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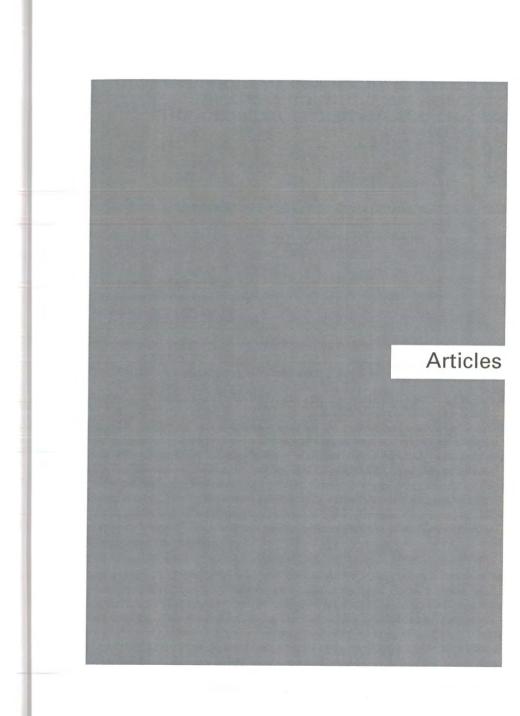
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HOW THE PHONEME INVENTORY CHANGES ITS SHAPE: A COGNITIVE APPROACH TO PHONOLOGICAL EVOLUTION AND CHANGE

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1. Phonetic prototypes, sonority and peripherality

According to Langacker (1991: 343), three general considerations should be borne in mind in order to assess the viability and potential insight of cognitive grammar for both synchronic and diachronic analysis: naturalness, conceptual unification, and theoretical austerity. *Naturalness* is understood here as the capacity to explain linguistic phenomena on the basis of well-established or easily demonstrable abilities. *Conceptual unification* implies that Cognitive Grammar (henceforth CG) posits only semantic structures, phonological structures, and symbolic relationships between them. Finally, *theoretical austerity* means that "the only elements ascribable to a linguistic system are semantic, phonological, and symbolic structures that occur overtly as (parts of) linguistic expressions, schematizations of such structures, and categorizing relationships."

Following the work of, among others, Rosch and Mervis (1975), Lakoff (1987) and Hampton (1993), we will refer to categories with a graded structure as *prototype-effect categories*, where the prototype is the most typical member of the category, and prototype-effects are those of grading. The notion of prototype expresses the sense that objects being categorized are not defined by the presence or absence of criterial distinctive features, but rather in terms of similarity to what is perceived as the prototypical member of its category (Taylor 1995: 27; Valimaa-Blum 2006: 98; Blevins 2004).

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To give a prototypical example, a sparrow would be a prototype of bird, whereas an ostrich (because of its atypical characteristics, notably its inability to fly) would not. In order to determine relative degrees of prototypicality, we can use such factors as frequency of occurrence, order of acquisition, and degree of universality (Langacker 1999: 514-515).

A first approach to phonological prototypes is given by Nathan (1986, 1995, 1996, 2006), who proposes *sonority* as the most important source of prototypical effects in phonology. Sonority (which he presents as a radial category) is measured in terms of loudness and openness of the vocal cavity. In Nathan's analysis, the fact that language must be audible implies that the louder a sound, the more prototypical effects it possesses. Since any kind of closure will limit the amount of noise produced by the speaker, sounds articulated with a complete closure of the mouth (i.e. stops) are less prototypical than those sounds in whose articulation the air escapes evenly and freely through the speaker's mouth (i.e. continuants and, especially, vowels). This implies that the prototypical speech sound is a vowel, and whereas open vowels can be considered 'more phonemes' that non-open ones, voiceless consonants are 'less phonemes' than voiced ones.²

In order to complete Nathan's analysis, I will use here the term *peripherality*, introduced by Labov, Yaeger and Steiner (1972), who proposed that vowel nuclei in many northern European languages can be divided into peripheral and nonperipheral categories. This distinction is based on the configuration of vowels in F_1/F_2 space. Peripheral nuclei are those located on the periphery of the vowel space, whereas non-peripheral nuclei are those located on the inside. In addition, peripheral vowels are normally also phonologically tense, while nonperipheral vowels are usually (but not always) phonologically lax (Thomas 2000).

The concept of peripherality, which implies that those sounds articulated closer to the periphery of the vowel space are more clearly distinguished by the hearer than those sounds articulated nearer to the centre of the mouth, has been used to propose several principles of diachronic vowel shifting (Labov 1994: 170-177). According to these principles (which will be outlined in the next paragraphs), there exists an inverse relationship between peripherality and changes in openness, so that "in chain shifts, peripheral vowels become less open and nonperipheral vowels become more open" (Labov 1994: 262). Given this link between peripherality and openness, we can assume here that changes in the degree of peripherality of a vowel imply a modification in its degree of openness and, consequently, in its prototypical effects.

Peripherality holds both for articulatory position and acoustic properties of sounds. By combining peripherality and height, we can confidently affirm that open peripheral vowels are more prototypical than their nonperipheral counterparts, even

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when their degree of openness is identical. The open vowel /a/ appears thus as the most prototypical instance of a phoneme, in so far as it shows the highest degree both of frequency of occurrence and of universality (Lass 1984: 130-147) and it is the first sound to be acquired by infants (Vihman 1996: 16-29).

According to Labov (1994: 601), in Germanic languages long/tense vowels are peripheral, whereas short/lax vowels are usually nonperipheral. This explains why Present-Day English tense vowels, which require a relatively strong muscular effort and involve a greater movement of the vowel tract away from the position of rest, produce a relatively strong spread of acoustic energy (McCombs 2006), whereas short vowels, which are produced with less muscular effort and movement, are short and less distinct. In fact, in faster rates of speech short vowels may not reach their intended targets as completely as long ones, as before they have fully emerged from one consonantal transition, they are engaged in another one (as predicted by the target-undershot model described by Lindblom 1963, 1990).

2. Paths of phonetic change

From a diachronic point of view, the introduction of different degrees of phonetic prototypicality implies a new notion of sound change. Thus, in chain shiftings sounds can do one of two things: they can become either more prototypical or less prototypical. Moreover, a vowel can change its degree of prototypicality in one of these two ways: by changing its degree of openness, and/or by changing its degree of peripherality.

	MORE PROTOTYPICAL EFFECTS	LESS PROTOTYPICAL EFFECTS
height close > open		open > close
peripherality	nonperipheral > peripheral	peripheral > nonperipheral

Following Labov's (1994: 601-602) principles of chain shifting, I will propose here a classification of sound change that is based on the cognitive notion of prototypicity.

Principle 1: In chain shifts, the relatively more audible sounds within a given phonological system will become less audible.

This principle explains why, throughout the whole history of the English language, long vowels and long consonants have shown a strong diachronic tendency to become either closer/unvoiced or, when closing/unvoicing was not possible, shorter. Here are some illustrations of this general tendency from the different periods in the early history of the English language:

1.1. Closing of open vowels: the Long Back Merger (LBM; Lass 1994: 18; Díaz Vera 2001: 116). The PrGmc³ LBM implies a decrease in the degree of prototypicality of IE */α:/ in the primitive Germanic languages, where this phoneme becomes more closed and, consequently, less loud.

E.g. IE */ α :/ > PrGmc */o:/; e.g. IE */'bh α :ghu-/ 'shoulder' > PrGmc */'bo:ku-/ > OE $b\bar{\nu}g$ 'bow').

i:				u:
	i		u	
e:				0:
	е	ə	0	
				α:
а				

1.2. Closing of open consonants: Gmc long voiced fricatives (Lass 1994: 28; Díaz Vera 2001: 118-119): This change implies that WGmc long voiced fricatives became long voiced stops in OE, i.e. they underwent a process of closing from fricatives to stops, as can be seen in the following examples:

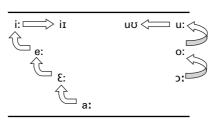
Gmc */ $\beta\beta$, dd, $\gamma\gamma$ / > OE /bb, dd, gg/; e.g.

Gmc */'hαββαn/ 'to have' > OE habban /'hαbbαn/

Gmc */'riddα/ 'rider' > OE ridda /'riddα/

Gmc */'froγγα/ 'frog' > OE frogga /'froggα/

1.3. Shortening and loss of peripherality: the Great Vowel Shift (GVS; Guzmán González 2005): In most cases, the GVS implies a process of closing of ME long vowels (similar to the process of closing described above; see LBM); only in those cases where the ME vowel was already maximally closed (ME /i:/ and /u:/), the original vocalic sound became short (i.e. less peripheral) and an epenthetic vowel was developed immediately after it (with the subsequent process of diphthongization):



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This explains why English short vowels and short consonants have always shown a strong diachronic tendency to become either more open/voiced or, when opening/voicing was not possible, longer. Here are some examples from the history of English:

2.1. Voicing of unvoiced consonants: the First Sound Shift (Grimm's Law Part I; Lakoff 1993): According to Grimm's Law (Part I), IE voiceless stops /p, t, k/ became voiceless fricatives in PrGmc (i.e. /f, θ , x/) and, under some circumstances (after a stressless vowel; Verner's Law), the resulting continuant consonants were voiced into / β , d, γ /.

* p	* f	IE *peisk- vs. OE fisc 'fish'
* t	* 0	IE *tenu 'to stretch' vs. PDE thin
*k	*x	IE *krewθ 'raw meat' vs. OE hrēaw 'raw'

(2) Verner's Law
P: If [V, -stress] X and X=[+cont], then X=[+voice].

* p	*β	*b	IE *septm vs. Gothic síbun 'seven'
*t	*δ	*d	IE *p∂tēr vs. OE fæder 'father'
*k	*४	*g	IE *dukā vs. OE togian 'tow'

In both cases, this mutation implies a gradual increase in the degree of openness of the mouth organs and, as a consequence of this, the production of a louder phoneme.

2.2. Lengthening of short phonemes: changes in ME vocalic length. ME short vowels became long and, consequently, peripheral, when they were found in an open syllable, as in the following examples:

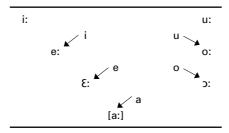
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OE /e/ > ME /\(\xi\)/ > /\(\xi\): e.g. OE mete 'meat' > ME meat ['m\(\xi\):tə];

OE /o/ > ME /J/ > /D:/: e.g. OE broken 'broken' > ME broken ['bro:kən];

OE /i/ > ME /e/ > /e:/: e.g. OE wiku 'week' > ME week ['we:k];

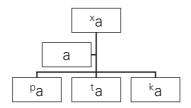
OE /u/ > ME /o/ > /o:/: e.g. OE duru 'door' > ME door ['do:r]



Mechanisms of sound change: a mentalist view of allophonic variation

In the previous section, phonetic change has been divided into two main routes: the first route means a loss in the degree of prototypicality of the phoneme, whereas the second route refers to those diachronic processes that produce more prototypicality. In both cases, our usage of the term prototypicality implies factors that are both articulatory (degree of openness) and auditive (degree of audibility).

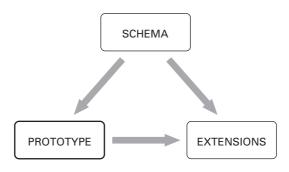
Taking into consideration these two basic principles, we are going to consider now the nature of allophonic variation. In my analysis, I will consider a phoneme as a complex category (Nathan 1986, 1996; Eddington 2007) consisting of a hierarchical set of allophones. The basic allophone within a given category corresponds with the basic allophone of a phoneme, which can be equated with the category prototype. The other allophones will function as context-induced extensions of this prototype, as diagrammed in the following figure (based on Langacker 1991: 273):



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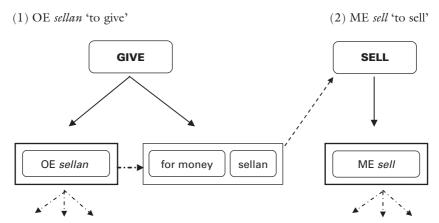
As Nathan (1996: 112) puts it, "we should expect to find that phonemes are organized into radial categories in the same way that cups are, and that there are general principles governing the relationship among the members of the categories." Supposing that the phoneme /a/ in a given language occurs only in the syllables /a/, /pa/, /ta/ and /ka/, we can calculate a minimum of four allophones for this phoneme: [a], which stands alone as a syllable, and its three derivations [Pa], [ta], and [ka], where the preceding consonant induces a given phonetic feature through a process of accommodation. It is precisely this need to be accommodated to their consonantal environment that prevents these three allophones of /a/ from reaching their highest degree of loudness, so that they become less peripheral and less open and, consequently, less prototypical than the central allophone [a].

The phonological system of a language is thus composed of a varying number of networks, each of which consists of one central allophone plus all its possible derivations. The network model extends beyond the realm of allophony: let us suppose for instance that eat is first learned with reference to the process of food ingestion by humans. The semantic pole of this verb is limited initially to that single value, which acts as a prototype of the whole category. However, the action expressed by this lexeme is not limited to that canonical view of eating, but includes a vast variety of more or less different actions: e.g. human and animals eat differently, and this difference is lexically expressed in some languages (such as German essen v. fressen). Moreover, the way we eat changes, depending on such different things as the type of food we are ingesting or the social context of the very act of eating. Finally, the set of actions expressed by the word eat is not reduced to food: we can eat words, fire, money, hats, and we can even be eaten by a negative feeling, such as trouble or jealousy. Each one of these prototypical meanings implies a semantic extension from the central meaning 'to consume food', which form a complex semantic network:



4. Semantic change and phonetic change: some steps towards conceptual unification

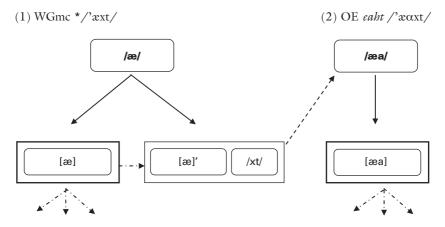
Within this framework, semantic change can be analyzed as the development of an independent semantic pole from a previously existing semantic extension. As can be seen in the following example, one of the numerous semantic extensions of OE *sellan* 'to give', which implied the action of 'giving somebody something for money', was able to lexicalize and create a new categorization schema, corresponding to ME *sell* 'to sell' (Vázquez González 2005: 57-60):



In similar fashion, phonetic change implies the phonologization of one of the allophones from that phonological pole. This way, a new phoneme is created, whereas the previously existing phoneme may either disappear (as in the case of unconditioned changes) or simply diminish its relative frequency (in conditioned changes). The following figure represents the results of the breaking of OE $/\alpha$ / by the consonant group /xt/ (e.g. OE *eaht* 'eight'; Lass 1994: 45-48; Díaz Vera 2001: 129-132).

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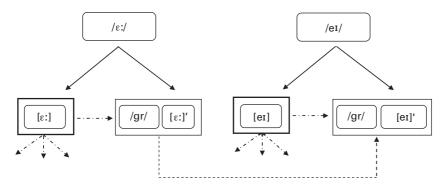


Like semantic change, phonetic change frequently implies a total or partial merging of two previously existing phonetic units, producing a growing degree of homophony within the linguistic system.

A short analysis of the evolution of ME peripheral vowels during the Great Vowel Shift illustrates this principle clearly. The evolution of ME /ɛ:/ into ModE indicates the existence in ME of at least two allophones for this phoneme: the more peripheral vowel [ɛ:] and the less peripheral [ɛ:]', which was found in such words as break, great and drain. The highest degree of prototypicality corresponds to ME [ɛ:], in so far as it is more peripheral than its extension, ME [ɛ:]'. The relationship between preceding obstruent + liquid clusters and degree of peripherality has been analyzed by Labov (1994: 180-182), who argues that front vowels preceded by such clusters tend to lower their F2 coefficient, moving them to a position significantly nearer to the nonperipheral area of the vowel space.

Things being so, the evolution of ME [ϵ :]' in ModE can be described as a change of one allophone from one phonemic network (represented by ME $/\epsilon$:/) to another (represented by ME $/\alpha$:/):

(1) ME /'grE:t/ (cf. ME meat /'mE:t/) (2) ModE /'greIt/ (cf. ModE mate /'meIt/)



In the light of all this, some major parallels can be observed between phonological and semantic change. These parallels have to do with:

- (1) the regular character of both types of change (the possibility of systematically structuring meaning-change along more or less regular paths implying a new view of semantic evolution), and
- (2) the existence of processes of psychological categorization which are apparently common to the two domains.

Sweetser (1990) has observed three basic types of regularity in the history of phonological systems, which have parallels in the history of semantic systems:

- 1. It is possible to identify directions of change which are recurrent and natural;
- 2. Units can be observed to change *in parallel*, maintaining the contrast relationships between them, and
- 3. Completed change affects a unit completely (all instances of the unit are affected).

5. Concluding remarks

In our own analysis, and treating both meaning and sound units as mental categories, we have tried to show how the principles of categorization and generalization motivate similar diachronic patterns both in the semantic and in the phonological domains.

Using the notion of sonority as our main indicator of prototypical effects in phonology, we have included within its radial category the concept of peripherality (a term developed in the sociolinguistic tradition to refer to the location of vocalic nuclei on the edge or within the vowel envelope). As we have argued, peripherality contributes, together with loudness and openness, to relatively higher sonority. Consequently, within this conception of sound change, changes in the degree of peripherality of a phoneme imply further changes in their relative degree of sonority. This means that in a process of chain shift as the ones described above, whole sets of phonemes become either less prototypical instances (I.1, I2) or more prototypical instances (II.1, II.2) of the category phoneme in a coordinate manner. Chain shifts are thus seen as changes in the relative degree of prototypicality within a given phonological system of the phonemes involved and, subsequently, in the way speakers categorize the set of sounds that conform their actual inventory of phonemes.

Notes

- 1. Nathan (1996: 118) proposes a very partial definition of the term sonority and its components: "...no single characteristic corresponds to pure sonority. Instead, a number of characteristics (loudness, openness of the vocal cavity, sustainability, etc) all contribute to relatively higher sonority".
- ². A similar approach is presented by sonority theory, according to which the pulses of pulmonic air stream in speech "correspond to peaks in sonority" (Giegerich 1992: 112). Speech sounds can be ranked in terms of their intrinsic sonority according to a
- sonority scale, from "more sonorous" (vowels) to "less sonorous" (plosives). See also Gussenhoven (2007) for a detailed analysis of the articulatory effects of voiced and unvoiced consonantal contexts on PDE English vowels.
- ³. The following abbreviations will be hencefoth used: IE: Indo-European; PrGmc: ProtoGermanic; WGmc: West Germanic; OE: Old English; ME: Middle English.
- 4 . Where W = word level and P = phonetic level.

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TRANSFER AND UNIVERSAL GRAMMAR IN UNACCUSATIVE CONSTRUCTIONS ERRORS

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1. Introduction

From the first studies in the field of second language acquisition (L2A), it was noticed that many of the grammatical errors L2 learners make –in Corder's (1967) sense, as opposed to mistakes– are not due apparently to their native language (L1) structural influence, as reflected in traditional Contrastive Analysis theory, but rather seem to involve or be a sign of some process of intralingual development. In fact, nowadays Interlanguage –IL, the concept about the transitional linguistic competence of L2 learners first introduced by Selinker (1972)– researchers take for granted that both factors, that is, native language influence and some kind of independent creative processes –call them Universal Grammar or Operating Principles, to name two of the most well-known proposals– are at work in the building up of non-native linguistic competence.

Elsewhere (Escutia 2002) I have attempted to show how L2 English word order errors in indirect embedded clauses by L1 Spanish adult students do not respond to the surface structure of the corresponding L1 constructions. Rather, their origin might be found in both the interaction of the different values of the L1 and L2 for specific syntactic features and overgeneralization of grammatical aspects of the L2; that is, both L1 transfer and creative construction could be active in the acquisition of these particular structures and their effects can be linguistically articulated.

Here, I will present some written production data taken from the compositions of L2 adult high-intermediate learners in an institutional milieu. I will look at one type of error which involves non-standard subject expletive insertion in sentences with unaccusative predicates. It is a very common error in learners at this proficiency level, and which, as in the case alluded above of the indirect embedded questions, does not respond to the surface structure of the corresponding L1 constructions. Using linguistic theory I will provide an explanation of the possible underlying linguistic processes at work and will show how the grammatical transitional solution the learners have found is consistent with Universal Grammar but corresponds neither to the L1 nor the L2.

I will proceed as follows: first, the linguistic framework adopted in my study will be briefly introduced; secondly, the type of error will be presented; thirdly, the surface manifestations of unaccusativity in both Spanish and English will be examined and contrasted; then, I will return to the specific error referred to and try to account for it in terms of linguistic theory; finally, some pedagogical recommendations will be briefly sketched.

2. Linguistic articulation of transfer and construction processes

I concur with Flynn (1987) that L1 influence and independent construction processes are both significant in L2 acquisition, but they should emerge as natural by-products of a theory based on fundamentally secure theoretical foundations, both psychologically and linguistically. Moreover, this theory must be capable of explaining properties of language deeper than simple surface structure reflexes in order to significantly account for crucial aspects of language acquisition.

In the last twenty-five years, there have been several important attempts at formulating a coherent theory of L2 acquisition compounding this dual influence within the chomskyan theory of Universal Grammar (UG, or innate constraints in the development of natural grammars), first within the Principles and Parameters framework (Chomsky 1981) and more recently within the Minimalist Program (Chomsky 1995, 2000, 2001a, 2001b), which would make both components, contrast and construction, compatible and derivable from the same linguistic theory. The former approach postulated that UG included universal linguistic principles (e.g. structure dependence, projection principle or X-bar theory, binding, etc) and built-in options called parameters with binary settings allowing for crosslinguistic variation (e.g., head first or last with respect to the different types of phrases in a language). Parameter options determined a cluster of derived syntactic properties that a native speaker would display and learners would

theoretically learn once they had set correctly the parametric option of the L1 or L2, respectively. The Minimalist Program associates those parametric differences between grammars and their consequent syntactic effects with the feature values of functional categories, such as complementizers, agreement, negation, determiner, etc; all of them part of the UG inventory. As White (2003: 10) explains, "the lexicons of different languages vary as to which functional categories and features are instantiated and what the strength of the various features may be". Here I subscribe to the position that L2 adult students project those feature values present in their L1s as an initial hypothesis in their handling of the L2, that is, what has been called the Full Transfer/Full Access Hypothesis (Schwartz and Sprouse 1994, 1996). Within this hypothesis, convergence on the relevant L2 properties may occur through restructuring of the L1 grammar in response to L2 input. However, this is not guaranteed and divergent outcomes are possible though all of them supposedly constrained by UG. In addition, I agree with other researchers (Liceras et al 1997, Smith and Tsimpli 1995) that L2 functional feature values are not acquirable and restructuring of the L1 grammar takes place in a piece-meal fashion, trying to accommodate the different surface structures or manifestations which in the L2 are the syntactic consequence of those values.

