

The Syntax and Semantics of the French *Ne Que* Construction

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1. Introduction¹

Focus appears as a heterogeneous phenomenon. Stress, clefts, extraposition, focus morphology, all induce focus. An empirical task of the linguist is to determine at what level, if any, these phenomena are unified. Chomsky's (1981) scope-theoretic approach to focal stress suggests a structural unification at LF. Rooth (1985) offers that the unification is interpretive (see also Kratzer (1989), Rooth (1992), Bonomi and Casalegno (1992), Krifka (1991)). This paper shows that an adequate treatment of the French bi-partite *ne que* construction (1) does not reduce to either the scope-theory view of focus or to purely interpretive treatments. I propose an analysis where the properties of the *ne que* construction follow from the interaction of syntax and semantics. Note that the *ne* can be dropped at least in informal conversation. I am assuming here that when phonetically absent, *ne* is nonetheless semantically present.

- (1) Je n' ai vu que Jean.
I NE have seen QUE Jean
'I only saw JOHN.'

Under the LF treatment of focus, a focally stressed expression undergoes LF adjunction to IP. The lower IP node defines the presupposition skeleton, and the adjoined expression, the focus. In the alternative semantics of Rooth (1985), focus introduces a set of alternatives which focus sensitive operators quantify over. Rooth's analysis explains the fact that *only*'s association with focally stressed expressions is insensitive to subject islands (2a) and tense islands (2b), unlike QR.

- (2)a John only believes that pictures of LUCIE horrified him.
(2)b John only believes that Peter said that Mary saw LUCIE.

The *ne que* construction contrasts drastically with *only*'s association with focal stress. The forms *ne* and *que* are typically in close dependency. The dependency between *ne* and *que* respects the subject island (3a) and the tense

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island (3b). Thus (2a) contrasts with (3a), and (2b) contrasts with (3b).

- (3)a * Jean ne croit que des photos que de Lucie l'ont horrifié.
 Jean NE believes that pictures QUE of Lucie him horrified
 'Jean only believes that pictures of LUCIE horrified him.'
- (3)b * Jean ne croit que Pierre a dit que Marie a vu que Lucie.
 Jean NE believes that Pierre said that Marie saw QUE Lucie
 'Jean only believes that Pierre said that Marie saw LUCIE.'

The contrast between *only*'s association with focal stress and the dependency between *ne* and *que* indicates that Rooth's analysis of focal stress cannot be directly imported to account for the *ne que* construction. The fact that *ne* and *que* typically exhibit a close dependency finds a possible explanation under the view that the interpretation of the *ne que* construction is dependent on QR. The *ne que* construction might thus be taken to vindicate the claim that the scope-theory of focus is needed to fully capture natural language focus.

2. A scope-theoretic treatment

Under the scope-theoretic treatment, *que*-phrases undergo quantifier raising to a position adjacent to *ne* for an interpretation to obtain. The distribution of *ne que* follows from constraints on QR. QR is however not incompatible with some long distance construals (4): negative quantifiers that are also interpreted with respect to a negative head *ne* allow long distance construals (5)(cf. Kayne 1984).²

- (4) Il n' a exigé que vous arrêtez que les anarchistes.
 he NE demanded that you arrest QUE the anarchists
 'He only demanded that you arrest the ANARCHISTS.'
- (5) Il n' a exigé que vous arrêtez personne.
 he NE demanded that you arrest no one
 'He demanded that you arrest no one.'

Under the scope theory, the interpretation of *ne que* is obtained from LF

² Paul Hirschbühler (pc) points out that long distance construals are not found in natural corpora, except those with infinitivals. The possible long distance construals reported by speakers (including me) in intensional contexts: belief and volitional verbs and future and conditional tenses have thus a different status. In my proposal, this difference in status follows from the fact that long distance construals rely on a last resort movement operation, while clause-bound dependencies are construed without the need for movement.

representations derived by the rule of Quantifier Raising.

2.1. The semantics of the scope-theoretic treatment

The *que*-phrase must occur in the scope of the negative head *ne*. Thus, focused subjects must be postverbal (6a, b). *Que*-phrases behave in this respect as an NPI lexically specified as licensed by negation (cf. Enç 1993).

(6)a * Que Jean n' a chanté une chanson.
 QUE Jean NE has sung a song
 'Only Jean sang a song.'

(6)b N' a chanté une chanson que Jean.
 NE has sung a song QUE Jean
 'Only Jean sang a song.'

