If the answer was more standard and daily use than the one that was omitted, it was considered as one correct answer out of two. For instance, there was the case of the lexical ambiguity in the word "bank", which in the statement provided could have referred to a financial institution and to the river side as well. Nevertheless, the former is a much more quotidian meaning, whereas the latter does not appear in everyday speech and is much less found in phrases that do not allude directly to the concept of river. Therefore, if the participant answered with the same word *bank*, or in Spanish *banco* (which is also ambiguous but with a different interpretation), the meaning of "financial institution" was considered as correct. On the other hand, when the interpretation provided had a similar frequency than the one that was omitted, the answer was considered as still ambiguous and therefore, as *incorrect*. An example would be the phrase *disturbing children*, which carries a syntactical ambiguity because it could refer to a verb (to disturb) and the direct object, but also to the subject and its adjective (that disturbs). Both of them have a similar level of frequency or probability in everyday English, so if the answer is not clarified, it was considered as incorrect. It is important to consider that probably the number of detection of at least one expected meaning could be higher, as in some occasions the participants provided a meaning that could be regarded as correct. Nevertheless as they did not make

explicit the meaning that they were referring to, these answers were counted as incorrect. For the same reason, it is possible that the number of wrong answers decreases. In this category, *Not detected*, there were included completely deviated meanings, statements that remained ambiguous, and omission. Additionally, distracting elements were not analysed, unless a common pattern worthy of study had appeared.

Regarding the subsequent organisation of the obtained results, different types of tables and charts were designed. On the one hand, the results were arranged in the tables according to the different categories (phonological, lexical and syntactical) and the groups of participants (first-year students, fourth-year students, and native speakers of English). On the other hand, the charts illustrate the information provided in the tables in a visual manner in order to make easier the understanding of the results.

The results in the first three tables, which correspond to the three groups, were analysed individually by each statement. Each one of them was identified in the tables by the section or portion that carries the ambiguity. For example, *In a bicycle* stands for *The policeman chased the boy in a bicycle*. The following tables show the average number of disambiguation per participants, which is the total number of correct instances divided by the number of participants for each group (25 in first year, 25 in fourth year and 10 natives). From that average, it is possible to obtain a corresponding percentage that represents the same results. To obtain this percentage is necessary to multiply the number of participants in each group by the number of possible instances of every type of ambiguity (10 statements each) or every type of format (10 statements in listening and 20 in the reading format). The result of that is 250 possible instances for first-year students, 250 for fourth-year students, and 100 for native speakers of English. Then, for example in table 4.1, 22 cases of disambiguation correspond to an approximate 9% of 100% of instances (250).

6. Results

In this section the results obtained from the application of the test and the subsequent analysis have been distributed and ordered in tables¹ and charts as explained in the methodology section. Each table and chart, particularly pie charts, illustrates the percentage of effective disambiguation, or recognition of ambiguities, in each group of participants (first-year students, fourth-year students, and native speakers of English), and also the number and percentage of effective disambiguation for each category (phonological, lexical and syntactic ambiguity). In the final table it is possible to find more condensed information about the final results, and the comparisons between the three groups and the different categories.

¹ Due to the format and size of the tables, Table 1 has been placed in the following page

Table 1

Total number and final percentage of disambiguation and cases without recognition of ambiguity in the first-year students group.

Type of ambig	Statement	Detected		Not detected			
		Instances	Percent	One meaning		None	
				Instances	Percent	Instances	Percent
Phonol	Allowed/Aloud	1	4%	20	80%	4	16%
	Red/Read	11	44%	12	48%	2	8%
	Knows/Nose	1	4%	6	24%	18	72%
	Tales/Tails	3	12%	9	36%	13	52%
	Spy/Spice	0	0%	13	52%	12	48%
	Sphere/Fear	0	0%	4	16%	21	84%
	Sale/Sail	1	4%	20	80%	4	16%
	Name/Aim	0	0%	17	68%	8	32%
	Flower/Flour	2	8%	18	72%	5	20%
	Nice/Ice	3	12%	19	76%	3	12%
Lex	Old Friend	4	16%	21	84%	0	0%
	Suit	0	0%	17	68%	8	32%
	Replaced by	1	4%	0	0%	24	96%
	Club	1	4%	22	88%	2	8%
	Case	3	12%	12	48%	10	40%
	Found by	11	44%	13	52%	1	4%
	Pounds	9	36%	4	16%	12	48%
	Sentence	10	40%	12	48%	3	12%
	Record	12	48%	12	48%	1	4%
	Bank	0	0%	23	92%	2	8%
Synt	Dog bite	15	60%	10	40%	0	0%
	One dies	8	32%	3	12%	14	56%
	Hunting dogs	12	48%	12	48%	1	4%
	English poems	6	24%	13	52%	6	24%
	In a bicycle	15	60%	3	12%	7	28%
	Ready to eat	18	72%	0	0%	7	28%
	With drugs	4	16%	19	76%	2	8%
	Visiting sailors	11	44%	14	56%	0	0%
	Disturbing children	15	60%	10	40%	0	0%
	Eating fish	10	40%	15	60%	0	0%
TOTAL		187	24,93%	373	49,73%	190	25,33%
APPROX. TOTAL		187	25%	373	50%	190	25%

Ambiguity Detection: First-Year Students

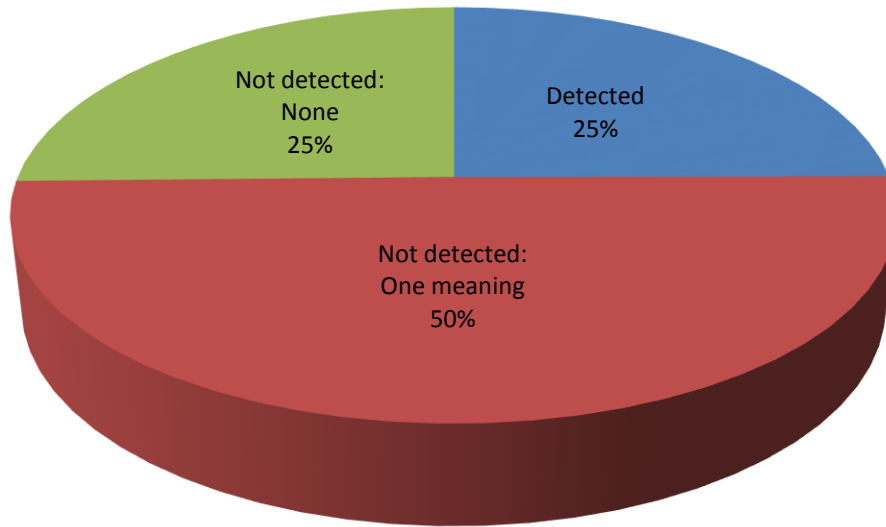


Chart 1 Percentage of disambiguation and cases without recognition of ambiguity in the first-year students group

Chart 1 shows the total number of effective recognitions of the three types of ambiguity detected by first-year students. In this group, the tendency (50%) was to find at least one of the possible meanings, while a quarter of the instances the ambiguity was recognised. In the remaining quarter, none of the expected meanings was found.

Table 2

Total number and final percentage of disambiguation and cases in which there was no recognition of ambiguity in the fourth-year students group.

Type of ambig	Statement	Detected		Not detected			
		Instances	Percent	One meaning		None	
				Instances	Percent	Instances	Percent
Phonol	Allowed/Aloud	12	48%	13	52%	0	0%
	Red/Read	13	52%	9	36%	3	12%
	Knows/Nose	0	0%	11	44%	14	56%
	Tales/Tails	11	44%	4	16%	10	40%
	Spy/Spice	6	24%	18	72%	1	4%
	Sphere/Fear	0	0%	11	44%	14	56%
	Sale/Sail	10	40%	9	36%	6	24%
	Name/Aim	2	8%	22	88%	1	4%
	Flower/Flour	13	52%	12	48%	0	0%
Lex	Nice/Ice	5	20%	14	56%	6	24%
	Old Friend	6	24%	19	76%	0	0%
	Suit	7	28%	16	64%	2	8%
	Replaced by	9	36%	8	32%	8	32%
	Club	8	32%	15	60%	2	8%
	Case	10	40%	15	60%	0	0%
	Found by	17	68%	8	32%	0	0%
	Pounds	14	56%	7	28%	4	16%
	Sentence	23	92%	2	8%	0	0%
Synt	Record	19	76%	5	20%	1	4%
	Bank	2	8%	23	92%	0	0%
	Dog bite	17	68%	6	24%	2	8%
	One dies	13	52%	8	32%	4	16%
	Hunting dogs	21	84%	4	16%	0	0%
	English poems	13	52%	7	28%	5	20%
	In a bicycle	24	96%	0	0%	1	4%
	Ready to eat	21	84%	2	8%	2	8%
	With drugs	15	60%	5	20%	5	20%
TOTAL	Visiting sailors	25	100%	0	0%	0	0%
	Disturbing children	23	92%	2	8%	0	0%
	Eating fish	14	56%	11	44%	0	0%
TOTAL		373	49,73%	286	38,13%	91	12,13%
APPROX. TOTAL		373	50%	286	38%	91	12%

Ambiguity Detection: Fourth-Year Students

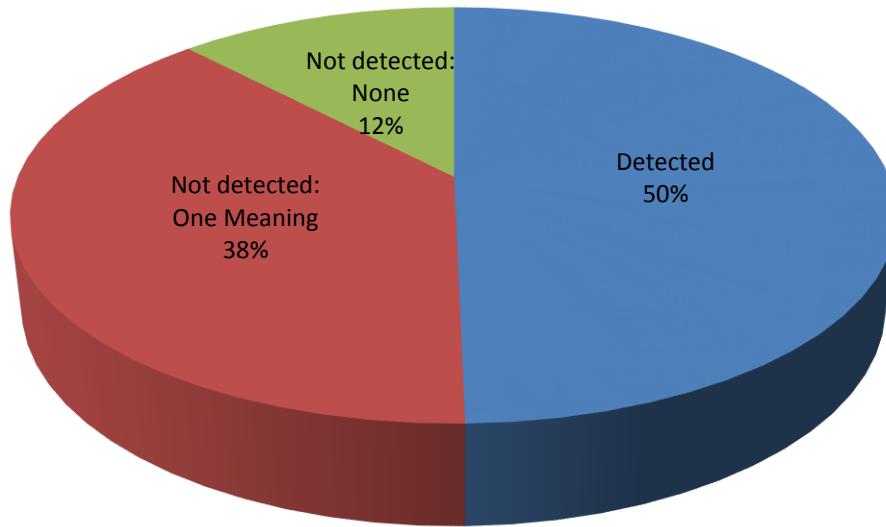


Chart 2. Final percentage of disambiguation and cases in which there was no recognition of ambiguity in the fourth-year students group.

Chart 2 illustrates the total number of effective recognition of the three types of ambiguity detected by fourth-year students. In this group, half of the participants detected the ambiguity, whereas the number of incorrect instances (None detected: None) was halved in relation to the first-year results. In table 2, the information was arranged as in table 1.

Table 3

Total number and final percentage of disambiguation and cases without recognition of ambiguity in the native speakers of English group.

