

Categories in the Left Periphery, Polarity, and Negation in modern Italian and European Portuguese (with some comparison to Brazilian Portuguese)

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Abstract

This article is concerned with an intricate interaction between syntax and semantics. The place of this interplay is Force and Focus. The model which guides our analysis is Rizzi 1997, 2004 and its split of the C-system into several categories. With regard to these concepts, we compare Italian and European Portuguese, in some structures we analyze Brazilian Portuguese variants. Our investigation sustains Longobardi's 2001 Inertial Theory which claims that syntactic change – and we add variation – can only be caused by or correlated with changes at the interface, that is Logical Form or Phonetic Form. In our article we propose that the semantic change respective variation in some quantifiers results in syntactic differences or changes.

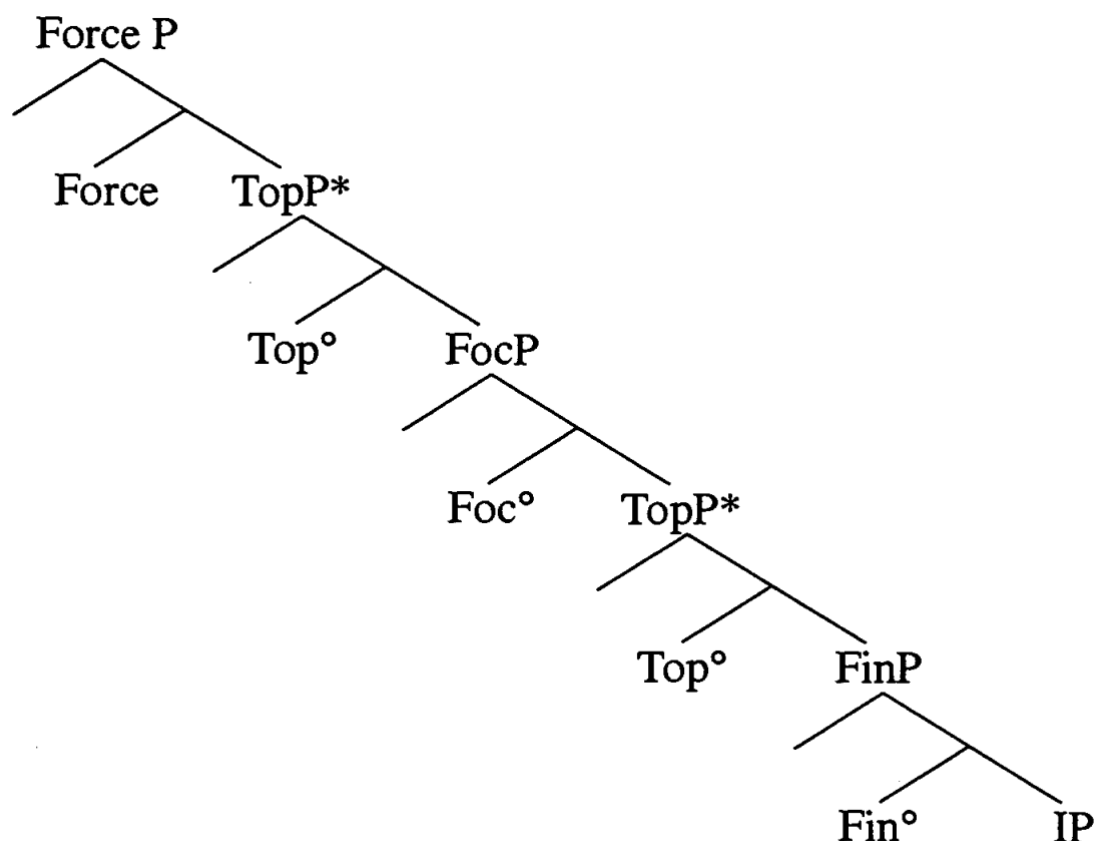
Keywords: syntax; semantics; complementizer phrase; Romance languages.

1. Introduction

In the wide sense, this article is concerned with sentence negation, its relation to quantificational scope, polarity and their interaction with modality in modern (mainly European) Portuguese in comparison to modern Italian. We follow the approach of Cinque and Rizzi 2008, i.e. the cartographic approach. Rizzi 1997 starts to split the Complementizer Phrase (compare Chomsky 1986) into new categories from Force, Focus, Topic and Fin, all c-commanding the Inflection Phrase (IP). In our article, we will concentrate on Force and Focus. We correlate the sentence negation with the highest category Force targeted at Logical Form (see May 1977, 1985). Rizzi's 1997:297 structural proposal is the following¹:

¹ Since Pollock 1989, the IP may also be identified with the Tense Phrase (TP). Though, the Agreement Phrase has come out of debate.

(1)



We work in the same framework as Franco et al. 2016. These authors give a very exhaustive survey about the development and state of the art concerning negation in old and modern Italian. Thus, we could just refer to their article. Instead, for the ease of readability, we give our own survey. Unlike Franco et al. 2016, we do not focus on the adverbs *anche/neanche* ‘also, also not / not even’ (for the latter compare Cinque 1999) and their historic development, but on the interaction between negation and polarity in modern Italian and European Portuguese.

