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Intro: This work is dedicated to the Chechen (< Nakh-Dagestanian) focus particle *bien*, exemplified in (1). Occurrences of this particle are reminiscent of the ‘split *only* construction’ (after von Stechow and Iatridou 2007), where the meaning equivalent to *only* in English is expressed by a focus particle which obligatorily co-occurs with negation. Such constructions are attested in languages like French (*ne...que*) or Greek (*dhen...para*). Sauerland and Yatsushiro (2023) develop an analysis for their Japanese counterpart formed with *sika*, treating it as an exceptive and accounting for the inferences associated with *only* and for *sika*’s strong-NPI distribution. In the present work I aim to show that, while S&Y’s analysis can be modified to capture some distributional properties of *bien*, it cannot be applied to all of its occurrences, due to the fact that this particle is highly cross-categorical.

Data: The Chechen construction with *bien* is exemplified in (1). The exceptive *bien* can only occur in the scope of sentential negation. The scope of negative universal quantifiers and the scope of *without*, which are capable of licensing strong NPIs in English, are not considered here, because negative quantifiers themselves form NPIs, while the meaning of *without* is expressed with a negative participle in Chechen.

(1) *Musa bien ca v-ea-na.*

M. EXPT NEG AGR-come-PFV

‘Only Musa came.’

Crucially, *bien* cannot occur in any weak NPI licensing environments, such as the restrictor of the universal quantifier (2) or the conditional antecedent (3), unlike *but*-exceptives.

(2) **Hora jolxalgha shardar bien d-i-n-chu desharxuo-chuo go’*
every sixth problem EXPT AGR-do-PST.PTCP-OBL student-ERG 3(C)
d-akqi-na.

AGR-get-PFV

Int.: ‘Every student that solved anything but the 6th problem got a C.’

(3) **Ahw jolxalgha shardar bien d-a-hw, suo cec-v-er*
 2SG.ERG sixth problem EXPT AGR-do-COND 1SG get.surprised-AGR-FUT
v-u.

AGR-AUX.PRES

Int.: ‘If you solve anything but the sixth problem, I will be surprised.’

S&Y assume that exceptives may differ in whether they merely restrict the domain of a quantifier, like the English *but*, or contribute quantification themselves, like the Japanese

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sika, which cannot be used with quantified noun phrases. *Bien* seems to allow both options: it can occur both freely (1) and in the restrictor of an overt quantifier (4), namely a negative polarity indefinite *chwa* 'a 'any' (lit. ~ 'even one', cf. Hindi *ek bhii*, Lahiri 1998). Quantifiers that outscope negation are not allowed (5).

- (4) a. *Chwa* 'a *ca* *v-iez-a* *suu-na*.
 one ADD NEG AGR-love-PRES 1SG-DAT
 'I do not love anyone.'
- b. *Musa bien chwa a ca v-iez-a suu-na*.
 M. EXPT one ADD NEG AGR-love-PRES 1SG-DAT
 'I do not love anyone but Musa.'
- (5) a. *Chwa* ' *ca* *v-ea-na*.
 one NEG AGR-come-PFV
 'Someone did not come.'
- b. **Musa bien chwa* ' *ca* *v-iez-a* *suu-na*.
 M. EXPT one NEG AGR-love-PRES 1SG-DAT
 Int.: 'I love someone different from Musa.'

The inferences that follow from (1) are that i. Musa came; ii. Nobody different from Musa came. I refer to the inference in (i) as the *positive* inference and to the inference in (ii) as the *negative* inference.

Deriving the inferences: I propose the analysis of *bien* similar to the account of the exceptive *but* in Hirsch (2016), where the exceptive is taken to denote a two-place predicate which states that its arguments do not overlap (6). In other words, the exceptive only contributes set subtraction, while the negative inference and the containment inference associated with it will be derived via exhaustification.

- (6) $\llbracket bien \rrbracket = \lambda x_e. \lambda y_e. x \text{ and } y \text{ do not overlap.}$

After *bien* combines with its first argument (7a), the exceptive phrase is passed as an argument to an existential quantifier (7b) which may be either overt (4b) or covert (1). This makes *bien* different from both the English *but*, which requires an overt quantifier, and Japanese *sika*, which is incompatible with quantified noun phrases and thus contributes existential quantification on its own. The ability of Chechen *bien* to take an existential quantifier as an argument unlike the English *but* may follow from the fact that Chechen is an articleless language, therefore, one has to assume that noun phrases co-occur with covert existential quantifiers, assuming noun phrases in articleless languages to always be indefinite (Heim 2011 et seq.).