Type of ambig	Statement	Detected		Not detected			
		Instances	Percent	One meaning		None	
				Instances	Percent	Instances	Percent
Phonol	Allowed/Aloud	4	40%	6	60%	0	0%
	Red/Read	7	70%	3	30%	0	0%
	Knows/Nose	0	0%	10	100%	0	0%
	Tales/Tails	6	60%	3	30%	1	10%
	Spy/Spice	2	20%	7	70%	1	10%
	Sphere/Fear	0	0%	2	20%	8	80%
	Sale/Sail	4	40%	6	60%	0	0%
	Name/Aim	0	0%	10	100%	0	0%
	Flower/Flour	6	60%	4	40%	0	0%
	Nice/Ice	2	20%	5	50%	3	30%
Lex	Old Friend	5	50%	5	50%	0	0%
	Suit	8	80%	2	20%	0	0%
	Replaced by	4	40%	3	30%	3	30%
	Club	9	90%	0	0%	1	10%
	Case	6	60%	3	30%	1	10%
	Found by	8	80%	1	10%	1	10%
	Pounds	5	50%	3	30%	2	20%
	Sentence	8	80%	2	20%	0	0%
	Record	9	90%	1	10%	0	0%
	Bank	4	40%	6	60%	0	0%
Synt	Bite victim	9	90%	1	10%	0	0%
	One dies	5	50%	4	40%	1	10%
	Hunting dogs	9	90%	1	10%	0	0%
	English poems	5	50%	1	10%	4	40%
	In a bicycle	8	80%	2	20%	0	0%
	Ready to eat	9	90%	1	10%	0	0%
	With drugs	6	60%	3	30%	1	10%
	Visiting sailors	8	80%	2	20%	0	0%
	Disturbing children	8	80%	2	20%	0	0%
Eating fish	9	90%	1	10%	0	0%	
TOTAL		173	57,67%	100	33,33%	27	9%
APPROX. TOTAL		173	58%	100	33%	27	9%

Ambiguity Detection: Native Speakers of English

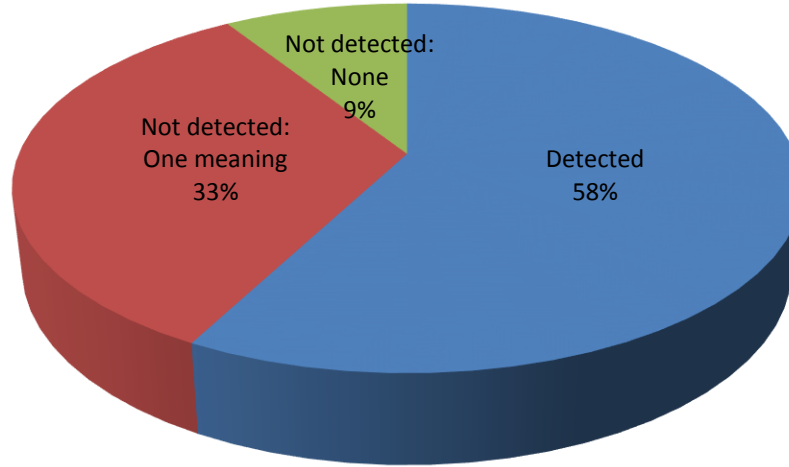


Chart 3. Final percentage of disambiguation and cases in which there was no recognition of ambiguity in the native speakers of English group.

Table 3 and chart 3 illustrate the total number of effective recognition of the three types of ambiguity detected by native speakers of English. In this group it is possible to observe a slight increase in the detection of ambiguity, and a non-significant decrease in the number of incorrect instances as well as in the recognition of one meaning. In table 3, the information was arranged as in table 1 and 2.

Table 4.1

Number of instances of effective phonological disambiguation in the three groups

Type of ambiguity			First Year	Fourth Year	Natives	
Phonological	Detected		Instances	22	72	31
			Average	0,9	2,9	3,1
			Percentage	9%	29%	31%
	Not detected	One meaning	Instances	138	123	56
			Average	5,5	4,9	5,6
			Percentage	55%	49%	56%
		None	Instances	90	55	13
			Average	3,6	2,2	1,3
			Percentage	36%	22%	13%

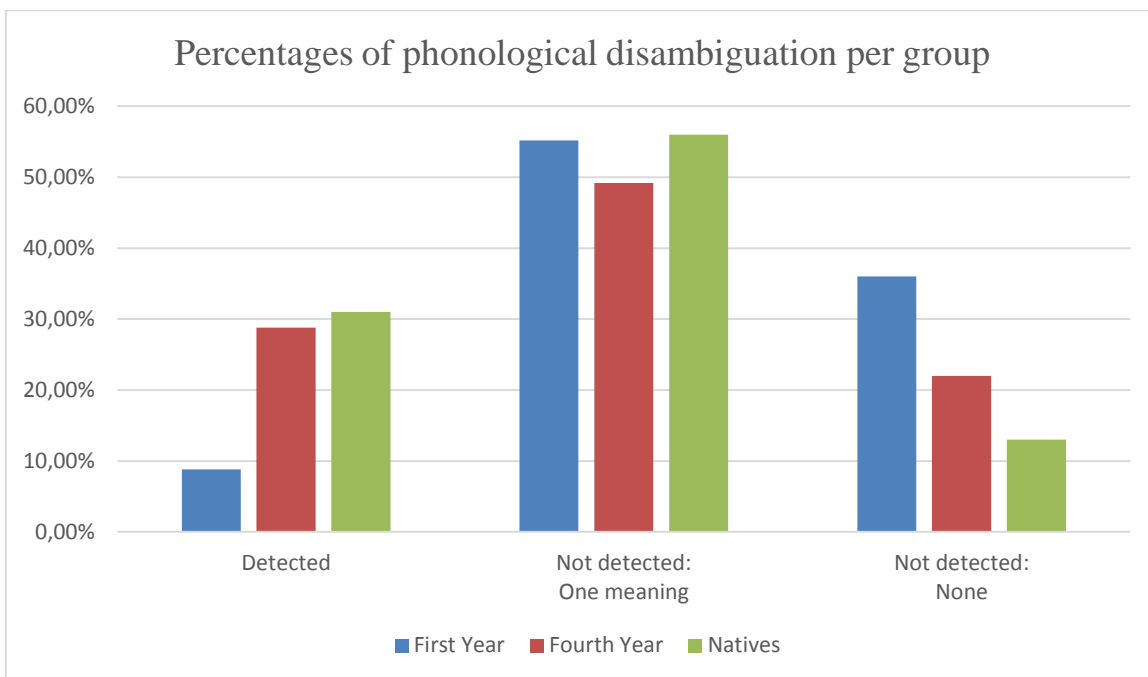


Chart 4.1. Final percentages of recognition of phonological ambiguity in the three groups.

Chart 4.1 illustrates a tendency in the recognition of at least one meaning within the three groups. On the other side, there is a significant difference in the detection of ambiguity in the first year group in relation to the other two groups: First-year student detected fewer cases of phonological ambiguity.

Table 4.2

Number of instances of effective Lexical disambiguation in the three groups.

Type of ambiguity			First Year	Fourth Year	Natives			
Lexical	Detected		Instances	51	115	66		
			Average	2,0	4,6	6,6		
			Percentage	20%	46,%	66%		
	Not detected		One meaning		Instances	136	118	26
					Average	5,4	4,7	2,6
					Percentage	54%	47%	26%
	None		Instances	63	17	8		
			Average	2,5	0,7	0,8		
			Percentage	25%	7%	8,0%		

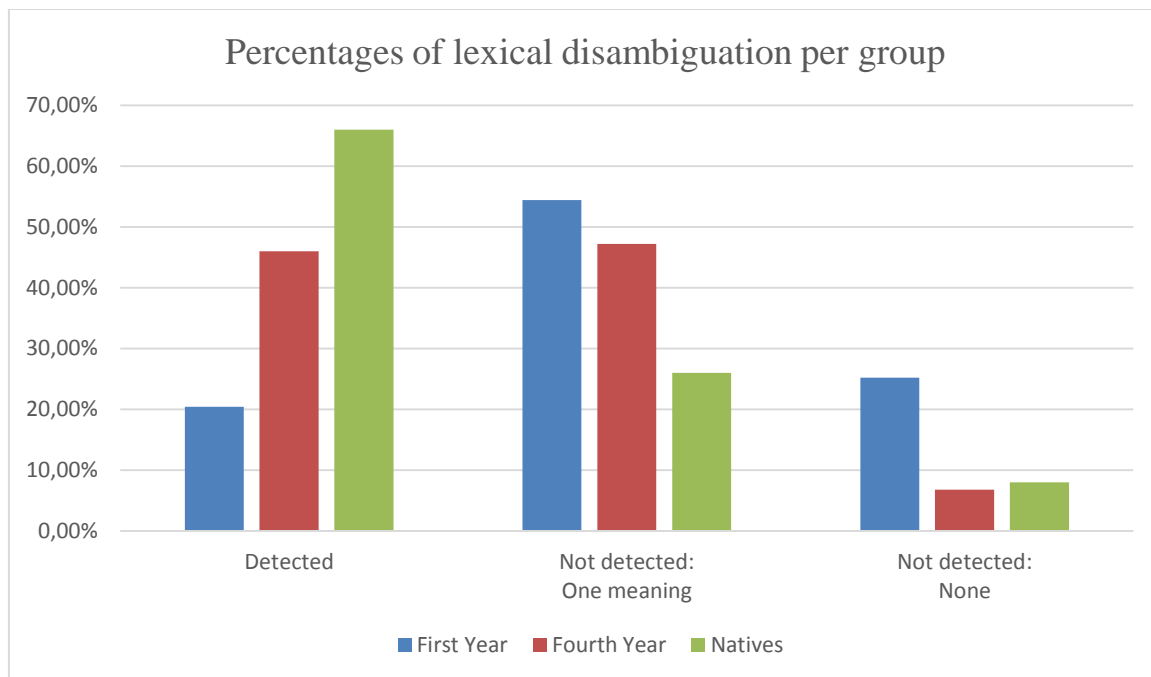


Chart 4.2. Final percentages of recognition of lexical ambiguity in the three groups.

Chart 4.2 shows an outstanding rate of disambiguation in the native speakers group. In relation to the other two groups, they had a similar result between them when recognising at least one meaning, and higher than the native group.

Table 4.3
Number of instances of effective Syntactic disambiguation in the three groups.

