An empirical approach to the pragmatics of the French *c'est*-cleft

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1 Introduction

Special syntactic patterns often go hand-in-hand with special meanings. One case is found in Hungarian, where the immediate preverbal position is often argued to be semantically exhaustive (Kiss 1998). A preverbal focus element must be interpreted exhaustively (1a), but this is not required of a focus element realized *in situ* (1b). This claim is often extended to English (Delin and Oberlander 1995), where the *it*-cleft is said to behave similarly (2).

(1) a. Tegnap este MARINAK mutattam be Pétert.
last night Mary.DAT introduced.I PERF Peter.ACC
'Last night I introduced Peter TO MARY (*and to no one else*).'

b. Tegnap este be mutattam Pétert MARINAK.
'Last night I introduced Peter TO MARY (*and possibly to someone else too*).'

(2) a. It was a PIZZA that Mary ate. (*'Mary ate a pizza and nothing else'*).

b. Mary ate a PIZZA. (*'Mary ate a pizza and possibly something else'*).

Similar cleft structures are extremely common in French. The language is widely known for resorting to non-canonical word order as the main strategy to signal focus because the language lacks the flexibility to stress words based on pitch accents. More specifically, the *c'est*-cleft, '*c'est* X COMP Y', is described as being the structure used to signal focus on arguments, and the structure used to express exhaustivity (Lambrecht 1994). Therefore, (3a) is pragmatically preferred over (3b) and comes along with the implication that 'Marie' is the only person for whom the predicate holds true. The SVO form on the other hand does not have this exhaustive inference.

(3) a. C'EST MARIE qui entame ses recherches sur le rayonnement de l'uranium pour son doctorat.
'It is Marie (and no one else) who is starting her research on uranium radiation for her doctorate'.

b. #MARIE entame ses recherches sur le rayonnement de l'uranium pour son doctorat.
Marie (and possible someone else) is starting her research on uranium radiation for her doctorate'.

Whether or not an exhaustive inference is ever associated with these syntactic position and constructions across languages is not an issue. It is largely agreed that clefts and the Hungarian preverbal position are somehow special and carry some amount of exhaustivity. Rather, the still-much-active debate concerns the nature of the inference: Is the exhaustivity part of the meaning contributed by the constructions/position or a pragmatic effect licensed by the use of such constructions/position? On the one hand, Szabolcsi (1981) and Kiss (2009), among others, defend a semantic view under which the exhaustive inference is part of what is 'at issue' in the sentence, being comparable to the meaning contributed by exclusive particles like *only*. On the other hand, Horn (1981) and Wedgwood (2007) argue for a pragmatic view where clefts and other focus positions simply implicate exhaustivity. The inference arises from the way we use language. On this view, a sentence like 'It was a pizza that Mary ate' can be true in a situation where, in fact, Mary ate a pizza and something else.

In previous French studies on the *c'est*-cleft, the nature of exhaustivity is rarely investigated, and the few studies that do are in disagreement. Lambrecht (1994) claims that both canonical and cleft sentences have the same truth-conditions, while Clech-darbon *et al.* (1999) argue they differ, and that clefts are semantically equivalent to sentences that include the exclusive particle *seulement* (*only*). What is missing from both the French and the cross-linguistic literature is a careful analysis of empirical and experimental data. Only a couple of recent studies turned to using psycholinguistic tools to investigate the issue of the nature of exhaustivity, and found that the exhaustivity effects associated with *only*-foci and *it*-clefts are indeed of a different nature (Drenhaus *et al.* 2011).

The goal of this paper is twofold. It aims at expanding on previous French studies by discussing one aspect of the cleft's meaning left unexplored, and contributes more generally to the cross-linguistic discussion on exhaustivity and focus by providing empirical data on an additional language. I address the following research questions: Is exhaustivity a systematic meaning of the cleft? And how does its level of exhaustivity compare with other sentence forms such as *only*-sentences and canonical sentences? I first present a preliminary qualitative study of some naturally occurring data in French. The data proves to be challenging the view under which exhaustivity is of a semantic nature, by showing that a variety of particles (additives, quantifiers,etc.) occur felicitously in the French *c'est*-cleft. This is further corroborated by the results from a newly conducted experiment that I report on. This judgment task (adapted from Onea and Beaver 2009) shows the French *c'est*-cleft can carry an exhaustive inference but this inference is weaker than the one found in '*only*'-sentences, although stronger than in canonical sentences. In view of these findings, I propose a pragmatic account of the inference. I argue that (1) the primary function of the French *c'est*-cleft is to select the most pragmatically important variable that answers the question under discussion, (2) the exhaustive inference results from this pragmatic function, thus being an implicature rather than

an entailment.