It is thus plausible to treat *que*-phrases as negative polarity items. *Que*-phrases are thus treated as indefinites licensed by negation and interpreted in the scope of negation. QR creates the tri-partite structure of natural language quantification. For exposition, I assume Diesing's (1990) version of the Heim-Kamp treatment of indefinites. Indefinites do not have any inherent quantificational force. They are treated as variables bound by a default VP-level rule of existential closure. The sentence in (7a) is thus interpreted with respect to an LF in (7b).

(7)a Il n' est arrivé que Jean.
 exp. NE is arrived QUE Jean
 'Only Jean arrived.'

(7b) $\text{Il} [\text{NegP } n'\text{est} [\text{VP} [\text{que Jean}]_i [\text{VP } \text{arrivé } t_i]]]$ (7b) = LF of (7a)

The phrase *que Jean* introduces a variable ranging over the set of individuals that are not Jean (cf. Azoulay-Vincente 1988). QR adjoins the *que*-phrase at the VP-level in the scope of negation and adjacent to Neg. Existential closure at the higher VP node binds the variable introduced by the *que*-phrase. This sentence is necessarily under negation, deriving precisely the interpretation of *only*.

(8) $[\text{que Jean}]_i \Rightarrow \lambda P \ x \neq j \cap P(x)$
 $[\text{VP } \text{arrivé } t_i] \Rightarrow \lambda x_i \text{ arrive}'(x_i)$
 $[\text{VP } [\text{que Jean}]_i [\text{VP } \text{arrivé } t_i]]] \Rightarrow \lambda P [\ x \neq j \cap P(x)] (\lambda x_i \text{ arrive}'(x_i))$
 $\Rightarrow \ x \neq j \cap \lambda x_i [\text{ arrive}'(x_i)] (x)$
 $\Rightarrow \ x \neq j \cap \text{ arrive}'(x)$

Existential closure

$$\begin{aligned}
 & [\text{VP} [\text{que Jean}]_i [\text{VP arriv  t}_i]] \Rightarrow \exists x [x \neq j \cap \text{arrive}'(x)] \\
 & \text{Under negation} \\
 & [\text{NegP} [\text{VP} [\text{que Jean}]_i [\text{VP arriv  t}_i]]] \Rightarrow \neg \exists x [x \neq j \cap \text{arrive}'(x)]
 \end{aligned}$$

This logical sentence paraphrases as 'it is not the case that there is an individual other than Jean that arrived'. This is equivalent to the statement that 'only Jean arrived'. This translation procedure can be generalized for any *que*-phrase (9).

$$\begin{aligned}
 (9) \quad & [\text{NegP} [\text{VP} [\text{que } \alpha]_i [\text{VP } \beta \text{ t}_i]]] \Rightarrow \neg \exists \gamma [\gamma \neq \alpha \cap \text{Apply} (\beta\gamma)] \\
 & \text{where Apply} (\beta\gamma) = \beta(\gamma) \text{ or } (\beta)\gamma, \text{ whichever is well-formed}
 \end{aligned}$$

This LF treatment has attractive features: it is compositional and the interpretation of *ne que* follows directly from the overt syntax of French. The scope-theoretic analysis links the interpretation of the *ne que* construction to movement at LF. Where movement is not available, an interpretation is not available. Hence it is predicted that *que* can only attach to a phrase that undergoes movement.

- (10) Jean ne voulait que Pierre boive que de l'eau.
 Jean NE wanted that Pierre drink QUE water
 'Jean only wanted Pierre to drink WATER.'
- (11) * Jean ne voulait que Pierre ait que bu de l'eau.
 Jean NE wanted that Pierre has QUE drunk water
 'Jean only wanted Pierre to have DRUNKwater.'

Under the scope theoretic analysis, the contrast between NPs (10) and VPs (11) can be related to the contrast between (12) and (13). NP objects may undergo movement (12). However, French past participles may not move (13). The strong ungrammaticality suggests an ECP effect, preventing overt and covert movements. Hence, presumably French past participles cannot move overtly or covertly.

- (12) De l'eau, Jean voulait que Pierre boive.
 water Jean wanted that Pierre drink
 'Water, Jean wanted Pierre to drink.'
- (13) * Bu de l'eau, Jean voulait que Pierre ait.
 drunk water Jean wanted that Pierre has
 'Drunk water, Jean wanted Pierre to have.'

This correlation between movement and the distribution of *ne que* follows naturally from the scope theory.

2.2. Problems for the scope-theoretic account

However, the connection between the distribution of *ne que* and the availability of movement cannot be maintained in all environments. For instance, *que* can be associated with past participles in matrix clauses (14), even though they cannot undergo movement (15).

(14) Il n' a que bu de la bière.
 he NE has QUE drunk beer
 'He has only DRUNK beer.'

(15) * Bu de la bière, il a.
 drunk beer he has
 'Drink beer, he did.'