Type of ambiguity			First Year	Fourth Year	Natives			
Syntactic	Detected		Instances	114	186	76		
			Average	4,6	7,4	7,6		
			Percentage	46%	74%	76%		
	Not detected		One meaning		Instances	99	45	18
			One meaning		Average	4,0	1,8	1,8
			One meaning		Percentage	40%	18%	18%
	None		None		Instances	37	19	6
			None		Average	1,5	0,8	0,6
			None		Percentage	15%	8%	6,%

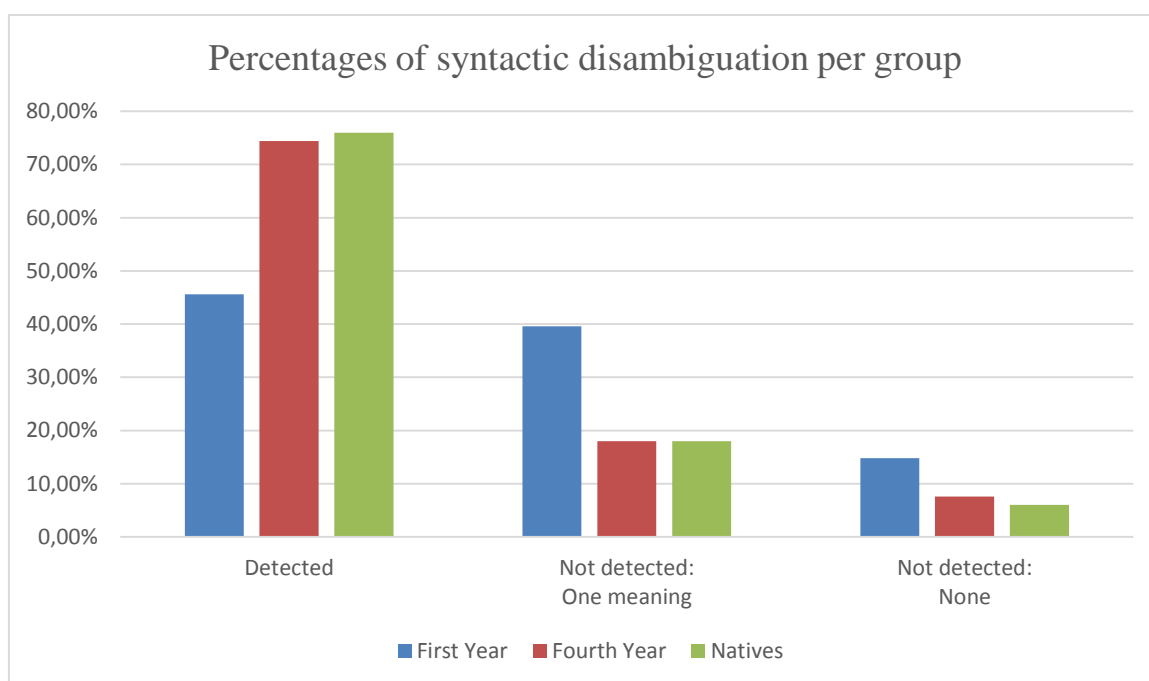


Chart 4.3. Final percentages of recognition of syntactic ambiguity in the three groups

Chart 4.3 illustrates that syntactic ambiguity was the most detected type among the three. The fourth-year group results were slightly lower than the ones obtained by the native speakers group. In the case of the first-year group, it is possible to recognise a considerable lower rate of detection of ambiguity in relation to the other two groups.

Table 5
Total number and final percentage of disambiguation and cases without recognition of ambiguity in relation to format: Listening V/S Reading.

Format			First Year	Fourth Year	Natives	
Listening	Detected		Instances	22	72	31
			Average	0,9	2,9	3,1
			Percentage	9%	29%	31%
	Not detected	One meaning	Instances	138	123	56
			Average	5,5	4,9	5,6
			Percentage	55%	49%	56%
		None	Instances	90	55	13
			Average	3,6	2,2	1,3
			Percentage	36%	22%	13%
Reading	Detected		Instances	165	301	142
			Average	6,6	12	14,8
			Percentage	33%	60,2%	71,0%
	Not detected	One meaning	Instances	235	163	44
			Average	9,4	6,5	4,4
			Percentage	47%	32,6%	22,0%
		None	Instances	100	36	14
			Average	4	1,4	1,4
			Percentage	20%	7,2%	7,0%

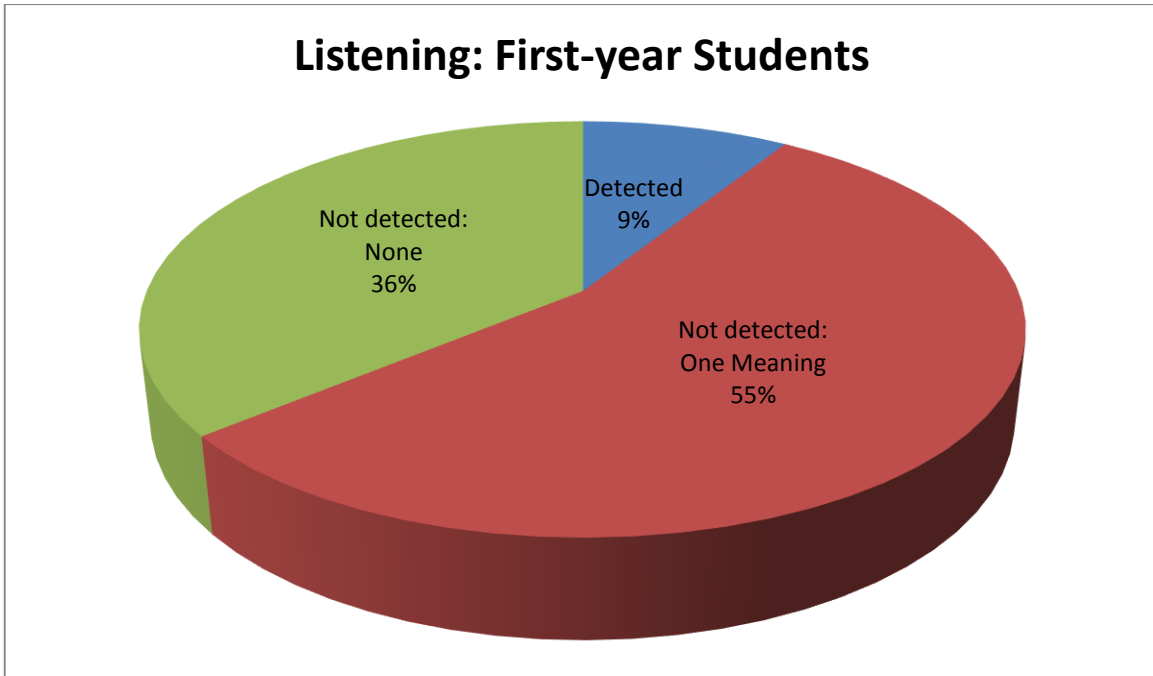


Chart 5.1. Final percentage of disambiguation and cases in which there was no recognition of ambiguity in relation to format: Listening in first-year students.

The chart 5.1 illustrates the results regarding the listening segment of the test in the first-year students group. In this group, it is possible to observe that few instances of ambiguity were recognised, whereas in more than half of the instances one expected meaning was identified. Besides, around a third of the instances was not recognised.

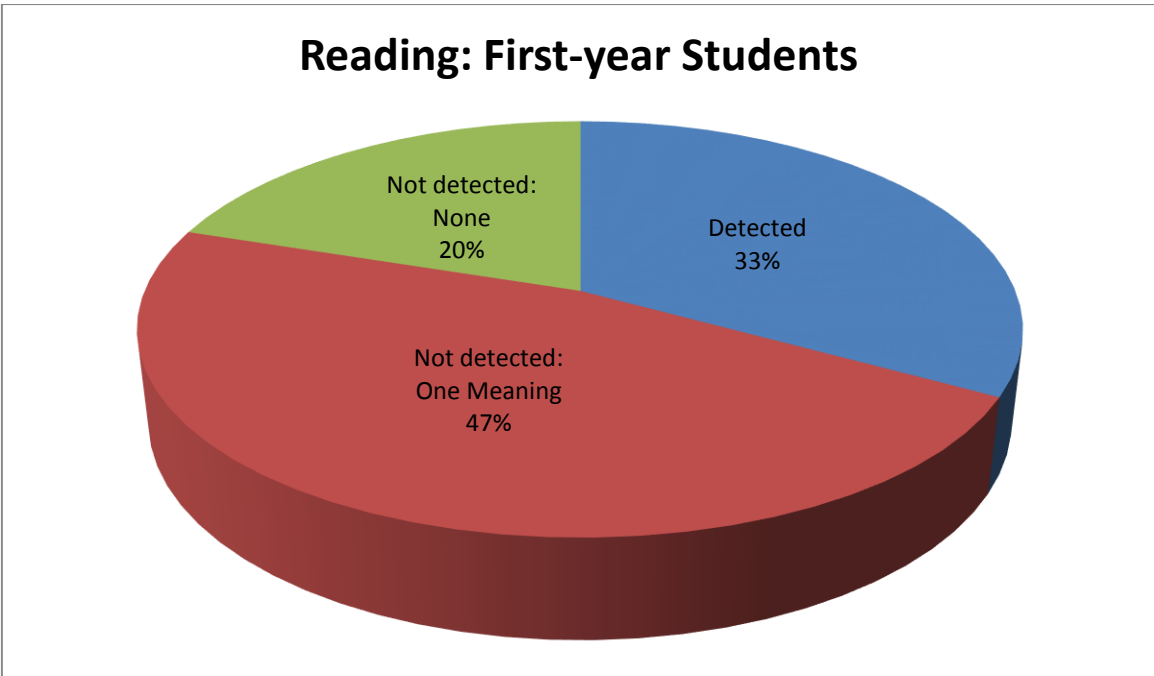


Chart 5.2. Final percentage of disambiguation and cases in which there was no recognition of ambiguity in relation to format: Reading in first-year students.

The chart 5.2 presents the results regarding the reading segment of the test in the first-year students group. In this group, we can observe that the instances of ambiguity that were recognised tripled the results of the listening section, whereas the instances where no meaning was obtained decreased considerably. The detection of one possible meaning decreased slightly.

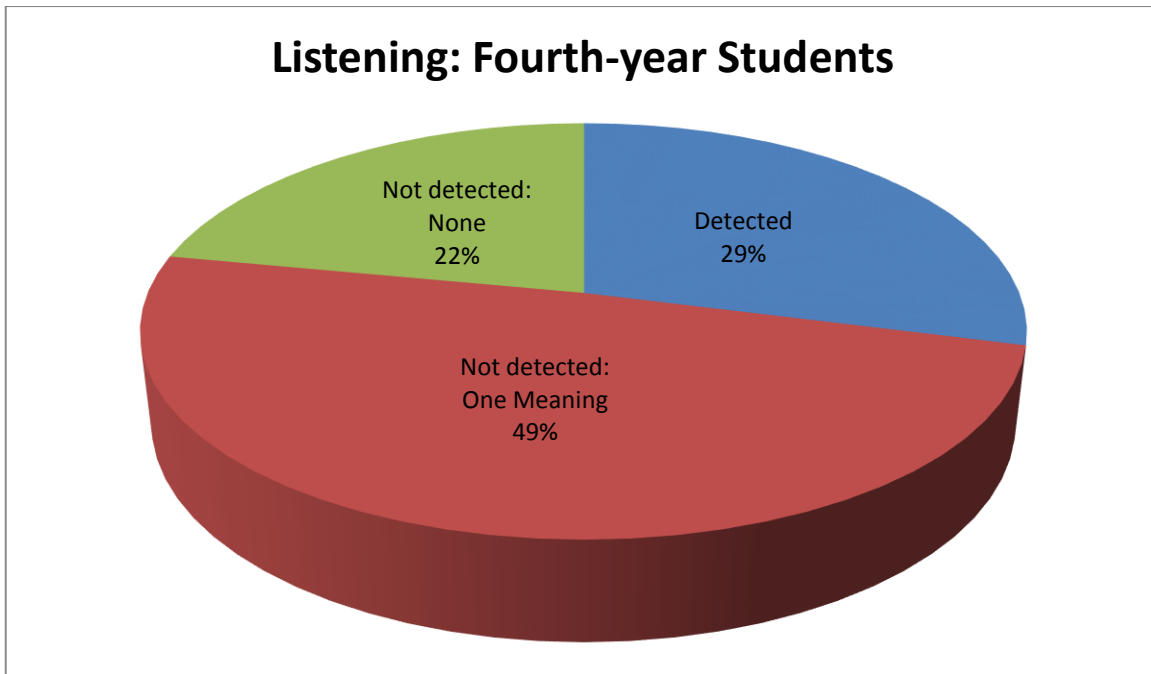


Chart 5.3. Final percentage of disambiguation and cases in which there was no recognition of ambiguity in relation to format: Listening in fourth-year students.