In this spirit, I will examine next the type of English as a foreign language (EFL) error present in the production of unaccusative predicates by Spanish high intermediate EFL students, seeking to point out what might occur linguistically in the construction of their IL grammars for these particular structures and how L1 influence could be linguistically articulated in their production. These are certainly performance data obtained from the students' academic writing. Although extrapolating to grammatical competence is a big jump, their frequency as well as the students' surprise at being corrected when faced with this kind of error might be a sign of some stable underlying grammatical specifications.

3. Data and subjects

The data to be examined correspond to a very common type of error in both the written and oral production of advanced Spanish EFL students, as any English teacher at this level can bear out. It consists of the insertion of a non-standard preverbal expletive and post-verbal placing of the non-clausal subject in sentences with ergative, passive and *be+adj* predicates. The data exemplifying it correspond to six sentences extracted from the written homework compositions of six high intermediate students, as measured by their having passed the Cambridge First Certificate in English examination the previous year. They are all second year Spanish university students majoring in English at Madrid Complutense University.

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Only one sentence has been chosen from each subject –as this is a qualitative study, each item reflecting the error under study with a different kind of predicate. They represent the whole gamut of possibilities for this kind of error within the students' group, as can be seen by looking up the other eighteen examples produced by their classmates in the appendix. The students selected –sixteen altogether– were enrolled in a four-month Composition course where they had to hand in three compositions, out of which all twenty-four items have been taken. For each example (in 1a-6a), both the corresponding standard English and Spanish version are given below (in b. and c., respectively)¹.

- (1) a. *.. and then it was opened the door
 - b. '.. and then the door (was) opened'
 - c. ...y entonces se abrió la puerta/(la puerta) fue abierta (la puerta)
- (2) a. *When it begins the second night everything is quiet.
 - b. 'When the second night begins, everything is quiet'
 - c. Cuando empieza la segunda noche todo está tranquilo.
- (3) a. *It happened many things
 - b. 'There happened many things' / 'Many things happened'
 - c. Ocurrieron muchas cosas.
- (4) a. *It exists many people that would do the same
 - b. `There exist many people who would do the same' / 'Many people exist who would...
 - c. Existe mucha gente que haría lo mismo
- (5) a. *It was eaten a lot of food in the party
 - b. 'A lot of food was eaten at the party' / (?) 'There was (a lot of food) eaten at the party (a lot of food)'
 - c. Fue consumida mucha comida en la fiesta / Se consumió mucha comida en la fiesta.
- (6) a. *... because it is possible human cloning
 - b. '... because human cloning is possible'
 - c. porque es posible la clonación humana

As can be seen, in each case a non-standard expletive (semantically empty) preverbal pronoun it has been inserted where standard English would either place the semantic subject pre-verbally (in all examples (1) to (6)) or insert expletive *there*, which is theoretically possible in items (3), (4) and (5)² (see Quirk et al 18.45, 49: 1404-1409).

Expletive *it* can only anticipate clauses –which have neither person nor number (functional) φ -features– because it carries both person (3rd) and number (singular) to match the corresponding finite features of the Tense Phrase (TP) and is co-

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referential with the notional post-verbal clausal subject. Expletive *there*, on the other hand, only carries (3rd) person features, leaving the number feature in T(ense) unvalued and making thus ungrammatical the corresponding sentence (e.g.: *It/*there is impossible that she was at home*). It can anticipate indefinite DPs (basically, NPs), as in examples (3) to (5), which have both person and number features to value the corresponding ones in T. *There* is placed pre-verbally by merge³, the operation of assembling the sentence, in order to satisfy the Extended Projection Principle (EPP) feature of T, which makes sure that all English sentences have overt pre-verbal subjects occupying the specifier position of TP (thus fully projecting T into TP).

Data similar to those in (1a)-(6a) have already been attested by researchers, such as Zobl (1989), Rutherford (1989) and Oshita (2000), who also provide written production from –among others– Spanish L1 intermediate students. Other authors have studied the English and Japanese L2 acquisition of unacussative predicates (see Hirakawa 1995, 2001; Oshita 2001; Sorace and Shomura 2001) and still others the L2 acquisition of Romance languages (see Sorace 1993, 2000; Montrul 2005), in both cases, from a broader perspective than is taken here and not focusing on a particular type of error as I do.

4. Contrastive study of unaccusativity in English and Spanish

According to modern linguistic theory, verbs such as open and begin in examples (1) and (2) are intransitive ergative verbs, whose sole argument bears the (semantic) θ -role of theme (that is, the thing affected by or undergoing the action of the verb, with an understood and undefined external agent) and form part of a larger class of predicates that also includes passives (such as (5)) and raising predicates (like happen, exist and be+(certain raising) adjectives (such as, likely or certain), as illustrated in (3), (4) and (6), respectively). The property they all share has been termed unaccusativity. As pointed out by Levin & Rappaport-Hovay (1995), unaccusativity is a syntactically codified semantic property of certain predicates. From a syntactic viewpoint, unaccusative verbs are monadic predicates with a basic internal argument appearing in an external position because they cannot assign accusative case to their internal argument (Perlmutter 1978, Burzio 1986). With respect to their lexico-semantic composition, many unaccusatives express events where an object experiences an internal change related either to its state (e. g. become, disappear) or its position (change of location, e.g. arrive). Other unaccusatives are inherently so, like the presentational/existential happen, exist and be in (3) to (6). All of the above are monadic predicates with an undefined external agent and, consequently, no corresponding transitive counterpart.

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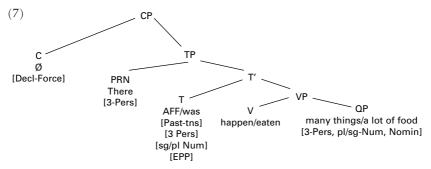
It might seem surprising to find predicates with *be* here alongside other predicates which signal change of state. However, in Old English the latter are conjugated with the verb *to be* as an auxiliary –as in German, Italian or French today, although with certain differences between them (see Sorace 1993, 2000) –rather than with *bave*, as in present day English. Some of this auxiliary use of *be* remains in examples from the King James' Bible, as in 'when they are come to the multitude...' (Mat. 17, 14). In addition, this use is also found in more modern literature, as for example, in the 19th century novel *Vanity Fair*, by William Thackeray: "Becky and Rawdon, as I have seen, are come together after Waterloo..." (Chapter XXXIV).

Sorace (1993, 1995, 2000) has proposed the so-called Unaccusative Hierarchy, according to which, after applying to some predicates certain tests, they are placed from most unaccusative to most unergative (intransitive with an external agent). At the unaccusative end of the scale would be the change of location and state predicates, like those mentioned before, followed by those of continuation of a pre-existing state (*stay*, *remain*), those of a state or condition (*be*, *seem*) and those of a change of state with a transitive counterpart (*open*, *break*, *begin*). Going towards the most unergative end of the scale would be uncontrolled processes (*tremble*, *shine*), motional controlled processes (*run*, *dance*) and non-motional controlled processes (*talk*, *work*). As can be seen, our examples would include predicates at the unaccusative end of the hierarchy.

Since unaccusatives have no underlying argument with an Agent θ -role, they cannot assign accusative case to their sole argument; instead, they value it as nominative via its agreement relationship in φ-features with the finite T probe which structurally dominates it (c-commands, specifically). Subsequently, the Extended Projection Principle (EPP) feature of T triggers its A(rgument)movement in order to become the structural subject of T (see Radford 2004). This is consistent with the so-called Thematic Hierarchy Principle (Jackendoff 1990; Grimshaw 1990; Dowty 1991; Van Valin and LaPolla 1997), which is an interface constraint matching semantic roles with syntactic positions. The latter establishes that the argument with the highest position in such hierarchy (this being, with some disagreement among different accounts: AGENT > RECIPIENT > THEME > LOCATION > SOURCE > GOAL > OBLIQUES) be mapped to subject position, the next highest to direct object position, the next one to indirect object position and so forth. As in the case of the unaccusatives there is only one theme argument, it is going to appear syntactically as the subject although its underlying position would correspond to object or complement position.

What has just been explained implies that –with respect to the example sentences—the following clauses –reflecting the type of errors that both Zobl and Rutherford report for their Spanish L1 subjects– are ungrammatical: *... and then (was) opened

the door, *Happened many things, *Exist many people..., *When begins the second night..., * Was eaten a lot of food, * Is possible human cloning, since the theme argument has to raise to subject position in order to value and delete the EPP feature of T. The Extended Projection Principle (Chomsky 1986) states that finite clauses must have subjects (overt ones, in English) and has been formalized in recent accounts (Radford 2004) as a feature carried by T which has to be deleted by a matching subject in the specifier position of TP, whose unvalued Case feature can be assigned nominative value in the base. The underlying post-verbal position of the theme argument can be seen in their occurrence in constructions with existential *there*, as in the examples: There happened many things, There exist many people..., There was eaten a lot of food at the party, as well as in their occurrence as direct object in those cases with transitive counterparts (ergatives, lower in the unaccusative hierarchy), like open (She opened the door) or begin (The teacher began the lesson) and in their corresponding active counterpart in the case of passives (The guests are a lot of food at the party). A (simplified) representation of two of the examples is given in (7) (where \emptyset stands for a null complementizer carrying a declarative force feature, AFF for the verbal tense affix which is lowered to V in the case of lexical verbs and QP for Quantifier Phrase, a kind of DP whose head is a quantifier).



Thus, two possibilities are available in standard English for examples (3) to (5): either the argument moves to the subject position (spec-TP) or the expletive pronoun *there* (a syntactic filler pronoun without a theta-role) is merged in such position in order to delete the EPP feature of T (or moves there, for those who maintain the base generation of non-thematic expletives in spec-VP). This is so because, in order to be interpretable and grammatical in sentences, DPs must have, respectively, both theta-role (assigned by the corresponding predicate in base position) and Case. For (6), an example of the predicate be+adj, the only viable possibility is the raising of the argument to subject position, as T c-commands a definite matching goal (*human cloning= the* cloning of humans).

In Spanish, the L1 of our students, the themes of the corresponding ergative, passive or raising predicates do not need to move pre-verbally to satisfy the EPP but can remain in their underlying post-verbal position because that is taken care of by the preverbal null subject pronoun *pro* present in null subject languages like Italian or Spanish (Rizzi 1982, 1990). Thus, in the corresponding Spanish translations (1c-6c) to the above non-native English items the DP theme remains *in situ*. Here it is not possible to insert an expletive in preverbal position because whereas English finite morphology requires that the syntactic preverbal subject be realized overtly (even in cases like these, where it has no theta role), the differentiated person and number agreement inflections of Spanish permit null subjects. In fact, there is no such type of expletive in native Spanish⁴. While agreement in Spanish is said to have the syntactic feature [+pronominal], which allows it to identify its null subjects, English is characterised as [-pronominal] (see Alexiadou and Anagnostopoulou 1998).

5. Transfer and linguistic articulation of L2 unaccusativity errors

Our L2 students, such as those of the studies mentioned above, seem to react to the common lexical property of unaccusativity, that is, L2 learners unconsciously seem to pick up on the fact that unaccusative predicates have undergoer subjects. For example, many of the errors Oshita (2000) found in the corpus he studied of L2 English unaccusatives production by different L1 speakers (Spanish speaking ones included) corresponded to passive unaccusatives (e.g. *"My mother was died when I was just a baby"). This somehow points to the learners' implicit knowledge of the patient role of the subject in these constructions. As this property is the result of the interaction of argument structure, Case assignment and satisfying the EPP, it corresponds to constants in the grammatical design of natural languages, or, in chomskyan terms, to UG aspects.

Oshita (2000) found that L2 learners treat unaccusatives and unergatives differently (for example, in terms of always observing the S-V order with the latter while often allowing the V-S order with the former, up to high intermediate proficiency levels). This is taken by some linguists as an example of the poverty of the stimulus problem (Hirakawa 2001, Montrul 2005), that is, a sign that UG must be at work, since there is nothing in the input that might lead them to such different treatment. Consequently, unaccusative verbs are a good test case for implicit learning because they are found in a great variety of languages and behave in the same way although they vary as to their syntactic reflexes; they are never taught explicitly and native speakers are unaware of this phenomenon in their L1. Nevertheless, in spite of all

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these characteristics, L2 learners acquire the distinction between these two types of intransitive verbs (Montrul 2005). Both Sorace (1993) and Montrul (2005) even show that L2 students are sensitive to the unaccusative hierarchy and the semantic distinctions between its different verb subtypes.

Thus, our students represent the argument structure of unaccusative verbs as having an internal theme argument, which they map appropriately to a position within the VP, although this representation could also derive from L1 transfer rather than directly from UG. Their problems relate to moving this argument to subject position in the syntax, as native English speakers do. However, what our examples show is that our students somehow know that the (preverbal) subject position has to be overtly filled (that is, the EPP has to be satisfied as in English) and so they provide a syntactic filler for it. The only divergence with L1 English standard speakers is that they use a different (semantically empty subject) expletive, it instead of there, which, on the other hand, is also present in analogous cases in another natural English variety, Black Vernacular English (in examples such as it ain't no heaven for you to go to: see Labov 1969)⁵. It would seem, then, that in our students' IL expletive it carries a 3rd person feature and an unvalued number feature as, both in the examples under study as well as in those from the appendix, it occurs with either singular or plural post-verbal subjects. Native there, on the other hand, only has a (3rd) person feature and no number feature.

Oshita (2000) also provides similar examples, mainly for Spanish and Italian L1 speakers, whose most frequent errors belong to the type *it-V-NP along with the * \emptyset -V-NP type rather than passive-unaccusative errors, as is the case for the Korean and Japanese speakers of his corpus. The fact that our students' errors tend to be of the first type (*it-V-NP) might point to a more advanced proficiency stage than the * \emptyset -V-NP type from the Spanish speakers of Zobl and Rutherford⁶. It might be a sign that our students are becoming fully aware of the non-null subject nature of English since expletives like these seem to be the most difficult type of subjects for L1 null-subject students to incorporate. At the same time, this knowledge would be compatible with not having learned to raise the theme argument of unaccusative verbs to subject position in all cases, even when it is obligatory because the theme argument is definite, as seen in examples (1a), (2a) and (6a).

Consequently, it might seem that both phenomena, non-null subject and subject raising, need not be related in L2A, contrary to thinking of the first L2A accounts of the Null Subject Parameter (White 1985, Phinney 1987, etc.), where verb-subject inversion used to be considered one of the derived properties of its positive setting (with test sentences normally involving ergative verbs). Here, satisfying the EPP and subject raising seem to be independent. In fact, Montrul (2004) shows how the morphosyntactic aspects of the Null Subject Parameter and the

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unaccusative/unergative distinction are acquired in very early childhood (before four years of age) in monolingual Spanish children and, in L1A, their syntactic consequences might well be linked and fall into place seamlessly. Probably, the situation is the same for English L1, but adult L2A seems to follow different paths, as has been assumed here.

In sum, our subjects may construct their mental grammar in a UG-determined way since they show evidence of the involvement and interaction of the theta Criterion (each argument must be assigned a semantic role), the EPP, the thematic hierarchy and Case assignment. It is possible that in constructing their grammatical specifications for these particular items they may start with their L1 knowledge, which would lead them to simply leave in place the internal argument of the unaccusative predicate in surface syntax, without either raising it to subject position (as in their L1 satisfying the EPP does not require such movement) or providing a subject expletive (treating the L2 as a null-subject language, like the L1). This would seem to be the case for those Spanish speakers reported by both Zobl and Rutherford. Nevertheless, our students have taken a step further in also providing an expletive (although a non-standard one⁷) to satisfy the EPP in the way it is done in the L2. So, although at first either UG, in the sensitivity to unaccusatives' underlying structure, or transfer, in knowing about it through the L1 and treating the L2 as a null-subject language, may be at work, the transitional grammar at this stage seems to have been restructured due to the full realization of the non-null subject nature of English.

6. Pedagogical considerations

Although my work here did not set out to study English unaccusative items from a pedagogical point of view, but rather to linguistically characterize a particular type of L2 error in the production of these elements, it seems pertinent, nevertheless, that I should briefly suggest some teaching applications.

If the errors that have been analysed are developmental, as indeed they seem to be, given how common they are in students from different L1 backgrounds at this high intermediate level (Oshita 2000), there is not much one can do about it except for awareness raising. I do not subscribe to the position which identifies adult L2A with L1A, in which case resetting the corresponding parameter might do the trick. I rather believe that many properties which in the L1 might be linked to particular functional feature values—like either the [±STRONG] character of verbal inflection, depending on the richness of verbal morphological paradigms, or the [± pronominal] feature of verbal agreement which might link both verbal movement and (non) null-subject properties in a super-parameter— are learned by adult L2

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students in a piece-meal fashion; and, for some particular structures, when they are conscious of the difference between the L1 and the L2 through corrective feedback.

Therefore I agree with authors like White (1988), who think that adult L2A cannot proceed only on positive evidence. She suggests that there are cases where change from X to Y will require negative evidence. The results of her studies on verbraising and English adverb placement by L1 French elementary school children (White 1991, Trahey and White 1993) indicate that positive evidence is not sufficient to trigger parameter resetting and that explicit evidence, both negative and positive, is more effective in assisting learners to acquire the properties of the L2 than naturalistic positive evidence alone.

The same view is held by authors working in a different framework like Gass and Varonis (1994), who point out that "the awareness of the mismatch serves the function of triggering a modification of existing L2 knowledge, the results of which may show up at a later point in time" (p. 299). Long (1996) also makes this point when asserting that negative feedback obtained during negotiation work or elsewhere may be facilitative of L2 development, at least for vocabulary, morphology, and language specific syntax, and essential for learning certain specifiable L1/L2 contrasts.

In our particular case, corrective feedback could be provided *a posteriori* by presenting (adult) students with sentences like those exemplified in (1) to (6) (or in the appendix), even alongside others with inversion but no expletive, and questioning them about their acceptability and the specific necessary changes which would make them acceptable. Noticing their error will at least help them in correcting their production when this can be monitored. Preferably, *a priori*, the items under study –ergative verbs, passives and raising predicates– could be taught together, showing their particular possibilities in the placing of their subjects and expletive pronoun use. An analysis which groups a number of structures like these together in terms of their thematic structure clearly has pedagogical advantages.

Thus, following Strozer's (1992) recommendations for other types of items, I would encourage teaching these elements by relating them all in a specific presentation dedicated to unaccusative items, pointing out the (parametric) differences between the L1 and L2. Both facts explored here, subject inversion and the non-native use of expletive it, follow from the thematic requirements of these predicates, and making L2 students aware of it may help them understand and avoid these types of frequent mistakes. Probably, there would be no need to mention other types of predicates, because, as mentioned above, research shows that inversion errors with other verbs, even intransitive (non-ergative) ones, are altogether negligible.

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One can expect that there will be transfer from the L1 at the beginning of L2 learning of these items, which favors post-verbal subjects and no expletive insertion. Even later, when students know that structures like examples (1) to (6) are not acceptable and when they have attained a higher proficiency level, they may still tend to produce them, as did our students and as do even more advanced learners when they cannot monitor their performance. As Strozer points out, non-native adult performance seems to require a lot of conscious 'patchwork' on the part of the speaker "who, for all I know, is using strategies and auxiliary routes that the native speaker does not have to resort to" (Strozer 1992: 101).

In this sense, some oral and written drilling practice, both when presenting the unaccusative items for the first time and when revising these constructions later, might be advisable in order to build up a habit to counteract the tendency towards inversion. Even if one does not subscribe to the view that learning a foreign language is just a matter of developing habits to counteract L1 interference, there are arguably some aspects of language production which benefit from this kind of practice once the learner has understood the problem cognitively. This may be one of them.

In this manner, this study may serve to back up an intuition many EFL teachers have, namely, the need for these structures to be taught explicitly to adult learners, making them aware of the conditions for both possibilities, subject raising and *there* insertion.

7. Conclusion

From the data and corresponding linguistic account given above one could conclude once again that L2 learning does not consist simply in the relexification or dressing up of the structures of the L1 in L2 words. Rather, a different process obtains where the following factors seem to be at work: UG (in the sensitivity to unaccusative underlying structure, perhaps through the L1), the underlying grammars of both the L1 (in the preference for leaving the subject in its underlying position) and L2 (in the provision of expletive subjects). The framework used here allows us both to articulate them linguistically and attribute to them unity of origin in terms of the same underlying principles. This is consistent with Liceras's model of L2A (1996), according to which when adults learn an L2 they restructure (parts of) the linguistic representations they already possess on the model of the L2 surface structure. This is so because their learning procedures, unlike those of L1A, cannot access the feature values of the L2 functional or lexical elements being learned (in this case the [- pronominal] feature of agreement and the φ -features of expletive it in native English).

Appendix:* it-V-NP items produced by ten other students of the same class:

- 1. ...because before it had been a drought.
- 2. ...and it appeared floods in some places.
- 3. There was a big famine in the country and it appeared dead men in some places.
- 4. In an ideal city it wouldn't exist violence.
- 5. I planted carefully the tree where it had been buryed the cat.
- 6. It happened many strange things in that place.
- 7. It exists many people in the world without food.
- 8. Nevertheless it exists other cases...
- 9. It is very strange this fact...
- 10. From this failure it results a question.
- 11. I believe also that it should exist a legislation.
- 12. In some countries it is permitted assisted suicide.
- 13. It was introduced the idea that clonation can be the solution.
- 14. It can exist a risk.
- 16. Because it can appear physical and psychological problems.
- 17. In this family it succeeds terrible things.
- 18. It has to be an end to porn.

Notes

- 1. Although in the Spanish versions it is possible to place the subject pre-verbally in all the examples, post-verbal subjects sound more natural and less marked.
- 2. The fact that it is possible does not mean that it corresponds to real usage. For this reason, an interrogation mark has been placed in front of some of the glosses after having consulted several native speakers. In any case, their (un)acceptability is immaterial to the error under study.
- ³. Although there are authors who maintain that both expletives *it* and *there* are generated in the base as non-thematic subjects in (spec) VP.
- 4. For ergative verbs like open, the corresponding Spanish counterpart 'abrir' requires the presence of the reflexive clitic se (as shown in 1c) as an obligatory overt mark of intransitivity, that is, the non-causative variant of open must be overtly marked. As long as this morpheme is present, the theme argument may either remain in place or raise in front of it, so that both Se abrió la puerta and La puerta se abrió have the same propositional meaning and are (propositionally) equivalent to the passive counterpart (la puerta) fue abierta (la puerta) 'the door was opened'. The clitic has to be present to make the verb intransitive (to "absorb" the agent argument), so that the sentence *abrió la puerta is ungrammatical in the intended intransitive meaning.

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- 5. Or indeed in other natural (standard) languages, like German where es (it) is the only expletive: e.g. Es sind drei Männer im ersten Abteil ('There are three men in the first compartment', existential construction); Es
- first compartment', existential construction); Es vergingen viele Jahrhunderte von Anfang ('Many hundred years went by since the beginning', unaccusative verb construction). It even occurs as anticipatory subject with transitive verbs: Es grüssen euch alle Heiligen ('All the saints greet you', from Saint Paul's second epistle to the Corinthians 13, 12).
- 6. Although Oshita includes both types of errors from Spanish speakers, the corpus sample corresponds to mixed proficiency levels. On the other hand, our students also produced some *Ø-V-NP items in

their compositions but the tendency seemed to be toward the *it-V-NP items.