The connection between the availability of movement and the distribution of *ne que* also breaks down with infinitivals. Hence, *que* can associate with an infinitival predicate (16), although the overt movement of the predicate is not available (17).

(16) Jean ne veut que boire de l'eau.
 Jean NE wants QUE drink water
 'Jean only wants to DRINK water.'

(17) * Boire de l'eau, Jean veut.
 drink water Jean wants
 'Drink water, Jean wants to.'

The scope-theoretic treatment faces contrary data. The connection between (10) and (12), and between (11), (13) finds itself invalidated by the data in (14)-(17). The fact that the connection between the distribution of *ne que* and the availability of movement cannot be maintained in all environments casts serious doubts on the feasibility of the scope-theoretic treatment of the *ne que* construction.

This is not the only difficulty for the scope-theoretic treatment. The distribution of *ne que* is sensitive to levels of embedding inside tense clauses. Thus there is a stark contrast between (18) in which the *que*-phrase is immediately embedded under the matrix and (19) where the *que*-phrase is multiply embedded.

(18) Jean ne croit que Pierre a vu que Lucie.
 Jean NE believes that Pierre saw QUE Lucie
 'Jean only believes that Pierre saw LUCIE.'

- (19) * Jean ne croit que Pierre a dit que Marie a vu que Lucie.
 Jean NE believes that Pierre said that Marie saw QUE Lucie
 'Jean only believes that Pierre said Mary saw LUCIE.'

Subjunctives also exhibit this distribution (20) vs. (21).

- (20) Il n' a exigé que nous arrêtions que les anarchistes.
 he NE demanded that we arrest QUE the anarchists
 'He only demanded that we arrest the ANARCHISTS.'
- (21) * Il n' a exigé qu'elle ordonne que nous arrêtions que les anarchistes.
 he NE demanded that she orders that we arrest QUE the anarchists
 'He only demanded that she ordered that we arrest the ANARCHISTS.'

This contrast between levels of embedding is problematic for the scope-theoretic treatment because, if movement through Comp is possible in (18) and (20), it should also be available in (19) and (21). Again the direct connection between movement and interpretability crucial to the scope-theoretic treatment of the *ne que* construction is invalidated.

All in all, the properties of the *ne que* construction differ significantly from those of phonological focus. However, major properties of the *ne que* construction are not adequately explained by the scope-theoretic approach which treats *que*-phrases as indefinites undergoing QR to a VP-adjoined position, where they are bound by VP existential closure (cf. Diesing 1990). Although there is in some environments a connection between interpretability and the availability of movement, this connection cannot be maintained in all environments.

3. An alternative

The construction involves a null operator identified in situ by the *que*-phrase. This operator undergoes chain composition with the NegP headed by *ne*. The negative quantifier provides the quantificational strength. The *que*-phrase provides the restriction of the operator. The *que*-phrase has essentially the semantics of 'other than' (cf. Heim, Lasnik and May (1991); von Stechow (to appear)). [Op *que* α] denotes the set of contextually restricted entities that are not α . Chain composition is a local process requiring both C-command and the presence of no barriers (cf. Chomsky (1986); Chomsky and Lasnik (1991)). Because the Op is identified in situ, operator movement is a last resort operation forced by Full Interpretation whenever barriers intervene between the base positions of *ne* and Op preventing in situ chain composition. If the null operator and *ne* are generated in a local domain, an in situ interpretation is possible. If barriers intervene, movement allows an interpretation as a last resort strategy. However, the movement of Op is subject to locality constraints on null operators: Op may not cross a tense CP (cf.

Stowell 1985).

3.1 A null operator

Azoulay-Vincente (1988) argues that the distribution of *que*-phrases follows from the presence of an empty category. This explains that *que*-phrases may not appear in subject position (22) and as objects of preposition (23), domains that are not properly head governed in French.

- (22) * *Que* Jean ne chantera une chanson.
 QUE Jean NE will sing a song
 'Only Jean will sing a song.'
- (23) * Marie ne parlera à *que* Jean.
 Marie NE will speak to QUE Jean
 'Marie will only speak to JEAN.'

In the subject case, the subject must be post verbal (24), and where a PP is focused, the *que* must appear outside the PP (25).

- (24) Ne chantera une chanson *que* Jean.
 NE will sing a song QUE Jean
 'Only Jean will sing a song.'
- (25) Marie ne parlera *qu'* à Jean.
 Marie NE will speak QUE to Jean
 'Mary will only speak to JEAN.'

The proposal that this EC is a null operator identified in situ that forms a chain with the negative phrase headed by *ne* by chain composition explains that multiple occurrences of *que*-phrases are impossible (26) (cf. Koopman and Sportiche 1982).