The chart 5.3 illustrates the results regarding the listening segment of the test in the fourth-year students group. In this group, it is possible to observe that about a third of the instances of ambiguity were recognised, whereas about a half of the instances corresponds to the recognition of at least one meaning, and about a quarter corresponds to none.

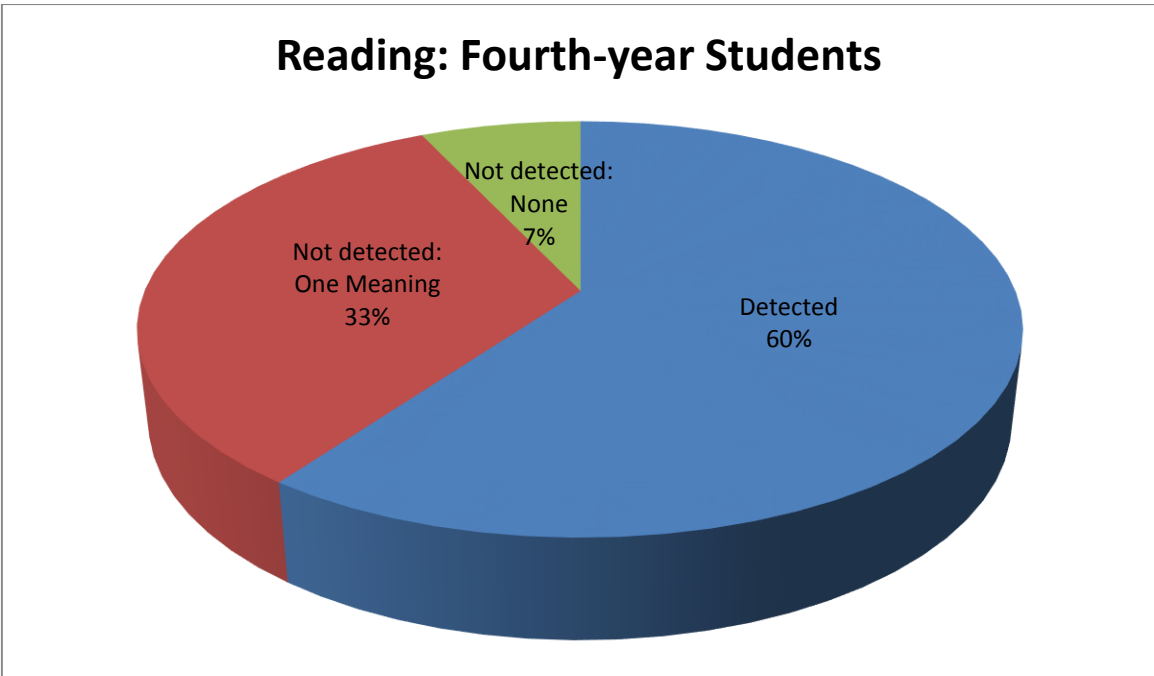


Chart 5.4. Final percentage of disambiguation and cases in which there was no recognition of ambiguity in relation to format: Reading in fourth-year students.

The chart 5.4 illustrates the results regarding the reading section of the test in the fourth-year students group. According to this information, it is possible to observe that more than half of the instances of ambiguity were recognised, whereas the recognition of at least one meaning, or no meaning decreased considerably.

Listening: Native Speakers of English

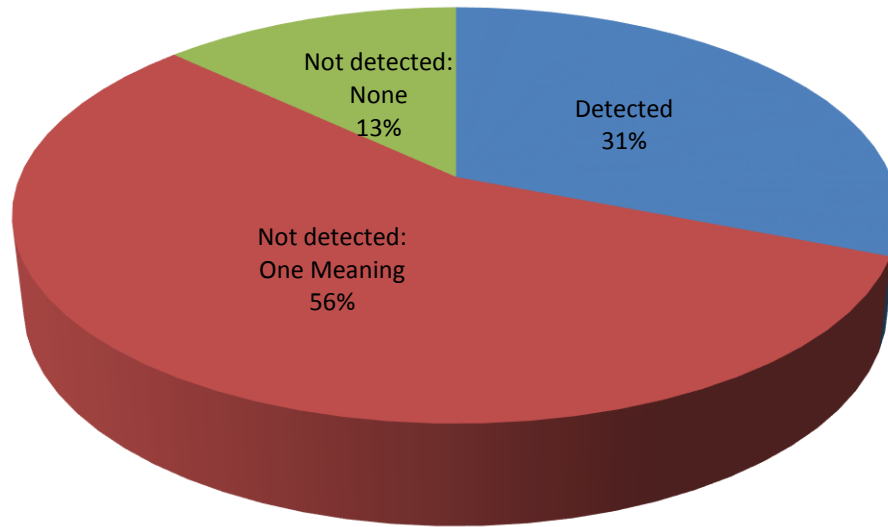


Chart 5.5. Final percentage of disambiguation and cases in which there was no recognition of ambiguity in relation to format: Listening in native speakers of English.

The chart 5.5 presents the results regarding the listening section of the test in the native speakers of English group. According to this information, it is possible to observe that about a third of the instances of ambiguity was recognised, and more than half of the possible instances corresponds to the recognition of only one meaning.

Reading: Native Speakers of English

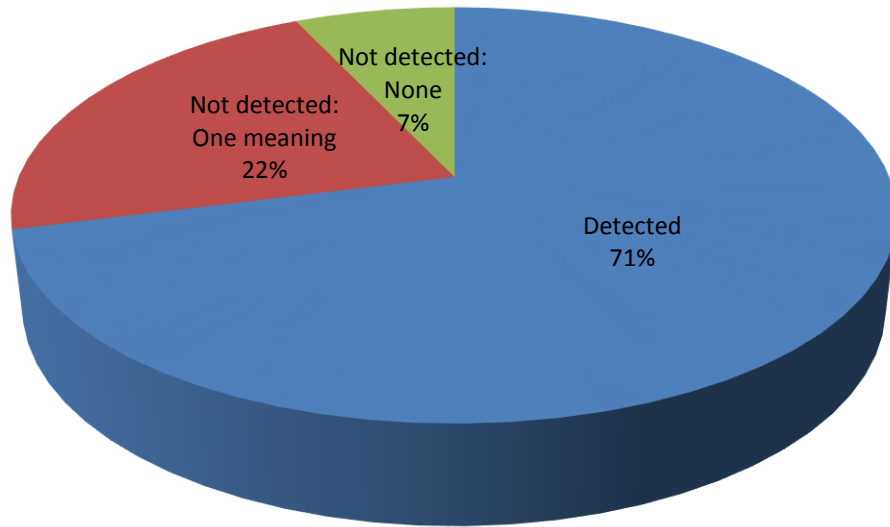


Chart 5.6. Final percentage of disambiguation and cases in which there was no recognition of ambiguity in relation to format: Reading in native speakers of English.

The chart 5.6 illustrates the results regarding the reading section of the test in the native speakers of English group. According to this information, it is possible to observe that more than two thirds of the instances of ambiguity were recognised, whereas the recognition of at least one meaning is less than a quarter, and the percentage of no meaning or none is non-significant.

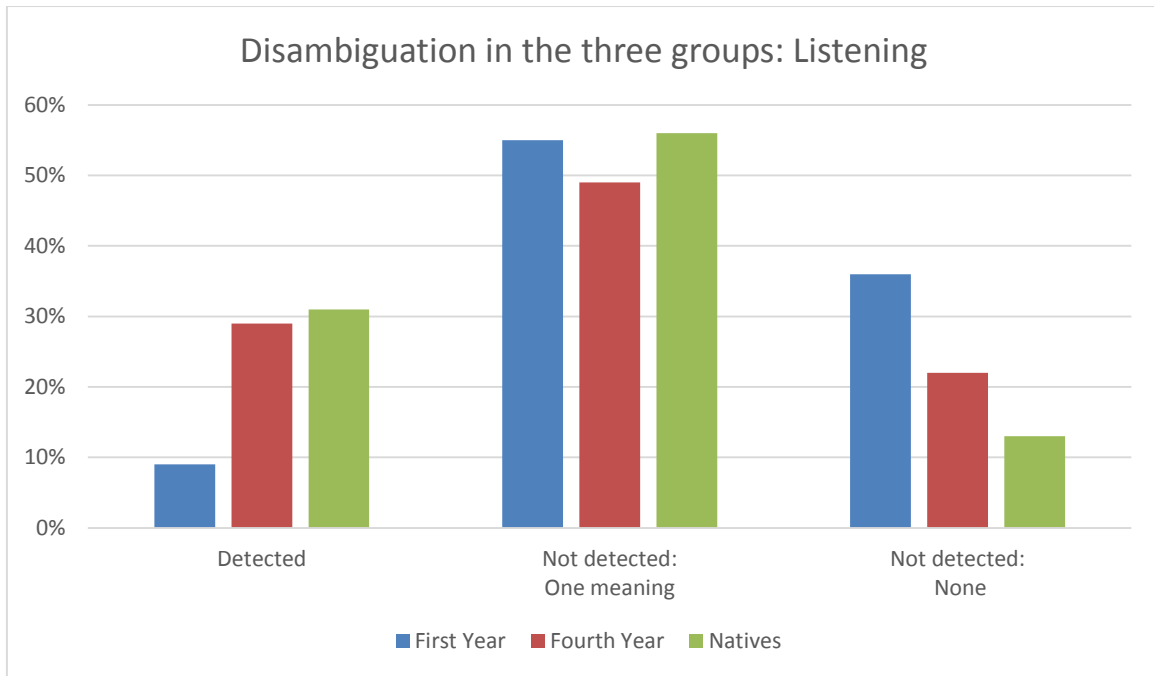


Chart 5.7. Final percentages of recognition ambiguity in a listening format in the three groups.

Chart 5.7 shows a low rate of disambiguation of statements given in a listening format in the three groups. Fourth-year students and natives speakers of English reached about 30% of effective disambiguation, whereas first-year students obtained less than 10%. On the other side, all the three groups of participants detected one of the possible meanings in about a 50%.

