

AN EMPIRICAL CHALLENGE OF HURFORD'S CONSTRAINT AND STRUCTURAL ECONOMY, AND A POSSIBLE SOLUTION

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Introduction: Hurford's Constraint and Structural Economy

Hurford (1974) observed that a disjunction is not felicitous if one of the disjuncts entails the other, as in (1).

- (1) a. #John is an American or a Californian.
b. #Mary was born in Paris or in France.

As an attempt to derive the 'unanalyzed condition of oddness' formulated in Hurford's Constraint (HC), Katzir and Singh (2013) formulate a general principle of Structural Economy (SE), which bans locally redundant arguments α , β of *any* binary operator O :

- (2) *Local Redundancy Check*: S is deviant if S contains γ and $\llbracket \gamma \rrbracket = \llbracket O(\alpha, \beta) \rrbracket \equiv_c \llbracket \zeta \rrbracket$, $\zeta \in \{\alpha, \beta\}$

With this generalization, Katzir and Singh are able to account for the (assumed) infelicity of the examples in (1) involving disjunctions, as well as for the following examples with conjunctions (see also Schlenker, 2008):

- (3) a. #John is an American and a Californian.
b. #Mary was born in Paris and in France.
c. #John walks and moves.

According to (2), the examples in (3) should be as infelicitous as the examples in (1). I provide empirical evidence suggesting that this generalization needs to be qualified: conjunctions with redundant arguments are generally less infelicitous than similar disjunctions, and that also disjunctions are not categorically banned, contrary to HC. The observed violations of HC and SE can be accounted for if we assume a form of implicature by which X *and/or* Y can be pragmatically strengthened to mean either X *and/or more specifically* Y or X *and/or more generally* Y . Under this assumption, HC and SE can be fully maintained, as long as we allow for them to be 'flouted' and then give rise to an implicature.

Empirical Challenge to Hurford's Constraint and Structural Economy

While most linguists have strong opinions about the infelicity of the examples in (1)¹, similar examples do occur naturally, though rarely:

- (4) a. [n]o one cares if you sound like an American or a Californian, [...] ²
b. It was not entirely the reality of life in Paris or in France, however. ³

Similarly for conjunctions: for every supposedly infelicitous example from (3), there are naturally occurring counterparts:

- (5) a. Those are the qualities that make me proud to be an American and a Californian. ⁴
b. In 1910, Eliot lived in France and in Paris, [...] ⁵

¹The examples in (1) and (3) are from Hurford (1974) and Katzir & Singh (2013).

²<http://www.lasth.com/conversation.html>

³Wikipedia on *Belle Époque*: http://en.wikipedia.org/wiki/Belle_Époque

⁴Congresswoman Grace Napolitano in 1999: <http://www.gpo.gov/fdsys/pkg/CREC-1999-06-09/html/CREC-1999-06-09-pt1-PgE1201.htm>

⁵Fowlie, W. (1966). Baudelaire and Eliot: Interpreters of Their Age. *The Sewanee Review*, 74, p. 299

- c. Or in other words which part of her body dominates the way she walks and moves?⁶

Unlike in the case of disjunction, such examples are actually quite frequent for conjunctions: searching the *Google N-Grams Corpus* for disjunctions and conjunctions of 40 word pairs, in which one entails the other, showed that Hurford disjunctions are systematically less common than equivalent conjunctions. Interestingly, no clear order effects were found for conjunctions or disjunctions, contrary to claims by Schlenker (2008).

A Possible Solution

A closer look at the statement of the congresswoman in (5-a) shows that what she (probably) meant to say was

- (6) [...] make me proud to be an American and *more specifically* a Californian.

and the likely meaning of example (4-b) can be made more explicit as

- (7) It was not entirely the reality of life in Paris or in France *more generally*, however.

Most observed violations of HC and SE can be paraphrased in a similar way. This leads to the following generalization, which can be seen as a description of the flouting of Structural Economy (2):

- (8) if the two arguments α and β of a binary operator O are in an entailment relation then the expression $\gamma = \alpha O \beta$ can be pragmatically strengthened as
- $\alpha O \beta \equiv \alpha O \text{ more generally } \beta$ if α entails β .
 - $\alpha O \beta \equiv \alpha O \text{ more specifically } \beta$ if β entails α .

Assuming such a pragmatic strengthening process, the observed difference in the frequency of violations of SE for disjunctions vs. conjunctions can now be reduced to the observed (but unexplained) difference in frequencies between *X and more generally Y* and *X or more generally Y*, with the latter being significantly less common than the former.

My solution predicts that violations of HC or SE will be infelicitous if the pragmatically strengthened meaning obtained from (8) is still redundant or non-sensical, as illustrated by the following pair of examples:

- (9) a. Mary enjoys life in Paris and in France.
b. #Mary was born in Paris and in France.

While a pragmatic strengthening of the second conjunct in (9-a) yields the rather felicitous utterance (10-a), the strengthened version of (9-b) is still infelicitous.

- (10) a. Mary enjoys life in Paris and more generally in France.
b. #Mary was born in Paris and more generally in France.

This line of argumentation may be extended to include any kind of pragmatic strengthening of conjuncts as an escape from HC or SE, thus subsuming Gazdar's (1979) observation that disjunctions consisting of scalar alternatives obviate HC.

Conclusions

I have provided empirical evidence that Hurford's Constraint and even more so its generalization (Structural Economy) to any kind of binary operators can be violated, but that such a violation gives rise to an implicature, which adds to the meaning of the operator beyond its logical meaning.

⁶<http://www.shakespearesglobe.com/education/discovery-space/adopt-an-actor/archive/nerissa-played-by-sonia-ritter/rehearsal-notes-2>