A very recent paper targeting the left periphery of Brazilian Portuguese *cadê* will be published in October 2023, vgl. Gravely and Gupton (in press). This is a very interesting article in various aspects. First of all, indeed the authors do mention to work in Rizzi’s model, but undeniably they do not use it at all. Second, to native speakers consulted by us some of Gravely and Gupton’s structures in Brazilian Portuguese seem at least weird if not ungrammatical. Third, this paper does not quite fit to the title of the book it will be published in: *Wh-exclamations, Imperatives and Wh-questions*. We think it is not a scientific lacuna if we do not refer more than this paragraph to their paper.

The literature on negation is abundant and it is almost impossible to give an exhaustive overview on this topic within the scope of this article, but see Giannakidou 2011, Horn 2001, Klima 1964, Lasnik 1972, Zeijlstra 2004.

On p. 283 of the above-mentioned article, Rizzi explains: ‘Force is expressed sometimes by overt morphological encoding on the head (special C morphology for declaratives, questions,

relatives, etc.) [...]’. In this quotation, the author classifies wh-structures (these are constituent questions) as instances of Force. He repeats this in Rizzi 2004:237: ‘The system is delimited upward by force, the head expressing the clausal typing, the kind of information that must be readily accessible to an external selector, [...]’. Clausal typing is the marking for declarativity, exclamativity, interrogativity, or injunctivity such as imperative expressions.

Rizzi comes to the conclusion in (1) on the base of syntactic distribution tests with rather little semantic consideration. We do not doubt the validity of Rizzi’s distributional tests. Yet, we do not agree with his assumption on p. 296f. that wh-movement targets Focus, in contrast to the declaration he states in the quotes given on p. 1 of our article. Rather we want to explore the idea that wh-movement targets Force, in accordance with Rizzi’s declaration.

This article is structured as follows: In chapter 2, we discuss scope of polarity and its relation with LF-movement on the basis of Rizzi 1982 and later works on this topic. Then in 3, the topic is the relation between sentence negation and emphasis. In this context, Frege 1919 is opposed towards Jespersen 1917, but he does not know Jespersen’s observations. The topic in chapter 4 is negation and sentence modality, i.e. we show differences between modern Italian and modern (European) Portuguese in polarity contexts with negation items in different sentence modalities like interrogatives. In the next chapter, chapter 5, we connect similarities and differences of European and Brazilian Portuguese and Italian with indefinite quantifiers with their polarity. The strength of quantifier (in the sense of Milsark 1974 & 1977) is the topic of chapter 6 while we discuss the problem of true quantifiers in chapter 7 in a general way. With chapter 8 we end the main part of the paper with a strange transformation of emphasis at LF which shows us that it is acting as a syntactic phenomenon. In the last chapter, we conclude our findings.

2. Scopus and LF-movement

In order to motivate our proposal, we come back to Rizzi 1982, ch. 4. In this article, Rizzi correlates negative concord to wh-movement in modern Italian.

(2) (a) Mario non ha visto nessuno. Mod. Ital.

‘Mario neg has seen nobody.’

(b) Mario non ha fatto niente.

‘Mario neg has done nothing.’

(c) Mario non ha parlato con nessuno.

‘Mario neg has spoken with nobody.’

In case that the negative polarity item *nessuno* etc. follows the finite verb, the sentence negation *non* is obligatory. Rizzi 1982:121 shows that the function of this item – whether subject, object or else – does not matter for the appearance of the sentence negation, rather being c-commanded by the verb is the crucial grammatical necessity. Rizzi 1982 compares this phenomenon with sentence questions:

(3) Mi chiedo [se Gianni abbia poi contattato nessuno.] Mod. Ital.

‘I wonder whether Gianni has eventually contacted anybody’

In (3), *nessuno* has the opposite polarity as compared to (2a). In (2a), the polarity is $\neg\exists$, while in (3) it is \exists . Furthermore, while in (2a) the negative pronoun must co-occur with the sentence negation *non*, this is not possible in (3). The modality of (2a) is declarative and in (3) it is interrogative. Note that it is not important that (3) has an imbedded structure. (4) is an example of Acquaviva 1999:150 without embedding.

(4) È venuto nessuno? Mod. Ital.

‘Has anyone come?’

Rizzi 1982 proposes that *nessuno* undergoes quantifier raising at LF i.e. adjunction to S (= IP in *Barriers*, Chomsky 1986) in the sense of May 1977. Laka 1990:88 invents a new functional category Σ to the left of Infl/IP where she locates a negative feature. This feature leads to *do*-support in English under sentence negation and to auxiliary movement in Basque. Laka 1990:127 suggests that negative polarity items such as Eur. Spanish *nadie* ‘nobody’ are located in this category as well. And, as Rizzi 1982, the polarity items come to this position by movement at LF. Interestingly, Laka does not refer to Rizzi 1982 in this respect – but to our knowledge, he was the first to make such a proposal, only without a special functional category to the left of the IP (respectively S)². Rizzi 1997 does not come back to Rizzi 1982 and does not integrate negation into his system of the left periphery. Rizzi 1997:286 refers to Laka 1990, but this just concerns the Focus structure of Mod. Spanish as compared to Mod. Italian and he does not refer to the Σ -phrase. Zanuttini 1994 renames Laka’s Σ -phrase to the more transparent polarity-phrase but her analysis mirrors Laka’s proposal. In short, in the generative tradition, polarity and negation is a matter of the left periphery to Infl or Tense and negative polarity items such as *ninguém* / *nessuno* can move to this place at Logical Form after overt syntax to mark their scope. We have seen that sentence negation is interrelated with modality (interrogation). We propose to bring together the referred ideas in Rizzi’s 1997 left periphery and especially we propose that it is Force where both, wh-movement and quantifier raising, end up.

