DIVERSE EXHAUSTIVENESS EFFECTS IN CLEFT SENTENCES: A DESCRIPTIVE STUDY¹

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- ABSTRACT: In this article, we show that cleft sentences may have "exhaustiveness effects" quite different from the "identification by exclusion" which is the effect usually discussed by the literature (ATLAS; LEVINSON, 1981; HORN, 1981; KISS, 1998; WEDGWOOD; PETHŐ; CANN; 2006; BÜRING; KRIZ, 2013). To show this, we present a detailed study of cases in which we test the contextual effects triggered by clefts found in Brazilian magazines and newspapers. Our testing tools are modifiers that the literature associates with exhaustiveness, such as *only* and *and nobody else* (ATLAS; LEVINSON, 1981; HORN, 1981), and *exactly* and *precisely* (MENUZZI; ROISENBERG, 2010a). On the basis of such tests, we conclude that "exhaustiveness effects" involve various types of inferences about the structure of the domain of the discourse referents, and may modify such a structure in many different ways. This result, we believe, puts into a new perspective many of the questions about the semantics and the pragmatics of clefts, in particular whether "exhaustiveness effects" are conventionalized pragmatic inferences (such as a presupposition, or a generalized implicature), or particularized implicatures.
- KEYWORDS: Cleft sentences. Exhaustiveness effects. Identification by exclusion. Contextual set of alternatives. Pragmatic inferences.

Introduction

This article presents a descriptive study of the "exhaustiveness effects" in cleft sentences. The "exhaustiveness effects" are, among the semantic-pragmatic properties of cleft sentences, one of the most discussed in literature (HALVORSEN, 1978; ATLAS; LEVINSON, 1981; HORN, 1981; KISS, 1998; BÜRING, 2010). In general terms, the exhaustiveness effects can be characterized as the inference that a

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unique entity (or a group of entities) satisfies the predicate expressed by the cleft sentence. For example, in the cleft sentence in (1a) below, the predicate expressed by the cleft be represented by the open proposition "x encontrou João" ("x met John"); when "exhaustively interpreted", (1a) is understood as (1b); in other words, from (1a) we can infer something like (1c):

- (1) a. Foi a Maria que encontrou o João. It was Maria that met João.
 - b. Foi a Maria, **e ninguém mais**, que encontrou o João. It was Maria, **and no one else**, that met João.
 - c. Somente Maria (e mais ninguém) encontrou o João.
 Only Maria (and no one else) met João.

As we show in sections 2 and 3, the literature on the "exhaustiveness effects", or the "exhaustiveness inference", of cleft sentences mainly addresses the issue of what type of inference it is: is it a semantic inference – an entailment? Or is it some kind of pragmatic inference – a presupposition, an implicature, etc.? With respect to this issue, there is no consensus in the literature. There is little disagreement, however, as regards the "general content" of the exhaustiveness inference: the literature in general assumes that it looks like what is encoded in (2b). That is, the literature in general assumes that "exhaustiveness effects" can be characterized as the "identification of a referent by means of the exclusion of other referents" – using Kiss (1998)'s terms. Although there is some debate on how precisely the "exclusion" effect must be formulated (HALVORSEN, 1978; ATLAS; LEVINSON, 1981; WEDWOOD, 2005; BURING, 2010; BURING; KRIZ, 2013), there is no doubt that the effects of cleft constructions on the clefted constituent are of "exhaustiveness" – that is, that the exclusion of alternatives is involved.²

The aim of this article is to show that the so-called "exhaustiveness effects" are more complex than suggested by the literature: they cannot be reduced to the "exclusion of alternatives contextually given". Our arguments come from the study of a set of occurrences found in texts of Brazilian newspapers and magazines. We will try to show that the so-called "exhaustiveness effects" involve different types of inferences concerning the structure of referents in the domain of discourse; such inferences lead to different kinds of adjustments in that structure. We think this conclusion reopens a few issues about the semantics and the pragmatics of cleft sentences, in particular one, namely: how much of "exhaustiveness" should

There is, also, a widespread assumption that the "identification by exclusion" is an effect associated with the "focalization" of the clefted constituent – that is, the exclusion is partly due to the fact that the clefted constituent is "contrastive new information" (KISS, 1998). We will not discuss this idea here, although it is perfectly clear that the cleft constituent is not always the focus of the sentence (PRINCE, 1978; ROISENBERG; MENUZZI, 2008).

be codified as a "conventional feature" of cleft sentences (as an entailment, or as a presupposition, or, yet, as a generalized implicature, for example), and how much should be derived by contextual calculation?

Exhaustiveness: always "exclusion by identification"?

For Kiss (1998) – one of the most influential works in the linguistic literature, especially in the syntactic one, on "focus" –, "exhaustiveness" is what makes the "focus" of cleft sentences differ from "normal focus", that is, from "information focus". That would explain why cleft sentences are not adequate in contexts that require "information focus" only, as in (2) below; but where there is "exclusion by identification", they are adequate, as in (3):

- (2) A: *Quem Maria encontrou?* Who did Maria meet?
 - B: (Ela encontrou) o JOÃO. (She met) JOÃO.
 - B': #Foi o JOÃO (que ela encontrou). It was JOÃO (that she met).
- (3) A: *Quem Maria encontrou, o Paulo ou o João?*Who did Maria meet, Paulo or João?
 - B: Foi o JOÃO (que ela encontrou). It was JOÃO (that she met).

Kiss characterizes the "function of an identificational focus" as follows:

(4) An identificational focus is a subset S of the set C of contextually given elements for which the predicate phrase can potentially hold; S is identified as the exhaustive subset of this set C for which the predicate actually holds (adapted from Kiss's (1), 1998, p.245).

In order to understand what (4) means, consider the example below:

(5) Yasser Arafat fez seu mais elevado e difícil gesto quando aceitou a existência de Israel [...] As negociações de paz estão há muito paralisadas, a violência predomina, os Estados Unidos de George W. Bush — única força capaz de arrancar uma solução — nada fazem; e o próprio Arafat colecionou fracassos e torpezas. Mas foi o seu gesto de grandeza que __ lhe garantiu um lugar honroso numa história que tem tantos personagens mais importantes do que ele.³

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The occurrences we will discuss in this article belong to a corpus of texts collected in 2004 from online versions of Brazilian newspapers and magazines. In the case of (5), the source is "Yasser Arafat, uma era que se acaba" ("Yasser Arafat, the end of an era"), published in Veja, November 10 2004.

Yasser Arafat made his most elevated and difficult gesture when he accepted the existence of Israel [...] Peace talks have long been paralised, violence prevails, George W. Bush's United States – the only force capable of getting a solution under way – do nothing; and Arafat himself stocked failures and filthyness. But it was his gesture of grandeur that __ earned him an honorable place in a history that has so many characters more important than himself.

In (5), the predicate of the cleft corresponds to "x garantiu a Arafat um lugar honroso na história" ("x earned Arafat an honorable place in history"). There is a set C of contextual alternatives that would satisfy this predicate: Arafat's "most elevated and difficult gesture", his "failures" and his "filthiness". Of this set of candidates, the subset S exhaustively identified by the cleft sentence is Arafat's "gesture of grandeur": from the context, we infer that **only** this gesture (that is, his acceptance of Israel) satisfies the predicate "x earned him an honorable place in history"; this predicate does **not** apply to the other members of the set C – Arafat's "failures" and "filthiness". The exclusion effect can be diagnosed by adding adverbs of exclusion, like **only, exclusively**, etc., or the expression **and not his failures and filthiness**, to the cleft in (5).

Thus, adopting Kiss's characterization of "exhaustiveness" in clefts, we can say that this notion consists of three elements: (i) a contextually given set of alternatives for which the predicate of the cleft clause potentially holds; (ii) the identification of **one** of the alternatives as the only one to satisfy the predicate contextually; and (iii) the exclusion of all the other alternatives of the set contextually given, that is, the negation of each proposition resulting from the application of the predicate to one of the relevant alternatives. In section 3, we will see that various studies on the "exhaustiveness" of clefts reiterate this characterization, even if arguing for slightly different formulations. (They differ, for example, in the way the notion covers the "exhaustiveness" of cleft constituents with plural denotation: see fn. 5 and 6 below.)

