Academic discourse markers: A contrastive analysis of the discourse marker *then* in English and Spanish lectures

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Resumen

Este trabajo investiga ciertas características del discurso académico hablado, concretamente el género de la clase magistral en Inglés y Español. Algunos estudios sobre este género han analizado características lingüísticas como el uso de la interacción, los pronombres o la repetición (Crawford, 2004; Giménez, 2000; Morell 2000). El objetivo es analizar el uso y la función del marcador discursivo then y sus equivalencias en español. Un análisis contrastivo entre dos sub-corpora (doce clases magistrales en inglés y doce en español) ha demostrado que entonces y then son generalmente marcadores polisémicos. El análisis muestra que el marcador then en inglés no corresponde a una sola categoría semántica y pragmática al igual que ocurre en español con entonces. Por otra parte, aunque entonces y then se asumen como equivalentes para la traducción, los resultados revelan que entonces y then no son siempre equivalentes en el género de la clase magistral. Palabras clave: discurso académico, clase magistral, análisis contrastivo, marcadores discursivos.

Abstract

This paper investigates certain features of spoken academic discourse and more concretely the lecture genre in English and Spanish. Some studies on lectures have analyzed linguistic features such as the use of interaction, pronouns or repetition (Crawford, 2004; Giménez, 2000; Morell 2000). The aim here is to analyze the use and function of the Discourse Marker (DM) *then* and its Spanish correspondent *entonces*. A contrastive analysis of two sub-corpora (twelve North-American English lectures and twelve Peninsular Spanish lectures) has shown that *then* and *entonces* are generally polysemous Discourse Markers (DMs) in academic lecture talk. The analysis shows first that the DM *then* in English lectures is not simply a member of a single category, which is also true of the Spanish marker *entonces*. Secondly, although *then* and *entonces* are often

assumed to be translation equivalents, the findings reveal that *then* and *entonces* cannot function as simple counterparts in English and Spanish lectures.

Keywords: academic discourse, lecture talk, contrastive analysis, discourse markers.

1. ENGLISH AND SPANISH AS INTERNATIONAL LANGUAGES

English as an international language has been coined as *lingua franca*, and as such it has become the language of commerce, business and the academic world. In fact, the English language seems to be closely bound up with the phenomenon of globalism (Chew, 1999) with a growth in the number of its speakers, in its domains of use and in its economic and cultural power (Graddol, 1999).

Scientific discovery and technological advance is increasingly disseminated through English, since English-medium publications allow scholars to reach a broader multilingual audience (Curry & Lillis, 2010). For this reason, many scientists and technical professionals from non-English speaking communities now choose English as their sole and sovereign scientific language. English has been considered the "global language of Science" by prestigious institutions and other text production participants (Lillis & Curry, 2010: 1), in other words, "today's premier research language" (Swales, 2004: 33). Further, globalizing processes are forcing higher education institutions to internationalize.

Due to this internationalization of university tuition mainly in Europe (e.g. Erasmus + European programme for Education, Training, Youth and Sport for 2014-2020), and also in the United States (e.g. postgraduate education programs), proficiency in academic discourse in English has become a priority in higher education institutions, focusing especially on spoken academic discourse. As Mauranen (1993) points out, it is primarily through speech that academic socialization and acculturation takes place. Students attending lectures need to listen to and understand first, and then be able to take appropriate notes. In addition, faculty members' academic activities involve not only reading English publications, but increasingly attending as well as presenting papers in conferences, or performing research and tuition tasks in other universities where English is used as the primary discourse language. These English-language oral academic genres have been studied by a wide range of authors, including Crawford (2004, 2007), Giménez (2000), Raïsänen (1999), Ventola (1999), Ventola et al. (2002), Fortanet et al. (2005) among others.

Alternatively, Spanish is currently the second most widely spoken language in the world according to its number of speakers, avoiding the Hindi-Urdu controversy; and followed by English in the third place (Lewis et al., 2015). Spanish is also the official language in

twenty-one nations, most of which are situated in the Americas. In addition, Spanish is not only gaining position in the world of business and commerce, academically speaking, the number of students learning Spanish is also growing worldwide, and Spanish is being offered as a second or foreign language in most European academic institutions as well as in the U.S.A, where the nation's Hispanic population has expanded sufficiently dramatically to force legislators and civic leaders to confront new questions about how, or whether, to regulate the emergence of Spanish in American life (Schildkraut, 2005).