2 Exhaustivity, clefts and particles

The literature on French agrees on the fact that the *c'est*-cleft conveys exhaustivity, but gives little analysis as to where this inference comes from. However, in the cross-linguistic literature, notably for Hungarian and English, the issue of whether exhaustivity is a semantic or a pragmatic phenomenon is extensively discussed. The literature on Hungarian acknowledges that the language has a special structurally determined position for focus which appears preverbally. This position is special because it is argued to necessarily be associated with an exhaustive interpretation. In other words, the focused element must be interpreted as uniquely satisfying the statement expressed by the sentence. Under a semantic account, the exhaustive inference associated with the preverbal position is part of the truth-conditions of the sentence and cannot be cancelled. One of the most powerful argument put forward to defend this semantic account is the distributional restrictions of certain particles in Hungarian preverbal position and English *it*-clefts. Consider the following examples (from Kiss 1998):

(4) a. *Mari **minden kapalot** nézett ki maganák.
Mary every hat.ACC picked out herself.DAT
'*It was every hat that Mary picked for herself.'

b. *Mari **egy kapalot is** nézett ki maganák.
Mary a hat.ACC also picked out herself.DAT
'*It was also a hat that Mary picked for herself.'

These examples illustrate that certain expressions, such as quantifiers and additives seem to be banned from occurring in the focus position associated with exhaustivity. Kiss (1998) takes these restrictions as evidence for a [+exhaustive] feature of both preverbal and clefted focus. On this view, the ungrammaticality of the sentences in (4) arises because of the clash between the exhaustive feature of focus and the semantics of quantifiers and modifiers. Indeed, the apparent ban of non-exhaustive quantifiers and additive modifiers is predicted if one assumes that the focus position semantically contributes exhaustivity. We observe that exclusives like *only* cannot indeed be combined with *every*, *also*, etc ... (**Mary picked only every/also/even hat for herself*). Like *only*, focusing in preverbal position and in clefts involves exhaustively identifying the value of the variable generated by the question-under-discussion and excluding all other possible alternatives generated by the focus. This function is incompatible with that of universal quantifiers and other additives, which, on the contrary, indicate that the predicate holds of more than one entity. In fact it holds for an entire set or a subset of the alternatives generated.

Yet, when taking a look at the corresponding data in French, I observed that the distributional pattern of particles is a lot more free than what is seemingly the case for Hungarian and English. The examples below come from the Europarl corpus, a multilingual parallel corpus of the European Parliament Proceedings, and from web-searches on Google. For all data, I ran a search for various non-exhaustive quantifiers and modifiers, looking at the broader context to insure the examples did not instantiate the reading where the second proposition is a correction or an elaboration on the type of predicate that holds of the focus element (a reading of the type "*It is X that Y. It is also/even X that Q.*"). This ensures the exclusion of cases where the particle does not quantify over the clefted element, but takes scope over the predicate in the relative clause.

Example (5) constitutes a first challenge for a semantic view of the exhaustive inference, since it is hardly possible to combine the clefted element with an overtly exclusive expression like the universal quantifier 'all' (**only all*, **seulement tout*).

(5) Le débat d'aujourd'hui montre que **ce sont toutes les institutions de l'Union** qui doivent assumer leur propre part de responsabilité dans ce combat.
'Today's debate shows that **all of the Union's institutions** *must accept their own responsibilities in this fight'.*
(*Europarl corpus*)

A canonical version of the cleft is formulated in (6):

(6) [...] Le débat d'aujourd'hui montre que **toutes les institutions de l'Union** doivent assumer leur propre part de responsabilité dans ce combat.