Recently, while investigating different uses of clefts, Menuzzi and Roisenberg (2010) observed that the so-called "exhaustive effects" do not always involve exclusion of **contextually given alternatives**.⁴ In the cases discussed by Menuzzi and Roisenberg, the context does not present a set C of explicit alternatives. Let us consider the following example:

(6) Diz um provérbio oriental que bambu enverga mas não quebra. A trajetória de vida do atual chefe da Casa Civil [José Dirceu] pode ser considerada a encarnação desta metáfora [...] É um articulador por excelência, elogiado até pelos inimigos, com

Menuzzi and Roisenberg (2010) postulate a correlation between the type of "exhaustive inference" they identify and a particular use of clefts they call "conclusive". (According to them, the relevant inference would not be found – at least, not often – with "non-conclusive" clefts.) This particular aspect of their discussion, however, has proved unfounded; see Menuzzi and Teixeira (to appear) for discussion.

uma visão única e completa do governo, da sociedade e da política, com os quais lida diariamente. [...] Mas foi (exatamente) diante deste tripé – sociedade, Congresso e governo – que ele viveu seu dia de bambu.⁵

"An Eastern proverb says that bamboo bends but does not break. The life history of the current chief minister [José Dirceu] can be considered as an incarnation of this metaphor [...] It is an organizer par excellence, praised even by the enemies; he has a single and comprehensive vision of government, society and politics, with which he deals daily. [...] But it was (exactly) before this triad – society, Congress and government – that he lived his bamboo day".

In the context above, the issue is not to identify a referent that satisfies the predicate, and to exclude other contextually given candidates. The opening words of the text induce the reader to think of the predication "José Dirceu lived his bamboo moment in situation x". Next, the text suggests that this situation did \mathbf{not} happen "before the triad society, Congress and government". Thus, until the point where the cleft appears, the text leaves undefined the referent that satisfies "x" in the predication; all it does concerning the identification of x, up to this point, is to create the expectation that x is \mathbf{not} the triad society, Congress and government. In contrast with this expectation, and unexpectedly for the reader, the cleft sentence ends up the stretch precisely by identifying the "triad society, Congress and government" as the referent that satisfies x in "Dirceu lived his bamboo moment in situation x ".

The "emphasis", or "contrast", in cases such as (6) does not seem to lie in the identification of a referent by the exclusion of an explicit set of alternatives. Rather, the contrast appears to be motivated by the fact that the referent that satisfies the predication is unexpected – its identification goes against expectations created by the preceding segment. The identification of an "unexpected referent" is diagnosed by the use of adverbs like **exactly**, **precisely**, etc.: these seem to indicate that the relevant referent is **exactly** the one that is *not* expected. For this reason, Menuzzi and Roisenberg (2010) called this particular manifestation of exhaustiveness "identification by precising". This effect differs from the "identification by exclusion" illustrated in (5): in (5) one can use the adverbs **only** and **exclusively**, but not **exactly**, **precisely**, etc.; in (6), the opposite happens.

On the other hand, it must be observed that, though **only** and **exclusively** are not acceptable in the context in (6), there is still some notion of "exclusion" involved in this example: the context is compatible with the expression *e ninguém mais* ("and no one else") – the same used in (1b,c) above to make the "exhaustiveness effect" of (1a) explicit. This indicates that modifiers like **only** and **and no one else** are not fully comparable: each of them incorporates

⁵ Source: "O Brasileiro do Ano: José Dirceu" ("Brazilian of the Year: José Dirceu), in Isto É, December 15 2004.

particular additional features to the general notion of "exclusion" – that is, to the notion assumed by the literature on clefts and characterized, for example, by the conditions expressed in (4) above.

If one takes only (5) and (6) into consideration, one may think that **somente** ("only") is "anaphoric" in that it requires the presence of contextual alternatives. *E ninguém mais* ("and no one else"), on the other hand, does not seem to require such alternatives; all it seems to require is that the identified value be unique, ruling out the possibility of alternative values – even if not available in context. Whatever the precise difference, the fact is: the notion of "exclusion" expressed by *e ninguém mais* is compatible with (6) above, but the notion expressed by *somente* is not; and the context in (5) is obviously compatible with both notions – but not, we emphasize, with notion of "exclusion" expressed by *exatamente* ("exactly"), *precisamente* ("precisely"), etc. Let us assume that the notion of "identification by exclusion" as proposed by Kiss delimits one particular "exhaustiveness effect"; we must, then, acknowledge that there is at least one other "exhaustiveness effect" which cannot be characterized in the same way: the one called "identification by precising" by Menuzzi and Roisenberg (2010a).

Interestingly, the possibility that "exhaustiveness effects" could be various is not, as far as we can tell, explicitly discussed in the literature: as we shall see in section 3, authors who discussed the notion of "exhaustiveness" questioned its semantic-pragmatic nature, but not its general characterization as synthesized in Kiss (1998). In section 4, however, we present a descriptive study of real occurrences of clefts which shows that the "exhaustiveness effects" we find are not limited to the two described above – that is, to "identification by exclusion" and "identification by precising": we also find several other "exhaustiveness effects" that are not properly described by these notions. In section 5, we will try to present an initial informal analysis of the various cases, trying to identify what is common to all instances discussed.

Exhaustiveness in other studies on clefts

The literature on "exhaustiveness inferences" of clefts generally has focused on one goal: to clarify their nature as far as the typology of semantic-pragmatic inferences is concerned – that is, to determine whether it is an entailment, a presupposition or some kind of implicature. As a result, the literature has not discussed in any deeper sense what the set of potential effects covered by exhaustiveness is – indeed, as previously mentioned, there is rather a general understanding that the "exhaustiveness" of clefts can be characterized as some variant of the effect of "identification by exclusion" as described by Kiss. (But, for a qualification of this statement, we refer to fns. 5 and 6 below, again.)

Horn (1981): "exhaustiveness" as a generalized conversational implicature

For example, Horn (1981) discusses the exhaustiveness of clefts in an attempt to better understand the various types of semantic-pragmatic inferences and their properties: he wants to determine whether an inference is simultaneously cancellable, detachable etc., and if it is so, why it is so. With respect to the exhaustiveness of clefts in particular, Horn argues against the analysis proposed by Atlas and Levinson (1981), for whom it would be an entailment; for Horn, it is rather a pragmatic inference, as proposed by Halvorsen (1978).

According to Horn (1981, p.129), Atlas & Levinson claim that a cleft such as (7a) below and its negation (7b) would have the inferences in (8), as indicated in the analysis in (9):

- (7) a. It was a pizza that Mary ate.
 - b. It wasn't a pizza that Mary ate.
- (8) a. Mary ate a pizza.
 - b. Mary ate something.
 - c. Mary ate (exactly) one thing.
- (9) a. (7a) entails (8a), but not vice-versa.
 - b. (7a) entails (8b), and its negation (7b) presupposes (8b).
 - c. (7a) entails, but does not presuppose, (8c).

This analysis allows Atlas and Levinson to explain one of the major problems faced by Halvorsen's proposal, according to which the exhaustiveness inference expressed in (8c) is a presupposition of the cleft in (7a). If it were a presupposition of (7a), the inference should be preserved under negation (or under interrogation etc.), but this is not the case:

(10) It wasn't a pizza that Mary ate, it was a sausage sub and spaghetti.

Treating (8c) as an entailment of (7a), Atlas and Levinson are able to explain why exhaustiveness, as expressed in (8c), is *not* preserved under negation, as (10) shows.

Horn (1981, p.130), on the other hand, observes that

[e]ven if Halvorsen's semantics cannot be maintained in toto, [6] the exhaustiveness premise associated with clefts does indeed act

Atlas and Levinson and Horn reject Halvorsen's specific analysis precisely on the basis of the acceptability of (10). For Halvorsen, a cleft with the form "It was α that Mary ate" would not presuppose that "Mary ate only α", but rather that "Mary ate at most n things", where n is the cardinality of α. The effects Halvorsen tries to capture

like *some* sort of implicature or pragmatic presupposition in the sense of non-controversial (material), old information or part of the 'common ground', rather than new, asserted, and hence potentially controversial material.