7. As to why our students consistently choose it over there -as do Labov's (1969) subjects—a possible explanation lies in the well-attested preference of second language learners for the expression of one particular function -in this case that of a semantically empty subject- through one particular form, in this case it, the one that occurs in more contexts in the L2. There, on the other hand, as the contrast seen within item 3 in the appendix might show, could only correspond in the students' IL to its strictly existential use with the verb to be, as in their L1, where the impersonal form hay -very probably equivalent in their IL to there is/arefulfils this function.

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"THYS MANNER OF INFIRMYTE THE GRETE LECHYS OF SALERNE CLEPYD OBTALMYAM": A STUDY OF MEDICAL TERMS IN BENVENUTUS GRASSUS¹

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1. Introduction

It is a fact that, in recent times, a great deal of attention has been paid to medical and scientific writings from the Middle Ages (Crespo & Moskowich 2006; Jones 2004 or Hunt 2000, among others). The remarkable number of texts available and a certain fascination with the period have paved the way for this increasing interest. My concern in this study is focused on De Probatissima Arte Oculorum, a popular late medieval treatise on the study of eye diseases, a discipline which had an almost independent place in the medical studies of the time, and which received specific attention in many writings. In those days, a knowledge of medicine, and especially ophthalmology, was disseminated mostly in Britain through various translations, some of which have been used in the edition of the text referred to in this paper, and some of the specialised terms may have been borrowed in this process. In fact, this high level of a specialised lexicon in English justifies the interest in searching for the specialised terminology of this area in this representative work, which illustrates the use of the terms most of the medical community would have been familiar with. Nowadays, medical terminology is perceived as containing mostly vocabulary of Latin origin, but in earlier periods this would not necessarily have been the case.

Thus, this paper aims at exploring the presence of different languages in the lexicon of this particular work, and how this may help us to understand the evolution and

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configuration of the vocabulary in this particular area of medicine. To this end, we have studied the nomenclature concerning diseases and anatomy, and their underlying etymologies. In so doing, we have followed previous works in the area (Norri 1992, 1998; Pahta 2004, Rothwell 1998). The study is structured in different sections. Section 2 contextualises the text and explains some professional details about the author, section 3 briefly explores the multilingual context in the Middle Ages, and sections 4 and 5 specify and discuss the data used in this study.

2. The text and the author

The life and professional status of Benvenutus may have interesting implications when interpreting the final results, and therefore some details concerning his life and work will be outlined in the paragraphs that follow, after which some aspects concerning the nature of the text and its publication are discussed.

It is interesting to note that biographical data about its author can only be traced in his work on diseases of the eye. His work is a treatise explaining the anatomy of the eye and the diseases that can affect it, the section devoted to cataracts and their treatment being the most extensive. According to Eldredge (1999: 149), he seems to have lived in Italy most of his life "though he shows some familiarity with North African medical practices and may have travelled as far north as France or even the Low Countries". It would be reasonable to think that some Arabic terms may have been incorporated in this period, although there were already close connections between the Salerno school and Arabic science. In the text we find imprecise but interesting references to his travels "[...] and after hys propre experience the wych he had by long continuance of his owne practik yn diuerse parties of the world, boyth in hote regions and colde [...]" (Eldredge (ed.) 1996: 49).

Although there is no conclusive proof of whether Benvenutus belonged to any academic institution or not, several references to what he calls "[...] many boystus leches and ignorant [...]" (Eldredge (ed.) 1996: 83) may give the impression of a certain academic superiority on his part. Nevertheless, this is purely conjectural. It is also noteworthy that at the end of his treatise he seems to put himself forward as a "magister", as he assumes his teaching role explicitly: "Now fynally drawyng to the ende of thys booke, Benuenucius spekyth to hys dysciplis concludyng thus: O 3e my dyscyples whych wyll be practysers yn cures off sore eyon, lyke as 3e haue herde me teche, [p. 136] [herde me teche] so werke". (Eldredge (ed.) 1996: 92). Focusing on the text, the present study is based on the recent edition by Eldredge, published in 1996. One of its main interests, and the motivation behind this research, is the degree of specialisation; Pahta and Taatvisainen (2004: 15) use the

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term 'specialised treatises' for this type of texts, rather than other possible labels such as 'academic treatise', which may be less accurate in describing its real nature.

But texts are written for a particular audience, and this is another related issue. A priori, it seems logical to think that medical practitioners like himself, would have been the target (Pahta and Taatvisainen 2004: 17). This group – or community² – would have probably been familiar with Latin terms, but were not necessarily university-trained. The proliferation of these discourse communities around specialised professions is an interesting subject, as it may illustrate the complex network of relations and languages being used by each specific community, as well as the role or effect exerted by the use of the learned languages together with the already widespread use of the vernacular. Jones (2004: 23) explores this issue and points out that the traditional dichotomies Latin vs. English, literate vs. illiterate or even professional vs. amateur are not practical for describing and analysing this complex network that is responsible for producing, disseminating and using a medieval text. Given this idea of community, my interest in this text and its lexicon arises on account of its high degree of specificity. It can be considered an early ESP text that offers us the chance to study early specific terminology together with the process of formation of its specific lexicon in medical English and, more particularly, in ophthalmology, thereby complementing previous studies on the issue (cf Norri 1992, 1998).

3. Some issues concerning multilingualism and science

The presence of various languages in the different discourse communities in Britain in the Middle Ages has been widely attested (Pahta 2004, Rothwell 1998, among others). We also know that the social and linguistic context in which Benvenutus and the translators of his work lived was multilingual (cf. Pahta 2004: 73), Latin, English and French being the main languages used at the time. Although translations into the vernacular languages were gaining force, it cannot be denied that one of the most important sources was Latin and/or Greek through Latin. However, previous studies have also found a significant presence of languages other than Latin:

Today, we associate the language of medicine with a lavish sprinkling of Latin and Greek, many of the new terms being put together of components from the two classical languages. In the 33 manuscripts and books studied here, the sources of the terminology are more varied, the lexical inventory including adoptions from a number of foreign languages [...]. (Norri 2004: 137)

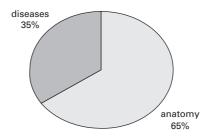
In addition, Pahta (2004: 95) mentions that "English and Latin also occur side by side in passages rich in medical terms, although there is a distinct predilection

towards Latin in the more specialised terminology [...]". However, as we will see in the final section, the assumption that Latin was the overwhelmingly predominant source of specialised terminology may be refined by studies focusing on a thorough historical revision of its lexicon, such as that of Norri (2004) and others. This idea does not diminish the importance of Latin in the configuration of specialised discourse in this area, and communication amongst physicians at the time cannot be fully understood without its use. In Pahta's words: "Although the wish to make contemporary medical knowledge available for an audience that was only literate in English must have been a major incentive for the vernacularisation of medical texts in medieval England, the discourse community of vernacular medicine was clearly not monolingual" Pahta (2004: 97).

Other studies (Crespo & Moskowich 2006) have focused on the presence of Latin in Vernacular Scientific Writing. Thus, once we assume the key role of Latin in the formation of English medical language, we are ready to proceed and explore other etymological sources. This point having been reached, there are a few matters that may pose some problems, such as the question of discerning between an ultimate Latin or French origin, in which the tendency is to consider both sources as valid. Both French-origin terms and terms with a possible Latin and French origin can be found in the lexical stock of Benvenutus Grassus, as the analysis in section 4 will show.

4. The data: lexical stock in *De Probatissima Arte Oculorum*

The division between terms related to anatomy and terms related to diseases has proved useful in previous studies (Esteve 2006a, 2006b), since it shows how the different lexical units from different etymologies have been incorporated into the two groups:



GRAPH 1: Division of the lexical stock into disease and anatomy types

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Every type occurring in the text was considered to be what have been named "terminological units" (Norri 2004: 106), because as he says: "each represents a separate and specific concept". Despite the fact that *Graph 1* shows a clear predominance of terms that refer to anatomy, it is interesting to note that terms referring to disease present a more balanced group of etymologies and, although they represent a smaller sample out of the total number of words, it reflects a wider variety of origins. This issue will be considered further in section 5.

4.1. Names for anatomy and diseases: an etymological map

The results obtained are specified below, grouped according to this division (terms for anatomy or disease) and also classified according to the different etymologies. In this respect, the classification proposed here divides the words according to whether they come from Latin and/or (classical) Greek, Arabic, French and Germanic (Old English, Old Norse); there is also a group containing terms with items from different origins, the *mixed* group.

One of the most difficult tasks – as mentioned in section 3 – concerns the classification of terms of Romance origin, where the difficulty lies in distinguishing whether a term comes from French or Latin. In some cases, it is impossible to say and even dictionaries give both possibilities as valid. This issue is also addressed by Norri (2004: 113) when he claims that "Terms of possibly dual origin, French and Latin, are the largest single group of foreign adoptions in all three text traditions, i.e. academic treatises, surgical works, and remedybooks". In this study, when this has been the case, the degree of adaptation to the borrowing language has been considered as an indicator, as in the case of *pupilla*, explained below.

The total number of words in the text is 21, 578 and the total number of different nouns, which have been counted from a list obtained through a concordancer, comes to 143. Hence, the text presents a high lexical density of specialised terms, in which 54.5% of the total number of nouns specifically denote anatomical or disease nomenclature. This high percentage of specialised nouns out of the total number reflects the high level of specialisation of the material used in this study.

In general, the results show a greater number of words related to anatomy (a total of 51 types, see Table 1 below). Knowledge of the anatomy of the eye was much more accessible than that of any other part of the body, due to its being a more external organ, which facilitated its study without explicit dissection. However, the names for diseases are much fewer in number (27) and many have to be explained metaphorically, sometimes by describing their colour, as in the case of a type of cataract: "And for that grete anguisshe of akpe the ey3e wexethe white and apperethe in colour as shynyng alabaustre" (Eldredge (ed.) 1996: 66). Other ways of naming a disease are by using metonymy, by mentioning the cause of it, as in

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blode (Eldredge (ed.) 1996: 59), or a symptom, as in the case of *fleying flies* (Eldredge (ed.) 1996: 73). It is sometimes difficult to distinguish between a symptom and a disease proper, which is a question that has been studied by different authors. Norri refers to this matter:

The modern distinction between disease, on one hand, and its symptoms and signs, on the other, was made only vaguely, if at all, in medieval medical treatises, where "the description of particular diseases often amounted to no more than a list of symptoms with which it was associated (P.M. Jones 1984: 58)." (Norri 2004: 104)

According to Rawcliffe (1995: 46) "little or no distinction was made between the symptoms of a disease and the actual ailment itself, [...]" and it is normally context and modern knowledge of medicine that provide the clues enabling us to understand the specific disease the medieval author was attempting to name and describe.

The results are presented in the following table, which shows the number of items in each case, and also specifies which words belong to each category:

Origin	Апатому	Diseases
Classical (Lat+Greek)	16	13
Arabic	0	2
Germanic	21	5
French	7	6
Mixed	7	1

TABLE 1: Types according to origin

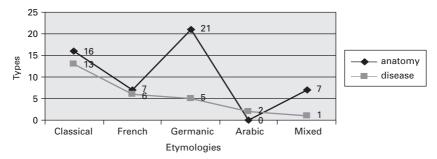
For anatomy terms, the following words of Classical origin were found: albigenius, aranea, coniunctiva, cornea, cristallinus, discoloratam, lacrimal, lacrimabili minore, neruus opticus, pupilla, rectina, scliros, secundina, saluatricem, uitrius, and vuea. Although pupilla is identified as having both French and Latin as its possible origins, I have considered this item to be part of the classical stock as it retains the original form. However, spelling variation, such as pyupil (Eldredge (ed.) 1996: 58), suggests the Anglicisation of the term. The Germanic component is very important; indeed, the following lexical items were found to have their origins in Germanic languages: appell of the eye, balle of the eye, bone, brayne, browys, erewarde, eye, eyelyddys, ouer ylede, neper lyd, forhede, hede, herys, hollow sinews, lyddys, ly3t of the eye, nose, teris, water yelwisshe, webbe, and whitnesse. The following items deriving from French are in the Benvenutus lexical stock: humour, humour

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albuginoys, concauytee, face, temples, tunicle, veynes. Terms with mixed origins are: concayte of hollownesse of the eye, corner of the eye, glassy humour, holowe nerffe, opylate holes, spyrit of sight, watery humors. Finally, no words borrowed from Arabic were traced, and the roots of the terms cootis or cote (Eldredge (ed.) 1996: 50) and toober (Eldredge (ed.) 1996: 70) could not be established.

The second group of nouns we studied are those referring to diseases. The most productive origin is Latin, together with a few examples from Greek: aqua putrefacta, cataract, fistule, guttam serenam, humeris benedictus, nexionam, papullam, maledictam, obtalmiam, torturam tenebrosam, panniculus, pannum vitreum, vngula. Terms from French follow: coler, flewme, malyncolie, mygreyme, pannycles, and nayle. The Germanic stock is not as abundant as in the group related to anatomy, but we still find interesting examples: blode (one of the humours causing the disease), fleying flies, scab in the eye, water yroted, and watry eyon. There was only one term of mixed origin, corupte water, and two from Arabic: amesarca (the Arabic name for cataract) and iherafrumaxyn (scab in the eye). Despite the immense influence of Arabic medicine, and especially in the field of ophthalmology (as they were the pioneers in cataract couching), only two terminological units revealing this origin were identified. Further research should be carried out on more texts on the same, or medicine-related, topics in order to obtain more data. Finally, there are certain words whose origin has not been ascertained. Such is the case of wulgalpus or muri (Eldredge (ed.) 1996: 79). These examples seem to respond to cases in which a denomination is used in just one or two texts, and is then lost in the following centuries. Further comments on these results will be made in section 5.

The following graph shows the number of examples of both anatomical and disease terms according to their origin, and it clearly shows which sources had more impact on the composition of the specialised lexicon in this text:



GRAPH 2: Quantification of terms according to their origin

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It is noteworthy that most of this lexicon has survived down to our days, since this shows that, despite the later lexical increase due to the development of medicine, the core vocabulary for contemporary terminology in ophthalmology had already been established.

4.2. An analysis of the lexicon and its etymology

I will now attempt to organise these data in the light of previous considerations. The lexicon of the text, as shown above, provides nouns from Classical, French, Germanic, Mixed and Arabic origins in all cases, with the exception of terms from Arabic in the field of anatomy. Thus, multilingualism is clearly reflected in this text, and sometimes all provenances can be found in a single example, given that – as Norri (2004: 107) suggests – "[...] medieval writers often explain that a sickness or body part is called this or that in Latin, French, Greek or Arabic". Such behaviour has also been detected in our survey examples such as the following:

(1) Fforwhy thorugh accacioun of the forsaid causes, the *humour albuginoys* ys dissoluid in partye and hit rotith; and that roted is as it were water congelid and crudded And it is putten afore the lyght and afore the ey3e appill, bitwene the tonick and the cristallyne humour; the which the *Sarazyns and the Arabies clepen hit "amesarca," that is in Latyn "aqua putrefacta," in Englisshe "water yroted" in the ey3e.* (Eldredge (ed.) 1996: 54)

Examples of Latin origin seem to occur with high frequency in the anatomical description, but the terminological units of Germanic origin show an even higher frequency with the highest percentage (41.4%). As suggested above, knowledge of the anatomical structures of the eye, due to its being an external organ, was available to medicine with no need for dissection and therefore names for them could be coined right from the early stages of the development of the language. Terminological units derived from Latin can easily be recognised as some of them still bear the case ending. In this case, according to some authors (Norri 2004: 107; Pahta 2004: 84), they could be considered a switch and would therefore be lost in subsequent centuries, as in the following example from the text:

(2) Thys maner of infirmyte the grete lechys of Salerne clepyd obtalmyam, but I, quod Benuonucius, calle yt *torturam tenebrosam*, ffor so much as it commyth with so greet a torment pat it makyth the eye dymme and derke. (Eldredge (ed.) 1996: 61)

In this example, the author resorts to the native language to clarify the imported concept. The explanation of the concept is often given in the vernacular, as in this example:

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(3) ffor the neruys obtyk be so opylate, that ys such maner of synewes ben so stoppyd and mortifyed, þat no medycyn may helpe yt. And þerfor thyes cateractys we clepyn *guttam serenam*, ffor yt ys gendyrde of a corrupcion commyng downe from the brayn yn the maner of a drope of water whych corruptyth and dyssol [p. 29] uyth all the humurs of the ey. (Eldredge (ed.) 1996: 58)

Another complementary consideration might be that the author was giving an equivalent which would be better understood. In this respect, Pahta (2004: 81) states that "The writers of Middle English medical texts had to create the terminology for topics that in many cases had not been discussed in vernacular writing before". She also discusses the different ways in which this problem could be solved. One of the possible solutions is illustrated by the example below:

(4) Also superhabundance of the humor of malencolye is often gendryd yn the ey a dysease callyd *vngula*, *a nayle*, *for it ys muche lyke a fyngernayle*, and begynnyth comonly to growe in lacrimabili minore, þat ys to sey yn the corner of the eye to the ere-ward. And the course of the growyng ys toward the pupil, þat ys to sey to the sy3te. (Eldredge (ed.) 1996: 75)

The use of these Latin terms may be explained by the need to endow the style with a learned manner, as with *obtalmie* and *panniclus* in example 5:

(5) But often yt ys seyn pat in pis maner of eyon *obtalmie*, pat is derknes of sy3t, and *panniclus*, that is smalle webbys, and oper dyuerse dyseases [...]. (Eldredge (ed.) 1996: 51)

This possibility is supported by Pahta (2004: 83), who thinks that these codeswitched terms are a contribution to the highly specialised register of scientific discourse. In this case, the term *obtalmie* certainly gives an air of technicality, but it also narrows the semantic specification of the term in opposition to *derknes of sy3t* – a more general and imprecise word.

All of the Germanic examples found, except *erewarde*, *herys*, *hollow sinews*, *ly3t of the eye*, or *water yelwisshe* have reached our days, meaning that they were already part of this specific terminology at the time. The group referring to diseases is less significant³ (34.6%) and clearly suffers from the lack of medical knowledge of the time. A diachronic study might show whether this area incorporated the new stock from classical sources only, or used the native storage to build up the specific terminology. As Norri (2004: 108) indicates: "Etymological study of the names of sicknesses and body parts yields an interesting pattern with respect to the number of lexemes in the different chronological layers".

The other important source this lexicon is taken from is French, and the reason for this seems obvious given that in the late Middle Ages, French loans would be

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entering the language in much larger quantities than in any other period. Coleman (1995: 96) recalls previous studies of French loans and their chronology, which indicate the different methods and procedures followed mainly by Mossé or Dekeyser, among others, which consisted of following the entries of the OED and reckoning up the French words included in them. This posed some problems, as Coleman explains (1995: 96-97), and it is not my purpose here to discuss these procedures. However, it may be of interest to compare their results with data referring to specific fields, in this case medicine, in order to clarify the peaks and the periods in which they are found.

In the case of mixed terminological units, the figures indicate that they are more common in lexicons related to anatomy. A total of 7 examples are found referring to anatomy (eg, *bollowe nerffe* (Eldredge (ed.) 1996: 82)), in contrast with only one example of the mixed type found in the list of examples denoting diseases. Even if it were true that the head of the noun phrase indicates the original source of the borrowing, both words have different etymologies and they have been considered separately in the etymological classification. Some examples of this group, like *watery humors*, refer to very general and imprecise concepts. The presence of this particular example in the text (among others) is justified, as terms necessarily had to refer to the contemporary medical theories, the most popular being the theory of the humours, in which the lack of balance between them had different effects; in this case, shedding tears is interpreted as being one of them:

(6) [...], for the abundance of watery humors and teris, the which often yssu [come out] per bycause sumtyme of sorrow and heuynes of herte, sumtyme of ioye and gladness, and sumtyme for habundance [p. 3] gg of superfluytees of humors caused of cold. (Eldredge (ed.) 1996: 49-50)

Such terminological units were to progressively vanish from this type of text as science and medical knowledge developed.

Despite consulting the standard reference works and related literature on the topic, the origin of some words has not been ascertained. This is the case of *wulgalpus* and *muri*, and although the linguistic context helps us to understand the medical concept, the origin of these words remains – to the best of my knowledge – unknown:

(7) And also of the malencolyus humor, quod the autor, ther is gendrid yn many men a sekenes that growyth betwene the nose and the ey, and it apperyth lyke the pece of a long and it < is > grauelous and voydyth allway fylth, and communly it towchyth withyn the ouer eyelede and also the neper. And [p. 93] in many placis thys sore is clepyd *muri* or *wulgalpus*. (Eldredge (ed.) 1996: 79)

A study of medical terms in benvenutus grassus

It may well be that these terminological units are *hapax legomena*, that is, words that have been attested in only one text (Colon 1969); however, it seems logical that, being translations, the words had reached the text from a previous life.

Finally, to return to the Arabic influence on this particular area of medicine, a priori it would seem that a direct influence on English is very unlikely and we know that the adoption of Arabic lexicon into English is frequently through French or Spanish. In this respect, results prove to be disappointing⁴. Despite the strong probability that Benvenutus had been in contact with Arabic terminology and the fact that Salerno certainly had close links with Arabic science, in our text only two examples referring to diseases, *amesarca* and *iherafrumaxyn*, appear to come from Arabic. Further research would help to give a clear, specific idea of the role of Arabic in specialised terminologies.

5. Special terms in ophthalmology: final remarks

It seems, in the light of the results obtained, quite safe to suppose that a large part of the specialised terminology was already present in this period, and that the Germanic element had a significant presence, especially in anatomy. Disease terms present a more balanced group of etymologies, although they account for fewer words. Some scholars have argued that prior to the sixteenth century, there could have been no development of lexicon in any specialised nomenclature and that only in the sixteenth century and beyond would this have been possible: "Around 1500 English was incapable of providing a linguistic medium for traditional scholarship and for the rapidly developing scientific disciplines since it lacked the necessary terminologies. [...]" Schäfer in Norri (2004: 101).

In this study we have attempted to show the opposite tendency, i.e. that the main core vocabulary of the standard terminology in ophthalmology could have already been present in this treatise, and that it has a high component of words of Germanic origin – a fact which modifies, at least partially, the assumption that Latin and Greek are the only relevant sources of lexicon in medical language. Norri (2004: 137) also points in this direction:

The survival rate of the names of sicknesses and body parts in the material examined may seem low [...]. This, however, does not in any way diminish the importance of especially the late Middle English period for the future development of medical terminology in English, since hundreds of lexemes that did survive were to become the standard designations for particular conditions and anatomical structures. In modern medical dictionaries, such terms often appear as the head word in a multitude of phrases signifying related phenomena.

It may be true that Classical stock has a more significant presence in other areas of science. A thorough diachronic review of the terms related to ophthalmology (contrasting it with other sub-specialties within medicine) would shed some light upon the differences between the varieties of medical fields and would help to shape a better picture of the configuration of the vocabulary in the different ESP from a historical perspective.