In (5), the speaker conveys that, in order to fight against organized crimes, a single institution accepting its responsibilities is not enough. Rather, the whole set of institutions engaged in the fight must do so. Despite being grammatically correct, as well as pragmatically correct, the canonical version lacks the highlighting of the element "*toutes les institutions*". The use of the cleft in (5) allows to bring this most relevant piece of information given the context to a prominent position. This element is the most relevant in the situation because it answers the implicit question-under-discussion: "How many institutions must take responsibilities for the fight against crime to be efficient?". In other words, the discourse goal of the cleft sentence is to assert the fact that the entire set of institutions must join in. The cleft therefore gives the hearer a clear indication as to what is pragmatically relevant and important in the sentence, and structures the discourse accordingly. The discourse goal is not to answer what actions should the institutions take in order to fight organized crimes (the answer being "to take responsibilities" and predicated in the relative clause), but rather to answer the question concerning the number of institutions that need to engage in order for the fight to be efficient. An exhaustive reading is therefore far from being available both in the cleft and in the canonical sentence. There is no single element that uniquely holds of the predicate, but rather a set containing all

the elements for which the predicate is important to hold.

Another piece of data conflicting with a semantic account of exhaustivity involves the interaction of additives with the cleft. Consider the following example (7a) and its manipulated canonical version (7b):

(7) a. [...] D'ailleurs, **c'est également par respect pour vos électeurs** qu'en tant que président en exercise du Conseil, je ne désire pas m'ériger en juge.

b. D'ailleurs, en tant que président en exercise du Conseil, je ne désire pas m'ériger en juge **également par respect pour vos électeurs**.
(*Europarl corpus*)
'Moreover, as a President-in-Office of the Council, I do not wish to set myself up as a judge **out of respect for your electorate**.'

Under a semantic account, an additive particle is not predicted to correctly combine with the exhaustive operator present in focus position (**only* also by respect...). Yet, such expressions occur in the French *c'est*-cleft. The 'at issue' content conveyed by both sentences is that the president in office of the Council does not wish to set himself up as a judge and tries to rationalize his decision by giving his reasons, one of which is the respect for the electorate. In the previous discourse context, the speaker starts by expressing his disappointment about an answer given by the Council, which is the main reason why he does not wish to be a judge. In the proposition under study, he adds to the discourse another reason for making this decision, hence the use of the additive expression "*également*". The QUD here is therefore "Why does the speaker does not want to set himself up as a judge?". Yet, the manipulated canonical version does not constitute a natural answer to that QUD because it relegates the important piece of information (the additional reason "*par respect pour vos électeurs*") to the less prominent sentence final position. In that case, the emphasis on that element disappears. By using a cleft, the speaker wants to indicate to the addressee that the reason "*par respect pour vos électeurs*" is the most pragmatically important one. The speaker may also want to convey that, despite the tendency to overlook the 'feelings' of the electorate in politics, he is willing to decline an authoritative position ('judge') because of his concern for the electorate. The speaker therefore assumes such a reason is unexpected in the mind of the addressee and signals its unpredictability by realizing it in a prominent position: the cleft. This effect simply does not appear in the canonical version. Once again here, the clefted example (7a) cannot be interpreted exhaustively. It is not the case that "*par respect pour vos électeurs*" is the only reason why the speaker does not wish to step in as a judge. Rather, this reason is added to previous reasons mentioned in the discourse. The cleft here is used to answer the QUD and indicate the pragmatic importance of the clefted element because of its unexpected status in the addressee's mind. Thus, the cleft also serves a contrastive function by comparing the reasons for the speaker's decision.

Probably the most convincing example against a semantic account comes from the comparison of the negated version of a cleft-sentence and an *only*-sentence. If it is indeed the case that a *c'est*-cleft semantically contributes exhaustivity, then *only*-sentences and clefts must have the same truth-conditions, i.e the same meaning. Yet, when one negates these two types of sentences, they are very clearly not synonymous. Consider the pair of examples in (8) taken from a gardening blog, where (8a) is the original version, (8b) is the manipulated *only*-sentence version.[1]