If exhaustiveness were part of the cleft's assertion, but not of the corresponding "normal" sentence, the cleft could be used to add exhaustiveness to the normal sentence. But this is not the case, as shown in (11a) below; Horn points out the contrast with (11b), in which *only* is the element asserting exhaustiveness:

- (11) a. # I knew Mary ate a pizza, but I just discovered it wasn't a pizza that she ate.
 - b. I knew Mary ate a pizza, but I just discovered it wasn't *only* a pizza that she ate.

Horn concludes that the exhaustiveness of clefts must be a pragmatic inference – some kind of implicature, or a presupposition, that is not part of the "asserted content".

Regarding these two possibilities, Horn contends – against Halvorsen – that the exhaustiveness of clefts is a generalized implicature, rather than a presupposition. One of the presumed properties of the presuppositions is that they would be *conventionally linked to the expression*; thus, they should also be "detachable". An inference is "detachable" if it does not necessarily adhere equally to synonymous expressions. In the case of the exhaustive inference of clefts, however, Horn argues that it is "non-detachable": we find it in various constructions, each having in common only the fact that they are all instruments for focusing a constituent:

(12) a.	It was a pizza that Mary ate.	[clefts]
b.	What Mary ate was a pizza.	[pseudo-clefts]
C.	The thing that Mary ate was a pizza.	["th-clefts"]
d.	A PIZZA Mary ate.	["Y-movement" or "focus shift"]
e.	Mary ate A PIZZA.	[contrastive focus]

Thus, Horn (1981, p.132) suggests that

 $[\ldots]$ [the exaustiveness inference] is instead [of a presupposition] a generalized conversational implicature, a pragmatic assumption

this way are related to the problems posed by plurals for an adequate characterization of exhaustiveness (see fn. 6 below). But Halvorsen's proposal is incompatible with (10): if the speaker of (10) presupposed that "Mary ate at most one thing" (since α = "a pizza", the cardinality of α is n = 1), he would not assert that Mary ate two things – "a sausage sub and a spaghetti". The literature that addresses these problems is concerned with how plurality affects exhaustiveness, and not with challenging the idea that exhuastiveness is identification by exclusion. We will not discuss the issue of plurality effects here. (A qualification: for Halvorsen, exhaustiveness is not a "presupposition", but a "conventional implicature" in the sense of Karttunen and Peters (1979). Horn shows, however, that such "implicatures" have the properties traditionally assigned to presuppositions.)

naturally (as opposed to conventionally) arising from focussing or exhaustive listing constructions in the absence of specific contextual trigger or block.

The "principle" that expresses the generalized pragmatic reasoning in question would be the following (adapted from Horn's (16), p.132):

(13) The utterance in context C of any sentence that entails F(a) and presupposes $\exists x F(x)$ induces a generalized conversational implicature to the effect that $\neg \exists x \ [x \neq a \& F(x)]$, where x ranges over entities in a set determined by context C.

For our purposes here, it is important to emphasize that the "principle" postulated by Horn incorporates all aspects that characterize Kiss's "exclusion by identification": (i) there is a "contextually determined" set S of alternatives; (ii) the "open proposition" applies to only one (subset) of the elements of S; and (iii) it is inferred that all other elements of S are "excluded", that is, that the open proposition is false when applied to them. Therefore, Horn's characterization of the exhaustiveness effect is essentially equivalent to Kiss's – except that, for Horn, it is a generalized conversational implicature, not an entailment, of the clefts.

Wedgwood, Pethő and Cann (2006): "exhaustiveness" as "presupposition of uniqueness"

A recent work that maintains a similar characterization is Wedgwood, Pethő and Cann (2006)'s. This paper compares uses of English clefts with uses of a Hungarian construction called "the focus position", by means of a study of occurrences in written corpora. Much of the literature that discusses the Hungarian construction claims that it encodes the same type of "focalizing effect" of English clefts; in particular, both constructions would be conventionally associated with exhaustiveness, either as an entailment (SZABOLCSI, 1981; KISS, 1998), or as a presupposition (KENESEI, 1986; SZABOLCSI, 1994).

According to Szabolcsi (1994), the exhaustiveness of the Hungarian focus position and of the English clefts would be a result of a "presupposition of uniqueness". In her analysis, this presupposition is incorporated into the semantics of an "exhaustiveness operator" underlying the logical form of both Hungarian focus position and English clefts. Specifically, the relevant presupposition corresponds to the content to which the iota operator applies in the formula in (14) below, which expresses the denotation of the operator (semantically, a relation between individuals and propositions; (SZABOLSCI, 1994, p.181; WEDGWOOD; PETHŐ; CANN, 2006, p.16, (15))):

(14)
$$[[Op_{exhaust}]] = \lambda z \lambda P[z = \iota x[P(x) \& \forall y[P(y) \rightarrow y \subseteq x]]]$$

According to (14), the exhaustiveness operator is a relationship between individuals z and predicates P such that it gives the truth if and only if z is the unique x that satisfies the following condition: P is true of x, and for all y, if P is true of y, y is equal or is contained in x. With this semantics for the exhaustiveness operator, a cleft would be interpreted as in (15) below (here we ignore the syntax underlying Szabolcsi's analysis):

(15) [[It was John that left]] = 1 iff [Bill =
$$tx[Left(x) \& \forall y[Left(y) \rightarrow y \subseteq x]]]$$

According to the Szabolcsi's analysis, "It was John that left" is true if and only if John is the (only) individual that satisfies the following condition: is an individual who left and, for every individual y such that y left, y is equal (or is contained in) John. If John is not the only individual who satisfies this condition, then the sentence "It was John that left" cannot have its truth value determined. That is, it cannot be felicitously uttered in contexts in which John does not satisfy the condition over which the iota operator scopes. This is the effect of taking the exhaustiveness condition as a presupposition, and not as part of the cleft's assertion. To see the difference, suppose that we replace the iota operator with an existential quantifier:

(16) [[It was John that left]] = 1 iff
$$\exists x[John = x \& Left(x) \& \forall y[Left(y) \rightarrow y \subseteq x]]$$

Under this semantics, "It was John who left" will always have a determined truth value: it will be true if John was the only one who left; and false otherwise. That is, the cleft would have the same semantics, basically, as a sentence modified for *only*; and Horn's arguments against exhaustiveness as an entailment would apply [see discussion of (11) above).

Wedgwood, Pethő and Cann (2006) argue *against* the analysis in (15) above for the Hungarian focus position: they demonstrate that there are many contexts in which the "presupposition of uniqueness" should be respected for the English clefts, but not for the Hungarian construction. Here is an example:

The condition that every y is equal to or is contained in x is due to the fact that the cleft constituent can denote a plural individual, as in "It were the windows that were broken". This is a way of trying to explain the effects of the the cardinality of the cleft constituent in exhaustiveness; see fn.4 above. For references and discussion of the issues involved, see Büring (2010), Büring and Kriz (2013).

For an introductory discussion of presuppositional NPs (or DPs) as well as references on the topic, see Heim and Kratzer (1998, p.73) and references cited there.

(17) A meccs hőse a mindössze húszéves, hirtelen növése miatt állandó izomproblémákkal küzdő Steve Gerrard volt.

'The hero of the game was 20-year-old Steve Gerrard, who is continuously suffering from muscle problems because of his sudden growth.'

A 16. percben [harminc méterről] vágta be a labdát Barthez the 16th minute-in 30 metres-from smashed VM the ball-ACC Barthez kapujába, igényt formálva az Év gólja címre. goal-POSS3SG-into claim-ACC forming the year goal-POSS3SG title-for 'In the 16th minute of the game, he kicked the ball [from 30 metres] right into Barthez's net, thus claiming the title for the Goal of the Year.'

'In the 16th minute of the game, # it was from 30 metres that he kicked the ball right into Barthez's net, thus claiming the title for the Goal of the Year."

Observe that, in the context, it is salient that Steven Gerrard did something special, something that made him the hero of the match; but there is no evidence, before the last sentence, that what he did was kick the ball from a distance x directly into Barthez's net. Hence the proposition expressed by the cleft clause is *not* presupposed. Therefore, the cleft is not used in English – as it is not in Portuguese either. (A cleft felicitous in the context would be: "It was after 16 minutes that Gerrard made his master play: ..."). Because the Hungarian focus position is an adequate construction in the context, Wedgwood, Pethő and Cann concludes that the "presupposition of uniqueness" is not a *sine qua non* condition for its use.

