Reflexive Connectivity in Copular Clauses and Identity Functions
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Introduction: I use specificational copular clause connectivity (Higgins 1973) to argue that natural language reflexives come in (at least) two varieties; either as syntactically bound variables (A-bound) or as identity functions. I do this with a comparison of the Tamil complex reflexive and English 'himself'.

Tamil Data: The relevant copular clauses are shown in (1).

1a) [Mala-ve   paatt-**avan**] Balan-(aa   iru-kum)   AC
      Mala-acc   saw-he   Balan-AA   be-3rd.sg.neut
      'The one thing (human, masc, singular) that saw Mala is Balan.'

1b) [Mala-ve   paatt-**adu**]   Balan-(aa   iru-kum)   IC
      Mala-acc   saw-it   Balan-AA   be-3rd.sg.neut
      'The one thing that saw Mala is Balan.'

(1a) shows the agreeing construction (AC) and (1b) shows the invariant construction (IC). The subject phrases are in brackets and the pivots are *Balan.* In the AC, the subject phrase matches the phi features of the pivot, whereas in the IC, the subject phrase does not. The overt copula *iru* 'be' is optional. But when the copula is overt, *-aa* (analyzed as the small clause head, Bowers 1993) is obligatory.

I propose that the derivations of the AC and IC differ in the crucial way shown below in (2).

2a) $[_{DP} [_{CP} Op_i [_{TP} t_i$ Mala-ve   paatt]]-**avan**]   Balan   AC

2b) $[_{DP} [_{CP}$ $[_{TP} <Balan>_i$ Mala-ve   paatt]]-**adu**]   Balan$_i$ IC

While both the AC and IC will be shown to be semantically equations (Jacobson 1994), I focus on the most important difference between the two in this abstract. In the AC, there is a null operator in the subject phrase and the pivot *Balan* is base-generated in Spec, PredP. In the IC, the pivot is extracted from within the subject phrase and thus leaves a copy of the pivot *Balan* in the subject phrase.

Analysis: Selected evidence for the difference in (2) is as follows. <u>First</u>, case is preserved only in the IC.

3a) [Balan __ paat-**aval**] Mala-(*ve) AC   3b) [Balan __ paatt-**adu**] Mala-*(ve)   IC
      Balan   saw-she   Mala-acc   Balan   saw-it   Mala-acc
      'The one thing (h, fem, s) that Balan saw was Mala.'   'The one thing that Balan saw was Mala.'

When the pivot is construed as a direct object as in (3), accusative case cannot appear in the AC but must in the IC. This is explained if only the IC pivot is in the right configuration within the subject phrase for case assignment before displacement. <u>Second</u>, the AC, unlike the IC, shows a null operator restriction.

4a) *[Balan samec-**avan**] Somu-(vikkaage)   4b) [Balan samec-**adu**] Somu-vikkaage
      Balan cook-**AVAN** Somu-ben   Balan cook-**ADU**   Somu-ben
                                                           'The one that Balan cooked for is Somu.'

(4a) shows that an AC with a PP pivot is ungrammatical. (4b) shows that the IC can have a PP pivot. It fact, the IC can be shown to have a pivot that is an AdvP, PredP, and CP as well. Following the category difference between parasitic gaps and across the board extraction (Cinque 1990, Postal 1993, Munn 1999) and Chomsky (1986)'s null-operator analysis of parasitic gaps, the difference in (4) is explained if the AC, but not the IC, has a null operator in the subject phrase.

Tamil Reflexive Connectivity: We can now look at the connectivity facts w.r.t. the complex reflexive.

5a) *[Balan$_i$ adici-kit-**avan**] taan taane$_i$ 5b)   [Balan$_i$ __ adici-kit-**adu**] tan-ne taane$_i$
      Balan   beat-koL-he   self self   Balan   beat-koL-it   self-acc self
      'The one thing (h, m, s) Balan beat was himself.'   'The one thing Balan beat was himself.'