- (26) * Pierre n' a acheté *que* des bonbons *qu'*au marché.
 Pierre NE has bought QUE sweets QUE at market
 'Pierre only bought SWEETS at the MARKET.'

The operator must be C-commanded by the negative quantifier in order for chain composition to take place and no barrier may intervene (cf. Chomsky (1986); Chomsky and Lasnik (1991)). The C-command clause thus explains that an NP containing a *que*-phrase cannot appear inside an NP in subject position (27), (28).

- (27) Pierre n_i 'a acheté [Op_i une photo t_i [que de Jean]]
 Pierre NE has bought a picture QUE of Jean
 'Pierre only bought a picture of JEAN.'
- (28) * [Op_i une photo t_i [que de Jean]] n_i 'a été achetée
 a picture QUE of Jean NE has bought
 'Only a picture of JEAN was bought.'

This proposal also explains that the construction is degraded when a VP-level quantifier intervenes between the *ne* and *Op* blocking chain formation (29) (cf. Rizzi (1990) and Chomsky and Lasnik (1991) who reduce minimality to Economy under the notion of intervention).

- (29) * Jean n_i ' a beaucoup $_j$ bu [Op_i [que e_j ; de bière]]
 Jean NE has a lot drunk QUE beer
 'Jean only drank lots of beer.'

3.2 *Ne que* and last resort movement

I proposed that the *ne que* construction relies on the local syntactic process of chain composition. When no barriers intervene, *ne* and *Op* can compose in situ. If barriers intervene, operator movement allows chain composition. However, Stowell (1985) shows that null operators are subject to more stringent requirements than overt operators. Stowell points out that null operator movement is grammatical over infinitival clauses (30), but impossible over tense clauses (31).

- (30) This language is impossible [Op_i to expect [Scott to tell Greg [to learn t_i]]]
 (31) * This language is impossible [Op_i to say [that Greg will learn t_i]]]

The asymmetries exhibited by the *ne que* construction with respect to levels of embedding reduce to Stowell's generalization under this analysis. In (32) and (33) in situ chain composition is blocked by the presence of barriers. However, in (32) null operator movement is licensed so that a long distance construal is made possible by movement. In (33), however, null operator movement is not licensed. Hence no such well-formed structure yielding an interpretation can be achieved.

- (32) Jean ne_j dit [Op_i qu'il verra t_i que Lucie], mais il verra Irène aussi.
 Jean NE says that he will see QUE Lucie but he will see Irene too
 'Jean only says that he will see LUCIE but he will see Irene too.'

- (33) * Jean ne_i dit [Op_i qu'il croit [qu'elle a vu t_i que Lucie]
 Jean NE says that he believes that she saw QUE Lucie
 'Jean only says that he believes that she saw LUCIE.'

Stowell (1985) argues that a tenseless IP is not a bounding node; hence a tenseless IP does not block chain composition. It follows that in situ chain composition is possible with infinitivals as with matrix clauses. The interpretation does not rely on operator movement and consequently does not exhibit movement-related dependencies. From the availability of movement follows the contrast between embedded tense clauses (34) and infinitivals (35) with respect to VPs.

- (34) * Il n' avait exigé que vous ayez que mangé.
 he NE had demanded that you had QUE eaten
 'He had only demanded that you had EATEN.'
- (35) Il ne pense avoir que trop mangé, mais il a aussi trop bu.
 he NE think have QUE too much eaten but he has also too much drunk
 'He only thinks that he ATE too much, but he also drank too much.'

NPs, as cyclic nodes, are opaque domains for chain composition. The construal of a *que*-phrase inside an NP thus depends on operator movement (36).

- (36) Il n_i'a acheté [Op_i une photo t_i que de Pierre]
 he NE bought a picture QUE of Pierre
 'He only bought a picture of PIERRE.'

Since null operator movement is sensitive to definiteness effects and to other extractions, *que*-phrases are predicted not to occur inside definite NPs (37) and not to co-occur with an extraction from NP (38).

- (37) * Il n_i'a acheté [Op_i ma photo t_i [que de Pierre]]
 he NE bought my picture QUE of Pierre
 'He only bought my picture of PIERRE.'
- (38) * De qui_i ne_i possède-t-il [Op_i un portrait t_i [que d'Aristote t_j] ?
 of who NE possesses he a portrait QUE of Aristotle
 'By who does he only possess a portrait of ARISTOTLE?'

It is possible to verify the claim that operator movement is indeed responsible for long distance construals with embedded tense clauses. A long distance construal is possible from within an object position (39), but impossible from a subject position since null operator movement violates the subject condition (40).