Thus, Wedgwood, Pethő and Cann (2006) conclude that the Hungarian focus position is a construction that is semantically underspecified; it is compatible with a context having a "presupposition of uniqueness", but this is not an inherent requirement of the construction. More importantly, Wedgwood, Pethő and Cann also conclude that, unlike the Hungarian focus position, **the English clefts are conventionally associated with the presupposition of uniqueness** as expressed in (14) and (15) – in their own words, the English clefts "are more inherently presuppositional".

Note, now, that exhaustiveness as defined in (14) incorporates much of what is assumed by Kiss and Hom – even if the nature of the postulated inference is again different: as we have seen, for Wedgwood, Pethő and Cann (2006), is a presupposition, and not an entailment or a generalized conversational implicature. Consider, again, what (15) says: there should be (in the context) one and only one (possibly plural) individual x that satisfies the proposition "[Left(x) & \forall y[Left(y) \rightarrow y \subseteq x]"; if

In fact, in Portuguese the appropriate utterance would be a case of left-dislocation: Aos 16 minutos de jogo, a uma distância de 30 metros, ele deu um chute direto para as redes de Barthez ("After 16 minutes, from a distance of 30 meters, he kicked the ball directly into Bathez's net"). See Wedgwood, Pethő and Cann (2006) and especially Wedgwood (2005) for a detailed analysis of the semantics of the Hungarian focus position.

this condition is satisfied, and if John is equal to x, then "It was John that left" is true; if the condition is not satisfied, then the sentence does not have a truth value.

According to this analysis, there is no explicit reference to a "set of contextual alternatives" that includes John and other individuals. If there is such a set, then what the presupposition requires is that John be the only one to satisfy the proposition "Left(x)" – that is, it is presupposed that "Left(x)" is false for all other alternatives. In this case, therefore, (14) is equivalent to Kiss and Horn's proposals – except that it is a presupposition, and not a generalized implicature or an entailment.

On the other hand, if there is no set of contextual alternatives and only John satisfies "Left(x)", the condition expressed in (15) is trivially satisfied – since there is nothing to be excluded in the context. But there is a difference here: unlike Kiss and Horn's formulations, (14) applies even to contexts in which *there is no explicit set of alternatives*. Thus, the analysis based on (14)-(15) above seems, in principle, to be compatible with the effect of "identification by precising" observed by Menuzzi and Roisenberg (2010a).

In fact, the approach based on the presupposition of uniqueness seems to indicate a way of understanding why *exatamente* "exactly" is compatible with the context in (7), but *somente* "only" is not. Assume that *somente* and *exatamente* differ in that the first presupposes a non-empty set of alternatives, and the second does not. Now, consider the following contrast:

- (18) A: Por que os pais de Maria ficaram tão tristes com o casamento? "Why were Maria's parents so sad with her marriage?"
 - B: # Com tantos candidatos maravilhosos, **somente** o Paulo casou com ela.

 "# With so many wonderful proponents, **only** Paulo married her."

 Com tantos candidatos maravilhosos, **exatamente** o Paulo casou com ela.

 "With so many wonderful proponents, **exactly** Paulo married her."

In Portuguese, the inadequacy of *somente* in the context above is clearly due to the following fact: the context indicates that A knows who Maria married. One could not assume that, knowing this, A would still think that Maria could have married others – that is, that there was a "set of contextual alternatives" to Paulo: after all, under the current laws, a person marries only one other person each time.

In the next section, we will present actual occurrences of clefts showing that even the analysis in (14)-(15) is not sufficient to capture all cases of "exhaustive effects" found in written Brazilian Portuguese.

Diverse exhaustiveness effects in clefts

What is, really, "identification by exclusion"? And "identification by precising"?

Among the occurrences of clefts in our corpus (see fn.4 above), we find cases of exhaustiveness effects such as the ones discussed before – that is, cases of "identification by exclusion", as in (5), and also cases of "identification by precising", as in (6). But it must be said that cases of "identification by exclusion" such as (6) – cases that are simultaneously compatible with exclusion of contextual alternatives and with *somente* "only" and *ninguém/nada mais* "no one/ nothing else" – are not as common as one might expect. Consider the following example:

- (19) Manoel de Oliveira acredita ter livrado seu trabalho do claustro do entretenimento: "Eu procuro tirar de meus filmes o lado espetacular para poder me concentrar no que há de mais humano.¹⁰
 - a) \acute{E} sobre a humanidade que acredito que o cinema deva falar."
 - b) É sobre a humanidade, e não sobre o espetacular, que o cinema deve falar."
 - c) # É sobre a humanidade, e sobre nada mais, que o cinema deve falar."
 - d) # É somente sobre a humanidade que o cinema deve falar."

Manoel de Oliveira believes he has saved his work from the cloister of entertainment: "I try to take the spectacular side away from my movies and concentrate on what is most human.

- a) It's about humanity that I believe that cinema should speak."
- b) It's about humanity, not about the spectacular side, that the cinema should speak."
- c) # It's about humanity, and about nothing else, that the cinema should speak."
- d) # It's only about humanity that the cinema should speak."

Apparently, what really matters in the above context is the exclusion **only** of the contextual alternatives, as indicated by the felicity of (19b), and not the exclusion of other potential alternatives, as we see by (19c,d). Especially regarding the last two, there are alternatives that one could say are "concrete cases" of **humanity** in (19), if we take it in a metonymic sense: if it means something like "humanity and all its concerns", the alternative would include, for example, "humanity and its dramas", "humanity and its desires", "humanity and its taboos" etc. It is because the speaker does not wish to exclude such alternatives in the context that modifiers like **and about anything else** and **only** are inappropriate.

Example (19) shows us a few important things. First, we need to understand how the identification of the "set of relevant alternatives" works for the so-called

¹⁰ Source: "Vitalidade" ("Vitality"), Jornal do Brasil, 3 de novembro de 2004.

"operators of exclusion". In (19c,d), it appears that, for operators like **somente** "only" and *e nada mais* "and nothing else", hyponyms of the asserted alternative ("humanity and its dramas" is a hyponym of "humanity and all that concerns it") should be contextually relevant alternatives; but not for the cleft, as we see by (19a). That is, if we assume that the relevant alternatives for operators like *somente* and *e nada mais* are "determined contextually" too, approaches such as Kiss's or Horn's will not be sufficient: they do not offer elements to distinguish which contextual alternatives are relevant or not for the clefts.

Now, assume that the correct generalization about the above example is that, in certain contexts, "hyponyms" of the asserted alternative should not be excluded from the set of alternatives. If this is the case, Wedgwood, Pethő and Cann (2006)'s analysis, expressed by (14) above, will account for (20a). Accordingly, the asserted alternative will be exhaustive not only if it is the unique alternative (when there are no contextual alternatives that satisfy the predicate), but also if all non-excluded alternatives are "parts" of it. This is what is stated in the condition "& $\forall y [P(y) \rightarrow y \subseteq x]$ " in (14) above.

At the same time, we should note that Wedgwood, Pethő and Cann (2006)'s proposal for clefts **cannot** be directly extended to the semantics of **somente** "only": if the difference between clefts and **only** lies in the status of the requirement for uniqueness – in clefts it would be a presupposition, and in **somente**, part of the asserted content –, then **somente** should be acceptable in (19).¹¹

Anyway, the conclusion we reach, with example (19), is that the cases of "identification by exclusion" by means of clefts do not behave all alike with respect to the set of excluded alternatives: in this regard, (19) is different from (5), for example.

