

On Skolem functions and wide scope indefinites

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Choice functions (CFs) are often used for obtaining wide scope readings of indefinites while leaving the indefinite in situ. Some works observed that when the restriction of the indefinite contains a locally free pronoun, its simple treatment using CFs leads to undesired truth conditions. For instance, an analysis as in (2) for sentence (1) is inappropriate, because two children who happen to know the same set of women are expected by analysis (2) to have a common woman liked by both of them. This claim is contrary to intuition.

(1) Every child likes a woman he knows.

(2) exists f [CF(f) & for-all y [child(y) \rightarrow like(y , f (women y knows))]]

The treatment in (2) seems to violate May's "scope principle", according to which a noun phrase cannot take scope over a binder of a pronoun it contains. A solution to this problem is to use Skolem functions (SFs) as a natural generalization of CFs. Definition: A Skolem Function of arity n (SK_n) is a function that maps any tuple $\langle a_1, a_2, \dots, a_n, X \rangle$ in a product $A_1 \times A_2 \times \dots \times A_n \times \text{Pow}(A) - \{ \}$ to an element of X .

Sentences like (1) can now be treated correctly using an SK of arity 1:

(2') exists g [$SK_1(g)$ & for-all y [child(y) \rightarrow like(y , g (y ,women y knows))]]

Two different children can now be mapped by g to two different women even when they happen to know exactly the same women. Obviously - CFs are SKs of arity 0.

In this talk I will make two claims:

1. That the general SK mechanism is not only required to prevent undesired effects with CFs. Certain sentences with indefinites and anaphora violate May's principle but are correctly analyzed using SKs.

2. That the arity of a Skolem function should be identical to (or at least, not smaller than) the number of (locally) free variables in the restriction of the indefinite it applies to. This restriction is easy to implement under Jacobson's functional treatment of anaphora.