

All that in indicative vs. counterfactual conditionals

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Conditional antecedents are known as a typical licensing environment for negative polarity items (NPIs), something that is commonly attributed to either their nonveridical nature [3] or their scalar properties [13]. In the present work, we make the novel observation that there is a class of NPIs, namely attenuating ones like English *all that* (1), which are degraded in indicative compared to subjunctive conditionals (experiment on validating the observation in preparation and can be presented at the conference). Building on [2], [6], and [8], we will propose a scalar licensing mechanism for the abovementioned NPI and will argue that the degradation of indicative conditionals is due to the presence of implicatures (i.e. conditional perfection).

(1) a. ?If the readers *have* liked the book *all that much*, they *will* buy the sequel.

b. If the readers *had* liked the book *all that much*, they *would* have bought the sequel.

Attenuating NPIs (aNPIs) – Previous approaches. Much of the existing work on NPIs concerns indefinites like *any* and *ever*, or minimizer NPIs like *to lift a finger*. It is often assumed ([6]; [7]; *among others*) that these expressions are acceptable if their presence in the sentence makes the assertion stronger than its alternatives. There are, however, also NPIs that appear to have the opposite effect. They have received less attention, but are by no means rare: Examples include English *much* [6] and *all that* [12], Japanese *a(n)mari/sonnani* ('very') [10], and German *sonderlich* ('particularly') [7:86]. [6;7] calls these NPIs *understating* or *attenuating*. Within his approach, aNPIs are lexically specified for a high "quantitative" and low "informativity" value. Their distribution is restricted to scalar contexts where the proposition with the aNPI is less informative than a contextually salient alternative, that is, where the alternative entails the proposition with the aNPI. However, it is not clear how this would account for the contrast between indicative and subjunctive conditionals. Alternatively, one could consider a nonveridicality approach to polarity sensitivity ([3] + subsequent works). Here, the licensing mechanism for aNPIs should be no different than that for any other NPI—weak NPIs are assumed to be licensed under nonveridical operators. One possible explanation for (1) would be that *all that* is a *strong NPI*, i.e. only licensed in antiveridical contexts. However, this analysis would predict a stronger degradation in the indicative. Also, it is incompatible with the fact that *all that* is acceptable in questions (2a) and with weak DE quantifiers like *few* (2b).

(2) a. Is your business school experience going to be **all that different** if you attend a religiously affiliated institution? (<https://www.bloomberg.com/news/articles/2007-07-09/taking-b-school-on-faithbusinessweek-business-news-stock-market-and-financial-advice>)

b. Although guests are generally of the opinion that this hotel offers value for money, **few are all that happy** about having to pay extra for extended Wi-Fi access. (<https://www.trivago.ae/manchester-38961/hotel/travelodge-manchester-piccadilly-3509960>)

Proposal. Our proposal is directed at the English aNPI *all that*, with its validity to other languages subject to future work. We closely follow [6], but propose a formalization based on [8]'s proposal that NPIs lexically trigger ordered alternatives, as well as [2]'s revised version of scalar assertion. The preliminaries are thus:

(3) **Strawson contextual update (from [2]):** $c +_{\text{str}} P = c \setminus \{w \in c \mid \llbracket P \rrbracket_c^w = 0\}$

Informational strength (from [2]): P' is informationally no stronger than P iff for any context c , $c + P +_{\text{str}} P' = c + P$

First, we assume that aNPIs lexically introduce alternatives, such that, at its core, *all that* is a degree modifier (we preliminarily stipulate a meaning like *very* [11]), but additionally introduces lower degrees as alternatives, see (4). Further, we propose that it is licensed under the condition in (5). In its first conjunct, this states that P is true in the actual world w . In the second conjunct, it states that there must

be an alternative P' such that there is a world compatible with the context where P' is true and P' is informationally stronger than P .

(4) $\llbracket \text{all that} \rrbracket = \lambda G \lambda x [G(x) \geq_{d_s(\{y: \text{pos}(G)(y)\})} \{ \lambda z [G(z)] \mid z < x \wedge G(x) \sqsubseteq G(z) \}]$

(5) **Proposed licensing condition:**

$\{w \in c \mid w \in \llbracket P \rrbracket_c \wedge \exists P' \in \text{Alt}(P) (\exists w' \in c \mid w' \in \llbracket P' \rrbracket_c \wedge c + P +_{\text{str}} P' \neq c + P)\}$

A conditional with the aNPI *all that*, abbreviated as *aNPI* $\Phi > \Psi$, is less informative than the evoked (lower degree) alternatives, e.g. $\Phi > \Psi$, such that both indicative and subjunctive conditionals license the aNPI. To account for the indicative/subjunctive contrast, we appeal to the presence of two implicatures—conditional perfection (CP) [4, a.o.] and the implicature to the falsity of the antecedent. The CP implicature is arguably present in both types of conditionals [4:321]. The latter implicature is only present in subjunctives.

Following [1;14], we assume that conditionals give rise to two types of QuDs, either about the conditions for the consequent, i.e. QuD₁: “*Under which conditions q ?*”, or about the consequence of the antecedent, i.e. QuD₂: “*What follows from p ?*”. The pragmatic inference to CP arises when the conditional is understood as exhaustive answer to QuD₁. Under a biconditional interpretation, the aNPI is not licensed: the contextual update step yields $c + P +_{\text{str}} P' = c + P$, *contra* the licensing condition above. With this, we can explain that conditionals are degraded with the aNPI due to the pragmatic inference of CP. But we have not captured why the aNPI is less degraded in subjunctive conditionals than in indicative ones. For this, we propose that subjunctive conditionals additionally trigger a counterfactuality implicature about the antecedent [5;9]. This implicature cannot be cancelled without good reason [1], and the two implicatures—CP and counterfactuality of the antecedent—are perfectly compatible [1]. The counterfactuality implicature creates an antiveridical environment, such that *all that* is better in subjunctive conditionals than in indicative ones.

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