Up until now most European universities have opted for offering courses in English for international students, but English is not exclusive; we mostly encounter graduate and undergraduate courses offered in Spanish, opening and facilitating enrolments in this competitive academic environment (Bellés-Fortuño, 2007, 2008). Spain, in this respect, plays a particularly important role; exchange students spending a semester or an academic year in Spain are willing to acquire certain skills in both academic English and Spanish, in contrast to some "small language" countries such as Denmark where courses at graduate and undergraduate levels are held mostly in English, demanding students' language skills predominantly in academic English (Ammon, 2001). Additionally, exchanges among scholars and researchers from Spanish-speaking countries are progressively growing, particularly among those whose level of English is not at the proficiency level required for international publications and who therefore, opt to publish in Spanish journals and reviews.

If we take all these aspects into account it is evident that the study of spoken academic discourse does not only concern researchers in the field of discourse analysis, but is also relevant to today's globalized society. As far as exchange students are concerned, the lecture "remains the central instructional activity" (Flowerdew, 1994: 1). Lectures have been characterized as having "paradigmatic stature" (Waggoner, 1984: 7), that is, traditional methods of learning coexist with more recent and interactive ones; lectures have also been defined as "the central ritual of the culture of learning" (Benson, 1994: 181). However, lectures are not homogeneous. Students see teachers at a closer distance and the role of a helper, a counselor or a facilitator for the learning process better fits their perspectives (Bellés-Fortuño, 2007, 2008).

The present paper follows previous approaches to lecture discourse but adds a further dimension since it investigates a feature of authentic recorded lectures as offered to university students of two different speaking communities. A contrastive analysis between Spanish and North-American lectures is thus carried out, focusing on the use of a small set of discourse markers (DMs). This contrastive approach is potentially valuable because it can bring out features of a language A or language B that would not have come to light in a

monolingual analysis (Salkie, 1997). Concepts such as systematicity and the problems of parallel corpora also find their place in this study (Aijmer, 1997; Salkie, 1995, 1997). The aim is not only to look at differences between English and Spanish use of DMs in lectures, but also to take a similarity assessment (Chesterman, 1998) as understood by contrastive linguistics in terms of the number of shared and distinctive features, that is, in terms of their degree of feature matching (Tversky, 1977). As Altenberg explained:

The use of natural language data form parallel corpora also gives rise to interesting theoretical and methodological problems, since it involves accounting for both language system and language use. (1999: 250)

Because of space considerations, this paper will focus on the use of *then* in English lectures, and its Spanish translation-equivalents. As the following section will show, *then* and *entonces* (and its alternants) are among the most common DMs in the two corpora.

2. SCOPE: DISCOURSE MARKERS

2.1. English review

In lecture discourse studies, many researchers have suggested that an understanding of the role of discourse markers and the relationships between different parts of the text is fundamental for the comprehension of lectures (Morrison, 1974; Coulthard & Montgomery, 1981; Chaudron and Richards, 1986). Previous research has examined features of discourse organization. Chaudron (1983) in an early study analyzed the effects of topic signaling in experimental lectures on ESL learners' immediate recall of the topic information. Kintsch and Yarbrough (1982) also pointed out that subjects are better able to answer gist and main-idea questions for texts that contain evident rhetorical cues (discourse markers) than for texts that, although having the same content, do not include evident rhetorical cues.

In her book *Discourse Markers*, Schiffrin was concerned with the ways in which DMs function to "add to discourse coherence" (1987: 326). She basically sees DMs as serving an integrative function in discourse and therefore contributing to discourse coherence. She also points out the different natures of certain DMs, whereas some DMs relate only the semantic reality (the facts) of the two clauses, others may relate clauses on a logical (epistemic) level and/ or speech act (pragmatic) level. Indeed, Schiffrin's (1987) view attributes DMs to have both semantic and pragmatic meaning.

Schiffrin's research on DMs has been particularly relevant in the field of discourse studies and extremely influential since she examined DMs in the spoken discourse of ordinary

conversation. Another study within the same approach is that of Redeker (1990, and Redeker 1991), who defines a "discourse operator" (1991: 1168) as:

[...] a word or phrase that is uttered with the primary function of bringing to the listener's attention a particular kind of linkage of the upcoming utterance with the immediate discourse context. An utterance in this definition is an intonationally and structurally bounded, usually clausal unit.

She proposes a revised model of discourse coherence based on three components: Ideational Structure, Rhetorical Structure and Sequential Structure. She revises Schiffrin's notion of "core meaning" and expands on this (1991: 1164) suggesting that "the core meaning should specify the marker's intrinsic contribution to the semantic representation that will constrain the contextual interpretation of the utterance".

Fraser (1999) studied DMs from a grammatical-pragmatic perspective. At an early stage Fraser speaks about "pragmative formatives" (1987) to finally arrive at the label "pragmatic markers" (2004). He characterized DMs as linguistic expressions. According to Fraser (1999: 936) this linguistic expression (or DM):

- (i) has a core meaning which can be enriched by the context,
- (ii) signals the relationship that the speaker intends between the utterance the DM introduces and the foreign utterance (rather than only illuminating the relationship, as Schiffrin suggests).