- (7) a. $\llbracket Musa bien \rrbracket = \lambda y_e. Musa \text{ and } y \text{ do not overlap.}$
 b. $\llbracket \llbracket Musa bien \rrbracket \{ [chwa 'a] / \emptyset_{ex} \} \rrbracket = \lambda P_{et}. \exists y. Musa \text{ and } y \text{ do not overlap} \ \& \ P(y)$

The negative inference obtains after sentential negation is applied. To derive the positive inference I suggest that *bien* is obligatorily associated with the exhaustification operator *Exh* (Fox 2007 et seq.) and that the constituent which *bien* attaches to must receive focus. The formal definition of the operator which I adopt is given in (9). *Exh* takes a set of alternatives *A* and a proposition *p* and asserts *p* while negating all of its non-weaker alternatives.

$$(8) \quad \llbracket \text{Exh} \rrbracket(p)(A) \Leftrightarrow p \wedge \forall q \in \{q \in A \mid p \rightarrow q\}, \neg q$$

Consider the alternatives with their respective truth and falsity requirements listed in (9), where the set of individuals in question is defined as $\{Musa, Zara\}$ and where *came* is the predicate $\lambda x.x \text{ came}$. Exh asserts the alternative in (9a) and negates the alternative in (9b). In other words, it states that there is no individual different from Musa who came and that it is not the case that there is no individual different from Zara who came.

- (9) a. true: $\neg[\exists x : [x \neq Musa] \wedge \text{came}(x)]$
 b. false: $\neg[\exists x : [x \neq Zara] \wedge \text{came}(x)]$
 c. $\llbracket \text{Exh} \rrbracket(p)(A) \Leftrightarrow \neg[\exists x : [x \neq Musa] \wedge \text{came}(x)] \wedge [\exists x : [x \neq Zara] \wedge \text{came}(x)]$

Thus, the positive inference is obtained: there is an individual different from Zara who came, namely, Musa.

Deriving the (strong) NPI distribution: The fact that *bien* is ungrammatical without negation is accounted for by assuming that the application of Exh in non-DE environments gives rise to obligatory logical contradictions. The truth and falsity requirements of the alternatives in (10) cannot be simultaneously satisfied.

- (10) a. $\exists x : [x \neq Musa] \wedge \text{came}(x)$
 b. $\exists x : [x \neq Zara] \wedge \text{came}(x)$

Bien has a strong NPI distribution and thus must be associated with the Exh operator which asserts the conjunction of the assertive part of its argument with all its presuppositions and simultaneously negates all its non-weaker scalar and domain alternatives (Gajewski 2011; Chierchia 2013). The same operator is selected by *sika*, while *but*, as a weak NPI, selects a weak exhaustification operator. The formal definitions for the weak and the strong exhaustification operators are given in (11) and (12), respectively. Exh takes a proposition which is the assertive component in (11) and to both the assertive (ap) and the presuppositional ($^\pi p$) component in (12). It then asserts the proposition and negates its non-weaker alternatives.

$$(11) \quad \llbracket \text{Exh}_W \rrbracket(p)(A) = p \wedge \forall q \in A [q \rightarrow p \subseteq q]$$

$$(12) \quad \llbracket \text{Exh}_S \rrbracket(p)(A) = p \wedge \forall q \in A [\pi q \wedge ^a q \rightarrow \pi p \wedge ^a p \subseteq \pi q \wedge ^a q]$$

Consider how adopting such an analysis accounts for the unacceptability of (13).

- (13) ***Hora** *hwalxara shardar bien d-i-n-chu desharruo-chuo go'*
every first problem EXPT AGR-do-PST.PTCP-OBL student-ERG 3(C)
d-akqi-na.

AGR-get-PFV

Int.: 'Every student that solved anything but the 1st problem got a C.'

The lexical entry for *hora* 'every' is stated in (14).

- (14) a. Assertion: $\forall x : P(x) \rightarrow Q(x)$
 b. Presupposition: $\exists x : P(x)$

The relevant alternatives in a scenario where there are exactly 3 problems in the test are of the form (15).

- (15) $m \in \{1, 2, 3\}$
 a. Assertion: $\forall x : \forall n \neq 1 : \text{solve}(n)(x) \rightarrow \text{got a } C(x)$
 b. Presupposition: $\exists x : \exists n : n \neq 1 \wedge \text{solve}(n)(x)$

The presuppositional alternatives are listed in (16).

- (16) a. $\exists x : \exists n : n \neq 1 \wedge solve(n)(x)$
 b. $\exists x : \exists n : n \neq 2 \wedge solve(n)(x)$
 c. $\exists x : \exists n : n \neq 3 \wedge solve(n)(x)$

When the alternatives are exhaustified, it is stated that (16a) is true, while (16b) and (16c) are false.