Conclusions concerning these issues will remain tentative until further research on specific texts, both contemporary and from different chronological layers, has been carried out. However, the importance of communication in medical matters has always been (both now and in the past) related to a proper transmission of knowledge and to the understanding of the patient and his/her symptoms. In this respect, Marečková (2002: 586) reminds us: "The old doctor spoke Latin, the new doctor speaks English, the good doctor listens to the patient".

50 Notes

- 1. This research has been funded by Fundació Caixa Castelló-Bancaixa, grant number 061003.12 and by Programa de promoción Xeral de investigación do Plan galego de investigación, desenvolvemento e innovación tecnolóxica (Incite) (PGIDIT07PXIB104160PR) and red de grupos de investigación Lingua e Literatura Inglesa e Identidade (Consellería de Educación e Coordenación Universitaria, 2007/000145-0). These grants are hereby gratefully acknowledged.
- 2. The notion of discourse community in relation to this issue is clearly explained by Jones (2004: 23): "The concept of 'discourse community' is in many ways more useful and accurate than 'audience' or 'readership' when describing the place of texts in medieval society. 'Audience' tends to suggest the passive reception of a text and places the producers at a remove once a text

has been disseminated. In a period when many texts were copied by individuals for personal, or at least localised, use this is a misleading picture".

- 3. Norri (2004: 109) supports this view "The Old English stratum contains a considerably larger number of terms for body parts (11 per cent) than for sicknesses".
- 4. The interest in learning Arabic in England is explained by Wilson, (2001:1) "Adelard of Bath (c.1080 c. 1150) travelled to mainland Europe from England in order to study Arabic learning; he translated into Latin the astronomical tables of Al-Khwarizmi. Soon many scholars were in search of Arabic treatises to translate, and 'Arabum Studia' became a legitimate pursuit in twelfth century England".

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THE SPOKEN CORE OF BRITISH ENGLISH: A DIACHRONIC ANALYSIS BASED ON THE BNC

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1. Introduction

This research takes as its starting point a frequency analysis of the demographic-spoken subcorpus of the British National Corpus in order to focus on two aspects of the evolution of spoken core vocabulary in British English. The first is the impact on the core of contact with other languages and, the second, the role of lexical innovation and/or replacement in the history of this core. Our analysis, which, to a certain extent, follows up on that carried out in Fuster (2007) questions the hypothesis that the spoken core is immune to foreign influence or that it is highly resistant to change.

2. The place of (core) vocabulary in linguistic research

Central to this contribution is the theoretical assumption that all speakers possess a core vocabulary that is more important to them in their daily verbal exchanges than other items in their repertoire, no matter how rich their particular vocabulary might be. In Stubbs' opinion, an outstanding feature of such basic vocabulary is that it is "known to all native speakers of the language. It is that portion of the vocabulary which speakers could simply not do without" (2002: 41). Several studies propose that basicness should be related to frequency. Lexicographers and

corpus linguists would agree today with Kilgarriff's statement that the more frequently a vocabulary item is used, "...the more important it is to know it" (1997: 135). McCarthy (1990: 49) states that those learners who are equipped with knowledge of basic words have at their disposal "a survival kit [...] that they could use in virtually any situation [...] or in any situation where an absolutely precise term, the *mot juste*, might be elusive and where a core word would do".

In the literature on language contact a number of reasons have been mentioned for importing core words (see for example the exhaustive catalogue offered by Grzega 2003: 23-4). We believe that the main cause is related to the intensity of contact. While superficial language contact basically leads to the importation of so-called less central cultural items, when contact becomes more intense, it may affect core vocabulary as well as the linguistic structure (see Thomason 2001: 69-70).

Although mention of core is often made in contact, historical and comparative linguistics, whether the study of such vocabulary, or, for that matter, vocabulary in general, should be given a prominent position remains controversial. Lass (1987: 60) maintains that changes in vocabulary are largely irrelevant because "[l]exis changes easily, but the structural frames it fits into are more resistant, and tend to remain, changing only under language-internal conditions". In a similar vein, Labov (2001: 13-14) points out that "the replacement of vocabulary seems to have many characteristics of random variability". In his view, it is impossible to propose constraints on lexical change and it is hard to know "which words have a better chance of surviving and which do not" (2001: 13-4). Research in language contact has also shown conclusively that the lexicon is, without doubt, the most borrowable of all subsystems of language (Thomason 2003: 694). In his analysis of contact areas for instance, Haspelmath finds that borrowing can be quite massive. In the case of Australia, it has been found that all kinds of words, core and non-core, were "easily borrowed" (Haspelmath 2004: 209). Rankin (2003: 187) also comments on the lack of borrowing contraints in East and Southeast Asia, where basic numerals are known to have been imported from Chinese, and Campbell observes a similar phenomenon in Finnish, Turkish and Persian (2003: 271). On the contrary, "the situation of well-studied Indo-European languages such as German, French or Russian, where loanwords are easy to identify and occur only in rather circumscribed domains, may be atypical" (2003: 2). Therefore, in principle there seems to be evidence that importing of vocabulary is the rule rather than the exception in the different linguistic areas which have been studied to date.

The study of lexical change lies at the heart of work in *lexicostatistics*, initiated by Swadesh (reported in Gudschinsky 1956). Lexicostatistics deals exclusively with a select word list of vocabulary elements, for which the borrowability rate is extremely low. More recent proposals, like that of McMahon (2004), have

revitalized the idea of selecting a small number of core words for the purposes of examining linguistic change before the existence of written records. One needs to refer to work done in lexicostatistics and glottochronology since the only basic word lists which still deserve the attention of comparative and historical linguists most typically come from these theoretical frameworks (see Fuster 2007).

3. The establishment of core lists: frequency and counts

From a comparative and diachronic angle, drawing up a list of core words containing stable members that show great resistance to change is, to say the least, problematic. We agree with Haspelmath that the first and foremost problem is that many researchers do not make it clear what they mean by core (2003: 2; 2004: 212), and so there may be disagreement about (1) the items which are considered as core, (2) the threshold between core and non-core word lists, and (3) what the theoretical principles which make up the basis for such lists are. We can only agree with Haspelmath that a greater refinement of this concept is urgently needed.

As stated above, the idea of *core* is not new or unknown in diachrony. The so-called Horn list (1926) (see Berndt 1984: 69 for a fuller account) is an early pioneering application of the idea of core vocabulary to etymological research in the history of the English language that was based entirely on a corpus of written American English. More recently, etymological research related to English vocabulary can be found in Bird (1987). It is to be noted that Lutz's (2002) application of core to the history of English in fact quotes earlier work based on Michael West's *General Service List* published in 1953.

We wish to single out the research carried out by Hughes (2000: 391-4), as it shows greater parallelisms with our own. His 600 word-list is made up of the most common components of the "Longman Defining Vocabulary", included in every new edition of the *Longman Dictionary of Contemporary English* (LDOCE). This vocabulary, in its turn, is based on the *British National Corpus* (BNC). Hughes' core word list therefore relies on *frequency* as a primary factor.

The importance of taking into account frequency as an index of basicness and, therefore, as an index of the relative weight of certain words in a language is that it is entirely based on the empirical observation of language use. This issue has been more amply discussed in Fuster (2007). In contrast with earlier, intuitive lists, we agree with Lee (2001) that frequency is, at the very least, an objective factor. There is a strong psychological or cognitive basis which supports the validity of frequency as more rigurous than other factors in the selection of vocabulary by speakers. For morphologists like Aronoff and Fudeman (2005: 225) it is clear that "[i]f a word is very frequent, it has been reinforced in their memories and so speakers will find

it easily". Plag (2003: 49) believes that "[...] there is a strong tendency that more frequent words are more easily stored and accessed than less frequent words" (see also Haspelmath 2003: 43-4).

Psycholinguistic research has been able to confirm that the most frequent words are the first that come to mind when individual speakers use their own language. Thus it follows that these items will also be the most resistant to loss, replacement or change. Aronoff and Fudeman note, for instance, that frequent vocabulary also preserves and indeed is characterized by older morphological irregularities not found in the rest of their vocabulary (2005: 225), and from a historical perspective, these morphological traits also resist sinking into oblivion.

Gradually, diachronicians have started to welcome frequency as a crucial factor in the determination of core, particularly because no other factors are equally objective. Haspelmath claims that the notion of frequency is essential in any proposal of core vocabulary since "it is well known that high-frequency items are resistant to types of language change such as analogy" (2003: 6). In their recent history of English, Brinton and Arnovick admit as a general linguistic observation that "the more frequently used the word, the more likely it is to have survived" (2006: 165).

A recurring problem arises when we start to consider the number of words which should be counted as basic since this will obviously yield different results. Traditionally, diachronicians have generally considered as basic the rather low figures of 100 or 200 items. We contend that this is a very restrictive view of core which has been challenged by research in corpus linguistics and modern lexicography. Researchers in these fields have observed that even the simplest kind of conversation in English cannot be carried out with 200 items alone. On average, lexicologists are more in favour of proposing an inventory of around 2,000 items as absolutely indispensable words (Sinclair 1991: xviii; Nation 2001: 15; Stubbs 2002: 42; McCarthy 1999: 248; and 2003: 61, note 3). A further observation of corpora shows that while there is a general consensus that up to 2,000 items is sufficient to be considered core, beyond such a figure different corpora will diverge (Kilgarriff 1997: 14). Indeed, Stubbs (2002: 42) finds that discrepancies may arise earlier, and there is only significant agreement about "the top few hundred words in different general corpora".

4. The spoken mode and the establishment of its lexical core

Practically all discussions concerning lexical calculations in diachrony carried out in the past have been based on written language, naturally because research on spoken data was impossible given the lack of adequate technology and reliable data.

The spoken core of British English: A diachronic analysis based on the BNC

However, there are sufficient reasons to think that changes in the spoken mode deserve greater attention. Stubbs (1996: 70) establishes an explicit correlation between the kind of words which can be expected to appear in the two language modes, and goes as far as to propose a correlation in terms of word origin:

spoken	written
everyday	academic
common	specialist
frequent	rare
informal	formal
monosyllabic	polysyllabic
Germanic	Romance/Graeco-Latin
acquired	learned
active	passive
core	non-core

It is undeniable that through these oppositions Stubbs (1996) sums up well-established assumptions among historians of the English language who seem to take for granted that the most important historical changes are internal, and not external, that is, due to contact. For Stubbs, the spoken language contains common vocabulary which is 'acquired' (that is, not accessed through formal education) and is Germanic. On the other hand, Stubbs states that the written mode contains more peripheral, specialised vocabulary, most of the borrowings, and is 'learned'.¹

We are not alone in arguing that the opposition between *core* as a defining characteristic of spoken English and *non-core* as a defining characteristic of written English is not as tenable as suggested by Stubbs (1996). McCarthy &Carter (2003: 5) have held that both language modes contain core and non-core items. According to Lee, this is precisely because core lexis is "central to the language as a whole and thus not specific to any lect or register" (2001: 250). Support for McCarthy & Carter's (2003) and Lee's (2001) position can be found in the fact that the majority of the core items in our word-list of conversational English are also shared by the other sub-corpora of the BNC. The greatest difference between conversational and written English is that a larger number of words obtain higher frequencies in the written mode than in the conversational spoken mode.

5. Research on spoken vocabulary in the British National Corpus

Our study of frequency lists in spoken English is based on the lists of Leech *et al.* (2001), and its companion website.² Both refer to the BNC, which contains

Contemporary English vocabulary, 10% of which is devoted to spoken Contemporary English, gathered since 1991, and 90% to written Contemporary English gathered after 1960. The reasons which have led these corpus linguists to include such a comparatively small proportion of spoken English is that they found its analysis to be "a skilled and very time-consuming task" (2001: 1). Nevertheless, the size of the spoken section –10 million words– is, in their view, "also sufficiently large to be broadly representative" (2001: 1). The compilers even go as far as to suggest that "no bigger transcribed purpose-built cross-section of spoken language exists at present".

Undoubtedly, the BNC surpasses earlier corpora of the English language; and it is also more up to date. The editors provide frequency lists and interesting contrasts between the lists (2001: XI). Recently, Hoffmann stated that "the availability of large corpora such as the BNC has enabled an even more precise description of both language structure and language use"(2004: 203-4). With its 10 million words, the spoken component is, for instance, ten times larger than the whole *Brown Corpus*. It is important to note that the spoken component that we have examined in the BNC admits of a subdivision between (1) *conversational, context-governed speech* and (2) *task-oriented speech*. In fact, we have decided to discard task-oriented speech as it shows a strong resemblance to *written* English in various ways, the most important of which is that it centers on specific activities, such as lectures, business meetings, interviews, political speeches, etc., and arguably such registers are in various ways closer to the written mode. Consequently, it is also likely to exhibit greater formality than conversational English.

The conversational section is, according to the compilers, the most innovative part of the corpus. One hundred and twenty-four adults (aged fifteen or over) were selected from different places across the United Kingdom. In their selection of informants they considered as relevant the sociolinguistic variables of sex, age and class, so there is approximately an equal number of men and women; the informants, practically all adults, were grouped into six age ranges; and there is a balanced selection of social groups. Geographically, the UK was divided into three major areas, the South contributed the most with 45.61% of the informants, the North, 25.43%, the Midlands, 23.33%, and a small proportion, 5.61%, belongs to unclassified areas. For the compilers of the BNC "the importance of conversational dialogue to linguistic study is unquestionable: it is the dominant component of general language both in terms of language reception and language production".³

Lexical differences in the written and spoken subcorpora of BNC

Leech et al. (2001: XI) find that in the written section "there is an overlapping subset of only 33 words shared with the top 50 words of the spoken corpus". Thus, while the most frequent word in written English is the determiner *the*, in the case of spoken conversational English, the most frequent word is the verb *to be*. Table 1 below focuses on the 20 top lemmas⁴ in *written* English alongside the top 20 items in the *demographic conversational* (henceforth conversational) and the *task-oriented* section.

WRITTEN SECTION		Di	MOGRAPHIC SECTION	TASK-ORIENTED SECTION		
1	the	1	be	1	be	
2	be	2	1	2	the	
3	of	3	you	3	and	
4	and	4	it	4	I	
5	а	5	the	5	you	
6	in	6	not	6	it	
7	to inf	7	do	7	а	
8	have	8	have	8	of	
9	to prep	9	and	9	to inf	
10	it	10	а	10	have	
11	for prep	11	that detp	11	in	
12	he	12	to inf	12	we	
13	I	13	they	13	that detp	
14	that conj	14	yeah	14	do	
15	not	15	he	15	not	
16	with	16	get	16	they	
17	on	17	oh int	17	er	
18	by	18	she	18	that conj	
19	they	19	what detp	19	to prep	
20	she	20	go	20	erm uncl	

TABLE 1: The 20 most frequent lemmas in the written, demographic and task-oriented sections of the BNC

Some items in the conversational section are not found in the written section, notably the verbs to get and to go, the pronoun you, the determiners that and what, and also some interjections. But important differences in terms of frequency also emerge from a comparison between the two sections of the spoken subcorpus. In order to compare the top 20 items in both lists, we have focused on their log-likelihood ratio (G), which, according to the compilers,

show[s] how high or low is the probability that the difference observed is due to chance. This statistic can be considered to demonstrate how significantly

characteristic or distinctive of a given variety of language a word is, when its usage in that variety is compared with its usage in another. Leech *et al.* (2001: 16)

According to Leech et al. (2001: 17) the higher this ratio, "the more significant is the difference between two frequency scores". Indeed, the greatest log-likelihood ratios are found among the top items. Most of those in the conversational word-list are much more frequent in that kind of variety than in the task-oriented section, e.g. I, you, it, not, do, have, that (determiner/pronoun), yeah, he, get, oh, she, what (determiner/pronoun). For certain items the ratio is extremely high, such as the personal pronoun I. In their research, O'Keeffe, McCarthy & Carter (2007: 33) claim that "...the high rank of I and you in the spoken data, along with discoursemarking items (e.g. well, right...)", seems to indicate "an overall orientation to the speaker-listener world in conversation". By contrast, some items in the task-oriented subcorpus also have a high differential ratio, as is the case of the, of, the filler er, or the conjunction that. When we turn our attention to the bottom of these frequency lists, other striking contrasts emerge. While some items are definitely core in 'contextgoverned' English, they are practically irrelevant in conversational English, and viceversa. This is the case of lemmas like authority, development, in terms of, chairman, motion, councillor, settlement, etc., whose frequency is lower than 10 per million in conversational speech, but higher than 100 per million in task-oriented speech. Since frequency is a key factor in our research, the conclusion to be drawn from such evidence is that these and other items in the task-oriented lists are, on the one hand, closer to the written mode, and on the other, cannot be described as basic within the conversational English sub-corpus.

McCarthy & Carter (2003: 5) point out that the written part of the corpus shows greater lexical density and variation than the spoken part. It may be observed that the task-oriented subcorpus also shows greater lexical density than the conversational subcorpus. Whereas the lemmatized task-oriented subcorpus contains over 850 lemmas which occur more than 25 times per million words, the conversational subcorpus does not reach 800 lemmas. This numerical problem has been an extremely important issue which has necessarily been reflected in our research.

It seems clear that at the lexical-semantic level there are differences between the core elements of contemporary written and spoken English. Many words which are more frequent in the written register, are practically absent from the spoken section. For instance, a number of closed class items are part of the written core but absent from our spoken word-lists: above, according (to), among, as well as, despite, former, herself, including, latter, nor, several, such as, though (conj.), thus, whom, whose. So, the obvious conclusion seems to be that not every function word is by definition a member of the core from the viewpoint of ordinary conversation.

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Stubbs has noted that (2002: 42) "raw frequency lists often have odd gaps". One finds that certain discrepancies might be due to differences among the corpora themselves. For other gaps a coherent historical explanation could be offered, as long as we are willing to admit the possibility that basic items may also change, though gradually, with the passage of time. For example, though contrary to expectations, some words referring to human body parts are not listed as members of the core in the conversational section of the BNC. In our lists, nouns like *heart*, mouth, neck or nose are not among the most basic items because their frequency is lower than two per million words. Note also that while McCarthy (1999: 243) mentions three nouns which refer to seasons, namely winter, spring and summer, as part of the core in the Cambridge and Nottingham Corpus of Discourse in English (CANCODE), a large corpus of spoken English, none of these are members of the core in conversational English in the BNC, once again because their frequency is lower than two per million. Gaps and differences are also observable in reference to the colour spectrum. So, while black, white, red, and blue are in our list of 700 core items, others, like green, yellow, brown or grey, some of them included as core in CANCODE, are not found in our conversational list drawn from the BNC. In both corpora, the non-core items have lower frequencies, whereas black, white and red always show high frequencies. This might also prompt us to wonder if a substantial part of those items which are non-core today have ever been so. Perhaps important societal, cultural, or even structural changes may have had an effect on the core. But only a similar kind of quantitative research performed on earlier stages could answer such question. Even though we readily agree with Stubbs (2002: 42) that "the vocabulary is a structured whole, not an unordered list of words", we cannot introduce 'unjustified', non-empirical or intuitive criteria in our definition of core in order to produce structured word series. Instead, what should be done is try to give an account of the results obtained. In fact, very often we may come across an explanation for gaps in word series. For instance, McCarthy (1999: 242) argues that the reason for discrepancies in frequencies observed in the days of the week lies in the fact that "in Westernised, Christian societies, Monday is considered the start of the working week; Friday and Saturday are associated with the week's end and leisure". Also, it is not hard to come up with cognitive explanations for the differential frequencies in colour names. As we all know, some colours, say black and white, are certainly more basic than yellow, pink or grey, a fact that is backed up by extensive research on the subject.

Some remarks about the nature of core conversational items

One of the salient findings in top word frequencies within corpus linguistics has been the predominance of closed-class items. In the article "What constitutes a basic vocabulary for spoken communication" published in 1999, McCarthy examines the main features of this English core vocabulary (see also O'Keeffe, McCarthy & Carter 2007: 31-57). His work is relevant to our research as the corpus he examines, CANCODE, offers very strong parallelisms with the lists obtained in BNC: practically all the items McCarthy mentions also appear in the BNC core list (see McCarthy & Carter 2003).

McCarthy addresses issues of meaning and functionality in the core items. He observes that a very large number of top items "clearly belong to the traditional province of grammar/function words, in that they are devoid of lexical content" (1999: 236). These are "articles, pronouns, auxiliary verbs, demonstratives, basic conjunctions, etc". For McCarthy & Carter (2003: 6) the category of function words contains up to 200 members. In our research, function words account for 53 of the first 100. Besides these, which are quite clearly characterised in CANCODE and the BNC, McCarthy establishes another nine categories which share the characteristics of both closed- and open-class words. These categories, "which are equally important as components of basic communication" (O'Keeffe, McCarthy & Carter 2007:37) include modal items, delexical verbs (quasiauxiliaries, Brinton & Arnovick 2006:385), stance words and discourse markers. Another large group is made up of items which can stand in for other members of their word-class. McCarthy & Carter (2003: 6-7) label these: basic nouns, general deictics, basic adjectives, basic adverbs, and basic verbs. Although they may be deemed more lexical than grammatical, the fact that core words like thing, do, lovely, etc. can be used in lieu of many members of their same class is a good reason to classify them as empty of lexical content (Halliday & Hasan, 1976: 274). It is clear that these items "defy an easy fit into the traditional word classes of noun, verb, adjective, adverb or interjection" (O'Keeffe, McCarthy & Carter 2007: 46).

8. Limits of our core list for conversational English

A threshold in frequency has to be established to differentiate what is core from what is not core in present-day British English. McCarthy (2003: 46) examined the spoken subcorpus of CANCODE (part of the *Cambridge International Corpus*) which is made up of a total of 5 million words recorded between 1995 and 2000. Using a graph he shows that "round about 2000 words down in the

frequency ratings" the number of occurrences per item "begins to drop more steeply" (McCarthy 1999: 235). This allows him to conclude that 2000 lexical items is quite a safe borderline which distinguishes high frequency (core items) from low frequency items (also McCarthy 2003: 61 note 3). In the CANCODE sample that McCarthy (2003) analyzed, which does not distinguish between demographic spoken English and task oriented spoken English, 1500 unlemmatized words occurred more than 100 times.

We decided to look at the frequency of lemmas rather than word forms as we wished to draw comparisons with earlier diachronic research in English which focused exclusively on lemmas. Secondly, unlike McCarthy (2003), we wished to focus on naturally occurring conversation and not any other kind of spoken variety. Our list is taken from Leech et al. (2001), which is based on the four-million word conversational subcorpus of the BNC. We believe that the BNC subcorpus is large enough to represent contemporary conversational speech. Leech et al.'s (2001) original list is made up of the 880 most frequent lemmas; the cut-off point was established by excluding lemmas which occur fewer than twice per million. We decided to omit items such as letters of the alphabet, proper names, titles, days of the week, months, currencies, countries, nationalities, religions and most interjections (Fuster 2007). This yielded a slightly smaller list of 852 words. In Kilgarriff's view items like these "though wordlike enough to be in the dictionary, were not wordlike enough to count for the purposes of the frequency list" (1997: 143).⁵ An additional reason for not including them is that it is impossible to trace their evolution through the use of historical/etymological dictionaries.