Fraser goes on defining discourse markers as:

[...] a class of lexical expressions drawn primarily from the syntactic classes of conjunctions, adverbs, and prepositional phrases. With certain exceptions, they signal a relationship between the interpretation of the segment they introduce, S2, and the prior segment, S1. (1999: 937)

Fraser (1999: 950) classifies two types of DMs: "those that relate the explicit interpretation conveyed by S2 with some aspect associated with the segment, S1; and those that relate the topic of S2 to that of S1". In a more recent publication, Fraser describes the canonical form for a DM SEQUENCE, that is, S1-DM+S2, where the S1 and S2 are discourse segments consisting of clauses, or the remain of clauses from which portions have been elided.

2.2. Spanish review

As regards Spanish authors whose focus of study has been DMs, the labeling of these linguistic units has also been controversial. They have been named in many different ways for the last fifteen years, most of them translated from English studies: *enlaces extraoracionales, organizadores discursivos, conjunciones, operadores pragmáticos, marcadores del discurso, señales discursivas, conectores de discurso, enlaces textuales, partículas modales,* etc. Whichever the name given to these linguistic units, they have been studied according to their function in discourse, that is, pragmatic-discursive function, syntactic or lexico-grammatical function (Bellés-Fortuño, 2007).

Some Spanish authors clearly make a distinction between *operadores* 'operators' and *conectores* 'connectors' explaining that *operadores* refer to a single utterance, whereas *conectores* relate two or more propositions (Escandell-Vidal, 1993: 115; Gutiérrez, 1993: 21).

Portolés, (1993: 160) makes a preliminary shallow distinction between *conectores textuales* 'textual connectors' and *marcadores textuales* 'textual markers'. For him the so-called *conectores textuales* serve to process context by means of linking clauses at a semantic and pragmatic level, these are instances such as *además*, *por lo tanto*, *sin embargo* 'moreover, therefore, nevertheless'. On the contrary, *marcadores textuales* give rise to conversational inferences (Portolés 1993). What distinguishes *marcadores* from *conectores* is whether they convey conventional and controlled inferences or conversational ones, as is the case of *conectores*. Portolés (1998: 25) is aware of the importance DMs have for the ongoing of the human communication phenomenon. He defines a DM as:

[...] invariable linguistic units, they do no play any syntactic function in the sentence and have an important role in the discourse: they lead, according to their morphosyntactic, semantic and pragmatic properties, the communication inferences $(my\ translation)^1$

2.3. A new classification

Although DMs are not given a syntactic function in the previous definition, they are described as having morphologic, syntactic, semantic and pragmatic properties when used in the inferential communication. Portolés (1998) goes on saying that DMs are not fundamentally grammatical but semantic; he also conceives DMs as having a core meaning

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¹ Original text.: [...] unidades lingüísticas invariables, no ejercen una función sintáctica en el marco de la predicación oracional y poseen un cometido coincidente en el discurso: el de guiar, de acuerdo con sus distintas propiedades morfosintácticas, semánticas y pragmáticas, las inferencias que se realizan en la comunicación (Portolés 1998: 25-26)

and that this meaning is procedural, coinciding with Schriffrin, Fraser and Blakemore. However, Portolés' definition of *marcador* stands closer to Grice's Relevance Theory (1989) based on conventional implicatures among the discourse segments, in this sense coinciding with Blakemore (1987, 1992, and 1995). In contrast to previous approaches which distinguished semantic, logical and pragmatic domains or levels (Schiffrin, 1987, Fraser 2004) of DMs, Portolés (1993, 1998) fails to describe the logical relations conveyed by some DMs discriminating only between semantic and pragmatic levels.

Other Spanish authors are also concerned about the relations DMs can bring into discourse or segments within a sentence statement; this is the case of Llorente (1996: 14). She makes a distinction between DMs that signal logic and semantic relations and those which signal discursive and pragmatic relations, coinciding with Schiffrin's levels (1987) in some way, since she joins together in a single category DMs that express logico-semantic relations. Therefore we have two domains or levels, the former link meanings in, for instance, cause-effect, temporal or addition discourse relations, what she calls conectores. The latter are DMs which link communicative acts taken by discourse participants, organizing and interlacing them; she calls them operadores. However, Llorente (1996:14) centers the scope of her study on the analysis of operadores discursivos 'discursive operators' disregarding the conectores that provide semantic discourse relations. She explains:

[...] the defining feature of a discursive operator is its capacity to be used for the pragmative and discursive events, that is, the events needed to enhance interaction and the ongoing discourse (Caron 1977), they link other discursive events and, therefore, they aid information processing (my translation)²

Along with Schiffrin's research, Llorente (1996) aims at the study of spoken discourse by analyzing colloquial, conversational language. She analyses DMs such as *Hola buenas tardes*, *vamos a ver*, *yo quiero*, *y resulta que*, *ya le digo*, etc. Some of these instances can only occur and be considered as DMs when analyzing conversational talk. Llorente's definition of *operador* relies on the underlying concept of discursive act, in that sense and taking spoken corpora for the analysis of DMs, the notion of *operador* is undoubtedly fundamental. On the contrary, a distinction between *conector* and *operador* seems deficient for a proper classification of DMs.