(8) Context: (Speaker A) *Pourquoi la nouvelle pousse est toute en train de brunir?* Le zygo [...] est environ à 6 pieds de la fenêtre.
'*Why is the new stem browning? The zygo [...] is approximately 6 feet from the window.*'

a. Response: (Speaker B) Les zygopetalums ne sont pas des plantes d'ombre profonde. Mais **je doute que ce soit le manque de lumière** qui a fait en sorte qu'il perde des feuilles. Ils sont sensibles à la photopériode mais je ne sais pas jusqu'à quel point.
'*Zygopetalums are not deep shade plants. But* **I doubt that it is the lack of light** *that caused it to loose its leaves. They are sensitive to photoperiod but I don't know to what extent.*'

b. Les zygopetalums ne sont pas des plantes d'ombre profonde. Mais **je doute que seul le manque de lumière** a fait en sorte qu'il perde des feuilles.
'*Zygopetalums are not deep shade plants. But* **I doubt that only the lack of light** *caused it to loose its leaves. They are sensitive to photoperiod but I don't know to what extent.*'

The context given in (8) shows the question asked by A 'why is the new stem getting brown?'. Both speakers share background knowledge that, when cultivating orchids, one of the most important aspect for a successful grow is the location of the orchid (does not like direct light and does not require too much light). Being aware of this, speaker A gives more context to B a few sentences later by describing the location of his orchid, therefore assuming that the variable 'light' must be the reason for its stem browning. Speaker B answers (8a), and conveys doubt about the lack of light being involved. While not openly stating it, the answer implicates that B believes something else is the cause (i.e. lack of humidity, etc...) A very different meaning is conveyed in the manipulated example (8b) where the exclusive particle is present. In this version, the meaning conveyed is that the lack of light is indeed responsible for the stem browning. Speaker B conveys doubt as to 'lack of light' being the *unique* reason, but does not convey doubt as to whether 'lack of light' *is* a reason. So, in (8a), the meaning expressed is that the lack of light is not responsible, while in (8b), the lack of light is (one of) the reason(s). In the

[1] http://forums.jardinage.net/viewtopic.php

first example, the cleft is used as a device to highlight the unpredictability of the reason 'lack of light'. Speaker B indicates to speaker A that he does not share his intuition about 'light' being responsible for the unsuccessful growth of the orchid. Thus, speaker B's proposition is contradicting speaker A's belief state. The clefted element 'lack of light' is therefore unpredictable, or surprising to A. The cleft signals the element 'lack of light' as the most important in the context because it is not the answer expected by speaker B. In the *seulement*-sentence (8b), the important meaning conveyed is that 'lack of light' is not, in B's mind, the unique reason for which 'leaves loss' holds. Therefore, the communicative goals of speaker B are different in the two sentences: in (8a), B wants to indicate to A that his expectation is not correct, while in (8b), B wants to indicate to A that his expectation is correct but that it is too restricted.

This section reveals that the *c'est*-cleft does interact with expressions which meanings are not restrictive at all, like the universal quantifier *tout*, as opposed to what is claimed for Hungarian and English. The qualitative analysis of naturally occurring data also showed that the cleft is not constraint to get an exhaustive reading. Instead, the cleft serves another discursive purpose: to answer the question-under-discussion by selecting the most pragmatically important element given the context and the addressee's state of belief.

3 Testing the exhaustivity inference with a forced-choice task

Despite the wide number of studies on the nature of the exhaustive inference, it is only within the last couple of years that researchers turned to experimentally testing the claims made in past theoretical works. The task of experimentally testing previous theoretical claims is a challenging one, in as much as ones needs to be sure the design does test the issue under investigation. In the domain of semantic knowledge, truth-value judgments are often used. Nevertheless, asking a subject a question in just the form 'can X mean Y?' constitutes a far-from-ideal task for trying to find out what the first sentence 'X' means. It would also be inappropriate to ask the participants whether a sentence is true or false given a context because it would not allow them to express levels of interpretation, but would rather ask them to make a categorical choice between two truth values. Thus, it would investigate speaker's judgments about the semantic meaning of an utterance (meaning contributing to the truth-conditions of sentence) but would not necessarily tell us about the implicated meaning. Yet, in the present study, the null hypothesis is that the cleft does not contribute to the truth-conditional meaning of the utterance, but enriches the interpretation of the utterance on an intended level. Therefore, the design must test whether or not speakers are able to systematically attribute an implicated exhaustive reading to *c'est*-cleft sentences. To do so, I rely on the idea that if some aspect of the sentence meaning is not 'at issue', the speaker must be able to cancel the implicature without also denying the truth of the sentence. The core assumption be-

hind this experiment is that a speaker will tend to overtly contradict a continuation sentence when he attributes a strong exhaustive reading to a previously given sentence. The less the utterance is interpreted exhaustively, the less likely the speaker is to disagree with the continuation, and thus will tend to see the continuation as a simple addition to the previous sentence, rather than as a contradiction.

