Deriving *Even Though* from *Even*

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BACKGROUND

Concessive Clauses

- In English, concessive clauses are introduced with *even though*, *although*, and *though*.
- Concessive constructions express a general (or perceived) incompatibility between the matrix and subordinate clauses:

(1) The tree didn't fall even though it was hit by a truck.

- Concessive constructions with scalar particles (e.g. *even*) are often derived from concessive conditional constructions, or in some cases, involve the exact same subordinators with other distinguishing grammatical/contextual cues, as in Spanish. (Kortmann '97)

Desiderata for a Theory of Concessives

1. **Compositional:** The theory should compositionally incorporate the contribution of the scalar particle (e.g. *even*).

2. **Relation to Concessive Conditionals:** The theory should relate concessives to concessive conditionals, ideally via a compositional analysis as described above.

Previous Analyses

Concessives

- König & Siemund ('00) draw a parallel between concessive clauses and causal clauses, giving the following semantics for both:

(2)

	because p, q	even though p, q
Presuppositions:	$P \rightarrow Q$; p	$P \rightarrow \neg Q$; p
Assertions:	$p \wedge q$	$p \wedge q$

- The conditionals "$P \rightarrow Q$" and "$P \rightarrow \neg Q$" are *generalized* conditionals of the particulars p and q.
- In this view, wide scope negation of *because* construction is equivalent to narrow scope negation of an *even though* construction. This fails when mere correlation is at play in a concessive construction.
- This analysis also doesn't meet the above desiderata.

Concessive Conditionals

- *Even if* clauses entail their consequent.

(3) Even if I eat now, I will be hungry later.
(⇒ I will be hungry later)

- Guerzoni & Lim ('07) compositionally derive the entailment of the consequent of *even if* via the additive presupposition of *even* and a covert verum operator AFF:

(4) a. $[[\text{AFF}]] = \lambda\phi.\phi$
b. LF: Even if $[[\text{AFF}]_F\ p]$, q.
c. Prejacent: if p, q $(= X)$
d. Alternatives: $\{\text{if } p, q\ (= a1);\ \text{if } \neg p, q\ (= a2)\}$
e. *Even*'s additive presup.: $\exists Y \in \{a1, a2\}[Y \neq X \wedge X = 1]$
f. *Even*'s scalar presup.: $\forall Y \in \{a1, a2\}[Y \neq X \rightarrow X <_{likely/expected} Y]$

- The entailment of the consequent falls out from the additive presupposition.

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Proposal for Concessives

- *Though* has a semantics very similar to AFF, but is overt:

(5) $[[\text{though}]] = \lambda\phi.\phi$

- *Though* also obligatorily introduces a set of alternatives needing to be exhaustified, *à la* polarity sensitive items like *any* (Chierchia '13).
- *Even though* constructions entail both clauses, much like conjunction, but syntactically *even though* clauses are adjuncts.
- Thus, semantically the conjunction-like behavior of *though* will be derived via Predicate Modification, where the type ⟨t⟩ *though* phrase meets the type ⟨t⟩ matrix clause.
- *Even* then operates over this conjunction:

(6) a. LF: Even $[[\text{though}_F\ \text{p}], \text{q}]$
b. Prejacent: though p, q = $p \wedge q\ (= X)$
c. Alternatives: $\left\{ \begin{array}{c} p \wedge q\ (= a1) \\ \neg p \wedge q\ (= a2) \end{array} \right\}$
d. Scalar presupposition: $\forall Y \in \{a1, a2\}[Y \neq X \rightarrow X <_{likely/expected} Y]$
$\Leftrightarrow a1 <_{likely/expected} a2$
$\Leftrightarrow (p \wedge q) <_{likely/expected} (\neg p \wedge q)$

- There is no additive presupposition (it would result in contradiction), like other cases of mutually exclusive alternatives (Rullmann '97, a.o.).

Bare *Though*

- **Q:** The *even* of *even though* constructions can be omitted without a corresponding change in meaning; what gives?
- **A:** A covert *even* is exhaustifying *though*'s (obligatorily introduced) alternative set. A covert *only* (here *O*) would result in triviality:

(7) a. $[[\text{O}]] = \lambda X.X \wedge \forall Y \in Alt\,[Y \neq X \rightarrow \neg Y]$
b. LF: O $[[\text{though}_F\ p], q]$
c. Prejacent: $p \wedge q$
d. Alternatives: $\left\{ \begin{array}{c} p \wedge q \\ \neg p \wedge q \end{array} \right\}$
e. Negation of other alternative: $\neg(\neg p \wedge q)$
f. De Morgan's law & double negation: $p \vee \neg q$

Only can't be vacuous (Al Khatib '13), leaving covert *even* as the only viable exhaustifier.

Concessive *Still*

The particle *still* can be used concessively:

(8) John studied all night. He still failed the test.

Ippolito ('07) argues for the following denotation, where p is a *pro* argument referring to the previous proposition.

(9) $[[\text{still}]]^w = \lambda p.\lambda q : \{w : w \in p \wedge w \in q\} <_{likely} \{w' : w' \in \neg p \wedge w' \in q\}.q(w) = 1$

This is very similar to the proposal for *even though* above. Is it possible that *still* and concessive clauses (and perhaps all such 'concessive' constructions) can be united by a (possibly covert) scalar particle?

Selected references: **Al Khatib 2013.** *'Only' and association with negative antonyms*. **Bennett 1982.** *Even if*. **Chierchia 2013.** *Logic in Grammar*. **Guerzoni & Lim 2007.** Even if, *factivity and focus*. **Ippolito 2007.** *On the meaning of some focus-sensitive particles*. **König & Siemund 2000.** *Causal and concessive clauses*. **Kortmann 1997.** *Adverbial subordination*. **Lycan 1991.** *Even and even if*. **Rullmann 1997.** *Even, polarity, and scope*.