Similarly, observe that the case of "identification by accuracy" in (6) above is not a "general type" either: again, we find occurrences that satisfy the same general character – compatibility with *exatamente*, *precisamente* etc. –, but still show differences with respect to exhaustiveness. For example, in the case of (6), we showed that there is no "identification by exclusion" properly speaking: there is no explicit set of contextual alternatives to be excluded. Moreover, the context is incompatible with *somente* "only", *unicamente* "uniquely" etc.; but, at the same time, it is compatible with *e ninguém mais* "and no one else". The conclusion is similar to that we reached in the discussion of (19): the identification of the set of relevant alternatives must be such that it allows us

A final note on (19): it is a case where the assertion made by the cleft is not precisely "new information"; the statement simply reinforces what was already implied by Oliveira's previous statement. Therefore, it is information accessible in the context. This may explain the inappropriateness of exatamente "exactly", used in contexts where there is indeterminacy about which alternatives satisfy the presupposed predication. See discussion of (6) above.

to explain the impossibility of *somente* etc., while allowing us to explain the adequacy of *e ninguém mais*.

Now, consider the example in (20) below:

(20) Raras vezes a humanidade presenciou a multiplicação de tantas iniciativas simultâneas em favor da implantação e da consolidação de uma verdadeira cultura de paz. No Brasil, marcado por desigualdades crônicas de renda, [...] a preocupação se amplia sobretudo devido a conseqüências diretas ou indiretas dessa realidade. [...] Em outras nações, como as que acabam de definir uma trégua no Oriente Médio, as razões são igualmente desafiadoras. [...] 12

A incorporação da paz ao cotidiano precisa ser um compromisso de cada um, todos os dias.

- a) É essa disposição que permitiu o acordo de paz no Oriente Médio.
- b) É exatamente essa disposição que permitiu o acordo de paz no Oriente Médio.
- c) # É somente essa disposição que permitiu o acordo de paz no Oriente Médio.
- d) #É essa disposição, e nada mais, que permitiu o acordo de paz no Oriente Médio.
- e) Sem essa disposição, não teria havido o acordo de paz no Oriente Médio.

Rarely humanity witnessed the multiplication of so many simultaneous initiatives in favor of the implementation and consolidation of a true culture of peace. In Brazil, marked by chronic income inequality, [...] the concern is amplified mainly due to the direct or indirect consequences of this reality. [...] In other nations, such as those who have just set a truce in the Middle East, the reasons are equally challenging. [...]

The incorporation of peace into daily life must be a commitment of each one, every day.

- a) It is this attitude that led to the peace agreement in the Middle East.
- b) It is exactly this attitude that led to the peace agreement in the Middle East.
- c) #It is only this attitude that led to the peace agreement in the Middle East.
- d) # Is this attitude, and nothing else, that led to the peace agreement in the Middle East.
- e) Without this attitude, there would have been no peace agreement in the Middle East.

Note, first, that the possibility of using *exatamente* "exactly" in the context suggests that it is a case like (6), of "identification by precising". Indeed, there is no explicit set of contextually relevant alternatives, which again makes (20) similar to (6). But there is an important difference: only in (20), the "identification

Source: "Visão solidária" ("A View from Solidarity"), Zero Hora, 9 de fevereiro de 2005.

by precising" seems to be incompatible with all tests for "identification by exclusion" – not only with *somente*, but also with *e ninguém mais*.

Intuitively speaking, the problem in (20) seems to arise from the following: the alternatives the speaker does not want to exclude from the predication are not just hyponyms of **this attitude**; they include all other things that, along with "willingness to incorporate peace to daily life", led to the peace agreement in the Middle East (e.g., in the case of the Palestinians, the need to address their social problems; in the case of US, the need to reassert itself as the strategic leadership in the region, etc.). Indeed, the cleft in (20) appears to play a role in the context similar to (20e): what the speaker wants to say is that **without** the willingness to incorporate peace to daily life, all other factors together would not be enough to ensure the peace agreement.

(20) is an important example for two reasons. Firstly, it suggests that when the so-called "exhaustiveness effect" is actually that of "identification by precising", it may be compatible with what appears to be the **inclusion** of the asserted alternative in a set of alternatives (in (20), inexplicit but inferable). That is, at least clefts expressing "identification by precising" may not involve any exclusion at all. Here, of course, the question arises of what is precisely the contribution not only of the cleft itself, but also of operators like *exatamente*.

Secondly, if the elements that should *not* be excluded from the set of alternatives in (20) are **not** mere hyponyms of "willingness to incorporate peace into daily life", then we are definitely facing a case that is **not** covered Wedgwood, Pethő and Cann (2006)'s analysis: the cleft sentence in (20) does not satisfy the condition "& $\forall y [P(y) \rightarrow y \subseteq x]$ " in (14).

The cases discussed in this section seem to lead to the following conclusion: the notions of "exhaustiveness" and "identification" relevant to clefts, though related to "exclusion" and "precising" as diagnosed by modifiers like *somente* and *exatamente*, cannot be reduced to any of these, nor are they a mere disjunction of both (as suggested by Menuzzi & Roisenberg 2010). Indeed, it seems that the effects of "exhaustiveness" or "identification" expressed by clefts are directly influenced by contextual factors that have not been investigated satisfactorily so far. These factors are selectively affected by modifiers such as *somente*, *exatamente*, etc. Moreover, they also seem to be directly related to the constitution of the "set of alternatives" relevant to the exclusion/identification effect contextually triggered by the cleft. The cases we will discuss in the following sections will confirm this conclusion.

The contextual structure of referents and the set of alternatives, part 1

Consider the following case:

- (21) O Quinto Império é seu 37º [filme de Manoel de Oliveira] e lhe rendeu um prêmio especial pelo conjunto da obra no último Festival de Veneza. Antes, fez dois filmes que permanecem inéditos no Brasil: O Princípio da Incerteza (2002), que talvez seja sua obra-prima, e Filme Falado (2003). Segundo Manoel, as histórias dessas fitas são impulsionadas pela curiosidade: 13
 - É a dúvida que me norteia. Ela é um estímulo porque não tenho certeza de nada, só de que duvido.
 - a) # É exatamente a dúvida que me norteia.
 - b) É, mais exatamente, a dúvida que me norteia.
 - c) # É a dúvida, e não a curiosidade, que me norteia.
 - d) # É somente a dúvida que me norteia.
 - e) # É a dúvida, e nada mais, que me norteia.

O Quinto Império ("The Fifth Empire") is his 37th [movie by Manoel de Oliveira] and earned him a special award for lifetime achievement at the last Venice Festival. Before, he made two movies that did not reach Brazilian cinemas so far: O Princípio da Incerteza ("The Principle of Uncertainty", 2002), perhaps his masterpiece, and Filme Falado ("Talking Movie", 2003). According to Manoel, the stories in these tapes are driven by curiosity:

- It is doubt that guides me. It is a stimulus because I'm not sure of anything, only that I have doubts.
- a) # It is exactly doubt that guides me.
- b) It is doubt, *more exactly*, that guides me.
- c) # It is doubt, not curiosity, that guides me.
- d) # It is only doubt that guides me.
- e) # It is doubt, and nothing else, that guides me.

At first, it seems that the case above is an instance of "identification by precising": it is incompatible with operators of exclusion and compatible with something similar to *exatamente* "exactly". The asserted alternative, *a dúvida* (lit. "the doubt"), is compared to an element in the context, *a curiosidade* (lit. "the curiosity"), and this is what seems to justify the use of the cleft. But the relationship between *a curiosidade* and *a dúvida* clearly is not a relationship between the "alternatives to each other". Here, again, we have some kind of lexical relation between the two terms compared, in this case probably metonymy. "Curiosity" means something like "the desire to know something", and doubt about something is obviously one of the possible reasons why we want to know more about it. That is, doubt can be a "source of curiosity". Therefore,

¹³ Source: "Vitalidade" ("Vitality"), Jornal do Brasil, 3 de novembro de 2004.

the first conclusion is: when the text above establishes a contrast between doubt and curiosity, the aim is not to exclude one of "elements of comparison", but rather to explain better why curiosity motivates the filmmaker: curiosity motivates him because it is caused by doubt.

Observe: in (21), not only the asserted term (a dúvida) but also the compared term (a curiosidade) satisfy the cleft predication ("x guides me"); and the relation of metonymy between both determines, by means of the asserted term (a dúvida), how the compared term (a curiosidade) satisfies the predicate. In these circumstances, it does not seem appropriate to say that it is a case of "identification (by precising) what was left undetermined" by the preceding context. (See especially the discussion of example (6) above.) Rather, what the cleft does in (21) is "to determine **more** precisely what had already been partially identified".