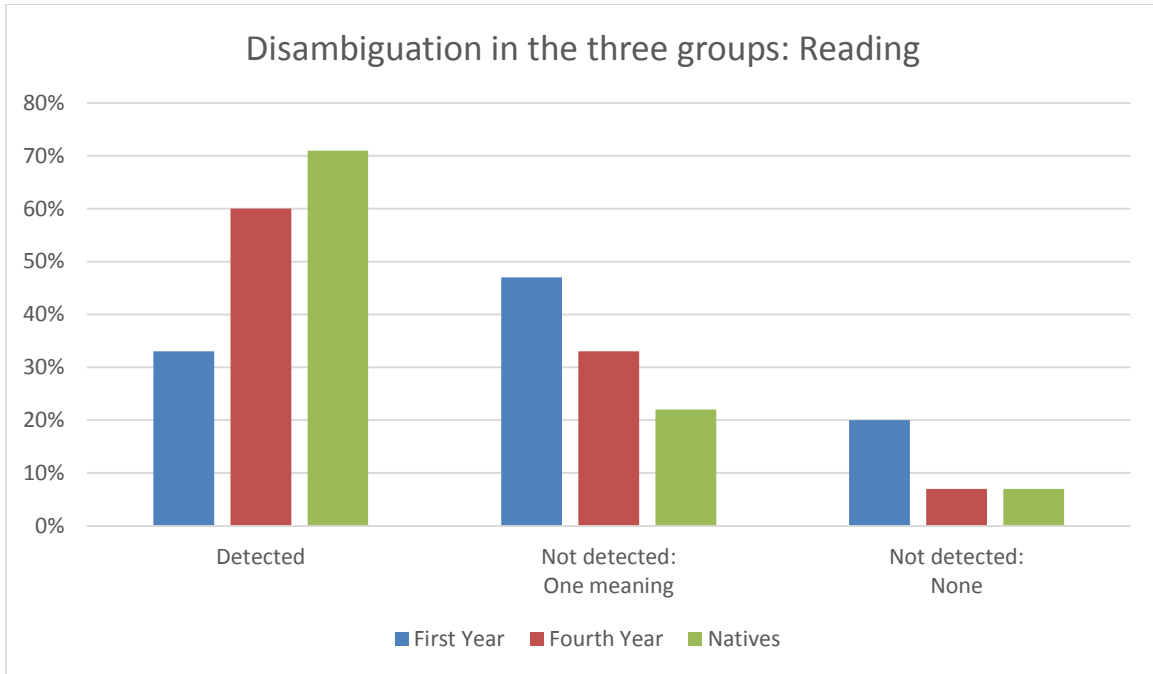


Chart 5.8. Final percentages of recognition ambiguity in a reading format in the three groups.

Chart 5.8 illustrates better results for the three groups in disambiguation of written statements than the ones provided orally. Again, the highest percentage of disambiguation was obtained by the group of native speakers of English. The group of fourth-year students followed with less than a 10% of difference, whereas the first-year students group hardly reached half of the correct answers of the previous group.

Table 6
Condensed table of final results: First-year, fourth-year students and native speakers compared in relation to the percentage of effective disambiguation.

		First Year	Fourth Year	Natives	
Detected		Possible cases	187	373	173
		Average	7,5	14,9	17,3
		Percentage	24,93%	49,73%	57,67%
Not detected	One meaning	Possible cases	373	286	100
		Average	14,9	11,4	10,0
		Percentage	49,73%	38,13%	33,33%
	None	Possible cases	190	91	27
		Average	7,6	3,6	2,7
		Percentage	25,33%	12,13%	9,00%

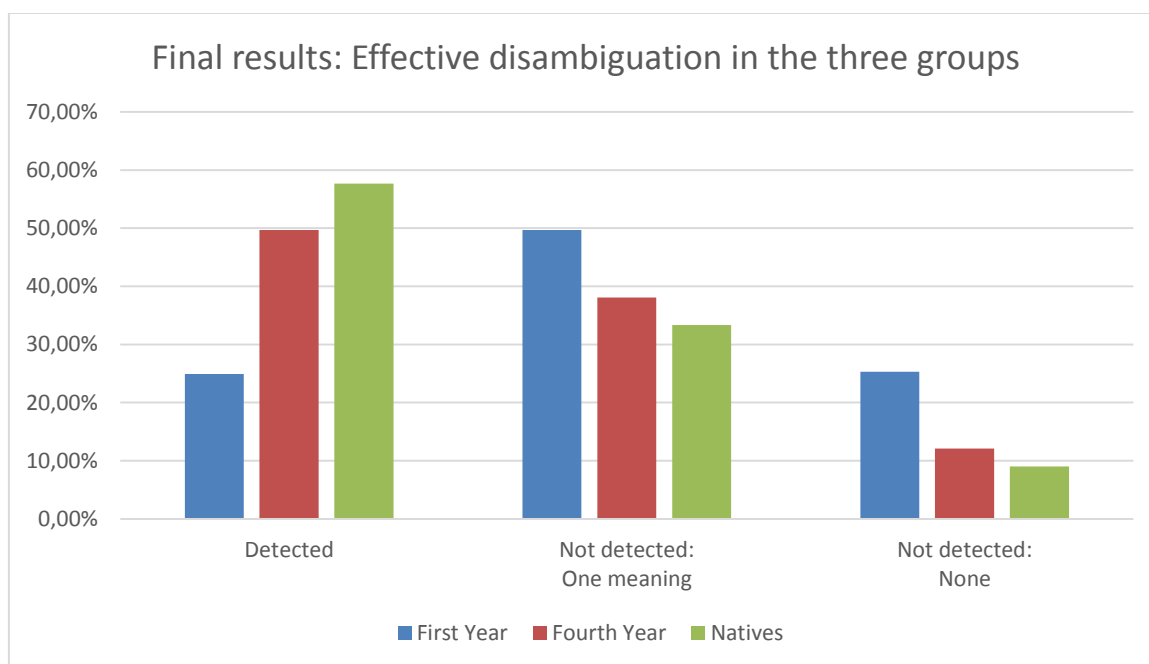


Chart 6. Condensed chart of final results: First-year, fourth-year students and native speakers compared in relation to the percentage of effective disambiguation.

Chart 6 shows the final percentages of disambiguation which were identified by the group of native speakers of English in first place, fourth-year students in second place, and finally first-year students. In general, fourth-year students obtained slightly lower scores than natives, having a difference of less than a 8% in effective detection of ambiguity. On the other side, there was a considerably bigger difference with first-year students, who reached half of the correct answers of fourth-year students. Around the same percentage of the answers of the younger students had none of the possible meanings of the statements.

7. Discussion

For the purpose of the analysis of the obtained data the final results were compared and contrasted taking into account the categories of ambiguity, the three groups of participants, and the relationship between them. In order to do so in this section the findings have been arranged in four subsections, namely, *General Findings*, *Findings according to the types of ambiguity and format*, *Final considerations about the three groups*, and *Special cases*.

7.1 General Findings

In accordance with the statistical evidence obtained from the conducted research, it is possible to generalise some results and suggest some patterns. In general terms, and as it was to some extent anticipated, fourth-year students' performance was superior to the first-year students'. Notwithstanding, the difference in the rate of ambiguity resolution between the fourth-year students group (50%) and the native speakers of English group (58%) was not as remarkable as it would have been expected. As a matter of fact, fourth-year students had a rather similar performance in the recognition of one particular type of ambiguity in relation to native speakers.

In relation to the rate of disambiguation regarding the three types of ambiguity (phonological, lexical and syntactic), phonological ambiguity was equally the most difficult to detect or recognise in the three groups. In contrast, and for its part, syntactic ambiguity turned out to be the easiest type of ambiguity to resolve in the three groups of participants. Regarding this type of ambiguity it would be relevant to mention that the rate of resolution or disambiguation of the fourth-year students was very close to the one of native speakers of English group. Concerning lexical disambiguation it would be relevant to mention that the rate of resolution was higher in the native speaker's group (66%) and it decreased in approximately 20% and 40% in the other two groups: in the fourth-year students group 46% of the instances were recognised, and 20% in the first year students group.

7.2 Findings according to the types of ambiguity and format

7.2.1 Phonological ambiguity

As it was said, phonological ambiguity was the most difficult to identify for the three groups of participants. The complexity of it was not given mainly by a low capacity to recognise the ambiguity, but in a high degree by the hard recognition of the whole stream of sounds. Regarding the main cases that appeared through the three groups, the homophone /red/ (*red* or *read*) was the most identified case of phonological ambiguity in the three groups in general, followed by /'flaʊə/ (*flower* or *flour*) and /teɪlz/ (*tales* or *tails*). For their part, /'stʌfɪnəʊz/ (*stuff he knows* or *stuffy nose*) and /'gʌvənməntsfiə/ (*government's fear* or *government sphere*) were also in general the less identified cases of this type of ambiguity. In the case of /'stʌfɪnəʊz/, the phenomenon of elision of the sound /h/ in the word *he* may have influenced the fewer cases of recognition of the ambiguity. Although elision is a frequent phenomenon in everyday speech of English, it is not very common and easy to identify for students, especially for the first-year ones. In the case of /'gʌvənməntsfiə/, the few participants who recognised one meaning identified the words *government* (sometimes its genitive) and *fear*; none of them recognised *sphere*. This word has a low frequency in English, especially in a phrase such as *sphere of competence*. It is not even listed in the *Longman Communication 3000* list or other word lists that include the 3000 most common words in English. Indeed, according to COCA, it only appears as the word number 4582 in frequency (Wordfrequency.info, 2015).

The ambiguity in /ənaɪs/ (*a nice* or *an ice*) and /əneɪm/ (*a name* or *an aim*) had a similar nature in juncture, and both of them were recognised by few participants in the three groups. In any case, there was a slight difference: around 17% of the total participants identified the ambiguity in the first phrase, and less than a 3% recognised the distinct meanings in the second one. A possible explanation for this circumstance is that, despite *nice* and *name* are included within the 1000 most frequent words of English, *ice* and *aim* appear after in the 2000 most frequent ones (according to the word frequency list *Longman Communication 3000*). Even more specifically, according to COCA, there is a difference of

more than 1000 positions between *name* and *aim*, but less than 300 between *nice* and *ice* (Wordfrequency.info, 2015).

There were several cases in which the ambiguity was detected, but the rest of the statement was misdecoded in different manners. This happened, for example, with the homophone /teɪlz/ in *These are wolves' /teɪlz/*, which was recognised in several instances (around 50% in fourth-year students and native groups), but many of the participants failed to recognise the rest of the statement correctly. In the same example, the word *wolves* (/wʊlvz/) was heard as *wool* (/wʊl/), *walls* (/wɔ:lz/), *woods* (/wʊdz/), *war* (/wɔ:/), etcetera, by students of first and fourth year. In this instance, as well as in the case of /'flaʊə/ (in *Pour some water on the /'flaʊə/*) understood as *floor* in first year specially, a graphemic interference is pointed as the main source of the misdecoding of these items.

When comparing statement by statement, a similarity between fourth-year students and native speakers of English can be observed in terms of number, whereas the first-year group obtained a lower score. Every statement was disambiguated in the same or a similar percentage in both groups (fourth-year students and native speakers of English groups), that is to say, less than a 10% of difference. In the cases of /teɪlz/ and /red/, the difference was slightly higher.

7.2.2 Lexical Ambiguity

The resolution or recognition of lexical ambiguity was probably the most difficult in terms of analysis as it cannot be fully explained in terms of frequency of words, or at least not in the traditional manner to approach the issue. In order to bring about the analysis of the lexical disambiguation other elements were taken into account, as the current list of frequency of words considers them without specifying to which meaning or sense of the words it is referring to. For the purpose of providing a possible explanation to lexical resolution, elements as sentence context, cognates, and professional instruction (linguistics in the case of first-year and fourth-year students), besides frequency of words, were considered.