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² Original text: [...] el rasgo definidor pertinente de lo que llamo "operador discursivo" es su capacidad de servir a la realización de actos pragmático-discursivos, es decir, de actos necesarios para hacer avanzar la interacción, de actos que regulan el desarrollo del discurso (Caron, 1977), relacionan entre sí otros actos discursivos y, en resumen, se destinan a facilitar el procesamiento de la información (1996: 14)

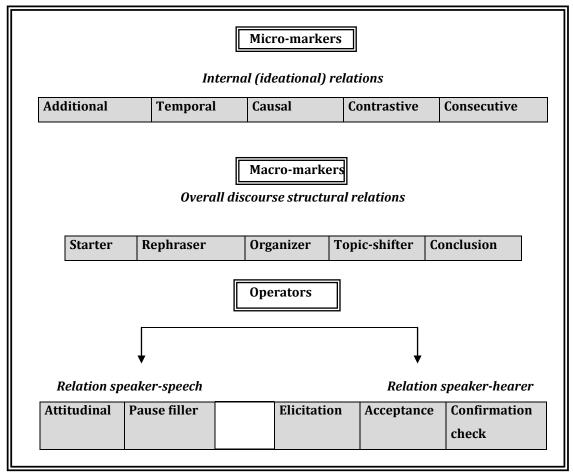
The DMs classification proposal I present here is not strictly based upon the discourse coherence model above described (Redeker, 1991); however, I agree that coherence is constructed through relations in the discourse and that these relations are frequently expressed by linguistic units (*cue phrases, discourse particles, connectors*, etc.) named here DMs. Along with Fraser and Schiffrin I agree on DMs having a core meaning, however I think that this meaning is strongly context-dependent rather than semantic. I have looked at the notions of a DM and which role or function they may have in the discourse, as some authors have presented them. In this paper I aim at exploring the correspondence between English and Spanish DMs, and concretely *then* and its Spanish translation equivalents as used in lectures in the two languages.

In a contrastive study between English and Spanish DMs in lectures (Bellés-Fortuño, 2007) it was proven that *then* was one of the most recurrent markers in North-American lectures, only preceded by the additional marker *and*. When the Spanish translation equivalents for *then* were observed in the Spanish corpus, these also presented a quite high rate of use, although less than in the English lectures. The need to analyze the importance of *then* as a DM seemed significant; moreover, I found that more than one translation equivalent was given in Spanish.

Taking into consideration that the researchers above mentioned base their studies upon relations within discourse and how DMs affect or are affected by these relations, I have considered a classification of DMs based on explicit discourse relations as rational and consistent. Previous English DMs classifications seem to be more semantic rather than pragmatic, since there is no consideration of context/co-text, that is, the situation in which the discourse feature is used in the utterance.

The classification I propose distinguishes three types of DMS: micro-markers, macro-markers and operators according to the relational functions conveyed along the discourse utterances: a) part of discourse-part of discourse relations (internal and structural meanings) and b) speaker hearer and/or speaker-speech relations (attitudinal meaning) (see Figure 1).

Figure 1. DMs classification model



Bellés-Fortuño, 2007

Within the classification above provided the DM *then* and its Spanish equivalents would fall under the micro-marker category, affecting and working at the level of relations *part of discourse-part of discourse*, this is, working at the internal/ ideational level of discourse utterances. Micro-markers (also known as lower-order DMs) indicate links between utterances in the lecture providing opportunities for bottom-up processing taking part within the micro-structure of the lecture. The micro-marker classification level is divided into five categories, namely, additional, temporal, causal, contrastive, and consecutive.

For the analysis, I will restrict myself to the semantic and pragmatic correspondences of the DM *then* in English and its Spanish equivalents; I will also observe any co-occurring DM variable between the two languages.