In the next section, we underline that both phenomena are interrelated with emphasis, i.e. Focus, as well.

3. Jespersen 1917 contra Frege 1919

Jespersen 1917:66 reinforces that sentence negation is the subject of emphasis with the Mod. German example:

² Although, earlier transformational studies of negation in English involve the left edge of the sentence as well, see Lasnik 1972 and literature discussed in this thesis.

- (5) Hat denn keener keenen Schwamm nich? Mod. German

'Does anybody have a sponge?

In this example, we have two constituent negatives, *keener* – subject, 'nobody', *keenen* – negative quantifier 'no' and the sentence negation *nich* – 'not', a phonological reduced form of *nicht* ending on the unvoiced coronal plosive [t]. This is an emphatic sentence question where the speaker expects the addressees to have at least one sponge. The speaker seems to be surprised. A more appropriate translation would perhaps be 'Is there really nobody who has a sponge?' Basically, this is a character of the spoken language. Frege 1919:157 in his logical analyses disregards this phenomenon. He says:

'die einen Gedanken bekleidende doppelte Verneinung ändert den Wahrheitswert des
Gedankens nicht'.

'The double negation of a thought does not change its truth value'.

That is, as a logician, he does not accept negation as emphasis. The case of negative concord in modern German is not restricted to the interrogative modality, but it is more probably restricted to vernacular or nonstandard varieties.

- (6) Ik hab ja keenen Schwamm nich.³

'In fact, I do not have any sponge'

(6) is a negated declarative sentence, and again we get an emphasis. Note, without the affirmative verb-phrase particle *ja* the sentence would be less grammatical or less target like. We propose that in varieties / languages with structures like (5) and (6), the functional features Force and Focus generate one functional head as proposed in Giorgi and Pianesi 1997. We propose that this functional head is a hybrid one in their sense, cf. Giorgi and Pianesi 1997:14f. While in modern German varieties the negative concord correlates with emphasis, this is different in modern Standard Italian and European Portuguese (but see discontinuous negative expressions in Italian below in (10)). Thus, we have to analyse whether in Mod. Italian and Eur. Portuguese the features Force and Focus are scattered to have their own heads. To shed light on this, in the next chapter, we discuss some fascinating differences between both languages concerning the interrelation of constituent negation and sentence modality.

4. Negation and Sentence Modality

Rizzi 1982 correlates the negative concord phenomenon of modern Italian with its character of being a Null-Subject-Language. This is, referential pronouns in subject position of (non-

³ Nietzsche (edition of 'The gay science' from 2009) says: 'Hab niemandem nie nichts nachgemacht' (literally: '[I] never copied nothing from nobody', here with topic drop of the subject pronoun *ich*). Thus, negative concord can also be detected in the standard variant of a language. The book was first published in 1882. But even if Nietzsche's sentence is not quite nonstandard, it expresses emphasis.

imperative) finite sentences may (and should) be empty in case of familiarity and unmarkedness.

European Portuguese is a Null-Subject-Language as well. Indeed, the phenomena in (2) can be found mirrored in European Portuguese. Both Italian and Portuguese (Brazilian as well as European) are considered to be (not strict) negative concord languages, see Peres 2000 § 1.3, Zeijlstra 2004:147. While some structures are analogous, there are quite differences.

(7) O Pedro *(não) visitou nenhum museu. (Peres 2000, ex. (1))

‘Pedro didn’t visit any museum’

The structure in (7) are parallel to the Italian sentences in (2). But (8a) is different in Portuguese, compare (4):

(8) a. Telefonou alguém (*ninguém)? Eur. Port.

‘Did anyone call up?’

b. Não telefonou ninguém?

‘Did (really) nobody call up?’ [the speaker expects a special person to call up]

If in Portuguese *ninguém* occurs in the sentence question, the use of *não* is obligatory as in (8b) and this structure has a different meaning from (4).

The Italian (3) is not quite matched in Portuguese:

(9) Eu me pergunto se ninguém / alguém telefonou ao Marcelo. Eur. Port.

‘I wonder whether nobody / anybody phoned Marcelo.’

Whether *ninguém* or *alguém* is used does not make any meaning or stylistic difference in Portuguese. In contrast to modern Italian, modern European Portuguese does not allow subjunctive but only indicative mode.

The number of scientific literature on negation and negative polarity items is huge and cannot be overseen within the frame of this paper. The phenomenon of negative concord illustrated above is kept apart from negative doubling (or discontinuous negation – which is more appropriate), where two negative markers occur, see (10) (from Poletto 2017 ex. (10b)):

(10) Non ti ho mica detto di telefonargli. Mod. Ital.⁴

‘Neg1 you [DAT] have Neg2 said to phone him [DAT].’

[In fact] [I] did not tell you to call him up (this is an emphatic negation)

⁴ In Portuguese, whether European or Brazilian, there is no equivalent to Italian *mica*. There, emphasis is expressed in a sentence final prepositional phrase, see footnote (5).

In (10) there are two negative elements *non* and *mica* but no negative item such as *niente*, *nessuno*. Poletto proposes various Neg-layers – at least four – for those different sentence negations to the left of the verb phrase. Her intuition is that semantically focus and sentence negation have something in common (in this she is in accordance with Rizzi 1997). Multiple sentential negative markers are merged as a unitary constituent and move as parts of this constituent to different structural positions in response to diverse feature checking requirements.

