PLING 228: Frameworks

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Review: proportion problem + solution

Quantification in Heim is over [extensions of] assignments, which gives a clean treatment of (some) donkey sentences – variables, whether associated with indefinites or other quantifiers, are treated on a par semantically. But fails in general.

(1) Every^x farmer who owns a^x donkey beats it^x. Heim's analysis (roughly): every way of assigning a farmer to x and donkey to y which makes it the case that x owns y, makes it the case that x beats y.

(2) a. Most farmers who own a donkey beat it.
b. Usually if a farmer owns a donkey he beats it.

1 farmer is rich but cruel and beats all 200 donkeys he owns. The other 99 farmers do not beat their single donkey. Clearly (2-a) is false but comes out true. It involve counting of farmers not farmer donkey pairs. Similarly

(3) At least two farmers who own a donkey beat it.

Fix

Non-indefinites treated as quantifying over individuals, as in classical semantics:

(4) {Every / no / most}^{x} farmer who owns a^x donkey beats it^x.

update effect: keep only world-assignments $\langle g, w\rangle$ such that: for each/no/most farmer o that can be assigned to x and extended to assign y some donkey x (o) owns, assigning o to x allows extending g so that y is assigned a donkey x (o) owns *and* beats.

This gives an "existential" reading as opposed to Heim's universal one: donkey-owning farmers need only beat one of their donkeys (or more).

Universal vs. existential readings

This may seem too weak for (1) but in other cases is correct:

(5) a. Every person who had a credit card used it to pay the bill. (Cooper)
b. Everyone person who has a dime will put it in the meter. (Pelletier and Schubert)

A pragmatic strategy would be to try to derive strong readings as for (1) as a pragmatic strengthening but this strategy has been doubted.

Alternatively, universal readings can be posited directly be modifying (4)'s final condition:

(4)' ...assigning o to x does not allow extending g so that y is assigned a donkey x (o) owns and *doesn't* beat.

In summary, there is a way to deal with the proportion problem while retaining Heim's insights about indefinites, and also to capture the universal-existential distinction as an ambiguity in quantifier meanings.

Though issues remain regarding whether the ambiguity is observed in all cases and why (not), and whether it is more systematic with some determiners. E.g. 'no' seems to favour the existential reading?

Brasoveanu

Argues against locating the universal/existential ambiguity in quantifier meanings, but rather proposes that it's due to an ambiguity in indefinites:

(6) a. Every^x person who buys a^y book on Amazon and has a^z credit card, uses it^y to pay for it^z Every^x man who wants to impress a^y woman and who has an$^{\text{`}}$ Arabian horse teaches her^y how to ride it^z.

This allows him to capture the mixed readings above, though shares over-generation issues with the determiner ambiguity view (e.g. both allow that 'No farmer who has a donkey beats it' can get a universal reading)

It might have under-generation problems though, as Richard notes:

(7) Everyone who has a credit card and doesn't forget it uses it to pay the bill.

The weak variant of the indefinite is apparently needed (not all cards are said to have been used), but this gives rise to "strong" readings for pronouns under negation so the sentence comes to quantify over just the people who remembered all their credit cards. [bound by a weak indefinite, doesn't forget it = doesn't forget some card = remembers all cards]. That seems too weak?