3. METHODOLOGY

3.1. Corpora

The corpus under study is made of twenty-four spoken lecture transcripts. Half of the corpus consists of twelve Spanish lectures; the other half contains twelve North-American

English lectures. The North-American English lecture transcripts, here called North-American corpus (NAC), have been taken from the MICASE (Michigan Corpus of Academic Spoken English) (Simpson et al. 2002) available on the web thanks to the English Language Institute at the University of Michigan (United States). The Spanish part of the corpus (SC) consists of twelve lectures recorded and transcribed at a Spanish University. As to participants, the students and teachers involved in the North-American English lectures are mostly native speakers of the language (NS). In the SC, participants are NSs of Spanish. Lecturers' gender was also taken into account. Consequently, for the SC, I tried to record both male and female lecturers, selecting seven male and five female lecturers. Regarding the NAC the amount is reverse, five male and seven female lecturers. Although not equal in number, I wanted to get a balance between male-female lectures in both subcorpora as an effort to have a whole uniform corpus.

The description of both parts of the corpus or sub-corpora is done following the parameters found in the MICASE (Simpson et al., 2002). In order to facilitate the organization of the corpus to be analyzed, the main lecture (LE) attributes have been categorized. Thus, appropriate information about the lectures is given, e.g. the title, primary discourse mode, speech event, number of words, as well as recording duration. All the lectures gathered for the purpose of this study belong to the academic divisions of Humanities and Social Sciences. However, the scope of Humanities and Social Sciences is extremely large including areas such as Anthropology, Business Administration, Communication, Economics, Education, History, Public Policy, Political Science, Psychology, Social Work, Sociology or Urban and Regional Planning. Nevertheless, this study does not aim at analyzing lectures according to discipline variation, but to treat the field of Humanities and Social Sciences as a single entity in order to study how DMs are used within its context.

The lecture attribute *Primary discourse mode* (according to MICASE) refers to the predominant type of discourse characterizing the *speech event*. All lectures analyzed for this study are monologic lectures where one speaker monopolizes the floor, sometimes followed by question and answer period. Likewise, the SC happens to be also a compilation of monologic lectures.

As to *Speech events* they are classified in the MICASE corpus according to *classroom events* and *non-class events*. As the corpus under study is a compilation of lectures, they are included within *classroom events*. According to the number of students in the audience, two groups can be distinguished: small lectures (LES)- a lecture class of 40 or fewer students, and large lectures (LEL)- a lecture class of more than 40 students. The corpus here presented embraces both. Among the twelve North-American English lectures there

are four LES and eight LEL. On the contrary, the number of students in the Spanish lecture corpus does not generally surpass 40, finding therefore more LESs than LELs.

Taking into account features such as number of words and recording duration, some lectures taken from the MICASE are slightly longer than the Spanish lectures, being the average number of words per lecture 10,452 and the average duration 72m for the North-American English lectures and 6,650 words and an average LE duration of 53.6m for the Spanish ones. Spanish lectures seem to be shorter than the North-American lectures, maybe due to the different styles of lecturing and/ or the timetable planning in both universities. However, this aspect does not seem to be significant for the aim of this study.

3.2. Procedure

A search on the concordancer option in the Wordsmith Tools 4.0 software was submitted, the goal was to find those instances of *then* in the NAC to later submit a search for the Spanish equivalent/s on the SC. It is worthy to point out that I did not expect to find an exclusive counterpart for *then* in the SC. However, the expected translation was *entonces* as one of the best fitting translation equivalents reflected on grammar-translation books. Note that both, the English and the Spanish DM classification models, are very closely restricted to the corpora under study as well as to the individual usage or idiolectal variation of lecturers' own preferences for DMs.

Instances of *then* and its Spanish equivalents were also individually examined to be able to fit them according to the five categories presented under the classification of DMs, (see Figure 1). Some instances of *then* fitted under the additional, temporal and consecutive categories. I also had to hand-edit instances of the Spanish equivalents found *entonces*, *luego* and *por lo tanto* to semantically match them with the above mentioned categories.

The variables analyzed were number of DMs and frequency rate every 1.000 words for each DM analyzed. The research question departs from the idea of looking at the semantic and pragmatic correspondences and similarities of the DM *then* and its Spanish equivalents in lecture discourse as a relevant educational genre within spoken academic discourse. Any approximation between meaning and collocational patterns in any of the described DMs was also of interest.

4. RESULTS

4.1. Then as a polysemous DM in English lectures

After a search for *then* in the NAC the results showed that *then* works as a polysemous micro-marker in English, functioning as an additional, temporal or consecutive micro-marker. However, *then* is more frequent in the NAC when functioning as a temporal rather than as a consecutive or additional DM, as the number of occurrences and frequency rate

calculated in Table 1 below show. Its variable, polysemous nature strictly depends on the context/ co-text where it appears.