- (39) Il ne_i voudrait [CP Op_i que[IP vous gardiez [NP une photo t_i que de lui]]]
 he NE would want that you keep a picture QUE of him
 'He would only want you to keep a picture of HIM.'
- (40) * Il ne_i voudrait [CP Op_i qu' [IP[NP une photo t_i que de lui] soit gardée]]
 he NE would want that a picture QUE of him be kept
 'He would only want that a picture of HIM be kept.'

3.2 Scopal interactions and Economy

The notion of intervention on the process of chain formation (cf. Rizzi (1990) and Chomsky and Lasnik (1991)) explains why quantifiers over events or situations like *pas* 'not' or *jamais* 'never' must take wide scope with respect to the *ne que* construction.

Two NegPs can be present in syntactic structure (41). Similarly (42) contains two NegPs: *pas* can be interpreted with respect to one NegP and the *que*-phrase with respect to the other. However *pas* must take wide scope and the *que*-phrase narrow scope. The low scope reading of *pas* in (44) is impossible.

- (41) Il n' a pas pas appris, il a mésappris.
 he NE has not not learned, he has mislearned
 'He did not not learn, he mislearned.'
- (42) Il n'est pas venu que Jean.
 exp NE is not come QUE jean
 'There did not come only Jean.'
- (43) $\neg \exists e [C(e) \cap \neg \exists u [C(u) \cap u \neq j \cap \text{come}(e) \cap \text{th}(e) = u]]$
 (44) * $\neg \exists u [C(u) \cap u \neq j \cap \neg \exists e [C(e) \cap \text{come}(e) \cap \text{th}(e) = u]]$

(43) says that there is no contextually given event where no one but Jean came. This entails that other people came, if C sets up alternative coming events. (44) says that there is no one but Jean who did not come; hence that Jean is the only one who did not come. This reading is absent with the *ne que* construction. Similarly in (45) the reading 'there is no one but Jean who never came' is not available. *Jamais* must also take wide scope.

- (45) Il n'est jamais venu que Jean.
 exp NE is never come QUE Jean
 'There did never come only Jean.'

The absence of low scope readings for *pas* and *jamais* follows from the syntax of chain formation. The low scope reading is only possible if *pas* and *jamais* are located in the lower NegP. But in these configurations, the lower intervening NegP blocks chain composition between the higher NegP and Op. But (45) has also another reading where *jamais* functions as an intensifier. This reading can be paraphrased as: 'At least it is only Jean who came'. This reading of (45) is felicitous in the following circumstance. A friend of yours invited a bunch of people for a party. But being forgetful, he forgot completely about the party. On the party date Jean showed up, but the others did not. Later your contrite friend tells you about this faux pas. Then you can utter (45) to indicate that things could have been worse: more people could have showed up. The embarrassment would have been worse. The existence of these readings follows under the view that *jamais* is a NegP modifier. The string in (45) is thus ambiguous between a one-NegP structure and a two-NegPs structure. In the two-NegPs structure, economy conditions force *jamais* to modify the higher NegP, forcing the wide scope reading. In the single NegP structure, *jamais* modifies the NegP implicated in the interpretation of the *que*-phrase.

4. The semantics of *ne que*

The semantics of the *ne que* construction are a function of the parts of the construction. I will drop here intensionality. Syntactic evidence suggests that *ne* has quantificational force since it interacts with other quantifiers. The semantic contribution of *ne* is similar to that of nothing/one $[\lambda P \neg \exists u P(u)]$. As to the expression $[\text{Op } [que \alpha]]$, grammarians have long proposed that the *que*-phrase partitions a relevant domain into two blocks. One block contains the denotation of α , and the other all other things in the relevant domain but α ; namely, the complement of α (cf. Azoulay-Vincente 1988).

The expression $[que \alpha]$ provides the restriction of Op. Because Op ranges over a subset of the domain of individuals, the expression $[que \alpha]$ must contain a context variable (cf. Rooth 1985). $[\text{Op } [que \alpha]]$ denotes the set of contextually relevant entities that are like α but differ from α (46). These semantics are related to the semantics of 'other' and 'but' (cf. Heim, Lasnik and May (1991), von Stechow (to appear)). The structure $[\text{Op } [que \textit{Jean}]]$ denotes the set of contextually relevant individuals that are not Jean.

- (46) $[\text{Op } [que \alpha]] \Rightarrow \lambda \beta \lambda \gamma [C(\gamma) \cap \gamma \neq \alpha \cap \text{Apply}(\beta\gamma)]$
 where $\text{apply}(\beta\gamma) = \beta(\gamma)$ or $\gamma(\beta)$, whichever is well-formed
- (47) $[\text{Op } [que \textit{Jean}]] \Rightarrow \lambda \beta \lambda x [C(x) \cap x \neq j \cap \beta(x)]$

The interpretation of the syntactic form (48) is detailed below.