Considering the difference between European Portuguese and Italian, see (8) and (9), we have to conclude that with respect to interrogation there is a difference between these languages. This is, in European Portuguese interrogation does not require a polarity item.

Rizzi 1982 argues that in interrogation structures the negative polarity item must undergo quantifier raising at Logical Form (i.e. covertly, in the sense of May 1977) in order to be in an agreement relation with the interrogative operator (in parallel to what happens in (2) with the sentence negation *non*). In Italian, this is quite consistent but in European Portuguese, it is not. At least in (9), the negative polarity item is possible. However, in (8a) it is ungrammatical. It seems to us that in European Portuguese the connection between the negative polarity item and the interrogative modality is not so much needed for agreement reasons. Rather, the quality of the interrogative modality (matrix or embedded) determines whether a negative polarity item is allowed or not. In a matrix interrogative sentence, no negative item may occur but in an embedded context this is possible. That is, in European Portuguese, negative concord is not correlated to interrogation. Therefore, what differs is the matrix interrogative structure. The question arises whether the negative quantifier has different lexical features strong vs. weak in both languages, and we will come back to this in chapter 5.

Just to keep in mind: European Portuguese and Italian share the features of being Null-Subject-Languages and showing negative concord. However, they differ towards the phenomenon of polarity change in interrogative structures.

Negative structures and interrogative structures both are marked structures. The unmarked structure is a declarative affirmative sentence. In principle, Italian requires a doubly marked structure with interrogative modality and negative polarity items.

There are other differences concerning the structure of questions. In ‘tag’-questions in European Portuguese we have the following structure (11):

- (11) a. Vocês não se lembram, não é?
 ‘You (pl.) do not remember, don’t you?’
 b. * Vocês não se lembram, é verdade?

In the ‘tag’-question of a negated sentence question, there must be a sentence negation, without it leads to ungrammaticality (11b), cf. Mateus et al. 2003:478. Yet, in Italian, this is inverse:

(12) a. Non lo ricordi, vero? (Kinsella 2008:54)

‘(You) do not remember (sg.), true?’

b. * Non lo ricordi, non é vero?

Concerning ‘tag’-questions, European Portuguese requires a sentence negation in the ‘tag’ while this leads to ungrammaticality in Italian (12b). It seems to us that it is less the sentence negation that differs from one language to the other but more the structure of the question. European Portuguese shows in the ‘tag’ the sentence negation even if there is none in the preceding sentence question, (13):

(13) Vocês lembram-se, não é?

‘You (pl.) do remember, isn’t (it)?’

This is obviously not a case of negative concord. We think this has to do with emphasis. ‘tag’-questions are cases of emphasis. Therefore, if we say that the first part, the sentence question, is an instance of Force (see above), we propose that ‘tag’-questions are an instance of Focus.

Jespersen 1917 suggests that negative concord comes out from a period where the second negative element is an exponent of emphasis, cf. (10). This becoming more current leads to semantic bleaching of one of the negative elements and of grammaticalisation of the second element. We propose that the structure of Focus in modern Portuguese differs from the one in Italian.

Hence, Force and Focus have a different structure in both languages. We suggest that Italian has a strong Force feature and therefore overt wh-movement to Force while its Focus feature is weak. In European Portuguese, it is quite the other way around: The Force feature is weak and prevents overt wh-movement while the Focus feature is strong. Furthermore, in Italian, we have LF-movement of polarity items because of a strong feature in Force. This is different in European Portuguese, in consequence, LF-movement for polarity items to force is forbidden, see (8). In Focus, European Portuguese has a strong feature and this correlates with sentence negation in tags, remember (13). Italian has a weak Focus feature and hence no sentence negation in tags. The question then is, in which respect do quantifiers behave language specific and which might be universal features they share. The next three chapters are concerned with this issue at the crossing point of syntax and semantics.

Feature/phenomenon	Ital.	Eur. Port.
Force	strong	weak
Focus	weak	strong
Overt Wh	yes	no
LF-movement of polarity items	yes	no
Sentence negation in tags	no	yes

Table 1: Correlation of features with syntactic phenomena

In the next section we explore quantifier raising in both languages (and also with Brazilian Portuguese) with respect to overtly not negative quantifiers, this is Portuguese *qualquer*, *algum* vs. Italian *qualche*, *alcuno* and *qualsiasi*.

5. More Similarities and Differences with Indefinite Quantifiers and their Polarity

The lexical material of both (or all the three) languages originates from Latin and *Infopédia* translates the Portuguese lexemes into the corresponding Italian ones. Again, their syntactic behaviour is in quite some respects inversely opposed.

In European Portuguese, *qualquer* cannot occur pre- nor postnominal and *algum* can only be placed prenominal and immediately adjacent to the noun. Note that this holds for postverbal subjects, but not for preverbal ones.

EP

(14) a. *Aqui vive animal qualquer / animal algum

‘Here lives some animal’

b. *Aqui vive qualquer animal / animal algum?

c. Aqui vive algum animal. – some animal

d. Vive aqui algum animal? – some animal

e. Qualquer animal bebe desse lago. – ‘any animal drinks at this lake.’

f. ?? Algum animal bebe desse lago. – ‘some animal can drink at this lake.’