Additional # # DMs ‰ **Temporal** # DMs **‰** Consecutive **‰ DMs** and then 13 105 69 0.1 then 8.0 then 0.5 130 and then 1.0 Total 13 0.1 235 1.8 69 0.5 Global 317 2.5 **Total**

Table 1. DM then results as an additional, temporal and consecutive DM

The examples that follow illustrate the use of then as an additional, temporal and consecutive marker in the NAC:

THEN

- (1) one is the difference in that relationship between Catholic and public schools. and then we've got these error terms. the error term associated with the, with the intercept...(LE10/NAC) Additional
- (2) this, Kirtland Air Force Base, is, a black-and-white photograph that he's taken, *then* he goes back to his studio, uh he blows the image up, usually it's a sort (LE8/NAC) *Temporal*
- (3) not thought of as, as highly desirable, and it brings in a profit, you cannot *then* channel that money into things related to the regeneration of your family. (LE1/NAC) *Consecutive*

Outstanding in the NAC within the *temporal* category, the micro-marker *then*, although mostly functioning as a *temporal* micro-marker (235 occurrences), it can also convey cause-effect relations between parts of the discourse as a *consecutive* micro-marker. When searching for *then*, the contexts in which it appeared and its different functions were observed, all instances of *then* were hand-edited to determine whether *then* was functioning as a temporal or a consecutive micro-marker showing the result of the events that had been described before in the discourse. It was also noticed that *then* presented a high number of occurrences when collocating with the also additional micro-marker *and*. One might think that the collocate *and then* functions merely with an additional meaning,

this one transferred from the additional marker *and* to the micro-marker *then*. Some authors have pointed out about the transferable meaning when DMs collocate (Fraser & Malamud-Makowski, 1996; Swales & Malczewski, 2001) and the intrinsic link between meaning and collocation (Sinclair, 1991). But a closer look to instances of the collocate *and then* in the NAC revealed that in most cases the meaning was temporal (130 occurrences) rather than additional (13 occurrences), as it usually occurs when *then* comes in isolation. However, in such cases *then* seemed to mainly convey a temporal meaning rather than consecutive.

The meaning conveyed by the collocation *and then* is context-dependent, however there are also other morpho-syntactic elements and patterns that may unveil the function the collocate *and then* is taking in the lecture discourse. If we observe examples 5 and 6 in which *and then* behaves as a temporal micro-marker collocate, the syntactical patterns seem to be the following: *and then* + *subject* + *verb* + *complements* or *and then* + *time expression*. In contrast, when *and then* conveys an additional meaning, the representative syntactical structure shows *and then* + *noun* as illustrated in the examples below.

AND THEN

- (4) a parallel phenomenon does occur in a couple of other Romance uh, varieties.

 and then there's a mor- a more broad based uh t- uh issue as well (LE12/NAC)

 Additional
- (5) flee by him because he knew that would inevitably follow from what he had seen. *and then* he fled, to the Medit- across the Mediterranean to Egypt (LE2/NAC) *Temporal*

4.2. Then and its equivalents in Spanish lectures

When analyzing the SC for data concerning *then*-equivalents in Spanish it has to be taken into account that English and Spanish DMs may not necessarily have a single counterpart in Spanish or vice versa. When observing the SC it was found that *then* could have three different lexical counterparts in Spanish, these are, *entonces*, *por lo tanto* and *luego* and most of these instances have more than one semantic meaning depending on the context/co-text in which they appear. See table below for *entonces*, *luego* and *por lo tanto* results in the SC.

Table 2. Entonces, luego and por lo tanto results as Temporal, Consecutive and Additional DMs

Additional	# DMs	‰	Temporal	# DMs	‰	Consecutive	#	‰
							DMs	
luego	16	0.2	entonces	44	0.5	entonces	196	2.4
			luego	42	0.5	por lo tanto	84	1.0
						luego	13	0.2
Total	16	0.2		86	1.0		293	3.6
	l			I	Į.		l	
Global	395	4.9						
Total								

As can be observed from table 2 above, the micro-marker entonces seems to be the most recurrent one compared to luego and por lo tanto. Entonces seems to be the most faithful equivalent to then in English as a matter of usage. Entonces as a polysemous micro-marker can function as Temporal or Consecutive; however, and in contrast to then results in the NAC, it is more frequent as a consecutive (196 occurrences) rather than as a temporal (44 occurrences) micro-marker. Within Temporal we also find a key micro-marker, entonces (44 occurrences). This micro-marker is one of the most complex and recurrent ones along with luego (42 occurrences). Both entonces (0.55%) and luego (0.5%) have not only similar frequency rates, but they can also fit in more than one category depending on the semantic meaning conveyed. Entonces can be used as a temporal DM when conveying temporal relations between discourse utterances joining syntactic clauses together, in some of these cases *entonces* has a somehow similar meaning to the temporal conjunction después (then) or a meaning similar to the expression más tarde (later), although not always. Entonces can also be a temporal DM when collocating with temporal adverbs such as ahora or ya emphasizing time meaning. Take for instance the following example from the SC3.