- (48) Il n_i' est arrivé [Op_i [que Jean]]
 exp NE is arrived QUE Jean
 'Only Jean arrived'

In (49), the *que*-phrase combines with the predicate to yield a property expression. This expression then is applied to the semantics of *ne* (50).

- (49) $\lambda \beta \lambda x [C(x) \cap x \neq j \cap \beta(x)] (\lambda y [arrive' (y)])$
 $\lambda x [C(x) \cap x \neq j \cap \lambda y [arrive' (y)](x)]$
 $\lambda x [C(x) \cap x \neq j \cap arrive' (x)]$
 (50) $\lambda P \neg \exists u P(u) (\lambda x [C(x) \cap x \neq j \cap arrive' (x)])$
 $\neg \exists u \lambda x [C(x) \cap x \neq j \cap arrive' (x)](u)$
 $\neg \exists u [C(u) \cap u \neq j \cap arrive' (u)]$

(50) can be paraphrased as 'it is not the case that there is a contextually restricted individual different from Jean such that that individual arrived'; hence, it follows that only Jean arrived. The semantics of *ne que* allow a wide variety of categories: NPs, VPs, as we have seen, but also PPs (51) and CPs (52).

- (51) Jean n'achète son vin que chez le récoltant.
 Jean NE buys his wine QUE at the producer
 'Jean only buys wine from PRODUCERS.'
 (52) Jean ne se demande que si il devrait y aller.
 Jean NE wonders QUE if he should loc. go
 'Jean only wonders whether he should go.'

The semantics predict that *que*-phrases can only interact with entity-denoting expressions. Hence *que* cannot combine with modifiers such as (53).

- (53) * Jean ne veut apprendre l'allemand que parfaitement.
 Jean NE wants to learn German QUE perfectly
 'Jean only wants to learn German PERFECTLY.'

It also follows that *que* cannot combine with idiomatic phrases (54) without them acquiring a referential interpretation.

- (54) * Il n' en a vu que trente-six chandelles.
 he NE of it has seen QUE thirty six candles
 * 'He only had the lights punched out of him.'

Quantifiers like *personne* 'no one', *tout le monde* 'everyone', and *chacun* 'each one' are correctly predicted incompatible with the semantics of *ne que* (55)-(57)

respectively. The quantifier *tout le monde* has a sum individual reading. However, the *ne que* construction carries a presupposition that someone else might have arrived, which is incompatible with the statement that the sum individual arrived.

- (55) * Il n'est arrivé que personne.
exp NE is arrived QUE no one
'Only no one arrived.'
- (56) * Il n'est arrivé que tout le monde.
exp NE is arrived QUE everyone
'Only everyone arrived.'
- (57) * Il n'est arrivé que chacun.
exp NE is arrived QUE each one
'Only each one arrived.'

Indefinites like *un pot* 'a drink' are traditionally treated as *un ou plusieurs pots* 'one or more drinks'. Such a treatment is potentially problematic for the present proposal because indefinites are predicted ungrammatical contrary to facts (58). Interestingly the NPs *un pot* and *un ou plusieurs pots* differ with respect to the *ne que* construction. (59) is very odd.

- (58) Jean ne prendra qu' un pot.
Jean NE will take QUE a drink
'Jean will only have a drink.'
- (59) * Jean ne prendra qu' un ou plusieurs pots.
Jean NE will take QUE one or several drinks
'Jean will only have ONE or more drinks.'

Bonomi and Casalegno (1991) argue that the non-unique reading of indefinites is derived from the unique reading at different event assignments. The semantics of [Op [que α]] can be made sensitive to events (60).

- (60) [Op [que α]] $\Rightarrow \lambda\beta \lambda e [C(e) \cap \exists\gamma [\gamma \neq \alpha \cap \text{Apply}(\beta\gamma)(e)]$
where $\text{apply}(\beta\gamma) = \beta(\gamma)$ or $\gamma(\beta)$, whichever is well-formed

Of course the semantics of *ne* must be revised accordingly: *ne* quantifies over events rather than over entities (61).

- (61) NegP $\Rightarrow \lambda P \neg \exists e' P(e')$

Hence the VP in (62) denotes the set of contextually relevant arrivals where someone different from some unique individual arrived (63)

- (62) Il n' est arrivé qu'un individu.
 exp NE is arrived QUE an individual
 'Only an individual arrived.'