In the structures above, *algum* can occur in postverbal position but this does not depend from the modality of the sentence. Both, declarative and interrogative sentences allow this position. *Qualquer* yields ungrammaticality in either modality, see (14a,b). Is this due to the postverbal position of the indefinite quantifier or are there other grammatical features interfering? *Viver* is an unaccusative verb, whereas *beber* is an agentive transitive verb even though in (14e,f) the object is omitted.

Whithin the scope of this article we will not analyse whether the semantics of the verb (unaccusative vs. action verb) may interfere with the choice of the indefinite quantifier but we leave it to further discussion.

In some variants of Brazilian Portuguese, *qualquer* is almost ungrammatical, but not as strict as in European Portuguese. *algum* is confined to the postnominal position, compare (15).

BP

(15) a. Aqui vive animal algum. – ‘no animal’

b. Animal algum vive aqui? – ‘any animal’?

c. Aqui vive um animal qualquer. – ‘here lives some animal’. Highly marked, almost not accepted as grammatical. Nevertheless, *qualquer* cannot occur prenominally.

In the variant of S. Paulo, both utterances are grammatical and unmarked w.r.t. the context. In contrast, in the variant of Curitiba, in the south of S. Paulo, both structures are felt to be very marked and almost ungrammatical.

In contrast to EP, in Italian, *alcuno* cannot be used in the structures but only *qualche*. Concerning the position of the indefinite determiner, both languages behave alike. The indefinites are strictly prenominal.

Ital.

(16) a. Qui vive qualche animale? – some animal

b. *Qui vive animale qualche?

c. Qualche animale vive qui nella foresta. – some animal

d. *Animale qualche vive qui nella foresta. – some animal

e. Qualsiasi animale può bere dal lago. – every animal

f. *Qualche, *alcun animale può bere dal lago.

In BP (15), *qualquer* is not accepted in prenominal position but only postnominal with cooccurring prenominal indefinite determiner *um*. Instead, as in EP, the indefinite expression is *algum*. But in the variant of S. Paulo, this is only postnominal and the prenominal position is ungrammatical, in contrast to Italian (16). Unlike EP and BP, Italian cannot have the indefinite quantifier *qualche* in preverbal subject position but only *qualsiasi*. The latter, in contrast, cannot occur in postverbal subject-DPs.

Modality, polarity, and indefiniteness interact. See Cantarini & Torregrossa 2014, Martins 2000:204. Yet, we agree with Martins that the distribution of indefinite quantifiers is determined by the negative strength of their lexical features. But our criteria of strength bases on their occurrence in existential sentences, this is the topic of the next chapter.

Eur. Port	postverbal	prenominal	postnominal	modality
Subj.				
qualquer	no	no	no	does not interfere
algum	yes	yes	no	does not interfere
	preverbal	prenominal	postnominal	
qualquer	yes	yes	no	does not interfere
algum	no	no	no	does not interfere
Bras. Port. S. Paulo	postverbal	prenominal	postnominal	
Subj.				
qualquer	no	no	?*	does not interfere
algum	yes	no	yes	does interfere
	preverbal	prenominal	postnominal	
qualquer	no	no	no	does not interfere
algum	yes	no	yes	does interfere

Table 2: Indefinite quantifiers in European and Brazilian Portuguese

This is, in Bras. Port. *qualquer* cannot occur in subject phrases unless it is combined with the indefinite determiner *um* and it is confined to the postnominal position.

6. The strength of quantifiers

The problem of quantifier-strength comes with existential sentences in English, compare Milsark 1974, 1977. Milsark 1977 contrasts the following sentences in (17).

(17) a. There is a wolf at the door.

b. *There is the wolf at the door.

According to him, existential sentences are tests for the strength of determiner and quantifier. ‘a’ is a weak term and can occur in existential sentences while ‘the’ (or ‘this’) is a strong one and therefore excluded in this position. Barwise and Cooper 1981 propose a qualification for quantifying expressions along this line and a formalisation in the sense of Montague 1973, compare Barwise & Cooper 1981:180. Although these authors explore their analyses on the basis of contemporary English they seem to assume that the validity of their qualifications might hold not just in this language but more or less cross-linguistically. Below in (18) are the respective sentences in Italian and European Portuguese (in this, there are no differences to Brazilian Portuguese).

(18) a. C’è un lupo nel giardino – ‘There is a wolf in the garden’ Ital.

b. *C’è il lupo nel giardino – ‘There is the wolf in the garden’

c. Está um lobo no jardim. EP

d. *Está o lobo no jardim.

Concerning the indefinite and the definite determiner, Italian and Portuguese behave like English. Therefore, one could think of Milsark's or Barwise and Cooper's qualification as a cross-linguistically valid observation. This is different for the negative quantifier *nessuno* and the indefinite quantifier *alcun/alcuno* in (19).

(19) a. Non c'è nessun lupo nel giardino – 'No wolf' (Ital.)

b. *Non c'è lupo nessuno nel giardino

c. Non c'è alcun lupo nel giardino – 'No wolf' (very formal Ital., e.g. in the court)

d. Non c'è lupo alcuno nel giardino (the same meaning and the same degree of formality)

The dictionary Dizionario Garzanti (<http://www.garzantilinguistica.it/ricerca/?q=alcuno>) is a little more liberal concerning the postnominal position of *nessuno*. We compare this with Portuguese, the European and the Brazilian variant in (20).