AHORA ENTONCES

(6) la fórmula rápida que os he dado está anteriormente especificada, pero ahora, ahora entonces, también se puede comprobar incluso sería más fácil de demostrar/ the specific quick formula that I've already given to you, but now, now then, it can also be proved and it'd be easier to demonstrate. (LE3/SC)

³ All Spanish examples extracted from the SC have been provided with an English translation for a wider audience understanding.

Temporal instances of *entonces* are not as frequently used as *entonces* when it functions as a consecutive micro-marker, as shown in Table 2. We have also noticed that *entonces* tends to collocate with the coordinate conjunction y and this normally occurs after a pause, however, in that case *entonces* seems to, more typically, convey consecutive meaning rather than temporal, contrary to what was seen above for *and then*.

Y ENTONCES

(7) O sea, si un acontecimiento, es una situación incontrolable, es externa, y entonces hagamos lo que hagamos, siempre ocurrirá lo mismo./ I mean, if an event is beyond control, it's external, and then whatever we do, it'll always happen the same (LE3/SC) Consecutive

The micro-marker *luego* can also convey temporal, consecutive and also less commonly additional meaning. As a temporal DM, *luego* has a similar meaning to the temporal Spanish adverb *después*, also a translation equivalent to *then*, although not as frequent as *luego* in the SC analyzed. Read the following examples.

LUEGO

- (8) simplemente dedicaremos unas [eleva el tono] pocas líneas a cada uno de ellos y luego ya iniciaremos en los que sea adecuado pues más adelante./ we'll talk about them briefly <u>and then</u> we'll begin with the correspoding ones later on. (LE2/SC) Temporal
- (9) la mecánica por si no lo sabéis es la siguiente, *luego* hablaremos con más detalle el tema del control interno pero.../ the procedure, in case you don't know, is the following, then we'll talk in detail about the internal control but...(LE3/SC) Temporal

In example 8 above the temporal use of *luego* co-occurs with the coordinate additional conjunction *y*; in any of the two examples above *luego* can be easily substituted by the time adverb *después* 'later' with no change of meaning.

The two remaining categories with a lower frequency rate are, in order, Consecutive with 3.6% (293 occurrences) and Additional with 1.2% (99) in the whole corpus. Within Consecutive category the micro-marker that stands out is *entonces*, a complex and polysemous DM as we commented above for the temporal category. *Entonces* is considered to be a consecutive micro-marker when functioning as an argumentative conjunction mostly interchangeable with Spanish expressions such as *en tal caso* (*in that case*), *siendo así* (*being so*), these uses of *entonces* are more recurrent than *entonces* as a temporal micro-marker in the Spanish lecture corpus analyzed. Instances of *entonces* had to be hand-edited to find out the semantic meaning conveyed in each case. Read example 12 with *entonces* as a consecutive micro-marker.

ENTONCES

(10) Con descuento y lo contrario si es menor que cero *entonces* la moneda va a cotizar con premio [pausa]./ with a discount and the opposite if it's less than zero then the currency is going to trade at prize [pause] (LE7/SC) Consecutive

The other recurrent micro-markers within the consecutive category that function as *then* equivalents in Spanish are *por lo tanto* and *luego*. *Por lo tanto* occurs 84 times with a frequency rate of 1‰. It has proven to be more recurrent in certain lectures than in others, especially in Art and History lectures which are typically monologic, not being homogeneously used along the twelve lectures that form the SC. This could be due to different lecturing styles and idiolectal variations. An example of *por lo tanto* is shown below.

POR LO TANTO

(11) gracias a esta política imperialista. Por lo tanto una consecuencia no directa es una [eleva el tono] satisfacción... /thanks to this imperialist policy. Therefore an indirect consequence [raises pitch] is a satisfaction... (LE1/SC)

With a lower frequency rate (0.2‰) and 13 occurrences comes the consecutive micromarker *luego*, also commented as a temporal DM. When functioning as a consecutive DM, *luego* could be substituted by *por lo tanto* (*therefore*) having the same meaning. Instances of *luego* expressing the consequence happened to occur in some concrete lectures, especially when *luego* is used to explain mathematical formulas as in example 12 below.

LUEGO

(12) Multiplicado por una cantidad menor de la unidad, en valor absoluto, luego nos tiene que dar una pendiente pequeñita, pero no de 0/ Multiplied by a smaller amount of the unit, in absolute value, then we get a light slope, but not a zero one (LE3/SC)

Luego can also convey semantic additional meaning and function as a micro-marker joining clauses within the discourse, these instances of *luego* as an additive marker are not very frequent and have shown to be specific of one or two lectures, the reason could be due to disciplinary variations or idiolectal variation of lecturer's discourse. Additional *luego* has shown 16 occurrences with a 0.2% frequency rate (see example below).