Our analysis of the resulting list showed that the $700^{\rm th}$ most frequent lemma occurred 48 times per million, but the $800^{\rm th}$ most frequent lemma occurs only sixteen times per million. As we decided to work with series of 100 lemmas in line with earlier diachronic research, item 700 became our cut-off point. Less frequent items clearly show greater variability and discrepancies between the BNC and other corpora.

9. The sources of core words in conversational English

Once we arrived at our our list of 700 lemmas, we made use of two online dictionaries for the diachronic analysis of each individual item, the *Oxford English Dictionary* (OED) and the *Middle English Dictionary* (MED). The first was the main source of data while the second was used as a secondary source exclusively to offer antedatings although it had negligible effects on our final results. A caveat seems appropriate here: as we know, the information contained in such historical dictionaries is primarily based on written sources. Therefore, the results offered

below need to be interpreted as indirect evidence rather than direct evidence of historical change in the spoken vocabulary of British English.

Some preliminary explanation of the ideas concerning the labels used for the source languages in this research is required. We have made use of the term *native* to refer to the lemmas belonging to the language used by the original Germanic invaders and settlers from the Continent. These are words which have not resulted from contact. The term 'native' also allows us to include core words such as dog, boy or girl whose origin is obscure, but with no proven links to earlier Germanic. The label Germanic, which is often found in the literature, is therefore inadequate when one wishes to refer to innovations found solely in English, not in cognate Germanic languages, like the examples above or items like the pronoun she, the earliest attested example of which is dated 1160 (found in the continuation of Peterborough Chronicle). The only drawback with the term native, in our view a minor one, is that, in principle, every word in English -including adoptions from other languages- eventually becomes nativized as soon as it is felt to be so by the speakers of that language, that is, if a word has won general acceptance and therefore its origin is no longer considered alien. For instance, a noun like city, adopted from French during Middle English, is undoubtedly felt by contemporary speakers of English to be as native as any other and has been considered so for many centuries.

With regard to the foreign sources included in our tables, ON stands for Old Norse. In this particular case we can be more precise because it is indeed from that donor and stage that practically all Scandinavian words in the core come. As diachronicians know, the case of French is more problematic as different varieties and periods have, according to the literature, exerted their influence on English. It has been repeatedly indicated that Anglo-Norman is the most important donor variety to judge from the number of items currently in the core; but language historians will readily admit that there are a substantial number of items for which it is not always possible to establish a distinction between varieties in relation to their contrasting impact during the Middle English period (see also Rothwell 1998). Moreover, since French has continued to exert its influence on the core during the Modern period, the general label *French* seemed more appropriate than any other. An almost identical problem concerns the term-Latin, which we have adopted as a general label, although it is beyond discussion that different varieties of the Latin language have been the source of English words at different times. For some words though, the label Latin/French has been found convenient as the OED cannot distinguish clearly one or the other as single donors. Indeed distinguishing between these two sources of Romance words, Latin and French, in medieval times has often proved notoriously challenging (Pyles, 1971: 318: Brinton & Arnovich 2006: 239-40). In relation to the words we examined in our research, we have found that, in contrast to the OED, the MED is less inclined to distinguish between these two sources. Part of the problem in the selection of a donor language relates to the historical development of meanings. If we acknowledge a certain identity of form, we often see that French has actually reinforced the presence of items adopted earlier from Latin. This is well illustrated by the evolution of the noun *place*: the OED gives post-classical Latin *platea* as its source in Old English, but Anglo-Norman and Old French are mentioned as later donors which strengthen this particular Latin word's continuity in the language throughout Middle English. Let us now examine statistically the origin of core words in spoken conversational Contemporary English.

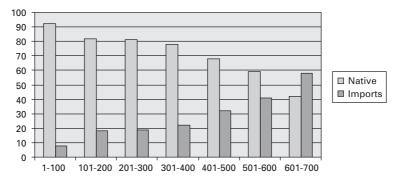


FIGURE 1: Native vs imported lemmas per 100 lemmas

Figure 1 shows the proportion of native and imported items in the most frequent 700 lemmas divided into series of one hundred items. We may observe that foreign elements are certainly present in this conversational core, but not evenly in all series. The native element is predominant in the top 100 items, with a percentage of imports as low as 8%, but then diminishes gradually until we reach items from 600 to 700, where the number of imports surpasses that of native lemmas.

Table 2 above shows the origin of such words in greater detail. Again we have subdivided the list in groups of 100 lemmas in descending order of frequency. As expected, the lists show on the whole that the native element is the most important in conversational English (71.7%), but the non-native and non-Germanic element is also substantial (28.3%). If words of Norse origin are added to the native element, we might be tempted to conclude that the 'Germanic' core amounts to 75.3%, but this is somewhat misleading, as we shall explain. The greatest contribution to the core from foreign sources is due to the incorporation of French

LEMMAS IN DESCENDING ORDER	Native	ON	FRENCH	LATIN	FRENCH/ LATIN	OTHER
1-100	92	5	3	_	_	_
101-200	82	6	9	2	1	_
201-300	81	1	14	3	_	1
301-400	78	4	12	5	1	_
401-500	68	5	15	9	2	1
501-600	59	1	31	3	4	2
601-700	42	3	45	5	5	_
TOTAL %	502 71,7	25 3,57	129 18,42	27 3,85	13 1,85	4 0,57

TABLE 2: Origin of core words in conversational Contemporary English (based on the demographic subcorpus of BNC)

and Latin words whose statistical importance is clear. In principle, if we added up all the French and Latin words, the adoptions from both Romance languages amounts to 24.1%. It is also quite patent that only French and Latin should be seriously counted as donors to the spoken conversational core, with a clear numerical predominance of French over Latin. The influence of other languages is extremely low in the conversational core, contributing only 0.57% of the total.

But such figures alone do not explain how or to what extent the vocabulary of English has been renewed through importation from Romance languages. Indeed, the vocabulary of English cannot be viewed as consisting of separate layers of inherited material and adoptions from foreign languages, since foreign elements may also be detected in new native coinages. Romance roots are recognisable in at least 31 words in the native group. This is the case of common words like *just*, difficult, or really, which do not have a Germanic ancestry. The very existence of this group of words also provides an argument for discarding the term 'Anglo-Saxon' to refer to the whole 'native' element. Also included within the native stock are eleven words whose etymology is obscure or unkown. This means that items which can safely be called native as they have been formed in English with entire Germanic morphology or inherited from an ealier ancestor, that do not contain Romance elements, decreases to 65.7%. On the other hand, if we count 'native' lemmas which contain romance morphology as part of the Romance element, its presence would rise to 28.5%. All in all, then, French and Latin are the source of

close to a third of all core words in spoken conversational Contemporary English. Unfortunately, to our knowledge there is no similar word list with which our findings may be contrasted. The only widely used core lists of Modern English almost exclusively have written English as their basis. This research and that carried out by Fuster (2007) based on the top 1000 items in the entire BNC cast reasonable doubts on the assertion often made that over 80% of the top 1000 words in Modern English vocabulary is of Germanic origin (see, for example, Brinton and Arnovich 2006: 166).

A remark should also be made about the contribution of Old Norse, which, as seen in Table 2, is conisiderably less than that of French and Latin in the core. Although it has been suggested that Scandinavian is the source of many common core items in ordinary spoken English, our research contradicts this assumption. Although the relevance of Old Norse is undeniable, many supposedly core items from that donor quoted in textbooks have not been found in this list. For example, the nouns *neck*, *skin*, *sister*, *sky*; adjectives like *ugly*, *weak* or *ill*, the verbs *to guess*, *to cast*, *to smile*, and many others. We may conjecture that the contribution of Old Norse vocabulary, though of unquestionable importance to the conversational core in Contemporary English, has been most probably overrated, while that of Romance languages may have been downplayed. One possible reason for the low percentage of Old Norse words is that core items in frequency lists tend to be either functional or have a more abstract meaning, whereas many Scandinavian imports like those often quoted in textbooks show more concrete meanings.

10. The Rate of change: renewal of English vocabulary across time.

By definition, the core is in principle the layer that changes the least in the lexicon, but diachronicians agree that over a long period even the core, like any other aspect of language, is subject to change. We consider that more work should be carried out on the possible relationship between the importation of words, as the logical outcome of contact, and the rate of renewals and retentions in lexis. Our contribution attempts to put together both aspects in a historical perspective, considering the rate of retention and/or change these lemmas have gone through to date. Tables 3 and 4 show the evolution of each set of one hundred words in descending frequency order and the stages in which new core words have been incorporated. We have ventured to go as far back as the so-called Germanic stage, not beyond. Principles of a more hypothetical sort are required to discuss whether certain words are inherited from IE in an unbroken genealogical line, or have resulted partly or entirely from contact during the pre-Germanic period. One of

the greatest difficulties in this kind of research is the lack of data regarding specific word-formation processes during periods where no written records exist, so any results would be quite speculative. Moreover, when etymological work has been carried out in order to determine whether certain terms go as far back as the Germanic or the Indo-European stages, it has been limited to the detection of roots, not entire lexical items (see for example Bird 1987). We considered that basing our approach on the examination of 'roots' to determine a word's ancestry was inadequate because, on the one hand, it did not address the issue of possible later word formation processes or the role of contact, which we surmised were likely to be present in very ancient native forms. Again, we have avoided any distinction made on the basis of whether words should be labelled Proto-Germanic, West Germanic or Anglo-Frisian, all of these representing acknowledged evolutionary stages within Germanic prior to the emergence of English. Thus the term Germanic as used here includes lexical items that can be traced back to a Germanic source in any (sub)period earlier than Old English, and items or roots which in other kinds of research might be traced as far back as Indo-European:

	0-100	-200	-300	-400	-500	-600	-700
Gmc(includes IE):	69	49	43	45	43	27	21
OE (until 1150):	13	16	13	7	12	10	7
ME (until 1499):	17	26	29	31	31	45	60
Mod (until 1900):	1	9	11	17	14	18	12

TABLE 3: Retention and change in the core by period

Table 3 shows the rates of retention and change to demonstrate that the core has undergone historical changes which cannot be accounted for entirely through contact. The layer pertaining to the Germanic stage, the oldest in this analysis, makes up 42.4%, whereas 57.6% of this core has been renewed in historical times. If Germanic is interpreted as those lexical items which were inherited from the ancestor(s) of Old English, the figures are definitely smaller than have been suggested to date. Some lexical renewals seem to have occurred during OE, but most of these took place during the ME period and, interestingly, there is also some observable continuity in ModE. The fastest rate of change for each one-hundredword set in descending order takes place during the Middle English period. Note also that some items which correspond to the Germanic period are, in fact, adoptions from Latin, consequently renewals, such as the nouns *pound* and *box*, or the verbs *to turn* and *to stop*. More important, however, is the fact that not every

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innovation in ME is the result of copying. Table 4 and Figure 2 allow a much more detailed analysis. The columns corresponding to Germanic and OE have been transferred unaltered from Table 3, but when we reach the twelfth century the distribution can be properly carried out century by century. The twelfth century should be interpreted as corresponding to 50 years, from 1150 until 1200, the earliest stage in Middle English, since there is a wide, though not unanimous, consensus that the period up to 1150 corresponds to Old English. In brackets, we include terms for which no recorded date has been provided in the OED.

BY CENTURIES	G мс	OE	12	13	14	15	16	17	18	19	20
0-100	69	13	7	6	2	2	_	_	_	1	_
101-200	49	16	5	11	9	1	4	1	1	2	(1)
201-300	43	13	4	16	8	1	6	1	2	-	(2)
301- 400	45	7	6	11	10	4	12	1	1	3	_
401-500	43	12	4	15	8	4	8	2	1	2	1
501-600	27	10	1	23	13	8	6	5	2	1	1(3)
601- 700	21	7	2	25	24	6	5	4	1	1	(1)
Total per period	297	78	29	107	74	26	41	14	8	10	9
Percentage %	42,4	11,1	4,1	15,28	10,5	3,7	5,8	2	1,1	1,4	1,2

TABLE 4: Innovations in the core from Germanic up to today

The inherited Germanic element amounts to 42.4% of the core, so more than half has been renewed from OE until today. Whereas 53% of the core was present in the Old English period, the rest has changed from the start of the Middle English period to date. The OE period, with a share of around 14.5%, shows a comparatively low rate of innovation, which practically equals the rate of renewals during the Modern English period.

If we are to trust the dates of first recorded instances of words in the OED and MED, the fastest rate of change takes place during the Middle English period, starting from the twelfth century. The thirteenth century witnesses a notable acceleration in the rate of innovations as reflected in the conversational core today. In fact, this century alone sees the renewal of a greater number of items than those effected during the entire Old English period. Together with the fourteenth century, both the second half of the twelfth century and the thirteenth century represent by far the highest rate of core renewal in the whole history of the English language from the Germanic period until the twenty-first century, with no less than

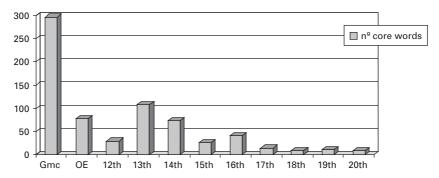


FIGURE 2: Innovations in the core from Germanic up to today

25.7% of all renewals. It is no accident that this coincides with the period during which the greatest number of adoptions, core and non-core, are recorded in the whole English vocabulary. Jespersen had already noted "that the linguistic influence did not begin immediately after the conquest and that it was strongest in the years 1251-1400, to which nearly half of the borrowings belong" (1967: 87). Of course, Jespersen's study was based on dictionary searches, and not on corpus linguistics, since this was not available in his time. Yet, imports alone cannot explain all the innovations in core vocabulary.

If attention is paid to the rate of change while taking into account the order of frequency, it is also obvious that the top one hundred words show the highest degree of permanence as 69% of these words go as far back as the Germanic stage. After the first hundred items, there is a steady decrease in the number of Germanic words.

It may be useful to establish a rapid comparison with the results obtained from a similar analysis effected on the *whole* BNC as seen in Table 5 (Fuster 2007: 715).

CENTS	OE	12тн	13тн	14тн	15тн	16тн	17тн	18тн	19тн	20тн
Total	413	22	138	222	73	84	36	9	5	1

TABLE 5: Statistics from the 1000 core words in the whole BNC corpus (90% written, 10% spoken)

We observe once again that the rate of change accelerates during the thirteenth and fourteenth centuries; and that after the early Modern English subperiod, it slows down again. The obvious difference is that there is a greater number of items renewed during the fourteenth, fifteenth and sixteenth centuries in the whole corpus than in the core list corresponding to conversational English. In all

likelihood this is because when one considers the BNC as a whole, both written English and task-oriented speech have a greater weight. The degree of retention, looking at the Germanic subperiod and Old English together, makes up 53.5%, whereas in the core lists obtained from the whole corpus it is 41.3%. In any case, there is no doubt that both written and ordinary conversational English have changed in important ways mostly during the Middle English period. Incidentally, these results also confirm Haspelmath's observation that the rate of lexical replacement in language change is not necessarily constant (2003: 2).

11. Conclusions and further research

We have carried out a corpus-based diachronic analysis of the conversational core vocabulary of contemporary British English entirely based on the BNC in order to show statistics that highlight two important features which are often mentioned by historians of the English language. The first one refers to the importance of the native element in contrast with the historical role of contact and the second, to the resistance of core vocabulary to historical (internal) changes and/or contact. Such analysis is not devoid of theoretical problems of various kinds: first and foremost the decision to adhere to frequency as the only truly objective and empirical factor in the determination of core. We are well aware of the dangers of slavishly accepting word lists based on frequency. Yet, we agree with Haspelmath (2003: 2; 2004: 212), that frequency is the single most objective factor we have in the establishment of a core list, and it should certainly supersede intuitive lists diachronicians and comparative linguists have relied on in the past.

The statistics offered here, based on 700 lemmas, show that though native elements are numerically outstanding, even the most basic kind of English, such as that represented by spoken conversational interactions, cannot exist without a substantial number of French, Latin and even a few Scandinavian words or word elements. Consequently, it can no longer be accepted that this core has remained impervious to foreign, particularly non Germanic, or Romance influence. Although Contemporary English qualifies as a highly cosmopolitan language, to be fair, the role of donor languages other than Latin and French, is practically insignificant in their contribution to the core. The second aspect examined here was that of renewal. Here statistics showed that more than half of the current core has suffered replacement within historical times. Lexical renewal was particularly significant during the so-called Middle English period. Although this was expected, we have been able to show that vocabulary replacement was not only effected via importation but that word formation processes and the inclusion of items of obscure origin have also contributed to this renewal.

Further research should attempt to provide explanations for changes in the core. For instance, there are interesting lines of enquiry which seek to shed new light on old questions in historical and areal linguistics such as whether there is a neutral universal core which is truly 'culture free', or whether even the core vocabulary for each language or period is subject to cultural influence. Wierzbicka (2006) has claimed that many of the most frequent items have functions which owe their existence to what they call the "Anglo cultural script". For Goddard (2002) extremely frequent verbs in Contemporary English such as *forget*, *decide*, *understand*, etc., adjectives like *wrong*, *stupid*, etc., or nouns like *idea*, *sense*, and *reason* are part of the "Anglo cultural script", they are not neutral. If these authors are right, the development of such an Anglo cultural script would necessarily imply that different cultural scripts existed in earlier periods and would be reflected in the core vocabularies corresponding to each stage in language development.

Notes

- See Fuster and Martí (2000) and Fuster (2007) for a more exhaustive examination of these and the other oppositions mentioned by Stubbs.
- This is in the public domain, freely accessed from http://www.comp.lancs. ac.uk/ucrel/bncfreq/.
- ³. See http://www.natcorp.ox.ac.uk/ docs/userManual/design.xml.ID=spodes. A fuller description of the contents of the spoken component is found at this site.
- 4. We shall be considering here the less technical term "word" and the more technical "lemma" as interchangeable. Corpus linguists and lexicographers often refer to lemmas in this sense of "word" as dictionary "headwords".
- 5. These same items have also been discarded from the frequency list in the preparation of the top 3000 words of the defining vocabulary in LDOCE3. It will be recalled that Hughes' diachronic research, with which interesting comparisons may be established, is based on LDOCE3 (2000: 391-4).

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A LINGUISTIC APPROACH TO DAVID MITCHELL'S SCIENCE-FICTION STORIES IN CLOUD ATLAS

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Style is not specific to an author but to a particular narrative. Nobody shows this better than David Mitchell in *Cloud Atlas* published in 2004. This novel is composed of six different stories linked by a diegetic thread but set in different epochs, from the 19th century to a distant post-apocalyptic future. These six stories have stylistic, rhythmic, semantic and grammatical structures of their own, perfectly suited to their content. The reader just has to follow the rhythm to be plunged into the atmosphere of the narrated story. In other words, *Cloud Atlas* seems to illustrate a truism: the same language can create different worlds by deploying stylistic devices adequate to the overall design. However, it must be acknowledged that David Mitchell is doing more than 'using' language to that effect: he remoulds standard English to fit the world he has in mind. The subject matter is carved into existence through a carefully sharpened language.

It can therefore be said that this finely-worked language does not merely mirror the story it narrates, it gives shape to it, it makes it possible. Standard English would not have been up to the task. This makes David Mitchell akin to writers such as Anthony Burgess (*A Clockwork Orange*) or Russell Hoban (*Riddley Walker*), who indulge in similar alterations of the English language. To illustrate this, we shall focus on the two stories that take place in the future in *Cloud Atlas¹* "An Orison of Sonmi ~ 451" (Sonmi) and "Sloosha's Crossin' an' Ev'rythin' After" (Sloosha). These two opposite worlds —the first one portrays a genetically-

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engineered world in the 22nd century, the other depicts humanity back in an Iron Age after the explosion of the nuclear bomb— are produced by two discourses which could not be further apart in their structures and rhythms. Mitchell manages this *tour de force* of making language speak completely differently from one story to the next.

We shall first see how in both stories, language acquires a defamiliarizing strangeness, reflecting the new context. We shall then analyse in what sense language can be said to create the story. The writing of these two stories follows different patterns: following Gilles Deleuze's terminology, we shall call "Somni" an 'arborescent' kind of writing and the other story a 'rhyzomatic' type. Lastly, we will examine how far language has gone in its evolution in both stories. In "Sonmi", discourse seems to be the result of a political manipulation that has tampered with its natural evolution. In "Sloosha", however, the bomb appears to have liberated language from the grammatical shackles that used to stifle it: the new language is powerfully alive and appears to have come back to its 'essential' state.

Though worlds apart, the two stories yet produce a similar defamiliarizing effect on the reader. In "Sonmi" we are presented with an exceedingly modern world composed of purebloods, xecs, genomicists, syntaxists, aides, tellers, archivist and fabricants, who have been given mathematical names, like Yoona-939, Wing-027, or Sonmi-451, the fabricant interviewed in the story, in the purest science-fiction tradition (we need only think of Zamyatin's We). The text is strewn with unfamiliar technological and medical words (kalodoxalyn, stimulin, amnesiads, xenon, neon, carbdiox, ascension catalysts, soporifix, medics, aircon inflows, Medicorp, biocosmeticians, healant), sometimes in the form of abbreviations or capital letters (sync, EyeSats, Xultation, AdV). It is permeated with signifiers belonging to the rigorous field of science (portion, encompass, approx, milligrams). There is a striking contrast with the other story, in which English seems to have regressed just as humanity has. The linguistic fabric has become threadbare; some letters have completely disappeared, replaced by apostrophes, which makes the text sometimes hard to read. The nuclear disaster has brought about some kind of linguistic entropy, illustrated perfectly illustration in the signifier "hole" standing for "whole"; the loss of this <w> reveals a bigger loss; people have been literally plunged into a big bang from which they painfully try to recover. There are two contradictory forces in this post-apocalyptic writing, reflecting the atoms at work in their contradictory activities of fusion and fission. The reading is axed by the apostrophes: they indeed tend to make the reader halt, as they sharply cut the rhythm. At the same time the sounds are sometimes so close that they seem to blend into a kind of fusing whole, to the point of being almost unreadable. The alphabetical atoms are indeed tending towards fusion, creating new, unfamiliar linguistic entities: 'n'kin'n'age'n'all. The survivors of the Apocalypse try to grasp what certain ancient technological words used to refer to, by translating them into familiar words: a *tel'scope* is thus defined as "the furthest seeing eye"; 'lectric has to be comprehended in known words: "Smart magic like a heart works the body". The survivors attempt to make do with what remains: they are "bricoleurs" in Lévi-Strauss's meaning of the term and of the activity of 'bricolage':

[The bricoleur's] universe of instruments is closed and the rules of his game are always to make do with "whatever is at hand", that is to say with a set of tools and materials which is always finite and is also heterogeneous because what it contains bears no relation to the current project, or indeed to any particular project, but is the contingent result of all the occasions there have been to renew or enrich the stock or to maintain it with the remains of previous constructions or destructions. (Lévi-Strauss 1992: 17)

As in Russell Hoban's post-apocalyptic story (*Riddley Walker*), the survivors make the most of the fragmented words that have lost their previous referents, trying to remember what there was before the blast and to make sense out of the incoherent and heterogeneous.

