**Conjunction Meets Negation: A Study in Cross-linguistic Variation**

This paper is concerned with the following contrast between Hungarian and English in the way that conjunction interacts with negation.

(1) Mari nem járt hoki-ra és algebrá-ra.
  a. `Mary didn't take hockey and didn't take algebra.' easy
  b. `not both H and A' – difficult or impossible
(2) Mary didn't take hockey and algebra.
  a. ` Mary didn't take hockey and didn't take algebra.' difficult or impossible
  b. `not both H and A' easy

Although we will show that once intonation and context are taken into account the contrast is less dramatic, what remains is robust enough to call for an explanation. We will argue that the formal semantics for both languages is fundamentally the same as that of definite plurals, and the contrast in (1) and (2) is due to what other expressions *és/and* competes with.

The claim that conjunctions are essentially definite plurals, appears relatively straightforward for Hungarian, since Hungarian conjunctions (of names, definites, and abstract nouns) behave like plural definites in crucial ways: both support collective, distributive, and cumulative readings, and both easily take extra-wide existential scope but do not easily take even clause-internal distributive inverse scope. Crucially, plural definites in both English and Hungarian also interact with negation in the same way as Hungarian conjunctions:

(4) Mary didn't take these classes.
(3) Mari nem járt eze-k-re az órá-k-ra. `idem'

Both (3) and (4) mean that Mary took none of these classes; the 'not every' reading is marginal or unavailable. This behavior does not follow from the basic semantics, since for non-collective predication, the basic semantics would predict the `not every' reading. We follow Löbner (1987, 1998) and Schwarzschild (1993) in attributing this `none of them' reading to a homogeneity presupposition:

(3) Homogeneity Presupposition:
  Where *x* is a definite referring to a plurality and *P* a distributive predicate, *P(x)* has a truth value iff *P* holds of all elements in the denotation of *x* or if it holds of none of them.

Whatever the source of this presupposition, we may now say that Hungarian conjunctions behave in the expected way: they have the same denotational semantics as plural definites and they carry the same homogeneity presupposition.

How then to account for the English data in (2)? As a first step, we note that intonation crucially bears on acceptability. When the two conjuncts are put together in an ad hoc fashion as in (1) and (2), out of context, we find that, if the connective is destressed, the sentence does not mean `not both;' rather it is not very acceptable at all. The `not both' reading is a privilege of stressed *AND.*

The stressed *AND* cases such as (5) will not be a primary focus of this paper; we direct our attention instead to the degraded status of destressed *and* in (4).

(4) ??? Mary didn't take hockey and algebra.
(5) Mary didn't take hockey AND algebra.

Crucially, an additional "packaging" constraint also appears to bear on the availability of 'neither' readings with *and*. Packaging may be stereotypical, as in (6), but it need not be, as shown in (7). Both are readily interpreted as 'not A and not B':

(6) Mary didn't take math and physics.
(7) Prof is advising a student who has five more required courses to take. All five are offered in the given semester, but the student cannot fit all into their schedule at the same time. The five courses are unrelated to each other. Prof says,
You haven't taken Morphology and Historical. Why don't you take them now?

The *and* in (7) has two alternatives: one with *or* and one with *(neither) nor* shown in (8).

(8) a. You haven't taken Morphology and Historical.
b. You haven't taken Morphology or Historical.
c. You have taken neither Morphology, nor Historical.

(8a) with *and* suggests that it is normal or expected for students in general or for the advisee in particular to take both Morphology and Historical. (8b,c) do not suggest that normally both courses are taken. The felicity of (8a) in this context may be contrasted with the striking infelicity of (9). The sentence is infelicitous because it suggests that knowing both English and Mandarin would be expected or useful in this situation. But this goes against what we know about paperwork: once you start to fill out a form in one language, you do not switch to another.

(9) ??? My son does not know English and Mandarin, he cannot fill out the visa application.

These facts, then, suggest that use of *and* carries an implicature such that the predicate is normally expected to hold of both conjuncts. Two facts suggest that this implicature arises as a function of competition with other ways of expressing a similar meaning. First, this "normally both" implicature (though undeniably present) is weaker in Hungarian, where there are fewer forms in competition with *és*. While *and* has (at least) the two competing forms in (8b,c), *és* has only one clear competing construction: *se…se*, akin to 'neither…nor.' Hungarian *vagy*, 'or' is a positive polarity item (Szabolcsi 2002) and does not compete with *és* in negative contexts. Second, out-of-the-blue non-packaged conjunctions are also felicitous in both English and Hungarian in non-negated contexts, where there are also fewer competitors (*both ... and...* and *... is, ...is* `idem', which, similarly to *neither nor* and *se,se,* carry a discourse linking constraint).

The "normally both" implicature might be conventional or conversational. If independence is encoded in the semantics of *or* and *neither...nor* / *se...,se...*, then "normally both" is very similar to Gricean conversational implicatures of the scalar kind: (8a) is weaker than (8b,c). However, it is highly sensitive to actual linguistic competitors, over and beyond conceptual competitors. On the other hand, competition here does not lead to lexical blocking, which in other cases gives rise to razor-sharp acceptability contrasts (cf. Chierchia's and Dayal's work on cross-linguistic variation in semantics). This constellation lends more general theoretical interest to the phenomenon we are studying.