LUEGO

(13) y este tema lo vamos a desarrollar en la parte de apoyo social e interés sociales, en otro de los temas de la asignatura. *Luego* está el voluntariado, que también lo vamos a desarrollar/ and we're going to see this unit within the social support and social interests, in another of the subject units. <u>Then</u> we have volunteering, we'll also see this (LE9/SC)

5. CONCLUSION

Special attention has been drawn to the micro-marker *then* in this study, but not only because of its higher frequency rate in the NAC (where it is the most often used temporal micro-marker), also because of the importance of its Spanish equivalents in the SC. As explained in the above section, *then* as a micro-marker can function with a temporal, consecutive and/or additional meaning. Nevertheless, I observed that *then* as a temporal micro-marker does not have a unique single counterpart in Spanish. In Spanish lectures *then* can have three different equivalents such as *entonces*, *luego* or *por lo tanto*; either with a temporal, consecutive or additional function as is the case of *luego*. The following table is an attempt to summarize the micro-marker *then* and its Spanish micro-marker equivalents as to contextual functions (marked X) and translation equivalents.

Table 3. Then and its equivalents in Spanish according to their semantic and functional meanings

NAC	Consecutive	Temporal	Additional
then	X	X	X
SC			
entonces	X	X	
por lo tanto	X		
luego	X	X	X

If we closely observe *luego* in Spanish lectures we realize that *luego* has a prominent place as an additional micro-marker in the Spanish lectures, while *then* as an additional marker can occur in the NAC but it is not as frequent and recurrent as *luego* in the SC. *Luego* with a contrastive meaning in the Spanish corpus has proven to be more relevant in one specific lecture (LE4) when it comes to explain mathematical formulae: apparently a sequential, problem/solution macro-structure of a lecture in Spanish may use *luego* with a consecutive meaning rather than with a temporal or additional function. This is one example of the complexities that can arise when comparing and contrasting DMs in two languages using multilingual corpora.

One striking difference found between the use of *then* and its equivalents in Spanish is that, in the case of *luego*, *entonces* or *por lo tanto* in Spanish, we could not get clear syntactical patterns that would allow us to match the functional meanings of the markers in each context with quite fixed predetermined syntactical patterns as visibly found with the micro-marker *then* in the NAC. One would have expected the contrary, taking into

account the Spanish syntactical, discoursal and textual tendency to use long sentences/utterances, at least longer than the English language. However, the results in the study based on real instances of lecture corpora have shown the opposite. Nevertheless, generalizations from this result cannot be made, a larger multilingual corpus as well as a deeper analysis on this issue would be needed to corroborate the findings.

Then in the NAC is used preferably as a temporal micro-marker, as the number of occurrences and rate showed. In contrast, one of its equivalents in Spanish, that is, *entonces* is preferably used in the SC with a consecutive function rather than a temporal one. One explanation to this could be that in English the consecutive function is mainly expressed by another consecutive micro-marker such as *therefore*, being this latter an English synonym for *then* within the consecutive function.

Departing from the idea of Sinclair and his colleagues that meaning and collocation are inextricably linked (Sinclair, 1991, 1997), the study has proven that in the NAC the micromarker *then* recurrently collocates with the additional marker *and* when functioning as an additive or temporal marker. This proves that DMs cannot exclusively be treated as single individual units in spoken discourse but as multiple units that collocate with other units to create meaning (Swales & Malczewski, 2001). As mentioned before in this paper, in order to make a comparative analysis of DMs in two languages, choosing counterparts is not probably the best linguistic option and building theory, take the case of *then* as a good example.

In this study, I departed from the idea of looking at the semantic and pragmatic correspondences, similarities and divergences of the DM *then* and its Spanish equivalents in lecture discourse. The existence of any link between meaning and collocation in any of the above mentioned DMs was also discussed.

As a conclusion, it can be said that there are similarities as well as differences in the use of micro-markers that convey internal ideational relations that affect *part-of-discourse/part-of discourse* elements (micro-markers) in English and Spanish lectures, especially in the use of some specific categories presented such as Temporal, Contrastive and Additional. Special uses occur when trying to find counterparts or translation equivalents between English/ Spanish and/ or vice versa with some particular micro-markers as is the case of *then* and its Spanish equivalents *entonces/luego/por lo tanto*. It has been shown how translation equivalents between two languages do not always have the same semantic, pragmatic and syntactical equivalences in multilingual comparable corpora.

In this paper I tried to broaden the research done up to date on contrastive linguistics using multilingual computer corpora. The study was built on computerized working methods and the construction of hypotheses as to the use of *then* in English and Spanish

lectures. The contribution of this study can help foreign language teaching practices and materials. Native and non-native university students as well as scholars can benefit from the findings of this study.

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