Metalinguistic Contrast and Scalar Implicatures: The case of '*x, but X*'

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A. Introduction:This paper examines constructions of the form '*x, but X'*, like the English (1):
1. *a. Everyone, but (really) EVERYONE arrived b. He is always, but (really) ALWAYS late*
The second x, i.e. x2, is usually accented and interpreted as 'stronger' than x1 ('Everyone, with no exceptions, arrived'). Different languages use different strategies to achieve this effect, e.g. Hebrew just uses accentuation on x2, English and French tend to add an intensifying operator (like *really*), Spanish reduplicates x2 (*todo, pero todo todo…*), etc. Importantly, while *x but (really) X* is very common with universals, (1), it is odd / harder to find with existentials (2):
2. *??Someone, but really Someone arrived b.??He is sometimes, but (really) SOMETIMES late*

B. An initial analysis: Greenberg 2014 takes the conjuncts in *x but* X to be domain-based alternatives, derived by assigning distinct values to the covert domain variable in them (cf. Chierchia 2013). For example in (1a) both conjuncts are of the form $\forall x \in D$ *arrived (x),* and they differ in the value assigned to the domain restriction variable D, (3):
3. **x1**$: \forall x \in D_{narrow}$ *arrived (x),* **x2**$: \forall x \in D_{wide}$ *arrived (x),* s.t $D_{narrow} \subset D_{wide}$
Adopting this assumption, Shitrit 2015 then analyzes *x but X* (in Hebrew) by adding two more ingredients: **(A)** *but* in (1) has a counterexpectational semantics (cf.Winter & Rimon (1994), Toosarvandani 2014). I.e. *a but b* asserts the conjunction of *a* and *b* and presupposes there is an implication *r* of *a*, that *b* rejects. E.g. *It was raining but we remained dry* asserts that it was raining and we remained dry, and presupposes that there is an *r*, e.g. *we got wet*, which is implied by *a* and its negation is entailed/implied by *b*. **(B)** In the case of *x but X,* the implication *r* that x1 supports and x2 rejects is the **scalar implicature** (SI) of x1. E.g. that only everyone in the <u>narrow</u> domain arrived, and x2 rejects this SI, i.e. entails it negation.
        Hence, the presence of *but* in (1) seems to be justified, and yields the right interpretation. Moreover, this analysis predicts the infelicity of *x but X* with existentials (2), no matter which conjunct is interpreted with a wider domain. In (2a), for example, taking *x1* to be $\exists x \in D_{narrow}$ *arrived (x)* and *x2* to be $\exists x \in D_{wide}$*arrived* won't work, since, unlike what happens with the universals in (1), *x1* will be stronger than *x2* (it will asymmetrically entail it) and hence won't trigger the SI that x2 is false. Reversing the picture, i.e. taking *x2* to be $\exists x \in D_{narrow}$ *arrived (x)* and *x1* to be $\exists x \in D_{wide}$*arrived* won't work either: Here, though *x1* is indeed weaker than *x2,* the SI that $\neg \exists x \in D_{narrow}$ *arrived (x)* is blocked, since given other potential subdomain alternatives, this alternative is not <u>Innocently Excludable</u> (Fox 2007, Katzir 2014). This nicely supports the analysis: *x but X* is infelicitous exactly in cases where SIs are independently blocked.

C. Despite the merits of this initial analysis, though, it faces a serious problem, since in standard *a but b* sentences like (4a) trying to take *b* to reject a SI of *a* (that not everyone arrived) leads to clear infelicity (Winterstein 2013). This infelicity seems to generally hold sentence of the structure **weak but strong** (where *b* asymmetrically entails *a*), see also (4b-e):
4. a. *#Someone arrived but everyone did b. #I like her but love her c. #John or Mary arrived but both did. d. #She is ok but superb at math e. #It is possible but necessary that he is a spy*
However, given the initial analysis, *x but X* is a clear **weak but strong** construction as well. The question, then, is why, unlike sentences as in (4), those in (1) are perfectly fine.

D. Why are standard *weak but strong* sentences ruled out? We examine the possibility that
this is due to obligatory exhaustification of the weak conjunct, *a*, e.g. that in (4a) *a* is <u>*exh someone arrived*</u> (Fox 2007, Chierchia et al 2011), leading to a contradiction when conjoined with *b* (*Everyone arrived*). Such a proposal, however, does not seem to be right, as seen from the comparison between *and* and *but* in (5) with a *at least some*:

5. a. At least some students arrived and even all did
   b.#At least some students arrived but even all did

When *some* is explicitly non-exhaustified, (5a) with *and* is fine. This requires the presence of *even*, which can be explained due to Maximize Presupposition (given the scalar ps. of *even*). Crucially, however, (5b) with *but* is bad, despite the non-exhaustified *at least some* and the presence of *even*.