The experiment presented in this section, the design of which is adopted from Onea (2009) contributes to the experimental trend by testing the exhaustivity of the French *c'est*-cleft. In this experiment, the task asked of the participants is to make a judgment about possible continuations to a previously presented situation. I discuss the stimuli and design in more detail below. The goal of this experiment is to address the question: What is the degree of exhaustiveness of the French *c'est*-cleft as compared to sentences including an exclusive and to canonical sentences? It also seeks to answer the underlying questions: Is the exhaustive inference systematically observed (is the effect statistically significant), and can we further conclude it is part of the truth-conditional content of cleft-sentences? What we want to test is therefore whether native speakers of French interpret the focus-argument realized in clefts exhaustively and compare the way they interpret it to sentences that have a more clear-cut interpretation: *only*-sentences and canonical sentences. It is safe to assume that the presence of an exclusive particle like *seulement* (*only*) will necessarily lead to an exhaustive interpretation since it is part of the semantics of the particle. The case of canonical sentences is a bit trickier. Indeed, while there is no clear trigger for an entailed exhaustive reading, it would be wrong to assume that these types of sentences are *never* interpreted exhaustively. van Rooij (2008) discuss the status of answers in English and argue that *in situ* foci (marked via pitch accent) should be interpreted exhaustively, especially in certain contexts. And by looking back at Grice's maxim of Quantity, a speaker assumed to be cooperative is expected to be as informative as required. So for successful communication, the speaker is expected not to withhold any relevant information related to the '*question under discussion*' and the hearer to safely conclude that the information received is exhaustive. Yet, I assume that the use of one form instead of another is not random, and when speakers are presented with different forms, they recognize which is appropriate.

This experiment investigates the possibility that the factor behind the use of a cleft is that the speaker wishes to convey a 'stronger' exhaustive interpretation. Of course, this may not be the only reason, for it has been discuss in previous work on French that *c'est*-clefts serve other discourse functions such as 'contrast' (Hupet and Tilmant 1986; Katz 1997; de Cat 2007) but the issue of the difference in interpretation remains, and previous literature on French commonly claims that the primary function and meaning of the *c'est*-cleft is 'identification'. Therefore, the null hypothesis tested in this experiment is that the exhaustivity in the *c'est*-cleft is not of the same nature as that of *seulement*-sentences; while the exhaustivity in *seulement*-sentences is semantic, the exhaustive effect associated with the *c'est*-

cleft is not part of the truth-conditional meaning of the sentence. In order to test this hypothesis, we must also assume that sentences have a truth-conditional component to their meaning. In that sense, a proposition expressed by a sentence can either be true or false. Assuming a proposition is true, only a certain type of sentences will lead to either a felicitous continuation or a clear contradiction. Let's illustrate:

(9) John dives in Mexico.

Considering the sentence in (9) and assuming its truth - there exists a person who does go diving and when he does, it is in Mexico, and that person is John - the hearer has a few options concerning his role in conversation. He can choose to contradict the proposition *p* in (9) if *p* is interpreted as $\exists x$[dive in Mexico(x) & x = John]. If the predicate 'dive in Mexico' in fact holds for John but also Mary, the speaker can conclude that there is some kind of inherent incompatibility between the truth-conditions of the sentence (the condition under which the sentence is true) and the situation. In this type of judgment, the hearer chooses an *overt contradiction*, which will be translated in the experiment as a 'No'. Thus, the continuation expected on the hearer's part is of the form 'No, John and Mary dive in Mexico.' On the other hand, the hearer can choose to accept the sentence, despite the fact that x = {John, Mary}. In that case, he would choose to respond to (9) with a milder version of the contradiction, like 'Yes, *but* Mary dives in Mexico too'. Finally, the subject can choose to accept the sentence and to offer a *simple continuation* that shows he does not take the speaker's statement as exhaustive, but is able to respond without sounding like a correction. In that case, the form of the subject's answer is of the type 'Yes, *and* Mary dives in Mexico too.' Two factors were manipulated: *sentence type* (whether the sentence is a canonical, a cleft, or a sentence including the exclusive particle *seulement*) and *grammatical role* of the focused element (whether the focus is the subject or the object), creating 6 conditions. The detail of the conditions is given in Table (1).[2]