(20) a. Não está nenhum lobo no jardim – 'No wolf' (Eur. Port.)

b. Não está lobo nenhum no jardim (very emphatic)

c. *Não está algum lobo no jardim (this is true also for Brazilian Portuguese)

d. *Não está lobo algum no jardim⁵

Our native speakers (five native speakers, three of them monolinguals from Porto, two bilinguals of Portuguese and German) reject this structure and judge it as ungrammatical. Compare this with the Italian sentences in (19). In Italian, either pre- or postnominal *alcuno* is grammatical, even though it is stylistically marked as very formal. In contrast, the place of *nessuno* is restricted to the prenominal position. Again, this is the inverse situation to European Portuguese. What is common to both Italian and European Portuguese, that in an affirmative existential, *algum* and *alcuno* cannot occur, neither pre- nor postnominal.⁶ In negative existentials, *algum* is not grammatical in either position in European and Brazilian Portuguese.

⁵ For example, we found the following sentences in the corpus CRPC: Reference Corpus of Contemporary Portuguese in the European Portuguese Part:

(i) Não está em lado nenhum.
'[she] is in no place' (she is nowhere)

(ii) Não a encontramos em lado algum.
'[we] did not find her in any place' (we did not find her anywhere)

Nenhum and *algum* in the postnominal position of (i) and (ii) are very emphatic. The sentences occur in the same utterance. In contrast to (i), these sentences are not existentials and the postnominal position of the negative or existential quantifier occurs in a prepositional phrase.

⁶ This is true for the singular forms, in plural they yield grammatical structures in both languages (and for Brazilian Portuguese as well).

(i) Ci sono alcuni lupi nel giardino. – 'some'
(ii) Estão alguns lobos no jardim.

If we take not only affirmative but also negative existentials as a tool to characterize the strength of a quantifier in Milsark's sense – or in the sense of Barwise and Cooper 1981 –, it follows that *algum* is a strong quantifier in European Portuguese and *alcuno* a weak one in Italian.

Concerning the other left monotone decreasing quantifiers, *tutti* vs. *todos*,⁷ Italian and European Portuguese (even Brazilian Portuguese) show no differences at all:

(21) a. *Ci sono tutti i lupi nel giardino (It.) – ‘all’

b. *Estão todos os lobos no jardim (EP / BP) – ‘all’

The universal quantifier is a strong one.

Milsark avoids analysing negative quantifiers. Barwise and Cooper 1981 do not. They consider *all* to be a strong quantifier and *no / none* to be a weak quantifier, cf. p. 180.

To sum up, with respect to the indefinite and definite determiner and with respect to the universal quantifier ‘all’, Italian and Portuguese pattern with English in existential sentences. Concerning the negative quantifier *nessuno / nenhum*, our languages under analysis are like English as well. The only difference is that in Portuguese it can occur pre- and postnominally, this is not possible in English. In Italian, quite some speakers do not accept the postnominal position, but there are also speakers who do accept even the latter. These are not predominant differences. A noteworthy difference concerns the behaviour of *alcuno*, *algum* in negative existentials. In European Portuguese, they are completely excluded from this position. This is inverse in Italian. Gianollo (2018:70f.) says that an original positive quantifier can develop into a negative one by quantifier cyclic change through structures such as (19) above. We doubt this since these structures are stylistically marked. Thus, it seems unlikely that they trigger semantical reanalysis. Compare our chapter 3 above. There we gave colloquial usage of several negative elements in German. It is more conceivable that a colloquial usage may cause semantic reanalysis rather than a formal one. Gianollo (2018:72) reports Martins (2015) examples of European Portuguese, see chapter 5 above. Her Italian translations show the contrast between European Portuguese and Italian.

(22) Portuguese (Martins 2015: 403)

a. Algum animal vive aqui

qualche animale vive qui ‘Un qualche animale vive qui’

b. Animal algum vive aqui

animale nessuno vive qui

‘Nessun animale vive qui’

Neither Gianollo nor Martins analyses existential sentences. Their examples are with unaccusative and transitive verbs. It is the question whether the weakness of the negative

⁷ We illustrate the notion of monotonicity below in chapter 7.

indefinite *alcuno* in Italian comes from such usages as Gianollo's example *Non ho paura alcuna* – 'I do not have any fear at all'. *Não tenho medo algum* is the respective expression in Brazilian Portuguese but in this variant as well, it sounds better to say *não tenho medo nenhum*. Even if the first of these sentences is not as disliked as in European Portuguese, *algum* is excluded in negative existentials just as in European Portuguese. That is, the fact that at least in Brazilian Portuguese there are structures where the indefinite quantifier *algum* has a negative meaning does not turn it into a weak quantifier that can occur in negative existentials. Negative existentials are marked as opposed to affirmative existentials. In the latter, neither variant of Portuguese nor Italian have the respective indefinite quantifier.

With respect to the unmarked existential structure, the indefinite quantifiers are strong in all the three Romance languages. In the marked structure, the negative existential, the Italian one is weak whereas the Portuguese equivalent is strong (in both variants). This cannot follow from the fact that in some contexts it has a negative meaning as Gianollo suggests. This is because the Italian structures are mirrored by the Brazilian equivalents in this respect. Up to this point, we discussed differences and similarities of Portuguese and Italian indefinite quantifiers. They exhibit language specific strength albeit the languages under examination are quite closely related. We see there are some problems to explain the parametrization of strength or modelling of language specific lexical features of the quantifiers. There are more issues to be discussed concerning general characteristics of quantifiers which behave cross-linguistically alike. This is the topic of the next section.