On the basis of the obtained results it is possible to establish that in the case of lexical ambiguity there was a gradual, but at the same time constant increase in its detection and resolution. The first-year students group detected less than a quarter (20%) of the ambiguous instances, whereas the fourth-year students group identified about half (46%) of the ambiguities, and the native speakers group detected two thirds (66%) of them. In relation to the level of difficulty of this particular type of ambiguity and taking into account the other two, it is possible to say that this type of ambiguity turned out to be of medium difficulty, as it was the second most detected and resolved kind in the test in the three groups of participants.

Regarding the obtained results it is a particularly interesting fact that, on the one hand, the words that had a higher rate of disambiguation in the three groups were the same: *record* (in the sentence *It must be a new record*), *sentence* (in *Actor is sent to jail for not finishing sentence*), and *by* (in *Stolen painting was found by a tree*). On the other hand, the words that had a lower rate of disambiguation in the three groups tended to be roughly the same: *bank* (in the sentence *They often go to the bank*), *old* (in *An old friend of mine teaches at that school*), and *by* (in *Old school pillars replaced by alumni*). As it has been already stated the word frequency criterion might not be enough to explain this type of ambiguity resolution as word frequency lists do not give enough information, and more specifically, information about the different meanings of the words. Nevertheless, and at any rate, it might be useful to mention that practically all the words used in the test for lexical ambiguity purposes (with the exception of *suit*), are in the top 1000 most frequent words in spoken English according to the *Longman Communication 3000* word frequency list. Consequently, the words themselves probably were not the main issue as they cannot be considered as *recherché* or uncommon.

In relation to the words that had the highest rate of disambiguation (*record*, *sentence* and *by*) it is important to mention that *record* is an Anglicism, and *sentence* is a cognate. In the first case *record* is an Anglicism used in Spanish commonly meaning the best performance of somebody, usually referring to sports. Moreover the second other possible meaning of *record*, a plastic disc on which music is stored or recorded, seems to be

frequent as well as about half (48%) of the first-year students, more than three quarters (76%) of fourth-year students, and 90% of the native speakers of English detected that meaning. Those two facts may explain that *It must be a new record* was an easy sentence to disambiguate. Finally, and particularly for the native speakers of English group, *record* is a very common and easy word as it is in the top 1000 most frequent words in spoken English according to *Longman Communication 3000*. In regard to the second case, *sentence* and *sentencia* (in Spanish) are, according to *Diccionario de la Lengua Española* (2001) and *Etymonline* (Etymonline.com), cognates as both come from Latin *sententia*. This fact, and the fact that in the two Spanish speakers groups the participants were linguistics students (and therefore *sentence* meaning *oración* was a very frequent word for them) may explain that *Actor is sent to jail for not finishing sentence* was an easy statement to disambiguate. In the case of the native speakers of English, the situation is the same as in *record*. Finally, the third easiest lexical item to disambiguate was *by* in *Stolen painting was found by a tree*. The two expected meanings were *by* understood as indicating the *agent* of the action and *by* as *near to*. One possible explanation to this high rate of disambiguation is the common use of both meanings of *by*. As a matter of fact, and according to the *Oxford Advanced Learner's Dictionary*, both meanings seem to be very frequent and common as they appear in the second and first position in the list of possible meanings of *by*.

In respect of the words that had the lowest rate of disambiguation (*bank*, *old* and *by*) it is important to mention that *bank* is a cognate. According to *Diccionario de la Lengua Española* and *Etymonline* *bank* and *banco* (*financial institution*) are cognates as both come from French *banque*. However, the second possible meaning of *bank*, sloping raised land, normally along the sides of a river, or *ribera* in Spanish, turned out to be a rather infrequent meaning as the rate of detection among the three groups was low: 0% of the first-year students detected the ambiguity, whereas 8% of the fourth-year students and 40% of the native speakers of English recognised the ambiguity. Another possible explanation to this case, in addition to the frequency of use, would be the sentence context. Perhaps the sentence *They often go to the bank* did not provide enough contextual information to presume the second meaning, *ribera*, and therefore the participants selected the most obvious and common meaning of *bank*: financial institution. Probably, on the other hand, a

similar phenomenon may explain the low rate of recognition of *old*: only a 16% of the first-year students recognised the ambiguity, whereas 24% of the fourth-year students and 50% of the native speakers of English detected the ambiguity. Maybe the most common interpretation of *old* in a sentence context as *An old friend of mine teaches at that school*, both in English and Spanish, would be somebody that has been a friend of mine for a long period of time, and not a friend of mine that is old (elder). Finally, the difficulty recognising the second possible meaning of *by* in *Old school pillars replaced by alumni*, that is to say, *with alumni*, was probably the result of the complexity of the sentence. Even though the participants were warned about the humorous or illogical nature of some statements, perhaps the second meaning of the sentence, that is to say that the students took the physical place of the pillars, was too difficult to decode, or too odd, and they preferred the agent marker meaning. As a matter of fact only 4% of the first-year students recognised the ambiguity, whereas the 36% of the fourth-year students and 40% of the native speakers of English detected the two possible meanings.

7.2.3 Syntactic ambiguity

Different to the other instances, the score of fourth year students closely reached the correct disambiguation of the English native speakers. Similar to what happened in the other cases, first-year students obtained the lower score. In terms of type of ambiguity, the syntactic one was the most detected type in the three groups. An explanation for this result would have relation with the occurrence of syntactic priming. That is to say, most of the syntactically ambiguous statements followed a similar pattern: a noun preceded by a lexical item that worked as a verb, but at the same time as an adjective. Such were the cases in *bite victim*, *hunting dogs*, *visiting sailors*, or *disturbing children*. Therefore it is probable that, different from the cases of lexical and phonological ambiguity, if the participants were capable of comprehending the criterion or mechanism once, they could apply the same procedure to all the instances. As a matter of fact, in the three groups those instances of syntactic ambiguity were the most easily recognised, and this type of ambiguity was the most detected of the three. Therefore, these statements that presented syntactic priming were the most easily identified utterances of the test.

Another significant phenomenon is that some cases of syntactic ambiguity were also ambiguous in Spanish, as in *Two ships collide, one dies* (*Dos barcos chocan, uno muere*), *The policeman chased the boy in a bicycle* (*El policía persiguió al niño en bicicleta*), or *The duck is ready to eat* (*El pato está listo para comer*). This fact could also have helped to the better results obtained in this type of ambiguity. The facility to identify syntactic ambiguity more easily is not due to the knowledge of the language only (in the case of fourth-year students and native speakers of English), but probably to an awareness of the language and the study of it as students of linguistics as well. In the case of fourth-year students, these two were the determining factors that reduced the gap between their results and the ones of the native speakers of English.

Those named factors that helped to obtain a high rate of disambiguation in the three groups are only applicable for syntactic ambiguity. This case is different from what happens with ambiguous lexical items, where the rate of disambiguation of fourth-year students was considerably lower than the results of native speakers of English. The reason for this is that, different from the cases of lexical or phonological ambiguities, the participants had an extra indicator in the structure of the sentence that points out a pattern to follow in order to disambiguate. In phonological and lexical ambiguities it is the mere knowledge of the meaning of the lexical item what makes possible the identification of the ambiguity.

7.2.4 Format: Reading V/S Listening

In relation to format, and as it has been to some extent expected, the cases of ambiguity provided orally were much harder to identify than the written ones. In effect, only 9% of the ambiguous instances were recognised by first-year students, whereas 29% was detected by fourth-year students and 31% by native speakers of English. Therefore, and on the basis of the obtained results it was possible to establish that that phenomenon was true not only for the Chilean participants of both first and fourth year, but also for the native speakers of English. In fact a common remark among the native speakers of English was that the oral section of the test turned out to be the most difficult one, among other

things, because of the difficulty given by an accent they were not acquainted with, and that affected their comprehension. In this sense, more than the ambiguities per se, the format of the statements was a more determining factor in the low rate of correct answers in the case of phonological ambiguity. This can be seen in the answers provided mainly by the participants of first and fourth years as well, which had numerous misdecodings not only in the ambiguous segment but also in the rest of the statement.

7.3 Final considerations about the three groups

Close to what was to some extent expected, the group of native speakers of English obtained in general a higher rate of detection of ambiguity. As a matter of fact, they obtained the highest rate of resolution in the three types of ambiguity: they detected 31% of the phonological cases of ambiguity, 66% of the lexical ones, and 76% of the instances of syntactic ambiguity. In the case of the syntactic ambiguity, for instance, the difference between native speakers of English and fourth-year students was minimum: the native speakers of English recognised a 76% of the instances of syntactic ambiguity, whereas the fourth-year students group detected 74% of them, that is to say, there was a difference of 2% only. The fourth-year group followed closely the scores of the native speakers group, therefore those results were more similar between them than originally expected. Apart from the syntactic ambiguity mentioned above, the difference between natives and fourth year students was of a 2% in phonological ambiguity, and a bigger difference of a 20% was given in the case of the lexical aspect. Finally, the group of participants that had more difficulties recognising ambiguity was the first-year students group: less than a quarter of the possible instances of ambiguity were detected. Generally speaking, the difference between the results of native speakers and fourth-year students is much smaller than the distance between fourth and first-year students.

7.4 Special cases

In the course of the analysis some cases of disambiguation presented a particular complexity in terms of evaluation, that is to say that in some instances the disambiguation

was not sufficiently clear. The present section is devoted to the discussion of those special cases (See Appendix B for more information about the results discussed in Special Cases).

In the case of the resolution of phonological ambiguity, a number of statements presented a special situation, some of them were *The book's /red/* and *The /'stʌfnəʊz/ can lead to problems*. Originally the statement was *The book is /red/*, but due to a more natural fluency, it ended being recorded as *book's* instead of *book is*. This slight change gave origin to two other cases of ambiguity that, apart from *The book is red* and *The book is read*, were not considered at the beginning: *The book has read* and *The books read* (Meaning that the books were animated objects that read). Once again it is reminded that ridiculous sentences were allowed, so these two other statements that were generated by the participants in several instances were equally valid. At the end the original division of two meanings was kept and these new sentences were selected as part of the meaning *read*, as the word was also considered as the same verb.

In the case of */'stʌfnəʊz/*, there were participants who recognised some of the lexical components of the juncture but were not capable of identifying the ambiguity *per se*. The classification of this statement was complex because some participants identified for example the word *stuff*, but not *he* nor *knows*, or just *nose* without *stuffy*, etcetera. Therefore the answers were not completely right nor wrong. Besides, as it happened in a considerable number of the oral statements, some participants changed the real meaning almost totally. At the end, it was determined that the answer would be right or partially right (*ambiguity detected* or *one meaning*) when one or two detected components of the ambiguity were connected with a statement as approximate to the original as possible, or at least that made sense.

Regarding the recognition of lexical ambiguity two cases turned out to be of special interest as the criterion to decide if the participants were able to detect the ambiguity was based on the most frequent use of the words or expressions. Those two cases were *bank* (in *They often go to the bank*) and *old* (in *An old friend of mine teaches at that school*). In the case of *bank*, and as it was partially explained in the previous section, the majority of the

participants detected the meaning of *financial institution* only. However, and unlike to what happened in other similar cases, those answers, that basically consisted in the literal translation of the sentence (*Ellos a menudo van al banco*), were considered as the recognition of at least *one meaning* and not as *none*. The criterion used to make that decision was that the most frequent meaning of *bank* is the first one. As the sentence context did not provide enough information to detect the second one (*bank of a river*), then the most probable intention of the participants when rewriting the same sentence or the literal translation was to indicate the meaning of *financial institution*.