Table 1: Matrix of conditions

Factors	Canonical	Cleft	Exclusive
Subject (s)	subj-canonical	subj-cleft	subj-exclusive
Object (o)	obj-canonical	obj-cleft	obj-exclusive

To sum up, the assumption for the present experiment states that the form of the sentence presented to the participants - either a cleft, a bare canonical sentence, or a canonical including an exclusive - influence whether they interpret the sentence exhaustively or not. If this is correct, the form of the sentence that subjects pick as a continuation will illustrate the degree of exhaustivity to which they have interpreted the sentence. This experiment will allow us to draw conclusions on how similar or

[2]See section 3.1.2, Table 2, for sample items of a few conditions.

different is the level of exhaustivity in clefts, canonicals and *seulement*-sentences.

Of course, as mentioned above, a subject can choose to overtly contradict sentences of the canonical type (example 9) since, according to Grice's Maxim of Quantity, speakers are assumed to be as informative as required. Therefore, for successful communication, the speaker is assumed not to withhold any relevant information related to the 'question under discussion' and the hearer to safely conclude that the information received is exhaustive. The opposite reasoning can also lead us to think that subjects would not tend to contradict a sentence for diverse reasons, as Roberts (1996) and Onea (2009) note, going from 'lack of interest in achieving a common ground to politeness'. Nevertheless, if the assumptions made above are correct (i.e. that speakers will choose different continuations for different stimuli), then there should be a statistically significant effect of the form of the given stimuli on the form of the chosen response. Thus, if speakers choose to systematically overtly contradict sentences with a clefted focus, I will conclude that the exhaustive inference is part of the semantics of the construction, and will take as counter evidence the fact that speakers choose otherwise.

3.1 Method

3.1.1 Participants

24 undergraduates from the University of Toulouse Le Mirail were recruited for this experiment. All participants had normal, uncorrected vision and were native speakers of French.

3.1.2 Materials and design

The preliminary experiment I report on here was designed with the experimental software WebExp. A total of 36 different items were created in order to avoid recognition by the participants (6 different lexicalizations of each 6 conditions). 6 different versions of the experiment were created by pseudo-randomizing the 36 items presented to each participant. All participants saw exactly 2 items from each of the three conditions (Exc/Cleft/Can). No one saw the same item in more than one condition. In addition, each participant saw 2 introductory items, 2 warm-up items and 12 fillers. The latter items were created to prevent the development of specific expectations or strategies on the part of the subjects, and consisted of 3 types of sentences that, despite being fillers in this experiment, can be analyzed in further work. The 3 types were, entailment (e), implicatures (i) and presupposition (p).

Each experimental item consisted of a question-answer pair and three possible continuations. The instructions made clear to the participants that the Q-A pair and the continuations were uttered by three different persons. The answer of the Q-A pair all contained of a two place predicate (R), a focus argument (F) and a background argument (B), and differed only in form: either a bare canonical (*can*), a canonical sentence including the exclusive particle *seulement* (*exc*) or a *c'est*-cleft

sentence (*cl*). These three sentence forms constitute our three conditions. The continuations were given through forced choice, the participants being offered three possibilities which were derived by either changing the focus element (F') or the background element (B') and adding either '*yes, and*', '*yes, but*' or '*no*' as a root. An example of a typical item is given in Table 2.