By contrast, the language of "Sonmi" could be the tool of 'the engineer', as it seems to be perfectly designed to serve the new reality. Unlike the "bricoleur", the engineer (to use Lévi Strauss's dichotomy) "subordinate[s] each of the [diverse tasks] to the availability of raw material and tools conceived and procured for the purpose of the projects" (Lévi Strauss 1992: 17). In this dystopian near future Korea (Nea So Copros) run by corporations, what is a brand in our reality has now become a common name without any capital letters: 'traffic jams' are now called fordjams. People are equipped with their sony, they wear nikes and rolex. The Media use *nikons*. In this *consumerdom*, everything has been de-sacralized, or rather, only one thing is sacred: business. Even the contents of the Encyclopaedias have been translated into the new consumerist language: there are now only encyclopaedia of consumable. Music takes the form of scientific programming: "programmable violin". Commitment is now synonymous with "Investment". Alienated to the consumer society, human feelings and expressions have changed meaning. One father complains about his inability to look at his neighbours "in the eye", not because he has made a mistake involving his honesty and dignity as we would have expected, but because he could not get his daughter the most fashionable doll: "How am I supposed to look our neighbours in their faces if our daughter is the only girl in our carousel to *not* have a Zizzi?" (Mitchell 2004: 355). We then realize just how far the human race has gone down the consumerism line. People are asked to "work, spend, work" (Mitchell 316). That most sacred of human activities, giving birth, has turned into a real market: you can "sell baby quota". As in

Huxley's book, in this brave new world too, life-giving has been taken over by the State. It produces genetically-engineered slave-workers called *fabricants* whose life and death are entirely controlled. The scientist has become all powerful in this bypassing of natural reproduction: the human body no longer constitutes a limit; the border has been crossed, as evidenced by the new word *wombtank*, bringing together the natural locus of birth and an artificial container. The era of the post-human has already begun.

Man has taken total control of nature. Natural elements only exist in so far as they are human-engineered. For instance, science takes care of the dissemination of seeds, as the now "sterile" wind cannot carry out this function any more ("the sole sound was a sterile wind swishing blunted needles" (Mitchell 328)). Irrational uneven nature has been dealt with: the mountains are being "processed". The trees have been planted in a mathematical, rigid order so that they look like a military corps: "The Norfolk pine-rubberwood hybrids were planted in rank and file and created the illusion that trees were marching past our ford in a billion-strong regiment" (Mitchell 328). Science has infiltrated the natural world to the point that nature can no longer be described in its own terms: the 'natural' world has been subordinated to the engineer's language and vision. Even the moths are described as "electron-like". In the living-room the old "aquarium" has been superseded by a dysneyrium (displaying films): natural elements have been taken over by culture linguistically too. In the latest linguistic software the Party has installed, the new cultural files have indeed deleted the old natural ones. There thus can be no such thing as a comparison between the two worlds any more since there is only one left. As a matter of fact, there are very few comparisons in "Sonmy", unlike the other story where nature seems to have regained its rights after the nuclear disaster. In "Sloosha", nature appears to be coming back unexpectedly through the linguistic door. For instance, what used to be scientific and therefore exclusively human ("observatories") is now written observ'trees. Most comparisons take nature as their standard of comparison: "my eyes got owlier", "slipp'ry as cave fish, heavy as a cow, cold as stones", "she din't b'have like no queeny-bee", "lornsomer'n a bird in a box in a well". Nature proves to be a rich linguistic source for the survivors in their description of human movements, for instance: "hawkeyeing me", "to spider up the crumbly ridge". The process of 'life-giving' is following natural rhythm and evolution here, as the images make clear: "I planted my first babbit up Jayjo from Cutter Foot Dwelling", "when Jayjo plumped up ripe" (Mitchell 243). Living in complementarity with nature, the post-apocalyptic survivors communicate with their environment. This harmony is linguistically rendered by the indifferent use of the genitive form for human and non-human elements, showing that now humans are just one category among others. This form is not the preserve of animate beings any more: "this busted world's fault". As we shall proceed to see, the choice of semantic and grammatical structures is determining in both stories.

The two stories are produced by two radically opposed languages. The language in "Sonmi" has the rigour of mathematical writing, the sentences being often introduced by a very scientific colon: "Therefore: we must be vigilant against evil", "some: but yet more surprises", "Not really: an enforcer escorted me". Although this narrative is actually an interview of Sonmi before her execution—Sonmi is a *fabricant*, that is to say, a clone created to serve as a dutiful worker, who has rebelled against the lot reserved for her species by the State—there are absolutely no contracted forms, every word is as fully pronounced as it would be in a very formal speech. In this paratactic way of writing, there is no link between the short sentences, creating a very sharp, chopped-up rhythm. The long words of Latin and Greek origins sound like linguistic fossils, adding to the deadly, cold rhythm: obscured, chauffeur, reverted, ricocheted, alternated, curtail, acute, soporifix, quandary, simulacrum, malfunction, requartered, morphed. A preference is given to nouns, which contributes to the impression of a reified language: "Her aloofness was in fact watchfulness", "Her sullenness hid a subtle dignity", "Their drunkenness had a recklessness that nite". The following sentence, designed to explain Mr Rhee's emotional reaction and behaviour, sounds like a cold medical diagnosis: "Seer Rhee should be understood in the context of his wife". Similarly, the technocratic-sounding expressions "in the face of" ("Why did the entire conurb not grind to a halt and give praise in the face of such inevitable beauty?"), or "for the comfort of" ("This fallacy is propagated for the comfort of purebloods"), tend to technicize language. In fact, beneath the seemingly rich linguistic surface of this 'engineered' piece of writing lies a poor language based on a simple mechanical construction. Signifiers can indeed be articulated or disarticulated as you connect or disconnect a computer. The pervasive use of a negative prefix is symptomatic of a language lacking variety and colours: un-censored, unconscionable, disconnecting, underbelly unmet, unlatched, untouched, unfiltered, unlit, unbood, unflaggingly, unmaled, unpleasantness, uncritical, unthinking, unaided, unsouled, malfunctioned, ill-advisedly, unresponding, uninfluential. It may remind us of Orwell's Nineteen Eighty-Four in which zealous linguists try to "[cut] the language to the bone" (Orwell 54), exterminating superfluous words: "If you have a word like "good", what need is there for a word like "bad"? "Ungood" will do just as well better, because it's an exact opposite, which the other is not" (Orwell 54). In "Sonmi", a good "investment" or the devotion of your life to the Juche (the charismatic father of the Corpocracy) has its own technical language: it can be rebuilt in any way whether you are at the top of the hierarchy twelvestarred or on the verge of being destarred, as everybody is destarrable until you're left with nothing ("to zerostar somebody"). This language-machine creates a mechanical world that has in fact more to do with 'bricolage' than creativity.

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In "Sonmi" indeed, sentences strictly conform to the canonical order: a subject is invariably complemented by its verb, abiding by the ideological standards underlined and denounced by Benjamin Lee Whorf, for whom the old Greek grammatical structures have unquestioningly been governing our way of making sense of the world:

And, pursuant again to grammar, the notion became *ingrained* [...] that the verb class cannot exist without an entity of the other class, the "thing" class, as a peg to hang on. "Embodiment is necessary", the *watchword of this ideology*, is seldom STRONGLY questioned. (our italics; Whorf 1956: 241)

A sentence like "Ascension merely frees what Soap represses" complies with this linguistic ideology. In Nea So Copros, no deviation from the 'right' order is tolerated. The extensive reference to spatial directions (upstrata, instreamed, coerced into, untermensh, downcurved to, switchbacked up into, parallel to, etc.) contributes to creating the image of a rigidly hierarchized world where everything is "orientated". Space is linguistically mastered; each social stratum is addressed with a particular language ("Papa Song's upstrata lexicon that Matins supports this theory" [Mitchell 196]), ensuring that everybody remains in the place they occupy on the social and linguistic tree. Indeed like the scientists in Nineteen Eighty-Four who are given just the amount of words that would be needed in their trade, fabricants have to follow their "Catechisms", ready-made or ready-thought expressions learnt in a training session called "Orientation"; for example "the verb remember is outside servers' lexicons" (Mitchell 230). Natural acquisition is tampered with through the use of a drug called Soap that erases all the new words they have learnt during the day: "Orientation teaches us the lexicon we need for our work, but Soap erases xtra words we acquire later".

Through its semantic and grammatical structures, language in "Sonmi" would correspond to the "arborescent" structure Deleuze and Guattari speak of in A Thousand Plateaus, which they describe as a pre-defined structure where everything is already known and planned. They quote Jean Petitot and Pierre Rosenstiehl: "The channels of transmission are preestablished; the arborescent system preexists the individual, who is integrated into it at an allotted place" (Deleuze and Guattari 2004: 18). The mechanical and articulated language of "Sonmi" is modelled on the tree image in so far as "the tree articulates and hierarchizes tracings" (Deleuze and Guattari 13). We indeed have the feeling words are here at the end of the linguistic chain, labelled like manufactured goods at the end of the assembly line. Language in "Sonmi" addresses itself directly to the reader's brain: it has to do with semantics, with the signified, rather than the signifier; the linguistic process is terminated: words have been processed and deposited on paper, ready-to-be-understood. The abundance of –ed forms in the

text conveys the idea of a stabilized language describing a passive, arrested movement: well-oriented, genomically modified, unholstered, upended, a rainstained, sun-crackled overhang, deadlanded, "Huamdonggil is not gridnumbered or charted". Besides, the text is strewn with verbs in the passive voice, depriving the subjects of the sentences of any active part: "are entitled to 'rests'", "every minute must be devoted to", "these individuals will be named later", "Festivities were cancelled", "The other half was decidedly muted", "servers are genomed for gruelling nineteen-hour workdays", "a body genomed for service", "it was poorly dijied". With the passive form, we are presented with the result of an active process that seems to have been accomplished on its own, the agents being rarely mentioned. The grammatical structure here produces this idea of a puppet language being activated by invisible strings. Similarly, the subjects of the verbs in the active voice are often inanimate, creating a situation in which things are going on around Sonmi without her being able to exert any control over them: "an eyehole blinked, bolts unclacked", "The planked ceiling thumped and creaked, a hatch flipped open, and Ma Arak Na's face appeared" "the streets funnel the morning wind to high speeds" "the rear door hissed open".

The first story thus contrasts strikingly with the second story which is littered with -ing forms, that give the opposite impression, one of a movement in endless suspension. Nouns, which usually tend to immobilize processes, have been turned into -ing verbs. Instead of trips, folly, adventures or choices we find journeyin's, follyin's, adventuring's, choosin'. The numerous adjectives ending in <v>—mostly absent in "Sonmi"—convey a similar idea of movement: breathy, selfy, runty, mythy, southly, summery, melty, knotty'n'rooty, waxy'n'silty. Such a sentence as "there wasn't no scalin' it" would be rendered by "escalation was impossible" in "Sonmi", the noun (escalation) putting an end to the movement-in-process embodied by the -ing form (scalin'). Far from being linguistically obedient, the language of "Sloosha" upsets the 'ideological' rules: it is a 'delinquent' language flouting the canonical order, as in the following sentences: "so hushly hushly up I was", "snailysome goin' was them rockfields", "Coneys'n'roasted taro we was eatin'". Words have changed categories. Onomatopoeias abound in verbs: "They was padddooomin". The spelling and grammatical borders have been disrupted, giving birth to a new lexical and grammatical layout: Pa'n'me is a novel one-word signifier joining words previously separated.

Reading "Sloosha" can leave you out of breath, the accumulated signifiers linked by "n" accelerating the rhythm as if it were never going to end: "She's fuggin' your b'liefs'n'all up'n'down'n'in'n'out", "Magicky ruby welled'n'pumped an' frothed on the fleece an' puddle on the stone floor". In contrast to the regular tree-like linguistic structures in "Sonmi", the nomadic rhizome that Deleuze and Guattari speak of may helpfully be invoked here: it has the distinctive feature of

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never taking roots. Unlike the rooted tree indeed, the rhizome does not settle anywhere or conform to any already articulated hierarchical structure:

A rhizome has no beginning or end; it is always in the middle, between things, interbeing, *intermezzo*. The tree is filiation, but the rhizome is alliance, uniquely alliance. The tree imposes the verb "to be", but the fabric of the rhizome is the conjunction, 'and…and… and…'. This conjunction carries enough to shake and uproot the verb 'to be. (Deleuze 27)

Through its abundant use of the conjunction "and" accelerating the rhythm of the sentences, the language in "Sloosha" is indeed characteristic of the rhizome, always on the run, gathering speed in mid-sentence: "The middle is by no means an average; on the contrary, it is where things pick up speed" (Deleuze 2004: 28). It gives the impression of a 'stammering' process that will not finish. The idea of rapidity is also rendered by verbs that are then immediately followed by a direct object complement: "She sorried losing", "she looked spikers at me". The text here is not addressed to the reader's brain but to his/her senses. Indeed, after a technical language ("Sonmi") there follows a very concrete, figurative language that appeals to our emotions. Rather than semantics, what is at stake here is semiotics. The percept is substituted for the concept. The onomatopoeic sounds replace the finished linguistic goods; cockadoodlydooing, "an'blissweed'll lead you b'tween the whack-crack an'boom-doom an' pan-pin-pon till we...", "an' suddenwise whoah a whip binded my legs t'gether an' whoah up I flew an' whoah down my head dropped an 'aieee the pavestones smashed my skull" (Mitchell 289). In "Sloosha", language is not conceptual: it is a language "in the making", describing things as they occur without any prior structuring. Thus you do not "sob your eyes out" in "Sloosha" but sobbed'n'sobbed 'n'sobbed. Likewise, "an 'up Old Georgie's'closure we scaled hand by hand by hand" (p. 275).

This very concreteness of language makes it a good candidate for humorous remarks that would be impossible in the other language (where "Humor is the ovum of dissent, and the Juche should fear it"). Funny jokes are possible because language has crossed the barriers of decency. It tends indeed to be more colloquial: "fear pissin'in my blood". Such expressions as ass-belched, "my voice was jus a duck fart in a hurricane" cannot but trigger a smile. Far from the obscure, alien-sounding words in "Sonmi", language here is as close as it can get to the thing itself: "he spoke knuckly like savages", "blissweed" or "no mornin' for sluggybeddin'" need no translation. Words are on a par with things anyway: "stones'n'shapes'n'words". There are no fossilized words; language here is expressive, striking and vivid; simple answers and questions have become verbs: to yay, to howzit (how are you / is it with you), "to say-so somebody" (to order), to naysay, "there's no but whying". There is something very 'practical' in the expression "to coldwater the plan" and its exact

opposite "it fired hot" to refer to the success or failure of a project. "To hesitate" has a more expressive and 'natural' translation in the language of the future: "to donkey 'bout with it". "Going back to some place very fast" is expressed by the metaphor of a rapid animal: "to back rabbit". Our complicated words have been replaced by signifiers clearly expressing their meaning; thus if you are a veterinarian, what you do is indeed "animal doctoring"; the concept 'nonsense' tends to be more 'vividly' rendered in the new language: "animal farting". The numerous comparisons in the text conjure up colourful images that make language all the more transparent and clear. Such sentences as these are very visual: "wriggling like eels on the sand", "I was hooded like a goat b'fore slaught'rin'", "helpless as a strung-up lardbird bein' bled from the hook", "but the gone-lifes outnumber the now-lifes like leaf outnumber trees".

If language is so different in both stories, it is because its very essence, its very substance has been 'manipulated' in two radically opposed ways.

In the two stories, language has taken different evolutionary paths. More particularly in "Sonmi", it reveals the manipulation it has been subjected to. Indeed, the English language of the 22nd century would have been more corrupted than it is here, had it followed its natural evolution. In fact the Unique Party of the Corporation has mastered not only nature but also what is the most natural to man, that is to say their language. The irregular verbs for instance have been maintained. The natural process of simplification at work in any language has been curbed here through intervention. The linguistic DNA has been fixed once and for all: it is a *genomed* language. Repetitions, synonyms, superfluous or deviant elements are not seen in a good light by the Party as regards fabricants. The fabricant Yoona-939 became a suspect when she started using "irregular speech" and "finer-tuned" words. Language must conform to the mould sanctioned by Papa.

The absence of metaphors or any figure of speech in this language ("Sonmi") is the symptom of a dispassionate language. It has reached the final stage Rousseau talked about in his *Essai sur l'origine des langues*, moving further away from its passionate, metaphorical initial state. For the French thinker indeed, language was metaphorical in its origin because it was born of man's passions: "As the first motives which brought man to speak were passions, his first words were tropes. Figurative language was the first to arise, the 'proper' meaning was found last [...] We started reasoning a long time afterwards" (Rousseau 1993: 63, our translation). The language of Sonmi is a rationalized language that has done away with human passions and emotions. Vowels are rare in this consonant-dominated language devoid of any imaginative power; for instance, "ex" is systematically replaced by a simple x: "we xited the overway at xit two" (Mitchell 323). In "Sonmi" the earth is poisoned, compelling the remaining citizens to keep to the

cities run by a power obsessed with property. This cleaning process has affected words too: language has been made 'proper'. What belonged before to the abstract, metaphysical sphere has now been brought down to the level of material elements. A "Soul" is the new word for a microchip. Hence the disappearance of metaphors or similes whose main function, according to Lakoff and Johnson, is to enable us to grasp abstract elements (Lakoff 1980: 115). Indeed metaphors permit us to put things in relation and open perspectives so as to create meaning and understand the world: "because so many of the concepts that are important to us are either abstract or not clearly delineated in our experience (emotions, ideas, time) we need to get a grasp on them by mean of other concepts that we understand in clearer terms (spatial orientations, objects...)". For instance, "love" can only be defined with the help of other concepts: "Love is madness", "Love is a journey", "Love is war" (Lakoff 115). By contrast, in the other story, metaphors are plentiful, which is understandable among survivors who try to grasp the world around them. Besides, the narrator, Zachry, is narrating the story of his life as a child when he tried to face and understand the adult world. For instance, he resorts to a metaphor in his attempt to describe what lies are: "Lies are Old Georgie's vultures what circle on high lookin' down for a runty'n'weedy soul to plummet'n'sink their talons in".

Sonmi comes close to reintroducing metaphors, as she moves away from Papa's catechism. The spheres she is bringing together are far apart and create a surprising vision: "The statue itself assumed a comic majesty", or "Snow is bruised lilac in half-lite". She is reintroducing some kind of tension inherent to metaphors according to Paul Ricoeur (1975). Indeed, for the French philosopher this trope always displays a tension between the "is" and the "is not" of a metaphorical sentence. In the expression "this man is a lion", he is not (literally) and is (metaphorically) a lion. The literal meaning yields to the new impertinent meaning while resisting it. Both meanings cohabit in a way. The State would not allow such resisting and impertinent tension in the meaning of words. Just like the Inner Party in Orwell's novel, it has taken hold of the identity of things and determines what is and what is not. Tension or dual cohabitation is unthinkable for the Party of *Unanimity*. The opposition they are fighting (*Union*) is non-metaphorically called "Cancer". It literally embodies a disease to be fought by the Party of cleanliness and health, as the vocabulary reveals: "The Juche's rounds of new Enrichment Statutes are sticking band aids on hemorrages and amputations". All that used to be abstract now corresponds to something very physical in the 22nd century. "Evil" has taken up a very concrete embodiment:

Papa Song told us a gas called evil xists in the world; purebloods called terrorists breathe in this evil, and this gas makes them hate all that is free, orderly, good and corpocratic; a group of terrorists called Union had caused yesterday's atrocity by

infecting one of our own sisters, Yoona-939 of the Chongmyo Plaza Dinery, with evil. (Mitchell 196).

In this literal, orientated language, words have been reduced to one smoothed-out semantic layer with one fixed meaning. The Party has indeed tampered with the paradigmatic axis of language, condemning it as a lively and changing organism. This inability of language to deviate from its pre-assigned form has an equivalent at the diegetic level: indeed, we learn that the story Sonmi is narrating had a preplanned outcome. Its end was contained in its beginning and Sonmi was aware of it from the start: she knew that the people supposed to be her accomplices in her "ascension" have always been part and parcel of the Party's conspiracy to bring her down, with this aim in mind: "To generate the show trial of the decade. To make every last pureblood in Nea So Copros mistrustful of every last fabricant. To manufacture downstrata consent for the Juche's new Fabricant Xpiry Act. To discredit Abolitionism. You can see, the whole conspiracy has been a resounding success" (Mitchell 349). The idea of circularity and impossible escape is in keeping with the stifling language of the story, too mechanical and paralysing to allow any escape into the unknown or to let imagination grow. Similarly, no escape into the past is possible; the latter is a "forbidden zone" (Mitchell 233). The Party has indeed eliminated all the elements belonging to Pre-consumer times: "An abbey had stood there for fifteen centuries, until Corpocracy dissolved the pre-consumer religions after the Skirmishes" (Mitchell 329). No cohabitation of elements belonging to different periods of time is thinkable: it would introduce some kind of dissemblance or dissymmetry in which tension and dualism could reappear. Language guarantees this erasure of the past, as old words have been discarded and forgotten. Having only one meaning, the new signifiers cannot hide any other. Linguistic 'palimpsests'² are impossible since hypotexts have been deleted, washed clean.

Yet some hope remains and it is paradoxically to be found in language itself. Indeed if Sonmi played the game all the way till her preplanned arrest and condemnation, it is because she knew that her testimony would be read. Whether it is seen as "the ugliest wickedness in the annals of deviancy" does not matter. This piece of writing will somehow make its way through people's minds and start 'germinating' there:

We see a game beyond the endgame. I refer to my *Declarations*, Archivist. Media has flooded Nea So Copros with my Catechisms. Every schoolchild in corpocracy knows my twelve "blasphemies" now. My guards tell me there is even talk of a statewide "Vigilance Day" against fabricants who show signs of the *Declarations*. My ideas have been reproduced a billionfold. [...] As Seneca warned Nero: No matter how many of us you kill, you will never kill your successor. (Mitchell 349)

Linguistic seeds can grow some kind of rebellious feelings when and where least expected. In the long run this germinating language will get the better of the genomed language, starting the '-ing process' again. Sonmi seems to think that, like nature, language is resilient enough to counter any manipulative action. Like the genomed moth whose "wings' logos had mutated over generations into a chance syllabary" and thus represents "a small victory of nature over corpocracy" (Mitchell 328), language may deviate from the linguistic route laid out by the Party.

It is precisely this linguistic resistance that is at stake in "Sloosha". Unlike the other story, in this one language has not been tampered with. It is in the state it is in because of the circumstances. Apparently diminished, it has in fact found the strength to rebuild itself on a demolition site. In the process, grammar has simplified itself: most verbs have lost their irregularities (I knowed, she thinked, I'd bringed, he finded, forbidded), the plural is marked by a simple 's' for all nouns now (foots); was applies invariably to singular as well as plural subjects ("we was eatin", "our bodies was"). The same simplification applies to comparatives, sometimes operating on the irregular forms (badder, bestest). It has a powerfully poetic aspect: far from the perfect, military sounds of the first language (as in "the crush of consumers cleared in an instant", for instance), it seems to follow the rhythm of life. Hence the numerous superfluous elements; "'n all" punctuates many phrases: "wise up my people'n'kin to the Prescient's truesome plannin'n'all". As life is, the text is full of redundant repetitions: "mocking us mocksome". A binary rhythm gives the tempo to most phrases, making them sound as light as children's songs: "Ma was flappin'n'anxin'", "Pa was still lyin'n'bobbin'", "Dawn fogged waxy'n'silty", "bumpy'n'thorny", "runty'n'weedy", "not lazy'n'spotty", "over knotty'n'rooty ground". The childish-sounding words give a lively turn to the signifiers: "umb'licky word", "nothin' to be gained by dillyin'", "a squeezywheezy", "he snaky-snuck up a leafy hideynick".