(5a) shows that the AC pivot cannot be a reflexive whereas (5b) shows that the IC pivot can be. Based on

the difference in (2), the difference in reflexive connectivity in (5) can be explained. Since a copy of the reflexive is A-bound by *Balan* in (5b) but not in (5a), only the IC exhibits reflexive connectivity.

English Reflexive Connectivity: English reflexives in specificational clauses do not need an A-binder.

6a)   The person that every professor$_i$ said deserves a raise is himself$_i$.
6b)   *Every professor said that himself deserves a raise.

(6a) (from Sharvit 1999) shows reflexive connectivity in an English copular clause. However, this reflexive is construed in a position in which it cannot usually be licensed as shown in (6b). Schlenker (2003) assumes an ellipsis analysis and proposes that A'-movement of *himself* licenses reflexive binding [(7a)]. However, such movement of *himself* cannot usually license binding either as shown in (7b).

7a)   The person every professor$_i$ said deserves a raise is [himself$_i$ ~~[every person$_i$ <himself> said~~ ~~<himself> deserves a raise]]~~.
7b)   *Himself$_i$, every professor$_i$ said t$_i$ deserves a raise.

While A'-movement of picture-NPs is known to license matrix antecedents (Barss 1986), similar movement of the reflexive itself [(7b)] cannot license a matrix antecedent. These facts (and others) indicate that reflexive connectivity in (7a) is licensed by equation of two functions (Jacobson 1994).

8)   <u>The function mapping every professor to the person he said deserves a raise</u> is <u>the identity function</u>.

(8) shows (6a)'s interpretation in Jacobson's analysis. Crucial to this analysis is *himself* as an identity function. Notably the Tamil counterpart of (6a) is ungrammatical whether it is an IC or an AC.

9)   *[ella profesarum [__ sambalam kuutikki sariyaana aalu ni] conn-**avan/ -adu**]   taan taane
         all professor   pay   raise.for right person comp said-**AVAN/ -ADU**   self self

(9) shows an AC/ IC with an embedded subject gap that would have the meaning of (6a). The ungrammaticality of this sentence indicates that (8) is never a possible LF interpretation of (9). Why?

Identity Functions and Bound Variables: The ungrammaticality of (9) cannot be taken to indicate that Tamil specificational clauses do not have equative semantics. Nor does it indicate that Tamil does not allow equation of functions. Consider (10) which shows quantifier binding connectivity in the AC.

10)   [ellarum$_i$ adici-**avan**] avan$_i$ tambi   AC
         everyone beat-he   his   brother
         'The person everyone Balan beat was his brother.'

Comparison of (5a) & (9) with (10) indicates that Tamil reflexives differ fundamentally from possessives. Unlike Tamil reflexives, Tamil possessives can be construed as functions. Such functions map individuals to their brother (Jacobson 1994). In addition, (10) does have an equative semantics.

11)   <u>The function that maps individuals to the one they beat</u> is <u>the function that maps individuals to their brother</u>.

(11) shows the interpretation of (10). Based on the data above, I conclude that Tamil complex reflexive *taan taane* cannot be interpreted as a function. Specifically, I argue that the Tamil reflexive is a variable of type e that has reflexive morphology depending on whether its antecedent (an A-binder) is in the same phase as the reflexive (Kratzer 2009, Safir 2014). On the other hand, the English reflexive is an identity function and can have reflexive shape independent of whether its antecedent is in the same phase. Ultimately, we can conclude that natural language reflexives can be functions or A-bound variables.

Concluding remarks: Further evidence from compounding, similarity predicates (Safir 1992) and Norwegian is shown to support this ambiguity analysis of reflexives. For example, consider Norwegian which is assumed to form specificational clauses similar to English with an externally headed relative clause. Notably, although Norwegian has three different reflexive forms (pronoun+self, *seg*, *seg*+self),

copular clause reflexive connectivity is exhibited only with the pronoun+self form. This is suggestive that the pronoun+self form is the identity function in Norwegian.