Polysemy of Reciprocal

In many languages a morpheme that is responsible for a reciprocal interpretation appears in a sentence that does not describe a reciprocal situation. A question is whether this is a case of polysemy (one lexical item with two related meanings) or homonymy (unrelated lexical items). We take the Japanese verbal suffix –aw that appears both in reciprocal and non-reciprocal sentences as a case study and argue for the polysemy view of this suffix. We provide a formal implementation to support the claim and demonstrate the compositional analysis to derive the two interpretations.

It is typologically common that “the reciprocal construction may encode more than one type of real-world situation (Lichtenberk 1985; 19)”. The Japanese verbal suffix –aw appears in reciprocal (1)a and non-reciprocal plura ction (2) sentences. Assuming what Langendoen (1978) called Weak Reciprocity (∀x∃y(R(x)(y) & x≠y) & ∀y∃x(R(x)(y) & x≠y)) to be the core interpretation of reciprocal, the reciprocal interpretation of (1)a would be (1)b, which can be folded by Sternefeld's (1998) n*-operator as in (1)c (see Sauerland 1998, Beck 2001). On the other hand, the non-reciprocal interpretations have been described in various ways, such as collaboratively, alternately, one after another, competing with each other in English translations (Ishii 1989, Nishigauchi 1992, Nakao 2003, Bruening 2006). The previous works on the Japanese verbal reciprocal mentioned the non-reciprocal sentences with –aw but did not discuss it in detail. Indeed, the actual interpretation of a single sentence varies in different contexts. However, the shared meaning among these translations is pluraction (Lasersohn 1995, Beck and von Stechow 2007, Faller 2007) by the plural referent reffered by the subject NP and should be captured by the n*-operator as well.

(1)  a. Kodomo-tachi-ga  tasuke-at-ta.
    child-Pt-NOM  help-RECIP-PAST
    ‘The children helped each other.’
    b. ∀x(x∈kids → ∃y(y∈kids & x helped y & ¬x◦y)) &
       ∀y(y∈kids → ∃x(x∈kids & x helped y & ¬x◦y))
    c. *[λx.λy. help(x)(y) & ¬x◦y](kids)(kids)

(2)  Kodomo-tachi-ga  Yasu-o  tasuke-at-ta.
    child-Pt-NOM  Yasu-ACC  help-RECIP-PAST
    ‘The children helped Yasu one after another.’

The verbal suffix –aw appears in a nominal element aite (lit. ai-te ‘match-hand’) whose rough meaning is ‘a partner (of something contextually determined)’. The nominal aite also has various but related meanings, which can be specified by an additional elements such as a compound (3)a or a Genitive modifier (3)b. Similarly, the interpretation of
non-reciprocal sentences with –aw can also be specified by adverbial elements as in (4).

(3) Yasu-wa Hiroki-no {a. kyoosoo- b. kootai-no} aite da.
Yasu-Top Hiroki-GEN {a. competition, b. alternate-GEN} match-hand COP.NPAST
‘Yasu is Hiroki’s [a. competitor/rival, b. alternate].’

(4) Kodomo-tachi-ga {a. kisotte, b. junbanni} Yasu-o tasuke-at-ta.
child-P1-NOM {a. competing b. alternately} Yasu-A ACC help-RECIP-PAST
‘The children helped Yasu [a. competing with each other, b. alternately].’

We propose that the non-reciprocal interpretation has a context dependent variable of a state VS and that the event property denoted by (2) is (5)a (see Schwarzschild 1996 for Cover), which is further folded by the n* operator as in (5)b. The VS(x)(y)(e) requires there be a state s present throughout the event e, where s is a substantive plurality (Kratzer 2003, Ch.4) of non-overlapping individuals x and y. The paring of x and y must be meaningful by itself and it is not enough to have a mere sum of two individuals. The precise way of paring is determined by the utterance context such as x is a competitor of y or x is an alternate of y.

(5) a. λE. ∀x(x ∈ kids&Cov1(x) →
   ∃y∃e(y ∈ kids&Cov2(y) & e ∈ E&Cov3(e) & help(Yasu)(x)(e) & VS(x)(y)(e))) &
   ∀y(y ∈ kids&Cov2(y) →
   ∃x∃e(x ∈ kids&Cov1(x) & e ∈ E&Cov3(e) & help(Yasu)(x)(e) & VS(x)(y)(e))) &
   ∀e(e ∈ E&Cov3(e) →
   ∃x∃y(x ∈ kids&Cov1(x) & y ∈ kids&Cov2(y) & help(Yasu)(x)(e) & VS(x)(y)(e))))

b. λE. ***[λx.λy.λe. help(Yasu)(x)(e) & VS(x)(y)(e)](X)(X)(E)

where VS(x)(y)(e)=1 iff ∃s(s<e & s is a state of x and y being a pair & ¬x◦y)

The reciprocal interpretation can also be modeled using the VS and we propose two type shift variants of the lexical meaning of –aw in (6). When the predicate that –aw suffixes is a transitive verb, the most explicit way of paring the two individuals is interpreting them as the coarguments of the predicate. In consequence the VS functions as the non-overlapping condition of the reciprocal interpretation. Under this view, -aw in the non-reciprocal sentences functions as a semantic transitivizer in the sense that it creates a function from a relation of two individuals to an event property based on the intransitive verb it takes. At the same time, it reduces the syntactic valence of the main predicate by one by feeding it the subject argument twice.


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