7. The problem of true quantifiers

The analysis of strong determiner respective proper quantifiers is still an ongoing issue. Let us take the basic idea of Barwise and Cooper 1981 concerning proper quantifiers or true quantifiers. The idea is that the proper ones are sieves on their restrictors.⁸ From a group of entities they single out a certain amount of individuals. This is, from a group of men we can single out few men. The relation of both sets is a relation of subsets, including the whole set.

Let M be a model $\langle E, \models \rangle$, E is a set of entities (say the restrictor of a quantifier), \models : denotation of the elements of E . Then Q is a proper quantifier if for all $A \in E$ $Q(A) \subseteq E$.

Now let us test this conception. $E: \{x \mid \text{MAN}(x)\}$. $Q: \text{ALL}$. We apply Q to $A \in E$. We get $\text{ALL MEN} = E$. This is fulfilled. ALL is a proper quantifier.

The next element to test is NO as constituent negation. Is NO MAN a subset of MAN ? In a mathematical or logical tradition, it is. But if we take the conception of Barwise and Cooper that true quantifiers are sieves on their restrictors, NO is not a sieve and therefore not a proper quantifier. Perhaps it is not as bad as 'only', compare Ahn and Sauerland 2015, but it is not as good as ALL . Nevertheless, NO / NONE is able to have scope. Partee et al. 1993:380 say that non-comparative quantifiers (i.e. 'more, less' are excluded) can only be coordinated if they have

⁸ Keenan and Stavi 1986 call this the conservativity property of quantifiers.

the same direction of monotonicity. In this respect, let us analyse ALL and NO / NONE, compare (23) and (24) with (25) and (26).

(23) If all women run, then all women *with red hair* run.

In this conditional sentence we have the quantifier followed by its restrictor ‘women’ and the predicate ‘run’. If the size of the restrictor is minimized – in the main sentence ‘women with red hair’ is a smaller set than just ‘women’ – and the proposition is a valid conclusion from the conditional sentence, the quantifier is called left monotone decreasing, because the left function (‘women’) is narrowed.

(24) If all women run, it is not a valid conclusion that all women run fast.

In this example we have restricted the right function: ‘to run fast’ is a subset of ‘to run’.

From this it is usually concluded, that ALL is left monotone decreasing but not right monotone decreasing. Instead: it is right monotone increasing.

(25) If all women run fast, then all women run.

Now we test NO:

(26) If no woman runs then no woman with red hair runs and no woman runs fast.

That is, NO is left and right monotone decreasing.

If no woman with red hair runs, it is not valid to conclude that no woman runs and if no woman runs fast, we cannot conclude that no woman runs. That is: NO is neither left nor right monotone increasing. This is not only true for English, this is the same in Portuguese and Italian. We can schematize this as the following.

	left	right
NO	↓	↓
ALL	↓	↑

Thus, can we say that these determiners have the same type of monotonicity? On the left, this is true but, on the right, this is not true. Yet, again we come back to coordination and to Nietzsche. One of his most famous books is *Also sprach Zarathustra* (1883-1885), ‘Thus spoke Zarathustra’. The subtitle is *Ein Buch für alle und keinen*, English ‘A book for all and none’. In Italian the subtitle is *Un libro per tutti e per nessuno* and in Portuguese it is *Um livro para todos e para ninguém*. We might assume that Nietzsche is not concerned with the linguistical problem of ALL- and NO/NONE-quantification. But we see that these determiners can be coordinated with one another even though they do not share exactly their monotonicity features.

Above we said that NO is a problematic quantifier, it does not qualify as a sieve in the strict sense. With respect to the concept of monotonicity, they both allow to be classified – and they do not converge in all respects. Even though they can be coordinated without problem.

Cross-linguistically, ALL and NO / NONE do pattern very alike, whether this concerns existential sentences, or monotonicity. Perhaps the concept of sieves could be modified in future research.

These total quantifiers' behaviour converges in semantics and syntax. Coming back to the indefinite quantifiers *alcuno/algum* in Italian and Portuguese, they converge only in semantics: they are true quantifiers and both are left and right monotone increasing. But syntactically, they do not converge at all. In this respect, we see that the syntactic behaviour is independent of the semantic properties and that polarity change is more a syntactic operation taking place at Logical Form. Thus, the tests of Milsark concerning existential sentences is a syntactic test. To be or not to be a strong quantifier is a syntactic property and not a semantic property. Jespersen's 1917 cycle says that semantic bleaching triggers syntactic reanalysis. This is in principle to what Gianollo 2018 refers. Our proposal is perhaps right the other way around: the syntax changes the semantic interpretation, that means: first the syntax under special conditions show noun movement such as in (15). In the next step, quantifier raising changes the polarity at Logical Form. Then, the semantic interpretation reacts towards operations on Logical Form. In the next section, we illustrate this on the basis of a comparative structure. Again, we focus on the syntactic power to change the interpretation of the negative quantifier *ninguém/ nessuno*.