Table 2: Sample experimental item

Condition	Question Under Discussion	Answer-Stimuli	Possible continuations to choose from
subj-cleft	Qui est-ce-qui a tapé le voleur ? *'Who beat the thief?'*	C'est **le policier** qui a tapé le voleur. *'It is the policeman who beat the thief.'*	1. *Oui, et* **le général** aussi a tapé le voleur. 2. *Oui, mais* **le général** aussi a tapé le voleur. 3. *Non*, **le général** aussi a tapé le voleur. *'[...]* **the general** *also beat the thief.*'
obj-exclusive	Qu'est-ce-que le père a brossé? '*What did the father brush?*'	Le père a brossé seulement **le cheval**. '*The father only brushed the horse.*'	1. *Oui, et* le père a aussi brossé **la chèvre**. 2. *Oui, mais* le père a aussi a brossé **la chèvre**. 3. *Non*, le père a aussi brossé **la chèvre**. *'[...] the father also brushed* **the goat**.'

The 24 participants sat at a computer screen and took the experiment on-line. They were instructed to read the Q-A pair discourse between a first character Paul and a second one Jean. The instructions then asked them to choose the continuation they found the most appropriate in lieu of the Q-A pair given when uttered by a third character, Anne.

3.2 Results

The detailed results are shown in Table 3 and in Table 4. Despite the low number of items judged by each participant, the results are statistically significant (χ^2, p = 0.0002). In the second table, the grammatical functions (focus on the subject or on the object) are collapsed. The tables show the percentages of the different continuations chosen for the three types of sentences presented as answers. In Table 4, the number reported in parenthesis indicates the absolute number, i.e the number of times the continuation was chosen for each sentence form. So for example, out of the 46 stimuli presented during the experiment, subjects chose to continue an SVO sentence with a 'yes, and'-sentence 32 times, and only once did they chose to continue an SVO with a 'no'. The results show that there is a clear effect for exhaustivity in the the French *c'est*-cleft, these sentences being more significantly contradicted than the canonical forms. Yet, as predicted, this effect is not as strong as the one found in *seulement*-sentences, since these are more often overtly contradicted (78%).

Table 3: Results in percentages per conditions

	exc_s	exc_o	cleft_s	cleft_o	svo_s	svo_o
yes, and...	0	6.25%	37.5%	37.5%	68.75%	68.75%
yes, but...	6.25%	43.75%	56.25%	56.25%	31.25%	25%
no...	93.75%	50%	6.25%	6.25%	0	6.25%

Table 4: Results in percentages (collapsed for grammatical function)

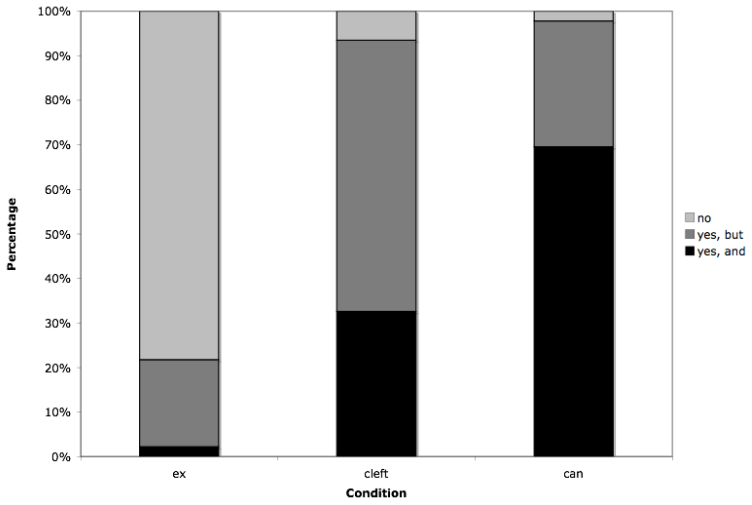
	exc	cleft	svo
yes, and...	2.2% (1)	32.6% (15)	69.6% (32)
yes, but...	19.6% (9)	61% (28)	28.2% (13)
no...	78.2% (36)	6.4% (3)	2.2% (1)

Concentrating on the results for the *seulement*-sentences (exc), we observe a clear pattern for choosing to overtly contradict the proposition expressed in the answer given the situation. In other words, subjects assign an inherent incompatibility between the truth values of the answer and the continuation given by a third party. The continuation introduced by 'no' is chosen 78.2% of the time over the other possibilities. Thus, the focus-argument is interpreted exhaustively by virtue of appearing under the scope of the exclusive particle *seulement*; the focus-argument

belongs to a minimal set containing that element only.We shall note there is a puzzling difference in the continuation chosen if a *seulement*-sentence was presented depending on whether the focus was on the subject or on the object. Indeed, the results show that in an exclusive sentence where the focus is the grammatical subject (‘*Seul le policier a tapé le voleur*), the overt contradiction ‘no’) was chosen almost 94% of the time. On the other hand, if the focus was on the grammatical object (‘*Le policier a seulement tapé le voleur*), the participants chose the overt contradiction significantly less, 50% instead of 94%.