Hence, the function of the cleft in (21) is to determine which element, **within the set of sources of curiosity**, guides the filmmaker. Possibly because of this, there is **no exclusion of other possible motivations "at the same level" of curiosity**. That is, there is no exclusion of alternatives that would constitute a "set of alternatives" with curiosity. Indeed, the discourse in (21) seems compatible with the idea that Oliveira's work has many "motivations": it may be motivated not only by curiosity – that is, by doubt –, but also by other things, for example, the desire to share his doubts; the desire to make the audience think about them, etc.

Thus, there is no exclusion in the set of alternatives to which **curiosity** belongs in (21). However, we do detect an "exhaustiveness effect" **in the domain of the sources of curiosity** – that is, in the set of alternatives to **doubt**, implicit in (21). From (21) we infer that it is doubt and not, say, a desire to know the sexual intimacy of individuals or a desire to get pleasure with what is unusual etc., which is the source of Oliveira's curiosity. That is, the cleft is used to suggest that it is **doubt, and not some other source of curiosity**, that guides the filmmaker.

The case in (21) is important because it shows how complex the "calculus" can be of the so-called "exhaustiveness effect". In particular, (21) reveals that **we must distinguish at least two sets of contextual alternatives** – a distinction that may not be needed in simpler cases. There is a set of "terms for comparison" in relation to which the clefted element is focused on in (21) – that is, the set of alternatives including the term that contextually justifies the focalization of the clefted element. This set appears to be constituted by curiosity and its alternatives (that is, those things that, together with the curiosity, may quide Oliveira's work). And there is a second set of alternatives in (21): it is the

Three facts support the idea that doubt is focussed because of its contrast relation with curiosity. (a) intuitively, the reader feels that doubt is actually "anaphorically" related to curiosity, (b) as we have just discussed, the use of more exactly is made clear by this relationship; and (c) finally, if the sentence containing curiosity did not

set of alternatives that includes the clefted term; this is the set whose terms we need to check whether the cleft predication is true of them, or not — that is, this is the set for which we calculate "exhaustiveness". This set, in (21), is evoked by evoked by evoked and its metonymic relation with evoked and it is constituted by doubt and other sources of curiosity.

That is, the set of alternatives relevant to "exhaustiveness effects" can be evoked by a relation like metonymy, which seems to have something to do with the structure of the domain of referents in the discourse. But this is not surprising: in our discussion of previous examples, we had seen that both metonymy and hyponymy are relevant. No wonder hyponymy has played a central role in the characterization of exhaustiveness in some approaches (see fn. 5 and 6 above, and references cited there). But the relevance of metonymy has passed unnoticed, we think

This is the point to note that examples like (21) indicate that we are faced with two distinct processes in interpreting clefts and operators such as **only**, **exactly**, etc. One is the identification of the set of relevant alternatives: this set is not simply "contextually given", as the literature vaguely suggests. (The criticism applies to HORN, 1981; ROOTH, 1992 and KISS, 1998) The identification of the set of relevant alternatives seems to result from an inferential process based on a contextually articulate structure of referents, which involves relations like hyponymy, metonymy and possibly others. The examples that we discuss below will confirm this.

The second process – that seems to be more directly related to the semantics of clefts and of **only**, **exactly** etc. – is the readjustment such constructions and operators perform in the identified domain of alternatives. This is what has come to be known as the "exhaustiveness effect". (21) confirms that, with clefts, it can be "exhaustiveness" properly speaking – that is, "identification by exclusion". But examples like (20) above seem to raise doubts on the idea that this is the only effect; see also the discussion of (23), in the section 4.4 below.¹⁵

have "term of comparison" to establish the relationship with the cleft constituent, the acceptability of the cleft would degrade significantly, and the use of *more exactly* becomes disconnected:

^[...] According to Manoel, the stories in the tapes are driven by humanism/disgust for modern society/etc.:

a) - #It is doubt that guides me. It is a stimulus because I am not sure about anything.

b) - #It is doubt, more exactly, that guides me. It is a stimulus because ...

The possibility of using a modifier like more precisely in (21) suggests that the cleft in this context functions as an expression of "metalinguistic negation", notion discussed in detail by Horn (1985). In fact, more precisely could be replaced for in other words in (21) – which shows the cleft is correcting the way something has been said. Other examples discussed below have the same feeling, but we cannot explore these connections here.

The contextual structure of referents and the set of alternatives, part 2

In this section, we discuss an example that confirms the importance of relations like hyponymy and metonymy, and also the need to distinguish the set of alternatives that "justifies focalization" and the set of alternatives relevant for the "exhaustiveness effect". As we shall see, the case to be discussed is even more unexpected. Here it is:

- (22) Todo mundo quer uma Agência Nacional do Cinema e do Audiovisual. Só que há inúmeras lendas em torno dela. Uma é que ela é uma idéia que partiu [dos cineastas brasileiros]. [...] Nossa classe reivindicava, sim, a criação de um organismo específico para o cinema ligado à Presidência da República. [...] Quando se formou o Grupo Executivo [...] para discutir a criação desse organismo, chegou-se à conclusão de que deveria ser uma agência nacional de cinema e trabalhou-se nisso. Foi o ministro das Comunicações Pimenta da Veiga que levantou e falou: "Por que não fazer uma agência abrangente que pegue cinema e televisão, para casar logo as duas mídias?" Nós, do cinema, [...] dissemos: "Olha! É muita areia pro nosso caminhão." Mas não adiantou.16
 - a) Mas foi o ministro Pimenta da Veiga que levantou e falou: ...
 - b) #(Mas) Foi o ministro Pimenta da Veiga, e não a classe dos cineastas, que falou:...
 - c) (Mas) Foi o ministro Pimenta da Veiga, e não um dos cineastas, que falou: ...
 - d) #(Mas) Foi somente o ministro Pimenta da Veiga que falou: ...
 - e) (Mas foi o Governo, e não a classe dos cineastas, que teve a idéia de criar a Ancinav:) Foi ministro Pimenta da Veiga que falou: ...
 - f) (Mas foi somente o governo que teve a idéia de criar a Ancinav:) Foi ministro Pimenta da Veiga que falou: ...

Everybody wants a National Agency for Cinema and Audiovisual media. But there are many miths about it. One is that it was suggested by Brazilian filmmakers. [...] It is true that our class demanded a specific body for cinema attached to the Presidency. [...] When an Executive Group was formed [...] to discuss the creation of this body, the conclusion was that it should be a national agency for cinema and people began to work on it. *It was minister Pimenta da Veiga that stood up and said:* "Why not create a comprehensive agency that covers film and television, joining both media?" We, of the cinema, [...] said: "Look! It is a lot of sand for our truck." But to no avail.

- a) But it was the minister Pimenta da Veiga who stood up and said: ...
- b) #(But) It was the minister Pimenta da Veiga, not the class of filmmakers, who said:
- c) (But) It was the minister Pimenta da Veiga, and not one of *the* filmmakers, who said: ...

¹⁶ Source: "DVD dá mais lucro" ("DVD is more profitable"), Jornal do Brasil, 17 de novembro de 2004.

- d) #(But) It was only the minister Pimenta da Veiga who said: ...
- e) (But it was the government, not the class of filmmakers, that had the idea of creating
- the agency:) It was the minister Pimenta da Veiga who stood up and said: ... f) (But it was only the government that had the idea of creating the agency:) It
- was

the minister Pimenta da Veiga who stood up and said: \dots

First, observe that the cleft in (22) does involve a contrast between the clefted term and some other term, which should be identifiable in the context. This is shown by the possibility of using **but**, as in (22a) (MENUZZI; ROISENBERG, 2010b). In the typical case, the term of contrast should form a set of alternatives with the focused term *minister Pimenta da Veiga*, and "identification by exclusion" would occur with reference to this set. But which is the term in (22) above that forms a set of alternatives with *minister Pimenta da Veiga*?