Far from being a one-layered language, words in "Sloosha" can sometimes be multi-layered. They indeed carry the burden of the Old Civilisation. The signifiers convey several meanings, dragging some remains of the past, forming a real palimpsest. They are sometimes funny (when we get what the *kole kole* girl refers to for instance), but they sometimes carry more scathing overtones. Just like in *Riddley Walker*, language seems to know things its speakers ignore: the word *Civ'lize* for instance insists on the sounds "lize" or "lies", as if the most civilised and scientific of all countries had lied to its fellow-citizens not telling them everything about the bomb. Many portmanteau words offer an acrid denunciation of our civilization: the term *trespyin* mixes two ideas "to trespass / to spy". Death seems to show through the new version of skeleton *skellyton* mixing such words as "skull/shell/hell/y". *P'mission* seems to insist on the mission any permission gives rise to. But unlike what happens in *Riddley Walker* where people blindly trust

language—in which they are sure to find the secret of the bomb—, Zachry is conscious of the power of language and thus of the need to denounce it, as he mistrusts people's nice words: "You can't go trustin' folks what lassoop words so skillsome as him" "No un but me seen the arrow o'flatt'ry them words fired" (Mitchell 252), "her words was slipp'ry wrestlers they jus' flipped your nay into a yay" (Mitchell 254).

What we have growing here (in the form of the rhizome) is real germinatng language. Not taking root anywhere, it simply follows the flow of life. As compared with the flat line on the electroencephalogram the one-layered language in "Sonmi" could represent, the accumulated 'n'n'n'n'n'n'n'n'n'n'n' could be an image of the heart oscillations signifying life. Yet, things are not so clear-cut. They tend to permanently oscillate between life and death, right and wrong. The wise prescient Meronym —a member of the remaining technologically-advanced civilisation who is visiting the primitive tribe the narrator belongs to—teaches Zachry that every single thing has two sides to it; it can never be one-sided and clear-cut:

List'n, savages an' Civ'lizeds ain't divvied by tribes or b'liefs or mountain ranges nay, ev'ry human is both, yay. Old Uns'd got the Smart o' gods but the savagery o'jackals an'that's what tripped the Fall. Some savages what I knowed got a beautsome Civ'lized heart beatin' in their ribs. Maybe some Kona. Not'nuff to say-so their hole tribe. (Mitchell 303)

'Unanimity' is impossible: there always are and must be some counterbalancing elements. Thus Meronym reinstates the dualism and the dichotomies laid down in the first language, and claims the possibility of standing in-between. The "Sloosha" language itself, as a rhyzomatic one, grows in the middle. Thus within the new spelling of *Hawai* can be read the questions of the survivors in regard to their lot: "Ha Why". A "lullaby" is now a *babbybye* oscillating between life (baby) and death (bye).

It is still possible for Zachry and his tribe to imagine a different future from the one they have, a possibility linguistically blocked in the other story: "an' 'magin' flyin' kayaks an' no-horse carts wheelyin' here'n'there" (Mitchell 285). But the term 'mazement expresses people's ambivalent feelings concerning their future, oscillating between hope and loss: people are both ready to be 'amazed' and yet are lost in a "maze" where they cannot see very far ahead. Language conveys this ambivalent wish to go forward and the inability to do so. Likewise, the signifier f'got in its new spelling seems to hesitate between to get / to have and to forget / to abandon. Language does not exhaust itself in one fixed meaning: like the people, it has become nomadic, refusing to settle itself anywhere. Rhyzomatic words can thus disseminate themselves on unknown territories and experiences, where everything is not rigorously set out for them in advance. Language has been set free. On the whole, it seems to have come back to the time when it was at its

most natural and this seems possible only because nature has regained its genuine place and function.

Conclusion

What can be said of the "Sloosha" story can also be said of Mitchell's novel as a whole, as it seems to refuse to follow a straight chronological line: the six stories are indeed embedded in a Matryoshka doll fashion; the whole structure thus forms concentric spheres that do not allow the readers to settle anywhere; when they become familiar with a story, they are indeed suddenly "deterritorialized"—to use Deleuze's term—and plunged into a new spatio-temporal universe. We never know where the next story is going to take us, just like the clouds in Sloosha's last image: "Who can say where the cloud's blowed from or who the soul'll be 'morrow? Only Sonmi the east an' the west an' the compass an' the atlas, yay, only the atlas o' clouds" (Mitchell 308).

The stories themselves are a palimpsest, drawing on very well-known literary styles (from the typical 19th century epistolary mode to the futuristic world and language that Huxley, Zamyatin, Orwell or Hoban have made us familiar with). The mosaic image Mitchell is building out of fragmented heterogeneous elements compels us to take a look at humanity's social, literary and linguistic history from a distance. At first sight very pessimistic—all the stories depict characters in a stifling situation, and the embedded structure of the stories adds to the impression—, *Cloud Atlas* nourishes hope of some rhyzomatic germination in the middle. And precisely the middle story, the only one which is uninterrupted, is the post-apocalyptic "Sloosha" story, where language is paradoxically at its most lively and essential, as if language and mankind needed to undergo such a trauma to be brought back in line with nature. Luckily, writers reinvigorate language for us before any catastrophe takes place. But Mitchell's writing, like Orwell's or Hoban's, remains a warning.

Notes

- 1. The first four stories take us from the South Pacific in the 19th century to 1931 Belgium, moving on to the seventies in California, and lastly today's England, before focusing on 22nd-century Korea (Sonmi) and Hawaii in a distant future (Sloosha).
- ². We here refer to the title of Gérard Genette's book, *Palimpsestes* (Paris: Seuil, 1982), by which he means that a literary text can always hide another that it never manages to conceal entirely, so that the text often lends itself to a double reading where hypertext and hypotext are superposed.

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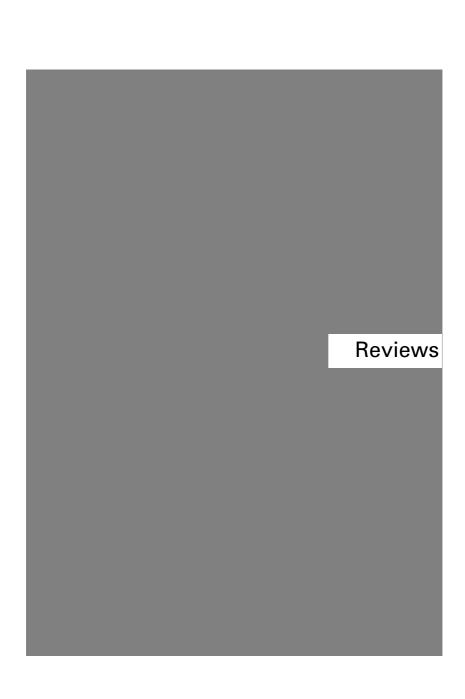
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EL EUFEMISMO Y EL DISFEMISMO. PROCESOS DE MANIPULACIÓN DEL TABÚ EN EL LENGUAJE LITERARIO INGLÉS

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El texto se articula en una estructura que comprende una introducción y cinco capítulos, más los correspondientes apartados dedicados a la bibliografía y anexos. Tras un primer capítulo, prolijo, acerca de conceptos teóricos básicos, los capítulos II y III se centran en el eufemismo y en el disfemismo, respectivamente, mientras que el capítulo IV trata de los cuasieufemismos y cuasidisfemismos. En el capítulo V se presentan las conclusiones, diferenciadas según si se derivan de la teoría lingüística o de cuestiones relativas al lenguaje literario.

En la introducción el autor establece las bases de su estudio partiendo de importantes trabajos previos, como son los de Casas Gómez (1986), Montero Cartelle (1981) o Allan & Burridge (1991). Señala que existen algunas posturas muy generalizadas en las que se considera la interdicción igual al eufemismo y en las que la presencia del tabú tiende a limitarse al nivel léxico, por lo que critica la falta de enfoques que denomina *discursivos*, así como el hecho de que no haya sido estudiada en profundidad la manifestación literaria del fenómeno, o bien que haya sido ignorado su carácter social.

El capítulo I trata en su primer apartado de las repercusiones lingüísticas del tabú y la interdicción. Entre las causas más habituales del tabú, el autor cita, como síntesis de numerosos trabajos previos, lo mágico-religioso, lo sexual y las funciones corporales, a las que hay que añadir otras de índole social, como la enfermedad, la conducta social, lo afectivo, etc. Opina que no se debe igualar causas y tipos del

tabú, esto es, categorías, porque las categorías son el resultado del tabú. Tras revisar diferentes clasificaciones (Ullmann 1962; Montero Cartelle 1979; Rodríguez González 1996) propone la suya propia, que coincide parcialmente con otras en las que se diferencia el tabú de origen interno o psicológico (el miedo) y el de origen externo o social (el *pudor* y el *respeto*). Concluye que sobre una realidad puede haber tabú en más de una categoría, lo que implica un mayor grado del mismo tabú, y afirma que el tabú lingüístico es, ciertamente, un tipo de interdicción, pero no limitado sólo y exclusivamente al ámbito de lo mágico y lo religioso. Desde el punto de vista diacrónico (cap. I, § 2), el tabú se presenta como un fenómeno intemporal y universal, de modo que actualmente ha aumentado en los ámbitos interdictivos de lo político y de las relaciones sociales (concretamente, lo racial), mientras que ha disminuido notablemente en el ámbito sexual. Ahora bien, sigue diciendo el autor, lo que realmente cambia es el sustituto eufemístico o disfemístico adoptado en cada momento, que es fundamentalmente inestable. Comienza el siguiente apartado, donde se discuten generalidades y características de los procesos eufemístico, disfemístico y mixto, con la exposición de una paradoja relativa al tabú lingüístico formulada por Benveniste (1974): "el concepto debe evitarse [...], pero la palabra y sus sinónimos deben existir" (p. 43). Crespo Fernández sostiene que el hombre se aproxima al tabú desde un punto de vista eufemístico o disfemístico según cuál sea su propósito comunicativo (p. 44). Así, el eufemismo presenta una vertiente social (relacionado con la cortesía y con el doble lenguaje de los políticos, cuestiones desarrolladas en Cap. I, § 8), mientras que el disfemismo es una opción de estilo, no necesariamente asociado a hablantes vulgares o con poca formación. Convendría notar aquí la conexión con el concepto de prestigio encubierto que se maneja habitualmente en sociolingüística, como lo formula, por ejemplo, Moreno Fernández (1998:43-44), y que Crespo Fernández apunta en relación con el cuasieufemismo (p. 224), pero no en su análisis de las variables socioculturales del disfemismo, especialmente el sexo. Por ser fenómenos contextuales, no pueden considerarse el eufemismo y el disfemismo como sustitutos per se (p. 47), sino como procesos que resultan en sustitutos eufemísticos y disfemísticos. En nuestra opinión, más bien dan idea del fenómeno de coherencia textual conocido como sustitución léxica sinonímica, como lo define, por ejemplo, Bernárdez (1982:103-105), o incluso del denominado colocación, de acuerdo con la teoría de Halliday & Hasan (1976:284). Es más, una unidad léxica puede aparecer eufemística desde el punto de vista locutivo, pero disfemística desde el punto de vista ilocutivo, por lo que cabe hablar de eufemismos disfemísticos y de disfemismos eufemísticos, es decir, cuasieufemismos y cuasidisfemismos, procesos mixtos que son objeto de atención especial en el capítulo IV. A continuación, el autor relaciona estos fenómenos con los conceptos de denotación y connotación (cap. I, § 4) y con la variación lingüística (cap. I, § 5). El eufemismo y el disfemismo son

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casos de variación lingüística gradual presente en todos los niveles: fonológico, léxico, sintáctico y discursivo (p. 52).

Los tres últimos apartados de este capítulo constituyen una breve exposición de las relaciones entre estos fenómenos y las distintas disciplinas lingüísticas, de las que el autor destaca la pragmática y la retórica. Así, trata la semántica sobre la base de la distinción entre significado y sentido y la semiología y la semiótica, que concibe como disciplinas diferentes, aduciendo que la primera tiene en cuenta las intenciones comunicativas, por lo que es la más favorable al análisis de estos fenómenos de manipulación del referente. Trata asimismo sus relaciones con la psicología y la psicolingüística, y con la estilística, donde da cuenta de las variaciones diatópica, diastrática y diafásica. Los estilos se definen desde la teoría de Halliday (1978), por lo que el eufemismo y el disfemismo son rasgos de estilo que se entienden en el marco de un registro. Finalmente, aborda el análisis del discurso, la pragmática (que desarrolla en Cap. I, § 7), y la dimensión social-cultural-antropológica del lenguaje, que integra la sociología y la sociolingüística, la etnolingüística, la etnografía de la comunicación, la etnometodología y la antropología lingüística. Todas ellas, creemos, en mayor o menor grado y desde metodologías distintas, dan cuenta de la variación lingüística o de las normas de interacción, de acuerdo con un concepto ampliado de la competencia lingüística. Por esta razón, notamos la falta de una mención explícita a la corriente del análisis de la conversación y, sobre todo, a la teoría de Hymes (1971), además de que algunas de las cuestiones señaladas, como la cortesía, son teorías pragmáticas, que es el punto de vista que adopta el autor en páginas sucesivas. Partiendo de la noción de sentido, más allá del significado y la designación (véase Casas Gómez (2002), acerca de los niveles del significar), Crespo Fernández entiende pragmáticamente los sustitutos eufemísticos y disfemísticos como usos eufemísticos y disfemísticos, por tanto, como actos de habla, que habría que estudiar dentro de una novedosa corriente, la pragmática léxica. Para su argumentación Crespo Fernández establece diez principios que guían su investigación y que pueden resumirse esencialmente en la importancia de los contextos lingüístico y extralingüístico, las situaciones de comunicación, el sentido, las intenciones comunicativas (explícitas o implícitas) y los participantes en la comunicación. El último apartado, centrado en la retórica, destaca precisamente el carácter persuasivo de la comunicación verbal, basado en los valores de reforzamiento y atenuación y, especialmente, en las vertientes positiva y negativa del proceso eufemístico.

Los capítulos II y III, en los que se trata de manera extensa los procesos de eufemismo y disfemismo, respectivamente, presentan una estructura similar de sus contenidos, de tal manera que en ellos puede hallarse un planteamiento inicial del marco teórico de cada uno además de una exposición de las perspectivas para su análisis que se ajusta con rigor a los objetivos generales del trabajo porque en ella se analizan estos procesos como fenómenos lingüísticos, pragmáticos y literarios.

Concretamente, los marcos teóricos incluyen a lo largo de sus distintos apartados, además de los aspectos etimológicos y diferentes conceptualizaciones del fenómeno en cuestión (con definiciones de carácter extralingüístico, lingüístico y pragmático), discusiones acerca de las relaciones entre eufemismo y tabú (pp. 83-85), los fines y motivaciones del eufemismo y del disfemismo (pp. 87-91 y pp. 167-170), así como sobre la aceptabilidad o no del eufemismo (pp. 91-93) y sobre las relaciones entre disfemismo y argot (pp. 170-171). Si atendemos a los detalles, cabe destacar que, puesto que el eufemismo actúa sobre el tabú para hacerlo aceptable (precisamente, una de las motivaciones que enumeramos un poco más abajo), sin que por ello debamos considerar que las esferas de interdicción son invariables, es, con todo, necesario distinguir claramente entre el eufemismo, entendido como un proceso, y el sustituto eufemístico, que es una unidad léxica (p. 80). Su revisión del marco teórico da como resultado una caracterización del eufemismo como fenómeno social, inestable y relativo, pero también, desde el punto de vista lingüístico, de carácter discursivo y pragmático, siguiendo los planteamientos, entre otros, de Allan & Burridge (1991), Warren (1992) y, sobre todo, Casas Gómez (1986). En este sentido, Casas Gómez (2007:8) ha señalado recientemente las limitaciones de carácter teórico y metodológico que su definición de 1986 imponía al fenómeno, aún cuando aquella definición supuso evidentemente una importante novedad para su estudio. En cambio, en el caso del disfemismo, la discusión parte del que, a su juicio, es un reduccionismo teórico según el cual el fenómeno se entiende en términos de jerga o de recurso humorístico, proporcionando él mismo la definición pragmática. Por otra parte, las motivaciones (en clara relación con las causas del tabú), señaladas por Crespo Fernández son, para el eufemismo, encubridoras, de tacto social, de acomodación e integración social, de dignificación, persuasiva, estética y ocultadora, mientras que, para el disfemismo, persiguen fines como el ataque verbal, la rebeldía social, la liberación de tensiones, la persuasión o el poder social.

En cuanto al análisis de los eufemismos y disfemismos como fenómenos lingüísticos, Crespo Fernández parte de la base de que ambos son casos de *parasinonimia*, que se dan, respectivamente, entre el sustituto eufemístico y el (término) tabú al que reemplaza y entre el sustituto disfemístico y el rasgo sémico negativo que acentúa. En todo caso, se trata de procesos metafóricos sobre los que el autor ofrece una extensa discusión. En relación con ello, analiza el efecto que sobre el tabú ejerce el lenguaje figurado, lo que lleva a una clasificación escalar de los eufemismos y disfemismos metafóricos en *explícito*, *convencional*, *novedoso* y *estético* (pp. 98-101 y pp. 174-175), si bien el último, el estético, no es identificable con el disfemismo. Esta propuesta tiene su aplicación lexicográfica en la configuración de las entradas correspondientes a los ejemplos utilizados y que podemos hallar en el anexo. El exhaustivo análisis del carácter metafórico de los eufemismos se complementa

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con una nota sobre el valor cognitivo de las metáforas eufemísticas. Otros aspectos lingüísticos abordados por el autor se refieren al cambio semántico y sus efectos sobre las unidades léxicas (pp. 103-105), además de las que denomina variantes eufemísticas y disfemísticas, a saber, términos, locuciones y enunciados (pp. 106-108 y pp. 177-179, respectivamente), lo que avala su punto de vista acerca de eufemismo y disfemismo como manifestaciones de la variación lingüística no circunscritas exclusivamente al nivel léxico. Finalmente trata los mecanismos de creación de eufemismos y disfemismos, partiendo de diferentes clasificaciones realizadas por otros autores, como son Senabre (1971), Williams (1975), Casas Gómez (1986), Alonso Moya (1988), Allan & Burridge (1991) o Warren (1992), para proponer la suya propia (véanse esquemas en p. 117, para el eufemismo, y p. 181, para el disfemismo).

En lo que se refiere al enfoque pragmático de estos fenómenos, el autor construye su argumentación, en consonancia con los principios que había establecido, en torno a tres grandes cuestiones: el contexto discursivo, un planteamiento general de las teorías pragmáticas más relevantes y un análisis de estos fenómenos desde variables espacio-temporales (que incluyen entornos, geografía y situaciones) y socioculturales (edad, sexo, clase social, etc.), no siempre claramente delimitadas desde el punto de vista de la teoría socioligüística (véanse las denominadas *variables pragmáticas* del eufemismo en pp. 132-143 y los *condicionantes discursivos* del disfemismo en pp. 193-202). En cuanto a la teoría pragmática, puede decirse que para el autor toda la pragmática es relevante para el estudio de estos fenómenos puesto que considera su incidencia en ellos de, por este orden, la teoría de los actos de habla, el principio de cooperación, la teoría de la relevancia, la teoría de la imagen, el principio de cortesía y la estética de la recepción, teoría esta última, no estrictamente pragmática sino de la crítica literaria, surgida en el marco de la Escuela de Konstanz (Acosta Gómez 1999).

Por último, el fenómeno literario abarca las nociones de estilo y lenguaje literario y una discusión sobre el concepto ya presentado de eufemismo estético (pp. 147-150), así como de las funciones literarias del eufemismo (pp. 150-152) y del disfemismo (pp. 206-210), todo ello ilustrado con gran profusión de ejemplos de la lengua inglesa, y de las cuales el autor resalta en ambos casos su capacidad para proporcionar al lector información acerca de contextos no sólo directamente relacionados con el mundo recreado en la obra literaria, sino también extraliterarios y ajenos a su contexto ficticio.

Ya en el capítulo IV, Crespo Fernández trata los cuasieufemismos y cuasidisfemismos como procesos mixtos de manipulación del referente. Presenta algunas consideraciones generales y otras de carácter pragmático, relativas a las que denomina *variantes* de cuasieufemismos y cuasidisfemismos, además de los objetivos y fina-

lidades para los cuales se utilizan. En el caso del cuasidisfemismo se especifican además su relación con la ironía (pp. 230-232) y sus recursos formativos (pp. 232-233).

En cuanto a aspectos de índole metodológica, los anexos (pp. 249 y ss.) constituyen un repertorio de ejemplos extraídos de las novelas y obras de teatro consultadas, agrupados según si se trata de eufemismos, disfemismos o procesos mixtos, y caracterizados de acuerdo con las categorías antes definidas, ya que en cada entrada se señalan su categoría, desde el punto de vista de la clasificación de eufemismos y disfemismos metafóricos, así como el mecanismo lingüístico relacionado con su formación. Cabría objetársele, sin embargo, al autor el reducido número de trabajos que conforman el *corpus* empleado y tal vez la falta de rigor en su uso y codificación, pues utiliza ocho textos literarios pertenecientes a géneros distintos, sin que ello tenga más trascendencia (no se comparan géneros), pero además ejemplifica ocasionalmente sobre otros seis. Dichas objeciones podrían deberse, no sólo a razones metodológicas que pudieran aconsejar un mayor número de fuentes, sino al hecho de que, precisamente, nos hallamos ante fenómenos que son el resultado de opciones de estilo, por lo que podría discutirse hasta qué punto son extrapolables las conclusiones a las que llega el autor a partir de su análisis.

Así pues, podemos concluir ahora, de acuerdo con las afirmaciones de Crespo Fernández, que eufemismo y disfemismo son resultados de procesos de manipulación del referente. Por ello, fenómenos discursivos, contextuales, que han de entenderse en términos de gradualidad, más allá de sus características lexicológicas. Sus respectivas manifestaciones lingüísticas, esto es, los sustitutos eufemísticos y disfemísticos, son unidades inestables, mientras que el fondo social y cognitivo que las sustenta, el tabú y, por tanto, su interdicción, es intemporal y universal. Realmente, Crespo Fernández ha producido una obra de gran interés, útil no ya sólo para trabajos de lingüística general, sino, sobre todo, para investigaciones sobre la lengua inglesa y sobre su literatura. El texto que hemos reseñado tiene el valor de proporcionar un fondo teórico para un fenómeno lingüístico que está directamente relacionado con la hermenéutica de los textos, con lo que ello supone para los estudios de crítica literaria en el marco de la literatura en lengua inglesa. Por otra parte, sirve asimismo como fuente para investigaciones de carácter contrastivo, bien entre ámbitos culturales diferentes (como podría ser un estudio comparativo entre la literatura inglesa y norteamericana), bien entre periodos históricos diferentes (véanse las interesantes apreciaciones que hace el autor a lo largo de su trabajo respecto de, por ejemplo, la época victoriana). Finalmente, arroja una importante relación de datos lingüísticos clasificados según su grado de lexicalización, a partir de premisas metodológicas y teóricas que bien podrían servir a otro tipo de investigaciones de carácter lexicológico y semántico sobre la lengua inglesa, o sobre cualquier otra, por supuesto.