(63) $VP \Rightarrow \lambda e [C(e) \cap \exists x [\exists!y [\text{individual}'(y) \cap x \neq y \cap \text{arrive}'(e) \cap \text{th}(e) = x]]$

Thus (62) is interpreted as (64) after conversions.

(64) $\neg \exists e [C(e) \cap \exists x [\exists!y [\text{individual}'(x) \cap x \neq y \cap \text{arrive}'(e) \cap \text{th}(e) = x]]$

(64) paraphrases as there is no contextually relevant events where someone different from some unique individual arrived. This explains why (62) asserts the uniqueness of that arrival.

Let us consider now the semantics of (65) given in (66).

- (65) * Il n' est arrivé qu'un ou plusieurs individus.
 exp NE is arrived QUE one or more individuals
 'Only one or more individuals arrived.'

(66) $\neg \exists e [C(e) \cap \exists x [\exists y [\text{individual}'(x) \cap x \neq y \cap \text{arrive}'(e) \cap \text{th}(e) = x]]$

(66) paraphrases as there is no contextually relevant events where someone different from some individual or other arrived. This sentence can only hold in cases where there is a unique individual in the domain of quantification since the semantics require that a partition be established.

These semantics crucially require an entity to establish a partition. It can be an individual or set of individuals or a proposition. What is required is that a meaningful domain partition can be achieved. Thus in (67), there exists in any given situation a partition distinguishing quantities of wine that qualify as 'little wine' from those that do not.

- (67) Jean ne boira que peu de vin.
 Jean NE will drink QUE a little of wine
 'Jean will only drink a little wine.'

The utterance (68) is interpreted with respect to a partition between sets of bottles with cardinalities between six and ten, and sets of bottles with cardinalities over ten.

- (68) Jean ne boira pas PLUS de SIX fillettes!
 Jean NE will drink not more than six demi-bottles
 'Jean will not drink more than six demi-bottles!'

Il ne boira que PLUS de DIX fillettes!
 he NE will drink QUE more than ten demi-bottles
 'He will only drink MORE than ten demi-bottles!'

5. The pragmatics of *ne que*

Rooth (1985) assigns an expression α a paired meaning $\langle [[\alpha]], |\alpha| \rangle$ consisting of the usual denotation $[[\alpha]]$, and a focus meaning $|\alpha|$. $[[\alpha]]$ is a function on $D^{W \times G}$. $|\alpha|$ is a subset of $D^{W \times G}$. If α is not focused, then $|\alpha| = \{[[\alpha]]\}$. A focus sensitive item contains a context variable C , which is sensitive among other things to the focus meaning of an expression. Rooth (1992) claims that the content of C is pragmatically fixed by the discourse context with the proviso that the content of C must be a subset of the focus meaning. I show that the range of possible domains is determined by structure, rather than discourse.

The proposed semantics allow for *ne que*'s association with phonological focus (69). This is because the *que*-phrase restricting Op contains a context variable which is sensitive to phonological focus, like that of *only*. Thus in (69) C must be a subset of the set of unique stores where Pierre bought a_1, a_2, \dots, a_n .

- (69) Il ne se souvient que du magasin où Pierre a acheté ASPECTS.
 he NE remembers QUE the shop where Pierre bought ASPECTS
 'He only remembers the shop where Pierre bought ASPECTS.'

The *ne que* construction challenges the view that discourse is responsible for establishing the domain of quantification. (70) shows that for *ne que* to associate with focus, the focus must be C -commanded by *que*. In (70) stress does not associate with *ne que*.

- (70) Il MANGE de tout, mais il ne BOIT que du vin.
 he EATS of all but he NE DRINKS QUE of wine
 'He EATS everything, but he DRINKS only wine.'

Stress here seems to set up two topics. BOIT does not associate with *ne que*. (70) cannot therefore mean 'the only relevant thing he does to wine is drink it', even though this reading is not contradictory with the statement 'he eats everything'. The absence of this reading is mysterious if domain selection is purely pragmatic, since nothing in the context prevents that reading. The absence of this reading follows under the view that structure, under a notion of C -command, determines

accessibility.

(71) presents a possible challenge for both the structural hypothesis and the subset hypothesis (cf. Roberts 1991). In (71) the domain of quantification appears broader than a domain derived from the P-set under a notion of structural accessibility will allow. (71) might then argue for the pragmatic domain selection hypothesis.

(71) A: Jean souffre d'amnésie totale. B: Pas exactement
 Jean suffers from amnesia total Not exactly
 'Jean suffers from total amnesia' 'Not exactly'

B: mais il ne se souvient cependant que où il a acheté ASPECTS!
 but he NE remembers however QUE where he bought ASPECTS
 but he however only remembers where he bought ASPECTS!'