- (17) $\llbracket \text{Exh} \rrbracket(\tau p)(A) \Leftrightarrow [\exists x : \exists n : n \neq 1 \wedge solve(n)(x)] \wedge \neg[\exists x : \exists n : n \neq 2 \wedge solve(n)(x)] \wedge \neg[\exists x : \exists n : n \neq 3 \wedge solve(n)(x)]$

In other words, (17) states that ‘somebody solved something other than the 1st problem AND nobody solved anything other than the 2nd problem AND nobody solved anything other than the 3rd problem’, which is contradictory. Meanwhile, there is no contradiction in the assertive component. The negated assertion can be paraphrased as ‘somebody did not solve some problem other than the 1st one and got a C’. The conjunction of all propositions with $m \neq 1$ is consistent with (15a) as can be seen from the scenario where some student solved the 2nd problem, did not solve the 1st problem and got a C. Thus, the ungrammaticality of *bien* in weak NPI licencing environments follows from contradictions arising when exhaustification is applied to both the assertive and the presuppositional component.

Cross-categorial instances: The associate of *bien* is not required to be nominal: there are instances where *bien* marks predicate focus (18)-(19) or where an entire clause is focused (20)-(21).²

- (18) *Hinca hwo-ga ladughu-sh bien v-a-c suo.*
 now 2SG-ALL listen-CVB.SIM EXCP AGR-AUX.PRES-NEG 1SG
 ‘I am only [listening to you]_F right now’

- (19) *Surt-ie hwazha bien mega-r d-a-c.*
 painting-ALL look EXCP be.able-FUT.PTCP AGR-AUX.PRES-NEG
 ‘You may only [look]_F at the painting’ (you cannot touch it or take pictures)

- (20) *Ahw ghullaq d-a-hw bien, as hwu-na shokolad oecu-r*
 2SG.ERG chore AGR-do-COND EXCP 1SG.ERG 2SG-DAT chocolate buy-FUT.PTCP
j-a-c.
 AGR-be.PRES-NEG
 ‘I will buy you chocolate only [if you do the chore]_F’

- (21) *Hwo luor v-u-i aella bien, as ca hwatti-na hwo-ga.*
 2SG doctor AGR-be.PRES-Q COMPL EXCP 1SG.ERG NEG ask-PFV 2SG-ALL
 ‘I only asked you [if you were a doctor]_F’

Recall that there is no quantificational force associated with the exceptive and that under the current approach an existential quantifier under negation is required in order to derive the positive inference and the NPI distribution. It is not clear what could provide existential quantification for the non-nominal uses.

²The Chechen “split *only*” is not unique in being cross-categorial: for similar data see O’Neill (2011) on *que* in French, Iatridou and Zeijlstra (2021) on *para* in Greek, and Vilkuina (2021) on *kuin* in Finnish.

Conclusion: The analysis outlined above captures some of the Chechen data, deriving the inferences associated with the particle *bien* and its strong-NPI distribution. Meanwhile, there are cases where the approach cannot be directly applied. In my talk I will elaborate on the possibility of a propositional analysis for *bien*.

References:

- Chierchia, G. (2013). *Logic in grammar: Polarity, free choice, and intervention*. OUP Oxford.
- Fox, D. (2007). Free choice and the theory of scalar implicatures. In *Presupposition and implicature in compositional semantics*, pages 71–120. Springer.
- Gajewski, J. R. (2011). Licensing strong NPIs. *Natural Language Semantics*, 19:109–148.
- Heim, I. (2011). Definiteness and Indefiniteness. In Maienborn, C., von Stechow, K., and Portner, P., editors, *Semantics: An International Handbook of Natural Language Meaning*. De Gruyter Mouton.
- Hirsch, A. (2016). An unexceptional semantics for expressions of exception. *University of Pennsylvania Working Papers in Linguistics*, 22(1):16.
- Iatridou, S. and Zeijlstra, H. (2021). The complex beauty of boundary adverbials: in years and until. *Linguistic Inquiry*, 52(1):89–142.
- Lahiri, U. (1998). Focus and negative polarity in Hindi. *Natural language semantics*, 6(1):57–123.
- O’Neill, T. (2011). The syntax of *ne... que* exceptives in French. *NYU Working Papers in Linguistics*, 3:199–230.
- Sauerland, U. and Yatsushiro, K. (2023). Domain size matters: An exceptive that forms strong NPIs. *The size of things II: Movement, features, and interpretation*.
- Vilkuna, M. (2021). The Finnish exclusive-negative construction *ei... ku (i) n* in the network of exclusion expressions. *Eesti ja soome-ugri keeleteaduse ajakiri. Journal of Estonian and Finno-Ugric Linguistics*, 12(1):457–490.
- von Stechow, K. and Iatridou, S. (2007). Anatomy of a modal construction. *Linguistic Inquiry*, 38(3):445–483.