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LAS LENGUAS PROFESIONALES Y ACADÉMICAS

Enrique Alcaraz Varó, José Mateo Martínez y Francisco Yus Ramos (eds.) Barcelona: Ariel, 2007. (por Pilar Mur Dueñas, Universidad de Zaragoza) pmur@unizar.es

El libro Las lenguas profesionales y académicas, editado por los profesores Enrique Alcaraz Varó, José Mateo Martínez y Francisco Yus Ramos consta de veintidós artículos que, desde múltiples perspectivas y con enfoques diversos, nos acercan al panorama actual de las lenguas o lenguajes de especialidad en España. Este trabajo recoge la investigación que se está llevando a cabo en numerosas universidades españolas acerca del lenguaje profesional y académico y, en especial, pone de manifiesto la intensa labor investigadora que se está realizando dentro de este campo desde el Instituto Interuniversitario de Lenguas Modernas Aplicadas de la Comunidad Valenciana (IULMA), creado y dirigido hasta su reciente fallecimiento por el profesor Enrique Alcaraz Varó, pionero y gran impulsor de dichos estudios. Las contribuciones del presente trabajo, surgidas de las I Jornadas organizadas por este Instituto, vienen firmadas por especialistas en numerosos campos: la traducción, la interpretación, la lingüística aplicada, la terminología, etc. lo que hace que pueda ser de interés para un público muy amplio. Resultará de especial relevancia para aquellos investigadores noveles dentro de los Estudios Ingleses en busca de una línea de investigación en los campos mencionados arriba, pues muchas son las propuestas que se plantean. Igualmente será de sumo interés para investigadores dentro de los Estudios Ingleses interesados en conocer el estado de la cuestión en el análisis de las lenguas de especialidad, no sólo en lengua inglesa sino también en castellano y, en menor medida, en francés. Asimismo, este libro puede constituir

un referente para aquellos profesores de lenguas para fines específicos y académicos que deseen enfocar sus investigaciones con una clara aplicación didáctica.

El libro consta de cuatro partes bien determinadas. Tras una interesante introducción del profesor Alcaraz Varó al porqué del auge de las lenguas profesionales y académicas, su sistematización y sus características generales más relevantes, cinco artículos conforman la sección dedicada al análisis de las lenguas profesionales y académicas con metodología oracional. En la línea del trabajo de Alcaraz Varó (2000) estas contribuciones recogen rasgos generales del lenguaje profesional y académico independientemente de las posibles peculiaridades disciplinarias y ponen de manifiesto la importancia del estudio de la morfosintaxis, el léxico especializado, la fraseología o la estilística específica en diferentes campos y disciplinas. Cada una de las autoras apunta a futuras líneas de trabajo; así, Martínez Linares propone el estudio de conectores discursivos, mecanismos de reformulación, construcciones causales y condicionales, rasgos que dificultan la comprensión del texto y van en contra de la claridad del mismo por lo que a rasgos morfosintácticos se refiere; Gómez González-Jover y Vargas Sierra plantean en sendos capítulos la futura creación de vocabularios o diccionarios especializados, ontologías y bancos de datos de conocimiento (en la línea de algunos ya realizados por grupos de investigación del IULMA); Aguado de Cea apunta al estudio de la fraseología en relación con factores pragmáticos, su variación en distintas situaciones dentro de la misma disciplina, así como entre disciplinas, la permeabilidad o transmisión de unidades fraseológicas o frasemas entre los campos de especialidad y la impronta cultural en el uso de éstos; y Samaniego Fernández establece la necesidad de profundizar en el análisis de las condiciones pragmáticas, cognitivas y lingüísticas de los lenguajes de especialidad como influencia en los rasgos estilísticos. Si bien es cierto que estos artículos se centran en el nivel oracional, en numerosas ocasiones se subraya la imposibilidad de separar los aspectos léxicos y morfológicos de los pragmáticos y discursivos, lo cual apunta a una mutua repercusión, tal v como señala Martínez Linares: "si, como se reconoce en las teorías funcionalistas, la investigación en el dominio gramatical no puede prescindir del discurso y de los aspectos pragmáticos de la interacción verbal, tampoco el enfoque pragmático o textual-discursivo puede prescindir de la caracterización de los textos en el nivel sintáctico, donde son 'parcialmente asequibles' las categorías pertinentes para estos otros niveles" (23). La segunda parte la constituyen seis contribuciones dedicadas al análisis de las lenguas profesionales y académicas con metodología supraoracional o discursiva. Dos aspectos son los que fundamentalmente vertebran esta sección: la comunicación y/o mediación y el género desde la perspectiva de Swales (1990, 2004) y Bhatia (1993, 2004). En el primer capítulo de esta parte Yus Ramos aborda aspectos generales de la comunicación escrita y oral en los campos de especialidad y propone una nueva línea de investigación en torno a la pragmática léxica desde la teoría de

la relevancia. La comunicación intercultural es el eje del segundo capítulo, en el que se revisan los modelos de Hall y Hosftede para realizar el análisis de dicha comunicación en el mundo de los negocios; Guillén Nieto propone un enfoque multidisciplinar para el estudio de los aspectos interculturales de la comunicación en este campo y aborda diversas posibilidades de enseñanza y aprendizaje de esta dimensión. El tercer capítulo aborda el tema de la mediación interlingüística e intercultural con referencia al papel del mediador dentro de la comunidad rumana en Alicante, especialmente en centros sanitarios; del estudio se desprende que en numerosas ocasiones se recurre a un amigo o familiar; Iliescu Gheorghiu concluve que existe una necesidad de formación de especialistas en esta labor y de creación de estudios interdisciplinarios. Los tres últimos capítulos de esta parte se centran en la noción de género. Mientras que el primero lo analiza en relación a los estudios de traducción, los dos siguientes lo relacionan con dos campos específicos, el científico-técnico y el jurídico. En todos ellos se enfatiza el papel clave que juega el género en el estudio de las lenguas de especialidad. Desde la perspectiva de la traducción García Izquierdo apunta la necesidad de conocer y establecer comparaciones y correspondencias entre géneros en distintos idiomas y contextos; de ahí la conveniencia de crear corpus multilingües de especialidad como el que la autora coordina (GENTT). En el capítulo dedicado a los géneros en el contexto científico técnico Marimón Llorca y Santamaría Pérez establecen diferentes niveles de variación (funcional, situacional, de contenido semántico, formal-gramatical) que caracterizan distintos tipos textuales dentro de la ciencia y proponen futuras líneas de investigación en el estudio de los rasgos genéricos, tales como el análisis de la frecuencia de colocaciones en función del nivel de especialización, el estudio diacrónico de esos rasgos o el análisis del papel que juegan las distintas lenguas sobre otras en la comunicación científica, entre otras. Finalmente, Borja Albí en el capítulo dedicado al estudio de género en relación con el lenguaje jurídico recoge estudios llevados a cabo en relación a distintos géneros particulares tales como contratos, convenios reguladores, marcas, patentes, etc., y los clasifica en torno a macrogéneros o sistemas de géneros; en la segunda parte de este capítulo la autora presenta las aplicaciones didácticas de la teoría de los géneros jurídicos v expone cómo explotar textos paralelos para la formación de traductores jurídicos e identificar normas de traducción dentro de este campo.

Aunque el artículo de Campos Pardillos aparece erróneamente en el índice dentro de la segunda sección, abre en realidad la tercera parte del libro. Ésta consta de siete artículos, dedicado cada uno a un lenguaje de especialidad concreto: el de las ciencias jurídicas, a cargo de Campos Pardillos; las ciencias médicas, a cargo de Postiguillo y Piqué Angordans; la biomedicina, a cargo de Palomar; las ciencias económicas, a cargo de Mateo Martínez; la ciencia y la tecnología, a cargo de Fuerte Olivera; la publicidad, a cargo de Montes Fernández y el turismo, a cargo de Ara-

gón Cobo, Eurrutia Cavero y Planelles Ibáñez. Todos ellos revisan estudios llevados a cabo en torno a cada uno de los lenguajes de especialidad; muchos de ellos indican las posibles implicaciones y aplicaciones didácticas de los mismos y apuntan a futuras líneas de investigación. Algunos de estos artículos presentan una descripción de los principales rasgos léxicos, estilísticos y morfosintácticos definitorios de la lengua de especialidad, como es el caso de los dedicados a las ciencias jurídicas, a la ciencia y la tecnología, a las ciencias económicas, a la publicidad y al turismo. También varios de los autores de estos artículos describen algunos de los géneros característicos dentro del lenguaje de especialidad en el que se centran. Así, Campos Pardillos propone una división de los géneros jurídicos en soft y hard, refiriéndose con soft a aquellos "que tradicionalmente no se han considerado parte del 'núcleo duro' de textos jurídicos" (163). Posteguillo y Piqué-Angordans proponen un mapa de géneros dentro de las ciencias médicas para pasar a describir con más detalle algunos de ellos: resúmenes o abstracts, artículos de investigación, casos médicos y artículos de revisión. En cuanto a las futuras líneas de investigación recogidas en los capítulos de esta parte, muchos de los autores coinciden en la necesidad de llevar a cabo más análisis en el nivel léxico, investigando el uso de la terminología en la línea propuesta por Cabré Castellví (1993, 1999), la fraseología, las metáforas o la creación neológica; en el nivel genérico, haciendo especial énfasis en el estudio de colonias de géneros (Bhatia 2004), y que puedan llevar a la creación de manuales de redacción como el coordinado por Fortanet (2002) en relación con el artículo de investigación en distintas disciplinas; y en el nivel intercultural, estudiando la influencia del componente intercultural en el uso de los lenguajes de especialidad, análisis que deberían estar basados en corpora de textos dentro de cada una de las especialidades. Una cuestión que plantean algunos de los autores de los capítulos en esta sección es la de la propia especificidad de los lenguajes de especialidad frente al uso general de la lengua. Esto es, cómo determinar que un tipo de lenguaje pueda ser considerado de especialidad. En este sentido, Mateo Martínez señala dos visiones de entender la lengua: "como conjunto de sublenguajes determinados por su contexto comunicativo" y "como una única lengua que responde de manera diferente a las necesidades sociocognitivas de sus usuarios" (192).

Por último, cierran el libro tres capítulos dedicados al análisis de los conocimientos profesionales y académicos y su difusión en el aula o por medio de la divulgación. El primer capítulo de esta sección se centra en la difusión oral del conocimiento por medio de clases magistrales y ponencias y ofrece una serie de pautas y estrategias para una comunicación eficaz; como implicación investigadora cabe destacar la necesidad que menciona Morell Moll de analizar el efecto del uso de modos y estrategias distintas en la retención, comprensión, aprendizaje y adquisición de los conocimientos por parte de los oyentes de la ponencia o clase magistral. En el

segundo capítulo de esta última parte Alcón Soler pone de manifiesto la importancia de aspectos como las necesidades comunicativas, los objetivos, las competencias y las destrezas en la didáctica de las lenguas de especialidad. Además propone una combinación de enfoques en el aprendizaje de los lenguajes de especialidad previamente propuestos: el sociodiscursivo, el sociocultural y el sociopolítico. Finalmente, el último capítulo está dedicado al español profesional y académico; Vera Luján aboga por el uso del término discurso profesional y académico en español en detrimento de lengua o lenguaje por la tradicional carga semántica de estos términos y señala la importancia de llevar a cabo estudios sobre las distintas variedades en diferentes dimensiones: pragmática, macroestructural, superestructural y microestructural.

Todos estos capítulos ofrecen en su conjunto una amplia bibliografía que se recoge únicamente al final del libro. Como se apuntaba arriba, resulta especialmente interesante que los autores provengan de campos diferentes y que su revisión de estudios previos no incluya únicamente estudios anglo-sajones, sino también estudios realizados por investigadores españoles sobre textos tanto en inglés como en castellano.

El gran número de contribuciones recogidas hace que en algunos casos se produzcan solapamientos o repeticiones de definiciones o ideas, tales como la definición de género o término, o la descripción de diferentes situaciones comunicativas de acuerdo al nivel de especialización de los participantes en la comunicación. Una introducción a cada una de las cuatro secciones de las que consta el libro podría ayudar al lector a comprender mejor su interrelación y a evitar algunas de esas repeticiones.

En cualquier caso, este libro constituye una gran aportación a la literatura dentro de los lenguajes de especialidad y ofrece un valioso panorama de los estudios que se están llevando a cabo en la actualidad en este campo en la comunidad académica española. Esperemos que futuras jornadas celebradas por el Instituto Interuniversitario de Lenguas Modernas de la Comunidad Valencia den como fruto publicaciones de similar relevancia.

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Abstracts

HOW THE PHONEME INVENTORY CHANGES ITS SHAPE: A COGNITIVE APPROACH TO PHONOLOGICAL EVOLUTION AND CHANGE

Javier E. Díaz Vera

In this paper I propose an interpretation of a series of phonological changes in the history of English (including Old English Breaking and the early Modern English Great Vowel Shift) from a cognitive phonology perspective. My analysis is based on Nathan (1886, 1995, 1996), who applies prototype theory to phonological description. In Nathan's analysis, the louder a sound is, the more prototypical effects it possesses. In processes of phonological change, phonemes change their number of prototypical effects. According to this view, we propose a classification that is based on two different prototypicality effects: degree of height and degree of peripherality. By treating both sound and meaning unit as mental categories, I try to show how the principles of categorization and generalization motivate similar diachronic patterns both in the phonological and in the semantic domain.

Key words: Cognitive phonology, Sound change, Semantic change, Old English, Linguistic variation.

En este artículo proponemos una interpretación de una serie de cambios fonológicos ocurridos a lo largo de la historia del inglés (por ejemplo fractura vocálica en inglés antiguo o el gran desplazamiento vocálico del inglés moderno temprano) desde un punto de vista de la fonología cognitiva. Basamos nuestro análisis en Nathan (1986, 1995, 1996), que aplica la teoría de los prototipos a la descripción fonológica. En procesos de cambio fonológico, los fonemas cambian su número de efectos prototípicos. Desde este punto de vista, propondremos una clasificación

Palabras clave: Fonología cognitiva, Cambio fonético, Cambio semántico, Inglés Antiguo, Variación lingüística.

TRANSFER AND UNIVERSAL GRAMMAR IN UNACCUSATIVE CONSTRUCTIONS ERRORS

Marciano Escutia

Common errors are examined in subject expletive pronouns use with unaccusative predicates in the written production of Spanish high-intermediate adult students of English as a Foreign Language (EFL) in an institutional setting. What these errors have in common is that they do not respond to L1 surface transfer in the sense of not corresponding to a mere L2 relexification of L1 syntax. They rather involve a process of construction of the L2 grammar which results in structures different from both the L1 and the L2. It is suggested and argued that they originate in the interaction of Universal Grammar principles and both L1 and L2 influence in a restructuring process of the L1. As these errors seem to be developmental –since they are also made by L2 students from other L1s, some cognitive strategies are suggested in order to help in the production of standard surface structures.

Key words: developmental errors, unaccusative predicates, expletive pronouns, language transfer, Universal Grammar.

Se examinan errores comunes en el uso de los pronombres expletivos sujeto con predicados inacusativos en la producción escrita de estudiantes hispanoparlantes adultos de de Inglés como Lengua Extranjera de nivel intermedio alto o avanzado en un medio institucional. Dichos errores no responden solamente a la transferencia superficial de la lengua nativa (L1), sino que más bien representan un intento de construcción de la gramática de la lengua no nativa (L2) que da origen a estructuras ausentes en ambas. Se sugiere y argumenta que proceden de la interacción de principios de la Gramática Universal (GU) con las gramáticas tanto de la L1 como de la L2 en un intento de restructuración gramatical de la L1 hacia la L2. Al parecer probable que dichos errores sean propios del desarrollo natural del aprendizaje de la L2, ya que se presentan también en estudiantes con otras L1s, se

apuntan algunas medidas de tipo cognitivo para ayudar en la producción de las correspondientes estructuras de la L2 estándar.

Palabras clave: predicados inacusativos, pronombres expletivos, Inglés como Lengua Extranjera, transferencia lingüística, Gramática Universal.

"THIS MANNER OF INFIRMYTE THE GRETE LECHYS OF SALERNE CLEPYD OBTALMYAM": A STUDY OF MEDICAL TERMS IN BENVENUTUS GRASSUS

María José Esteve Ramos

De Egritudinibus Oculorum is a very popular and extensive medieval treatise on eye diseases. This paper aims at exploring the presence of the different languages present in the lexicon of this particular work; special attention is paid to the names of diseases and also to the anatomical nomenclature, following previous works in the area (Norri 1992, 1998). This article will explore this map of etymologies in order to see whether they contributed towards an early standardisation of the specific terminology in this field of science.

Key words: Medical English, historical linguistics, history of science, lexicology, terminology.

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De Egritudinibus Oculorum es un tratado muy popular sobre las enfermedades de los ojos en la Edad Media, constituyendo un interesante ejemplo de los hoy en día llamados lenguajes de especialidad. Este artículo busca explorar la presencia de las diferentes lenguas que configuran el mapa etimológico del léxico de especialidad presente en este texto. Se presta, pues, especial atención a los nombres que están relacionados con la anatomía y las enfermedades del ojo, siguiendo algunos de los trabajos más relevantes en este campo (Norri 1992, 1998). El estudio de las diferentes etimologías del léxico de este texto ayudará a entender la temprana estandarización de esta terminología específica en este campo de la ciencia.

Palabras clave: inglés médico, lingüística histórica, historia de la ciencia, lexicología, terminología

THE SPOKEN CORE OF BRITISH ENGLISH: A DIACHRONIC

Miguel Fuster Márquez Barry Pennock Speck

ANALYSIS BASED ON THE BNC

Our research focuses on two aspects of the evolution of contemporary spoken core vocabulary in British English based on a frequency analysis carried out using the demographic-spoken section of the spoken subcorpus of the British National Corpus (BNC) which contains 4 million words (the whole BNC contains over 100 words). On the one hand, we examine the impact on the core of contact with other languages and, on the other, lexical innovation throughout the history of the English language. Ours is a quantitative study that uses as its starting point contemporary British core vocabulary. We define core as opposed to non-core by looking exclusively at the frequency of a word as several linguistic studies have proposed. Our analyis, which, to a certain extent, follows up on that carried out in Fuster (2007) questions the hypothesis, in several diachronic studies, that the spoken core is immune to linguistic contact, or that it is quite impermeable to innovation and resists change.

Key words: core vocabulary, corpus, diachrony, contact, frequency.

Esta investigación se centra en dos aspectos de la evolución del léxico básico del inglés conversacional actual. Nuestro punto de partida es el análisis de frecuencias de la sección demográfica del subcorpus hablado del British National Corpus (BNC), que contiene 4 millones de palabras (el BNC contiene un total de más de 100 millones de palabras). Por un lado se examina la repercusión que el contacto con otras lenguas pueda haber tenido en la configuración del léxico básico actual y, por el otro, de manera complementaria, la contribución de la innovación léxica autóctona desde esa misma perspectiva diacrónica. Se trata de un estudio cuantitativo donde la determinación del vocabulario básico depende en gran medida de la aceptación de la frecuencia como factor principal, y para ello nos basamos en varios estudios lingüísticos que apuntan en tal dirección. Nuestro análisis, que en cierto modo es continuación de otro realizado con anterioridad (véase Fuster 2007), parece poner en entredicho la hipotésis sostenida en no pocos estudios diacrónicos, de que el vocabulario informal en la lengua hablada, es apenas permeable al contacto lingüístico, o incluso que dicho vocabulario es ajeno a la innovación, y por tanto resistente al cambio.

Palabras clave: Vocabulario básico, Corpus, Diacronía, Contacto entre lenguas, Frecuencia.

A LINGUISTIC APPROACH TO DAVID MITCHELL'S SCIENCE-FICTION STORIES IN CLOUD ATLAS

Sandrine Sorlin

This paper focuses on the language of the two science-fiction stories among the six stories that comprise Mitchell's 2004 novel Cloud Atlas: "An Orison of Sonmi~451" and "Sloosha's Crossin'an' Ev'rythin' After", renamed 'Sonmi' and 'Sloosha' here for greater convenience. We aim at studying the extent to which the two craftily-carved languages, which are radically different both syntactically and semantically, give birth to completely opposed worlds. The highly-engineered language of the 22nd century in 'Sonmi' creates the image of a plentiful consumer society whereas the mutilated words in 'Sloosha' mirror a humanity which is only the shadow of its former self after the explosion of the atomic bomb. Yet, in keeping with the image of Deleuze's rhizome, the apparently diminished language of the middle story (Sloosha) seems to germinate again, finding its source in what is most natural and essential, while the other language actually produces an arborescent-like hierarchical society, leaving no space for imagination to grow. In Cloud Atlas Mitchell plays on intertextuality, his own distortion of the linguistic medium recalling other linguistic utopias such as George Orwell's Nineteen Eighteen-Four or Russell Hoban's Riddley Walker.

Key Words: David Mitchell, Cloud Atlas, Linguistic utopia, Science-fiction, Postapocalyptic writing.

El presente artículo se centra en el lenguaje de dos de las seis historias de cienciaficción que componen la novela de Mitchell Cloud Atlas (2004): "An Orison of Sonmi~451" y "Sloosha's Crossin'an' Ev'rythin' After", a las que nos referiremos como 'Sonmi' y 'Sloosha' en adelante. El estudio muestra cómo dos lenguajes hábilmente trabajados, radicalmente distintos sintáctica y semánticamente, crean mundos absolutamente opuestos. El lenguaje del siglo XXII que ofrece 'Somni' crea la imagen de una sociedad de consumo abundante, mientras que las palabras mutiladas en 'Sloosha' reflejan una humanidad que es tan sólo la sombra de sí misma tras la explosión de la bomba atómica. Sin embargo, al mantener la imagen del rizoma de Deleuze, el lenguaje aparentemente disminuido de la historia intermedia (Sloosha) parece germinar de nuevo, encontrando su origen en lo más natural y esencial, mientras que el otro lenguaje crea realmente una sociedad jerárquica de tipo arborescente que no deja espacio al crecimiento de la imaginación. En Cloud Atlas Mitchell juega con la intertextualidad, su propia distorsión del medio lingüístico que recuerda a otras utopías lingüísticas como 1984 de George Orwell o Riddley Walker, de Russell Hoban.

Palabras clave: David Mitchell, Cloud Atlas, Utopía lingüística, Ciencia ficción, Escritura post-apocalíptica.

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