However, (71) has a certain *even* quality. The focus appears to establish a conventional scalar implicature where remembering where one bought Aspects is the least likely thing that one is expected to remember if one suffers from near total amnesia. I thus propose that it is the introduction of a conventional scalar implicature which allows for this widening of the domain, rather than a pragmatically filled context variable.

(72) provides additional information that discourse may introduce a conventional scalar implicature on a structurally determined domain. In (72) speaker B does not mean that the only relevant thing that Jean did was drink beer, rather it means that comparatively to all relevant things that Jean could have done his drinking beer is insignificant. This is only possible if an ordering relation is introduced on the domain. I suspect that the role of pragmatics is of this nature.

(72) A: Jean brûlera en enfer.
 Jean will burn in hell
 'Jean will burn in hell'

B: Mais, il n'a que bu de la bière.
 but he NE has QUE drank beer
 'But he only drank BEER.'

Rooth (1992) argues that if domain selection were purely semantic, (73) should be contradictory, because it would be paraphrasable as: of all the things that they do to rice, those who grow rice just eat rice.

(73) Those who GROW rice only EAT rice.

Rooth therefore suggests that the domain of quantification can be entirely supplied

by discourse. This is at odds with the proposal that phonological focus must be in a position accessible to the context variable, a position C-commanded by it.

The *ne que* construction provides evidence that in this case as well potential domains are made available by structure. The *ne que* construction exhibits an asymmetry between a full NP (74b) and a clitic (74c), though both sentences are uttered in the same discourse context which requires a contrastive reading (74a).

(74a) Ceux qui ont produit diverses récoltes ont eu un régime varié.
those who produced diverse crops have had a diet varied
'Those who produced diverse crops have had a varied diet.'

(74b) Mais ceux qui ont PRODUIT du riz n'ont que MANGE du riz.
but those who PRODUCED rice NE have QUE EATEN rice
'But those who have PRODUCED rice have only EATEN rice.'

(74c) * Mais ceux qui ont PRODUIT du riz n'en ont que MANGE.
but those who PRODUCED rice NE of it have QUE EATEN
'But those who have PRODUCED rice have only EATEN it.'

I propose that the difference between (74b) and (74c) can be accounted for by the availability of QR. LF movement can influence the way in which the p-set is built. Namely, with a full NP, QR is possible leaving a variable in the VP. This variable can be implicated in the computation of the focus value, which is computed at the VP level. Each possible value of the predicate then applies to each possible value of the argument abstracted over.

The focus value is then of the form: $\lambda x. \lambda R. R(x)$ ('rice growers'). The focus value thus created will be a set of sets $\{\{P_1(g,a_1), P_1(g,a_2)\dots P_1(g,a_n), \{P_2(g,a_1), P_2(g,a_2)\dots P_2(g,a_n)\}\dots \{P_n(g,a_1), P_n(g,a_2)\dots P_n(g,a_n)\}\}$. The context variable of focus sensitive items must be a subset of this set. This focus value thus precisely includes a subset of the form $\{\text{eat}'(g,a_1), \text{eat}'(g,a_2)\dots \text{eat}'(g,a_n), \text{etc}\dots\}$, which can be taken as the value of C. QR thus allows for the non-contradictory reading associated with (74b).

With a clitic, no LF movement is possible. The focus value will be a set of relations between rice and rice growers: $\lambda R. R(\text{rice})$ ('rice growers'). This is a set like $\{P_1(g,r), P_2(g,r)\dots P_n(g,r)\}$. The context variable is a subset of this set; hence this structure leads to the contradictory statement that rice growers do nothing to rice but eat it (74c).

6. Conclusion

I have proposed that the interpretation of the *ne que* construction is the product

of chain composition between a NegPhrase with the semantics of a negative quantifier and a null operator ranging over the individuals in the complement set of the phrase to which *que* attaches. The *que*-phrase provides the restriction of Op. The negative quantifier provides its quantificational strength.

This analysis explains *ne que*'s otherwise mysterious interaction with movement. Namely, where in situ composition is possible no movement is necessary; however, if barriers intervene, movement can be used as a last resort strategy to rescue the structure; hence the movement effects. Many properties of the *ne que* construction are shared by null operator constructions. The facts that VP-level quantificational expressions like *beaucoup* or negative quantifiers *pas, jamais* block chain composition also follows from this analysis.

Given this analysis, the semantics of *ne que* are fully compositional. I have proposed that the semantics of *ne que* are sensitive to events, which captures the behavior of indefinites. *Ne que*'s association with focus suggests that the range of possible domains is defined structurally: subject to C-command and LF movements. It was suggested that pragmatics can introduce scalar implicatures on the domain of quantification, allowing for domain widening.

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