The most immediate candidate would be the class of filmmakers, which is the other salient term in the text: indeed, the filmmakers were opposed to Pimenta da Veiga's suggestion. Despite of this, note the pragmatic unfelicity of the statement in (22b), in which minister Pimenta da Veiga is focused on and the class of filmmakers is explicitly excluded. This indicates that the class of filmmakers is not an appropriate term to form a set of alternatives with minister Pimenta da Veiga. By analogy with (21), we could say: the class of filmmakers can be the term that "motivates" the focalization of minister Pimenta da Veiga; but it is not an alternative in the set where minister Pimenta Veiga triggers the "exhaustiveness effect".

(22c) shows that a relevant alternative could be **one of the filmmakers**, that is, a hyponym of **the class of filmmakers**. This makes sense: although **the class of filmmakers** is the term that motivates the focalization of *minister Pimenta da Veiga*, it just **evokes** a set of individuals who participated in the meeting where the minister stood up and spoke; and the text asserts that it was the minister, and not some other of those individuals, who suggested the idea that the agency should be created in this or that way.

However, consider what, under this interpretation, the "exhaustiveness effect" would be to justify the clefting of *minister Pimenta da Veiga*: it would identify (by exclusion) the minister as the only one – among those present at meetings between government, filmmakers etc. – to make the proposal in question. But the infelicity of (22d) at a first reading indicates that, contextually, this is not an appropriate interpretation for the text: **only** applied to *minister Pimenta da Veiga* seems to suggest that the proposal was made "only by the minister himself"; that is, the utterance would roughly mean: "But it was the minister – **personally, as an individual, and not, say, as a government official** – who stood and spoke...".

(22e) indicates that there is another, more appropriate, reading for the text. Under this reading, the cleft "It was minister Pimenta da Veiga that..." is only an indirect way of saying that another political group, rather than the class of filmmakers – the government, for example –, wanted a "more comprehensive agency". Crucially, the minister, in this reading, is related by hyponymy (or metonymy?) to this other group, that is, the government. In other words, one can say that the cleft "It was minister Pimenta da Veiga that..." has the role of evoking a hyperonym of the minister, the government. This also clarifies what the relevant predication really is for the purposes of "exhaustiveness effect": "x had the idea to create the agency (as it was created)."

(22f) seems to confirm this interpretation: it shows that *the government* would be a proper contextual alternative to *the class of filmmakers*. More than that, it also shows that it would be a proper term for the "exhaustiveness effect", that is, for the "identification by exclusion": this is demonstrated by the acceptability of *only* in (22f). Finally, (22f) confirms that the relevant predication for exhaustiveness is "x had the idea to create the agency (as it is created)". In fact, this was the "question under discussion" in the text, as the beginning of the text makes clear.

In short, the cleft "It was minister Pimenta Veiga that..." can be interpreted as a case of "identification by exclusion" in (22). In fact, this is the best contextual interpretation. But this effect is **indirectly** obtained by the utterance. In the relevant reading, the role of the cleft is to evoke another predication, the one presented at the beginning of the text as the "question under discussion": "(which) x had the idea to create the agency (as it is created)". In the same reading, the set of alternatives relevant for exhaustiveness is **not** the set that directly concerns the minister Pimenta da Veiga — which happens to be the clefted constituent! The implicit predication must be evaluated with reference to another set of alternatives. Explicitly, the result would be (22f) — an utterance fully coherent in the context.

We do not intend to discuss here all ramifications of the analysis just sketched for (22). But we think a few conclusions are unavoidable as long as (22) has the reading we just presented: (a) even in the basic cases of "identification by exclusion", the so-called exhaustiveness effects may involve a complex inferential calculus based on contextual information; (b) this contextual information is related to both the structure of the domain of referents and the predication relevant for the "exhaustiveness effect"; and (c) the relevant inferential calculus may require a structure of referents and a predication that are not directly encoded by the cleft. From this perspective, it does not seem to be a case that the "identification by exclusion" performed by a cleft sentence necessarily results from the compositional semantics of the cleft itself.

Structure within the set of alternatives

In the previous two subsections, we discussed cases where the appropriate calculus for the "exhaustiveness effect" requires a structured domain of referents. In particular, it is necessary to distinguish the set of alternatives that "motivates" focalization of the clefted term, and the set of alternatives over which exhaustiveness is defined. However, regarding the latter set, specifically, no internal structure was required so far: there is no relation between the alternatives beyond that of belonging to the same set – defined by the contextual possibility of satisfying the cleft predication (e.g., "x had the idea to create the agency (as it was created)" in (22f)). What the assertion made by the cleft does is to operate some modification in this set: typically, it excludes alternatives not asserted by the cleft; but the interaction between the cleft and the contextual structure of referents is often more complex than that – in some cases, the effect, in fact, seems to be the *inclusion* of an alternative in the relevant set [see (20)].

Anyway, in the cases previously discussed, as we said, no internal structure is required for the set of alternatives in which the "exhaustiveness effect" operates. However, consider the following, apparently simple, case of "identification by exclusion": 17

- (23) O artista que se desdobrava em engenheiro era uma figura comum na Renascença.

 O que era e é incomum, quase milagroso, é ter todos esses talentos na intensidade
 em que Da Vinci os tinha. [...] Embora tivesse uma assombrosa habilidade
 matemática, diz-se que Leonardo não criou algo que se pudesse chamar de
 "teorema de Leonardo" [...]¹⁸
 - a) É na arte de Leonardo que se percebe mais claramente o modo como se combinam sua imaginação e seu poder de retratar o mundo. [...]
 - b) É na arte de Leonardo, e não em sua ciência, que se percebe mais claramente o modo como se combinam sua imaginação e seu poder de retratar o mundo. [...]
 - c) #É somente na arte de Leonardo que se percebe mais claramente o modo como se combinam sua imaginação e seu poder de retratar o mundo. [...]
 - d) É mais claramente na arte do que na ciência de Leonardo que se percebe o modo como se combinam sua imaginação e seu poder de retratar o mundo.
 [...]

In the text below, the cleft was adapted to show more clearly the effect that we want to discuss here. The original utterance was: It is in Leonardo's art that his imagination and power of uncovering and portraying the world combine in a definitive way. In this form, the modifier a definitive way obscures the gradual nature of the predication expressed by cleft and the corresponding ordering imposed on the set of alternatives.

¹⁸ Source: "A modernidade de Leonardo da Vinci" ("Da Vinci's Modernity"), Veja, 27 de outubro de 2004.

The artist who doubled up as an engineer was a common figure in the Renaissance. What was and is unusual, almost miraculous, is to have all these talents in the intensity in which Da Vinci had them. [...] Although he had an amazing mathematical skill, it is said that Leonardo did not create something that could be called "Leonardo's theorem" [...]

- a) It is in Leonardo's art that one sees more clearly the way his imagination and his power to portray the world combine.
- b) It is in Leonardo's art, and not in his science, that one sees more clearly the way his imagination and his power to portray the world combine.
- c) #It is only in Leonardo's art that one sees more clearly the way his imagination and his power to portray the world combine.
- d) It is most clearly in Leonardo's art, rather than in his science, that one sees the way his imagination and his power to portray the world combine.

On a first reading, the text seems simple: it would oppose Leonardo's art to his science; and the "question under discussion" is which one best reveals how his imagination and power of description combine. At first glance, it seems that the meaning of the cleft (23a) is: it is Leonardo's art that most reveals, etc. And, by exclusion, it is not his science that most reveals, etc. This first reading of the cleft (23a) seems even to be maintained in (23b), which seems to explicitly exclude Leonardo's science from the alternatives that satisfy the cleft predicate.

But (23c) indicates that there is something wrong with this way of analyzing (23a) – that is, as simply containing the exclusion of "Leonardo's science" from the set of alternatives x of which it is true to say that "we see more clearly in x the way Leonardo's imagination and power of description combine". The key observation is: the use of only in (23c) seems to imply that we cannot see clearly in Leonardo's science the way his imagination and power of description combine. But that does not seem to be what is said in (23a) or (23b): in the last two, there is no such implication. As a matter of fact, (23a) and (23b) could be paraphrased by something like (23d) – which, crucially, does not carry the implication only triggers in (23c).