8. A strange transformation at Logical Form?

Jespersen 1917 described a diachronic change of negative elements from positive to emphatic in negative context to true negative element like French *pas*. It descends from Latin *passus*, 'step', in a construction *je ne vais pas*, 'I do not go a step' it is emphatic. In modern French, it is the main sentence negation and, in many constructions, *ne* is omitted.⁹ The idea is that from an emphatic structure it suffers semantic bleaching and ends as a true negative element. We want to cast doubts as to whether just semantic bleaching is the reason of shifting of the reference. Look at the following sentences in (27):

(27) a. Sabes-o melhor do que ninguém. (EP)

b. Lo sai migliore que nessuno. (Ital.)

[You]_{SG} know it better than nobody (meaning: all).

In both sentences NO is turned to ALL at LF. Just the question is how. In section 2 above, we have seen that NO can become SOMEONE in certain structures. But in our comparative structures it can not just change the polarity but become the opposed quantifier. The strange point of these structures is that they have nothing to do with emphasis but rather with the comparative structure. The respective sentence in modern Standard German *'du weißt es besser als niemand' is ungrammatical. Thus, not just emphasis can change the semantic interpretation but comparative structures as well. Both are language specific conditions. If we

⁹ For an exhaustive diachronic and stylistic discussion of this phenomenon see Dufter 2012.

classify comparative structures as a true syntactic phenomenon (see Bresnan 1973), we conclude that emphasis is a syntactic phenomenon as well but with semantic repercussions.

9. Conclusion and prospect

In the introduction we claim that negation and wh-movement target Force in the left periphery. Furthermore, the role of Focus should be discussed as well. In chapter 2, we give the theoretical background of our proposal that wh-movement and quantifier raising have their goal in the left periphery at Force. Next, we show in chapter 3 the relation of both phenomena with emphasis, i.e. Focus. Building on Jespersen 1917, we see that negation and emphasis are interrelated, the same is true for wh-movement. At this point, there is the need of analyzing whether Force and Focus are scattered features in Italian and European Portuguese or not. In chapter 4, we show differences between both languages regarding sentence modality and negation. The Portuguese interrogation does not require a polarity item while the Italian does, i.e. it seems that a connection between modality and polarity is more required in Italian than in European Portuguese. For European Portuguese, it is more important whether the interrogation is part of an embedded clause or a main clause. Because of this, we analyze the lexical features of negative quantifier in both languages in chapter 5. Another factor concerning questions is the structure of ‘tag’-questions. While EP requires negation in the ‘tag’, this is ungrammatical in Italian. We conclude that it is the structure of questions, Force, which differs between both languages and not the sentence negation. Because of missing negative concord in some ‘tag’-questions containing negative elements in European Portuguese, it seems to us that this has to do with differences in emphasis, i.e. Focus. As a result, we conclude that Italian has a strong Force and a weak Focus feature while it is the opposite in European Portuguese. Regarding lexical features of negative quantifier, we discussed in Chapter 5 differences of possible pre- or postnominal positions of Italian and Portuguese quantifiers which have the same Latin roots. The result is that their syntactic behaviour is in some respects inversely opposed. For contrast, we also show the behaviour of those quantifiers in Brazilian Portuguese. We conclude, that modality, polarity and indefinitivity interact. Concerning the strength of quantifier, we analyze existential sentences in chapter 6. Accordingly, we see that quantifier with positive polarity behave the same in both languages while the negative quantifiers differ in their use in existential sentences.

By discussing that, we perceive some problems with cross-linguistic properties of quantification which are the topic in chapter 7. While *all* and *no/none* converge cross-linguistically in semantics and syntax, *alcuno* and *algum* just converge in semantics, i.e. the syntactic properties are independent of the semantic ones. We conclude that Milsark’s test concerning existential quantifiers is a mere syntactic test where the strength of a determiner has no direct relation with its semantic feature make up. Consequently, we assume that, in contrast to Jespersen 1917, the syntax changes the semantic interpretation in special structures. In the last chapter, we reinforce this hypothesis with findings in comparative structures in European Portuguese and Italian.

Since Russel 1905 mainly semanticists and logicians investigate the nature of noun phrases and quantification but they do not care so much for their syntactic behaviour more for their set

of theoretic qualities and for their logical type (compare Heim & Kratzer 1998). In syntax, to our knowledge, Milsark is the first to analyse different types of quantifiers and his tool of investigation arethetic existential sentences. The next one is May 1977, 1985. He is concerned with scope mismatches of two quantifiers in just one sentence. He invents quantifier raising to explain those scope mismatches and adjoins quantifier phrases at S at LF. He calls this Chomsky-adjunction. S is transformed to the Inflection phrase in Chomsky 1981, and since this time quantifier raising targets IP. In those days, quantifier raising leaves a variable, this implies it is A'-movement being equalized with wh-movement. What is unfortunate is the fact that nobody cares for negation and not even considers Rizzi 1982 Chap. IV on the equivalence on Wh- and Neg-Movement.

Zamparelli 2000 tries to reconcile these syntactic proposals with the semantic hypotheses on strong versus weak quantifiers and he goes back to Barwise and Cooper 1981 but not to Keenan and Stavi 1986. Zamparelli proposes to move strong quantifiers and not the weak ones. More recently, Ahn & Sauerland 2015 investigate proportional quantifiers such as ‘66 per cent of all employees of Microsoft are women’. They analyse them as weak ones in the sense of Keenan and Stavi 1986. In contrast to Zamparelli – and without taking into account his work – they just want to move the weak ones and leaving in situ the strong ones. We conclude concerning quantifiers and their grammatical behaviour the research community has not yet reached a solid basis of general acknowledged facts.

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