In the case of *old* in the sentence *An old friend of mine teaches at that school* the detected phenomenon was similar to the previous one: the majority of the participants in the three groups detected only one meaning. Apparently the most frequent meaning of the expression *old friend* is somebody that has been a friend of mine for a long period of time, and not a friend of mine that is old (elder). Therefore the criterion used to evaluate the answers was that the responses that referred to that meaning, even when the disambiguation was not completely clear, were considered as the recognition of at least *one meaning* and not as *none*. Regarding this case it is important to mention that the literal translation of the sentence *per se* (*Un viejo amigo mío enseña en esa escuela*) does not disambiguate the sentence neither.

In respect of the resolution of syntactic ambiguity two cases presented some special features. The first case is the sentence *Two Soviet ships collide. One dies*. In this sentence the two hypothetical meanings were that one *ship sank* because of the collision, or that one *person died* because of the accident. Apparently this particular statement was difficult to disambiguate because of its humorous tone and also because of its referential nature: the statement is a case of referential ambiguity, a type of ambiguity that depends on syntactic phenomena. Even though the verb *to die* is commonly associated to animate subjects, and not to objects, apparently the information provided in the sentence influenced the participant's responses: the first humorous intended meaning (*one ship sank*) was more detected probably because the reference *ships* was present, whereas *one person* or just *person* was not. Nevertheless in this particular case the answers that only repeated the

statement or were the literal translation of the statement (*Dos barcos soviéticos chocan. Uno muere*) were not considered as *one meaning* correct, but as *none*, as the sense of sentence remained too ambiguous.

The second case was given in the statement *He saw a man eating fish*. Initially two possible meanings were identified, being *He saw another man who was eating a fish*, or *He saw a fish that eats men*. Subsequently, the additional meaning *He was eating a fish when he saw a man* was also considered as possible though stilted and not very frequent. Indeed, when applying the test, this meaning did not appear in the answers of English native speakers, appeared once in the responses of first-year students and twice in the answers of fourth-year students. However, only one participant identified the three possible meanings, who was a member of the fourth-year group. Therefore, when analysing the results, two meanings were considered as a correct disambiguation, regardless of which of them were identified. Concerning the two original meanings, it is also important to indicate that the first one mentioned above was identified for every participant of the study, whereas the second meaning was recognised by half or less participants from first and fourth-year groups.

Finally, distracting statements in general did not present difficulties for the participants. However there were some exceptions, such was the case of the sentence *Peter is studying French at the university*. In certain statements, especially in the case of this one, some participants tried to find a second meaning when actually there was just one. As it was previously said, the difficulty of phonological ambiguities were more related to the format rather than to the ambiguity itself. The statement presented here illustrates that idea again: a considerable number of the students heard the word *Teacher* instead of *Peter*, and some others heard *Did you*, as a question. Regarding the word *teacher*, it is understandable that the phonemes /p/ and /t/ had been misdecoded as /t/ and /tʃ/ respectively, due to their condition of voiceless sounds and their either equal or resembling manner or place of articulation. In the case of *did you*, neither the traditional pronunciation of the sounds /dj/ nor /dʒ/ as a coalescent assimilation in connected speech are related to /t/ in /'pi:tə/, the original sound provided in the recording. Besides, the vowel sounds /i:/ and /ɪ/ are another

difference in the two statements. Nevertheless, there is a more prominent feature of this chunk that differentiates the real meaning from the misdecoded one: Intonation. The intonation in questions is very dissimilar to the one in affirmative statements. For this reason, the manifestation of this other meaning in the results obtained was surprising.

What is the most interesting part of this distracting element is that, even though both of them are phenomena which occur in everyday speech, the misdecoding of /'pi:tə/ understood as /ti:tʃə/ or /dɪdʒə/ was heard a few times more than *he* in /'stɪfnəʊz/, which was the actual correct interpretation of the other statement. This situation may have been generated by the (false) recognition of more frequent or everyday expressions, which were *teacher* and *did you*. The phrase *stuff he knows*, on the contrary, would have a less frequent combination of words at least for the ears of the two groups of students. This one is also suggested as the reason why the component of intonation was totally omitted by several of those students.

8. Conclusions

Although language acquisition and language proficiency have been covered by a substantial number of different approaches, significant phenomena that constitute part of this process of communication, such as linguistic ambiguity, have been covered only generally and superficially, or in some occasions simply omitted. Along with these lines, there are several discordances between the classifications formulated by different authors, and therefore, its study requires a more exhaustive elaboration.

Taken to a closer reality as students, linguistic ambiguity is a phenomenon that is barely covered during the programme of Lengua y Literatura Inglesas in a specific manner. Nevertheless, it could be supposed that some instances of ambiguity are understood in general by the students. The present study was carried out in order to confirm how much the students can identify this phenomenon, the similarities and differences between students of different levels and English native speakers, and also to try to establish possible connections between linguistic ambiguity recognition and language proficiency from a

frequency point of view. With respect to the practical section of the research, a test with a listening and a reading format was applied to 25 first-year students, 25 fourth-year students and 10 native speakers of English that worked as control group. The test contained 10 ambiguous statements for each type of ambiguity (phonological, syntactic and lexical, 30 in total), and the results were classified into two groups: Detected and Non-detected ambiguity. The latter was also divided in two subcategories, namely *One meaning* detected and *None*.

In relation to the results obtained, English native speakers obtained in broad terms the best results of the three groups, followed by fourth-year students, and finally, first-year students. Other major findings were that, when comparing the results, it was observed that there is a substantial improvement in the recognition or resolution of linguistic ambiguity between the first and fourth-year students from the programme. The most outstanding finding obtained was that the results of fourth-year students and English native speakers were in general quite similar. These findings strongly suggest that the more proficient in the mastery of a language people become, the more proficient in the recognition of linguistic ambiguity they are, and therefore the recognition of linguistic ambiguity may be regarded as an indicator of language proficiency. Although linguistic ambiguity in fact it is not a subject specified as such nor studied thoroughly during the programme, it is clear that in general students learn to identify several instances of linguistic ambiguity. Nevertheless, there is still much work to do, especially in the area of phonology and listening training in general. The reasons for this is that it is always important to be able to recognise those instances of linguistic ambiguity, especially if students or any other person are dealing with a foreign or second language.

Finally, there were some facts that limited this research, namely the participation of English native speakers from only one country (namely from the United States) as well as the usage of one type of accent in the recordings, and the lack of a detailed second revision of the statements employed in the final test. The first issue is considered as a limitation especially because the recordings used had a different accent from the one of the participants, and some of them commented to have some difficulties with it. Regarding the

limitations just mentioned, for further research it is suggested a larger number and more varied participants, so that the research covered the most representative quantity of people with different accents. Besides, a better revision of the statements used would be more effective. It is important to make sure they do not give space for additional possible meanings.

9. Limitations and further research

Certain limitations were presented along the present research. The fact of having only participants from the United States (in the case of English native speakers) did not give enough space for a possible broader variety of responses in the case of the listening format of the test. In relation to the same issue, the accent used in the recordings was just one, RP, which was different from the accent of the native speakers who participated in this research. Although there were no significant features of the accent used that could make more difficult the identification of phonological ambiguity, several English native speakers claimed that the accent in fact influenced the responses somehow. In that hypothetical case, the comments received that made an allusion to having difficulties with the accent (in the case of native speakers of English as well as some Chilean students) may have been reduced by the use of a broader diversity of accents. Additionally, the careful revision of the statements that were used for the test seemed not to be enough. Even though there was a pre-test that helped to avoid a number of mistakes or extra possible meanings, there were some skipped details that may have influenced some of the results.

According to the limitations of the current research, suggestions for further studies also have relation to the variety of accents and the revision of the utterances employed in the test. In first place, a larger number of participants is suggested in order to cover a broader sample of students as well as of native speakers of English. Along with the same lines, it would be useful to have a diversity of accents, not only in the recorded statements of the test, but also in the native speakers who participate in the research. Furthermore, an issue that is certainly needed is the implementation of several thorough revisions of the statements used, in order to avoid or minimise as much as possible some extra possible or

confusing meanings that can bring certain complications and unnecessary additional work when analysing the results obtained. Finally, another factor that may be considered for further research is the different levels of English that students can reach in schools. Even though students from bilingual schools were not considered in this study, it is a fact that the way in which English language is taught varies considerably from school to school, and therefore that reality may affect the language proficiency of the participants, and hence the obtained results.

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11. Appendix

A – Applied test

The following text corresponds to the test applied to the participants of the first-year and fourth-year students groups. The one applied to the native speakers group was exactly the same, but the instructions were written and delivered in English in order to make the task easier. The first thirteen statements were delivered by means of a recording, but in this occasion they were written only to provide a textual transcription of what was said.

Reconocimiento de enunciados ambiguos

La presente prueba consta de 39 enunciados, que **pueden o no tener más de un significado**. Los enunciados están dispuestos en dos secciones dentro de la prueba. En la primera sección, las oraciones están enumeradas del 1 al 13, y corresponden a la parte oral de la prueba, por lo que deberás escucharlas. En la segunda parte, los enunciados numerados del 14 al 39, aparecerán escritos.

Sección I

- I. A continuación, escucha atentamente 13 enunciados en inglés que pueden tener más de un significado. Deberás dar cuenta por escrito del o de los significados posibles en el espacio proporcionado. Para ello, puedes explicar o parafrasear el enunciado en español. Cada enunciado será repetido en cinco oportunidades solamente.

Ejemplo:

The fat policeman's wife.

Significado 1.: *El policía es gordo.*

Significado 2.: *La esposa es gorda.*

Enunciado N°1 - Reading in the library is sometimes /ə'laʊd/

Enunciado N°2 - In holiday times, they usually go south.

Enunciado N°3 - The book is /red/

Enunciado N°4 - The /stʌfɪnəʊz/ can lead to problems.

Enunciado N°5 - These are wolves' /teɪlz/

Enunciado N°6 - Where is the /spɑɪsntə/?

Enunciado N°7 - Peter is studying French at the University.

Enunciado N°8 - The /'gʌvənməntsfiə/ of competence.

Enunciado N°9 - He bought it because of the /seɪl/

Enunciado N°10 - Be careful how you choose /əneɪm/ for your company

Enunciado N°11 - This tree is bigger than those

Enunciado N°12 - Pour some water on the /flaʊə/

Enunciado N°13 - Why don't you take /ənaɪs/ cold shower?

Sección II

- II. A continuación, encontrarás 26 enunciados en inglés **que pueden o no tener más de un significado**, algunos de los cuales pueden ser humorísticos o ilógicos. Deberás dar cuenta por escrito de los significados de cada enunciado en el espacio proporcionado para ello. Al igual que en el ítem anterior, puedes responder en español y con frases sencillas, no necesitas elaborar demasiado tus respuestas.

Enunciado N°14: People help dog bite victim.

Enunciado N°15: An old friend of mine teaches at that school.

Enunciado N°16: Doctor testifies in horse suit.

Enunciado N°17: We hope Chile wins the America Cup.

Enunciado N°18: Two Soviet ships collide. One dies.