We also examine Winterstein's own explanation of the infelicty of (4a), according to which *a but b* requires that learning *a* raises the probability of *r* and learning *b* lowers it ($P(r/a) > P(r) \land P(r/b) < P(r)$). Winterstein proposes that this condition is not satisfied with (4a), since if *a* involves *some* and raises the probability of *r,* a sentence *b* with *all* must raise the probability of *r* as well. We show, however, that there is an *r*, namely *Some but not all arrived* (i.e. *exh a*), whose probability is raised by *a* and lowered by *b*, so (4a) should be fine. It may be, though, this kind of *r* is ruled out, since, with *a* and *b* in (4a) being scalar alternatives, *<some, all>,* so should be *r*. Crucially, though, *Some but not all* is independently known to be ruled out as an alternative to *<some, all>,* (e.g. due to complexity see Katzir (2014)). This may explain the infelicty of (4a) and generalize to other **weak but strong** constructions with scalar alternatives**.** We examine this and other explanations in more detail in the full paper. Whatever the explanation is, though, we still need to understand why *x but X* is so much better.

E. A revised proposal for *x but X*, as expressing metalinguistic contrast: We concentrate on the intuition that *x but X* seems 'metalinguistic' and can be paraphrased as *Everyone, and (when I say "everyone") I mean EVERYONE arrived !* We hypothesize, then, that unlike standard *a but b*, in *x but X* what we consider is NOT the knowledge of *a* and *b*, but the knowledge that the speaker uttered *a* and that she uttered *b,* together with the fact that she used the two utterances to convey a single meaning. Given this intuition, (1a) conveys something like "You might infer from my utterance of *everyone* (and not *EVERYONE*), that I meant that only everyone in D_{narrow} arrived, but this inference should be rejected: By uttering it I meant what I mean when uttering *EVERYONE* (i.e. everyone in D_{wide} arrived)".

One way to capture this intuition is to assume that '**_but'_ in *x but X* is under the scope of a a metalinguistic,** and more specifically a **quotation operator**, (e.g. von Fintel 2004, Maier 2015) originally developed to account for mixed quotations. A mixed quotation "A" is interpreted as the definite description: The unique semantic object A the speaker s referred to by uttering the phonological string "A", (ιA [refer (s, *"A", A)*]), presupposing that such a unique A exists. We now take (1a) to mean (5):
(5) $\iota\, GQ_{<<et>,t>}$ *[refer (s, "everyone", GQ) but (refer (s, "EVERYONE", GQ)] (arrived$_{<e,t>}$)*
The crucial thing to note is that, analyzed as (5), (1a) is NOT a **weak but strong** construction anymore, since *a* and *b* are NOT scalar alternatives (*refer (s, "everyone", GQ)* doesn't entail *refer (s, "EVERYONE", GQ)*).

The whole sentence asserts that the unique GQ, s.t. the speaker referred to this GQ by uttering *everyone*, and she referred to this GQ by uttering *EVERYONE,* is true of the property *arrived*. To obtain the counter-expectational presupposition of *but*, we take the *r* that the first conjunct *a,* (i.e. _refer (s, "everyone", GQ)_**,** implies to be **_GQ= λP. exh ∀x ∈D$_{narrow}$ P(x)_** , and this *r* is rejected by *b* (i.e. by _refer (s, "EVERYONE", GQ)._ This presupposition seems to be met: Learning that the speaker uttered *everyone* (and not *EVERYONE*) to refer to GQ we may indeed draw the cancellable implication that she used this to refer to the exhaustified meaning "Only everyone in the narrow domain", and learning she uttered *EVERYONE* to refer to GQ rejects this implication. Finally, the uniqueness presupposition of the ι operator introduced by the quotation operator requires that there is a unique GQ that the speaker referred to by uttering *everyone*, and referred to by uttering *EVERYONE*. This seems to be met in (1): **_λP. exh ∀x ∈D$_{wide}$ P(x)_** is this unique GQ in our case. Crucially though, we don't overgenerate (4a): There is no unique GQ that the speaker referred to by uttering *someone*, and she referred to this same GQ by uttering *everyone*, so the presupposition of ι fails. In the paper we show that (2) are not overgenerated either, and discuss implications for ('pragmatic' and 'grammatical') theories of SIs.