What (23d) suggests with respect to (23a) and (23b) is: the predication that defines the set of alternatives relevant for the "exhaustiveness effect" in (23a) and (23b) does not divide this set in alternatives that satisfy the predication and alternatives that do not. Concretely, the cleft clause in (23a) and (23b) does not divide the set of alternatives into those in which one can see clearly the way Leonardo's imagination and power of description combine, and those in which one cannot see this clearly. Rather, it seems that the modifier *more clearly* has the effect of *ordering the set of alternatives* with respect to how much they show the combination of Leonardo's imagination and power of description. That is:

- (i) the predication relevant to (23) seems to be "we see in x the way Leonardo's imagination and his power to portray the world combine"; and
- (ii) the compositional effect of the modifier *more clearly* seems to be the ordering of the set of alternatives with respect to the degree in which they satisfy the predication described in (i).

Under this line of analysis, one can anticipate an explanation for the fact that (23d), but not (23c), can be used as a paraphrase for (23a,b).

Let us emphasize the consequence of this description: if it is correct, or nearly so, then we are forced to abandon the idea that "exhaustiveness effects" *necessarily* involve the identification of alternatives to which the predication applies and the inference that other alternatives are excluded. In the case of (23) – at least in the reading described above (that is, in which there is an ordering the set of alternatives with respect to the degree to which they satisfy the predicate), there is no such inference

Summary and Conclusions

In order to better see what the various cases discussed above suggest, we provide below a schematic representation for them. We try to indicate, in the representations, the structure of discourse referents at the time preceding the utterance of the cleft, and the structure resulting from the "exhaustiveness effect". The schematic representations are composed as follows:

- (a) circles indicate sets of alternatives as defined by the terms considered as possible values for the predicate of cleft (or subsets thereof);
- (b) terms within these sets are the relevant alternatives;
- (c) suspension points ("...") indicate potential or implied alternatives, that is, alternatives that not explicitly manifest in the context;
- (d) the left circle represents the structure of the relevant referents at the moment in which the cleft is uttered; and the right circle right represents the structure resulting from the "exhaustiveness effect" triggered by the cleft;
- (e) terms "scratched" in a set are the alternatives considered, but excluded contextually (either at the time that precedes or at the time that follows the cleft).

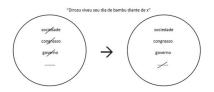
Here follow the relevant representations¹⁹:

¹⁹ All exemples are made by the authors.

Example (5): Identification by exclusion

Example (6): Identification by precising





Example (19): Identification by exclusion, but not of all possible alternatives

Example (20): Identification by precising, with no exclusion of possible alternatives

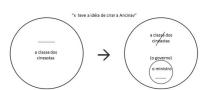




Example (21): Identification by precising hyponym, excluding other hyponyms

Example (22): Identification by evoking hyperonym, excluding its alternative





Example (23): Identification of "best candidate" by ordering alternatives



The representations presented above refer to just a handful of examples of clefts we found in the texts of our corpus of written Portuguese. We could add other cases, still with different effects. Assuming that our description of the facts is adequate at least for one reading of the texts, the overall picture that seems to emerge is the following:

- (i) The term "exhaustiveness effects" is inappropriate to characterize the set of contextual effects triggered by clefting a term. In the examples we discussed, few are the cases in which the effect is restricted to "exhaustively delimiting" the alternatives to which the predication applies. Strictly speaking, this only seems to happen in example (6).
- (ii) Even the term "exclusion" (of the set of alternatives that satisfy the predicate) also seems inappropriate as a constant element of the "exhaustiveness effects". Although most cases discussed do involve some type of exclusion [examples (5), (6), (19), (21) and (22)], there are at least two in which this does not seem to happen [examples (20) and (23)].
- (iii) In all cases, we do find the "identification" of at least one value for the variable in the predication expressed by the cleft. In all cases the cleft assumes that there is something that satisfies this predication, and asserts that this something includes the denotation of the clefted term. Sometimes we infer the exclusion of all other values; sometimes, of just a few values; sometimes, we infer no exclusion at all; and sometimes, even the **inclusion** of a value in the set of alternatives. That is, the "identification" performed by the cleft can have various effects.
- (iv) In all cases, the cleft is asserted in a context where not only the content of the cleft clause is presupposed (under existential quantification, at least), but also there is some expectation about the values that satisfy the corresponding predication – that is, about the set of alternatives. And in all cases the assertion of cleft changes such expectations (in different ways, cf. (iii)).
- (v) In all cases the clefted term is "anaphoric" in the sense that it has been previously introduced in the discourse, or it is inferable by means of relations like hyponymy/ hyperonymy and metonymy, as in (21) and (22).²⁰ Moreover, in general the "antecedent" of the clefted term was introduced in connection with the question of what satisfies or not the predicate of the cleft. The exception is, perhaps, example (20).

Given this picture, we can now try to provide a general characterization of the so-called "exhaustiveness effects". As a first approximation, we would say that:

²⁰ The observation that the clefted constituent, when focused, tends to be "anaphoric" is not new, of course; see, for example, Givón (1992, 1993) for discussion.

- (a) "exhaustiveness effects" result from operations of correction to the structure R of the discourse referents; these operations affect a set E of expectations of the discourse; and E concerns which referents in R may satisfy the predication P expressed by the cleft;
- (b) the particular operation of correction is "induced" or "implied" by the cleft's assertion, which is the identification of one of the values x that satisfy P;
- (c) the particular correction obtained in R must be "calculated pragmatically" from the previous structure of R and from the previous expectations E.

Possibly, the above characterization is too weak. One could try to make it stronger by assuming that the cleft bears an existential presupposition, as in Horn's proposal in (14) above. This would be compatible with the cases we discussed here; but they would still require a weakening in Horn's assumption about "exhaustiveness", as well as a refinement of what he meant by "set of entities determined by the context C". (And, of course, one must also consider whether the relevant inference is a "generalized conversational implicature", as in Horn's proposal, or some other type of inference.) We will not try to explore these possibilities here any further. Our goal was merely to show that the so-called "exhaustiveness effects" actually involve several different types of effects on a structure of discourse referents that is articulated, organized; and that this structure interacts with various types of contextual information and expectations.

In addition to the issues already mentioned, others arise, of course: (i) What is, precisely, the semantics and the pragmatics of expressions like *only, and nothing else, exactly, more exactly*, etc.? (ii) What are, really, the common elements they share with clefts? (iii) Can we keep the thesis, incorporated to the Horn's proposal, that the main property of clefts – besides the identity assertion expressed by the main clause – is a simple presupposition of existence? That is, is it possible to dispense with stronger assumptions, such as the "presupposition of uniqueness" proposed by Szabolcsi (1994) and Wedgwood, Pethő and Cann (2006)? We intend to address these and other issues in future work.

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■ RESUMO: O objetivo do presente artigo é mostrar que há "efeitos de exaustividade" no uso das clivadas que diferem da "identificação por exclusão" — o efeito mais conhecido pela literatura (ATLAS; LEVINSON, 1979; HORN, 1981; KISS, 1998; WEDGWOOD; PETHŐ; CANN, 2006; BÜRING; KRIZ, 2013). Para atingir este objetivo, apresentamos um estudo descritivo detalhado de casos, por meio do qual testamos os efeitos contextuais encontrados em exemplos espontâneos de jornais e revistas da imprensa brasileira. Utilizamos na testagem modificadores associados pela literatura aos efeitos das clivadas sobre o "conjunto contextual de alternativas" — como somente e e ninguém mais (ATLAS; LEVINSON, 1979; HORN, 1981,

entre outros) e exatamente e precisamente (MENUZZI; ROISENBERG, 2010a). Nossa conclusão é a de que os "efeitos de exaustividade" envolvem vários tipos de inferências acerca da estrutura do domínio de referentes do discurso, e podem modificar esta estrutura de diversos modos. Esse resultado coloca sob nova perspectiva algumas das questões acerca da semântica e da pragmática das clivadas; em particular, a de saber quanto dos "efeitos de exaustividade" tem algum caráter "convencional" (como pressuposições e implicaturas generalizadas), e quanto é derivado por inferência pragmática particularizada.

PALAVRAS-CHAVE: Sentenças clivadas. Efeitos de exaustividade. Identificação por exclusão.
 Conjunto contextual de alternativas. Inferências pragmáticas.

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