Enunciado N°19: Old school pillars replaced by alumni.

Enunciado N°20: They are hunting dogs.

Enunciado N°21: He went lion hunting with a club.

Enunciado N°22: Drunk gets nine months in violin case.

Enunciado N°23: H₂O is the chemical formula of water.

Enunciado N°24: I like English poems and novels.

Enunciado N°25: The policeman chased the boy in a bicycle.

Enunciado N°26: Stolen painting was found by a tree.

Enunciado N°27: The sun rises in the East.

Enunciado N°28: She went to a weight loss clinic in London and lost 250 pounds.

Enunciado N°29: The duck is ready to eat.

Enunciado N°30: The Eiffel Tower is the symbol of Paris.

Enunciado N°31: How to combat the feeling of helplessness with illegal drugs.

Enunciado N°32: They are visiting sailors.

Enunciado N°33: Buy a chocolate at the supermarket, please.

Enunciado N°34: She doesn't like disturbing children.

Enunciado N°35: Actor is sent to jail for not finishing sentence.

Enunciado N°36: It must be a new record.

Enunciado N°37: The teacher penalized twenty students today.

Enunciado N°38: He saw a man eating fish.

Enunciado N°39: They often go to the bank.

Observaciones:

B – Special Cases Section: Obtained Results in the three groups

Phonological Ambiguity: /red/ and /stʌfinəʊz/

Statement: The book's /red/

First-year Students Results

Tests	Meaning 1: Red	Meaning 2: Read	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x	x				
Test 2	x					
Test 3	x	x				
Test 4		x		x		
Test 5	x	x		x		
Test 6	x	x				
Test 7	x	x				
Test 8		x				
Test 9		x		x		
Test 10	x			x		
Test 11	x	x				
Test 12	x					
Test 13	x	x				
Test 14	x			x		
Test 15	x			x	x	
Test 16	x					
Test 17	x					
Test 18	x	x				
Test 19	x					
Test 20	x	x				
Test 21			x	x		
Test 22				x		
Test 23	x					
Test 24	x	x				
Test 25	x	x				

Fourth-year Students Results

Tests	Meaning 1: Red	Meaning 2: Read	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x	x				
Test 2	x	x				
Test 3						X
Test 4	x	x				
Test 5				x		
Test 6	x					
Test 7	x					
Test 8	x	x				
Test 9	x			x		
Test 10	x	x		x		
Test 11	x	x				
Test 12	x	x				
Test 13	x					
Test 14	x			x		
Test 15	x			x		
Test 16		x				
Test 17	x	x				
Test 18	x	x				
Test 19	x	x				
Test 20		x		x		
Test 21	x	x		x		
Test 22				x	x	
Test 23		x			x	
Test 24	x	x				
Test 25	x	x				

Native Speakers of English Results

Tests	Meaning 1: Red	Meaning 2: Read	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1		x		x		
Test 2	x	x				
Test 3	x	x				
Test 4	x	x				
Test 5	x					
Test 6	x	x				
Test 7		x		x		
Test 8	x	x				
Test 9	x	x				
Test 10	x	x				

Statement: The /stʌfɪnəʊz/ can lead to problems

First year Students Results

Tests	Meaning 1: Stuffy nose	Meaning 2: Stuff he knows	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x					
Test 2						x
Test 3		x				
Test 4				x		
Test 5	x					
Test 6				x		
Test 7				x		
Test 8				x		
Test 9	x					
Test 10						x
Test 11	x	x		x		
Test 12				x	x	
Test 13				x		
Test 14				x		
Test 15				x		
Test 16				x		
Test 17				x		
Test 18		x				
Test 19				x		
Test 20				x		
Test 21				x	x	
Test 22				x	x	
Test 23				x		
Test 24				x		
Test 25	x					

Fourth-year Students Results

Tests	Meaning 1: Stuffy nose	Meaning 2: Stuff he knows	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1		x				
Test 2						x
Test 3				x		
Test 4		x		x		
Test 5		x				
Test 6						x
Test 7				x		
Test 8		x				
Test 9						x
Test 10						x
Test 11				x		
Test 12		x				
Test 13	x					
Test 14				x		
Test 15		x				
Test 16				x	x	
Test 17		x		x		
Test 18	x			x		
Test 19		x		x		
Test 20				x	x	
Test 21				x	x	
Test 22				x		
Test 23				x		
Test 24		x		x		
Test 25				x		

Native Speakers of English Results

Tests	Meaning 1: Stuffy nose	Meaning 2: Stuff he knows	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x					
Test 2	x					
Test 3	x					
Test 4	x					
Test 5	x					
Test 6	x					
Test 7	x					
Test 8		x				
Test 9	x					
Test 10	x					

Lexical Ambiguity: *Bank* and *Old*

Statement: They often go to the bank

First-year Students Results

Tests	Meaning 1: Financial institution	Meaning 2: River side	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x					
Test 2	x					
Test 3	x					
Test 4	x					
Test 5	x			x		
Test 6	x					
Test 7	x					
Test 8	x					
Test 9	x					
Test 10						x
Test 11	x					
Test 12	x					
Test 13	x					
Test 14	x					
Test 15	x					
Test 16	x					
Test 17	x					
Test 18						x
Test 19	x					
Test 20	x			x		
Test 21	x			x		
Test 22	x					
Test 23	x			x		
Test 24	x					
Test 25	x					

Fourth-year Students Results

Tests	Meaning 1: Financial institution	Meaning 2: River side	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x					
Test 2	x					
Test 3	x					
Test 4	x			x		
Test 5	x	x				
Test 6	x					
Test 7	x					
Test 8	x			x		
Test 9	x					
Test 10	x			x		
Test 11	x					
Test 12	x			x	x	
Test 13	x					
Test 14	x					
Test 15	x			x		
Test 16	x	x				
Test 17	x			x		
Test 18	x			x		
Test 19	x			x		
Test 20	x			x	x	
Test 21	x					
Test 22	x			x		
Test 23	x					
Test 24	x					
Test 25	x			x		

Native Speakers of English Results

Tests	Meaning 1: Financial institution	Meaning 2: River side	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x					
Test 2	x					
Test 3	x	x				
Test 4	x					
Test 5	x					
Test 6	x	x				
Test 7	x					
Test 8	x					
Test 9	x	x				
Test 10	x	x				

Statement: An old friend of mine teaches at that school

First-year Students Results

Tests	Meaning 1: For long	Meaning 2: Elder	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x					
Test 2	x					
Test 3	x					
Test 4	x					
Test 5	x					
Test 6	x					
Test 7	x	x				
Test 8	x					
Test 9	x					
Test 10	x					
Test 11	x					
Test 12	x					
Test 13	x	x				
Test 14	x					
Test 15	x		x			
Test 16	x					
Test 17	x					
Test 18	x					
Test 19	x					
Test 20	x					
Test 21	x	x				
Test 22	x					
Test 23	x					
Test 24	x	x				
Test 25	x					

Fourth-year Students Results

Tests	Meaning 1: For long	Meaning 2: Elder	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x					
Test 2	x					
Test 3	x	x				
Test 4	x	x				
Test 5	x					
Test 6	x					
Test 7	x					
Test 8	x					
Test 9	x					
Test 10	x	x				
Test 11	x					
Test 12	x	x				
Test 13	x					
Test 14	x					
Test 15	x	x				
Test 16	x					
Test 17	x	x				
Test 18	x					
Test 19	x					
Test 20	x					
Test 21	x					
Test 22	x					
Test 23	x					
Test 24	x					
Test 25	x					

Native Speakers of English Results

Tests	Meaning 1: For long	Meaning 2: Elder	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x					
Test 2	x	x				
Test 3	x	x				
Test 4	x					
Test 5	x					
Test 6	x	x				
Test 7	x					
Test 8	x	x				
Test 9	x	x				
Test 10	x					

Lexical Ambiguity: *One dies and Man eating fish*

Statement: Two Soviet ships collide. One dies.

First-year Students Results

Tests	Meaning 1: Person	Meaning 2: Ship	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1				x		
Test 2				x		
Test 3	x	x				
Test 4	x					
Test 5	x	x				
Test 6	x	x				
Test 7	x	x				
Test 8				x		
Test 9				x		
Test 10	x	x				
Test 11				x		
Test 12				x		
Test 13						x
Test 14	x	x				
Test 15						x
Test 16				x		
Test 17		x				
Test 18				x		
Test 19		x		x		
Test 20				x		
Test 21	x	x				
Test 22				x		
Test 23		x		x		
Test 24				x		
Test 25	x	x				

Fourth-year Students Results

Tests	Meaning 1: Person	Meaning 2: Ship	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x					
Test 2		x				
Test 3	x	x				
Test 4	x	x				
Test 5	x	x	x			
Test 6				x		
Test 7				x		
Test 8				x		
Test 9		x	x			
Test 10	x	x				
Test 11	x	x				
Test 12	x	x				
Test 13	x	x				
Test 14				x		
Test 15	x	x				
Test 16	x	x				
Test 17	x	x				
Test 18		x				
Test 19	x	x				
Test 20	x	x				
Test 21		x		x		
Test 22		x		x		
Test 23		x		x		
Test 24		x	x			
Test 25	x	x				

Native Speakers of English Results

Tests	Meaning 1: Person	Meaning 2: Ship	Other	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x	x				
Test 2	x	x				
Test 3	x	x				
Test 4		x				
Test 5		x				
Test 6	x	x				
Test 7	x					
Test 8	x	x				
Test 9						x
Test 10		x				

Statement: He saw a man eating fish.

First-year Students Results

Tests	Meaning 1: The man ate fish	Meaning 2: Fish that eats men	Other: He looked while eating	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x	x				
Test 2	x					
Test 3	x	x				
Test 4	x					
Test 5	x					
Test 6	x	x		x		
Test 7	x	x				
Test 8	x					
Test 9	x					
Test 10	x		x			
Test 11	x	x				
Test 12	x					
Test 13	x					
Test 14	x					
Test 15	x	x				
Test 16	x					
Test 17	x					
Test 18	x	x				
Test 19	x					
Test 20	x					
Test 21	x	x				
Test 22	x	x				
Test 23	x					
Test 24	x					
Test 25	x					

Fourth-year Students Results

Tests	Meaning 1: The man ate fish	Meaning 2: Fish that eats men	Other: He looked while eating	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x			x		
Test 2	x	x				
Test 3	x	x				
Test 4	x	x				
Test 5	x	x	x			
Test 6	x					
Test 7	x	x				
Test 8	x					
Test 9	x		x			
Test 10	x	x				
Test 11	x	x				
Test 12	x					
Test 13	x	x				
Test 14	x					
Test 15	x					
Test 16	x					
Test 17	x	x				
Test 18	x					
Test 19	x	x				
Test 20	x			x		
Test 21	x	x				
Test 22	x	x				
Test 23	x					
Test 24	x	x				
Test 25	x					

Native Speakers of English Results

Tests	Meaning 1: The man ate fish	Meaning 2: Fish that eats men	Other: He looked while eating	Wrong meaning 1	Wrong meaning 2	Blank
Test 1	x	x				
Test 2	x	x				
Test 3	x	x				
Test 4	x	x				
Test 5	x					
Test 6	x	x				
Test 7	x	x				
Test 8	x	x				
Test 9	x	x				
Test 10	x	x				