Looking at the data for canonical sentences (SVO), we see that these sentences pattern the opposite way: subjects rarely choose to overtly contradict the change in focus-argument (‘no’ continuations are selected 2% of the time). Rather, subjects reliably pick the continuation introduced by ‘yes, and’ (69.6%), which conveys the weakest disagreement of all possible continuations proposed. I take this result as indicating that canonical sentences do not trigger a strong exhaustive interpretation, if such an interpretation is even present at all. Whether an exhaustive reading is present or not, the results allow us to claim that it is not of the same nature as the one found in the *seulement*-sentences either.

The results of special interest for this study are the ones concerning the cleft sentences (cleft). We observe that under this condition, participants do not directly accept the change of focus-argument as a addition to the answer presented (‘yes, and’), but do not overtly contradict it either (‘no’). They choose the intermediate option which is to select the ‘yes, but’-continuation (61%), conveying a medium degree of disagreement. These results correlate with the prediction that cleft sentences are can carry an exhaustive reading, but this reading is cancelable, therefore not semantic. Figure 1 is a graph version of the results presented in both tables.



I take the results from the experiment to demonstrate that there is a clear effect

for exhaustivity in the *c'est*-cleft, but that effect is not of the same nature as the exhaustivity associated with *seulement*-sentences. The results also show that the participant's choice between the three types of continuations, hence the three types of (dis)-agreement, are systematically constrained by the interpretation they assigned to the previous answer in the discourse. From this experiment, I conclude that the cleft is associated with an exhaustive reading, yet this reading is not part of the 'at issue' content of a cleft sentence. I argue that the exhaustivity is a conversational implicature; it arises because of pragmatics and the way we use language.

4 Discussion and Conclusion

The goal of this paper was to examine whether the exhaustivity of the French *c'est*-cleft is a semantic phenomenon. The data presented allows an unequivocal negative answer to this question. The first section presented a few qualitative examples on the interaction of the cleft with some expressions which do not allow restrictive quantification (universal quantifiers, additives...). I showed that, while proponents of a semantic account claim these expressions are banned from the English it-cleft and the Hungarian preverbal position, these expressions felicitously occur in the French *c'est*-cleft. Moreover, by analyzing the discourse context and meaning conveyed by the cleft, I showed that an exhaustive reading was, in most cases, not even expressed. I also discussed the difference between the clefted and the manipulated canonical version of each example studied, claiming that only the cleft was appropriate to answer a QUD. Moreover, only the cleft permitted to recognize the element in focus as pragmatically important in the situation, and to signal it as unexpected by the hearer's standards. While most of previous French accounts of the *c'est*-cleft claim its main function is to organize the information into a focus/background articulation, I propose its main function is to answer the QUD and to select the most pragmatically important element: either the most relevant given the situation or the most unpredictable in the hearer's mind. On a semantic level, I claimed that both the cleft sentence and its canonical counterpart had the same meaning.

The results from the forced-choice experiment proved that the nature of the exhaustivity associated with French cleft sentences was not semantic, but a mere implicature, as opposed to sentences that included an exclusive particle. Because exhaustivity is part of the semantic content of *seulement*-sentences but not of cleft sentences, I concluded that these two sentence forms had different truth-conditions, i.e. different meanings. The striking result in this preliminary study lies in the difference in judgment of the exclusive sentence when the focus is a subject or an object ('no' chosen 93.75% vs. 50%). I am in the process of replicating the experiment with the participants seeing all of the 36 experimental items to see whether this difference remains. Finally, a further issue I wish to investigate is whether or not the exhaustive implicature is generated at all if the context does not require it.

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