Relational nouns and reciprocal plurality

This paper aims to describe the similar behavior of relational nouns (DeBriun and Scha 1988, Lander 2000, Vikner and Jensen 2002: 204-210) in conjoined and plural contexts. I will refer to both cases as the instantiations of **reciprocal plurality**. I will demonstrate that the reciprocal plurality is problematic for the theories of conjunction and plural semantics. My analysis derives this interpretation in a similar way in both cases and explains the special properties of the constructions in question.

Plural relational nouns. Eschenbach (1993) was the first to point out that the plural noun phrases like *the sisters* in (1) do not need any contextual support to be interpreted, although many other relational nouns do (2).

(1) The sisters entered the room.
(2) The daughters entered the room.

On the most likely interpretation of (1) *the sisters* refers to a set of people who are sisters of each other. Eschenbach indicates that such interpretation poses some problems for the analysis of plurality and proposes a special ^{rec} operator to deal with such cases.

On an alternative analysis of Winter (2001: 191-249) the lexical meaning of the relational nouns in question is assumed to be equivalent to the meaning of the plural form. In other words Winter assumes that say a word *friend* denotes the set of sets of friends. On this analysis the plural morpheme has no effect on the meaning of the set predicates.

Conjoined relational nouns. I will demonstrate that the conjoined relational nouns often give rise to a similar interpretation. For example the phrase *a husband and wife* in (3) can only refer to two people who are husband and wife of each other and not to say Mary's husband and John's wife.

(3) The novel is about a husband and wife.

This interpretation is hard to describe within the current theories of conjunction semantics (Winter 2001: 29-75 among many others). The problem here is that starting from Partee and Rooth's (1983) notion of generalized conjunction it has been assumed that the arguments of conjoined nominal predicates must be coreferent. This is the case for the phrases like *fried and colleague* in (4) where two relational nouns have the same referent (John) and the second argument for both nouns is the speaker.

(4) John is my friend and colleague.

But the conjoined phrases like *husband and wife* can not be interpreted in this way because one person can not be both husband and wife to some other person.

Analysis. The existing descriptions cover the instantiations of reciprocal plurality in plural relational nouns but ignore the reciprocal meaning of conjoined relational nouns. I will argue that the similarities in the interpretation of relational nouns in the plural and conjoined contexts are not accidental (cf. Krifka's (1990) observation that coordination and plurality are closely semantically related).

I crucially assume the relational nouns to denote two-place predicates.

On my analysis the reciprocal plural meaning arises whenever the denotation of an expression is essentially the set of pairs of individuals such that a certain predicate holds for such pairs and a certain inverse predicate also does (5).

(5) $\left\{ \langle x, y \rangle \mid R_1(x, y) \wedge R_2(y, x) \right\}$

This part is essentially present in the meanings of both types of expressions although I will demonstrate that it is modified due to the requirements of the particular constructions.

In the case of plural forms the same relation (for example *sister'*) is substituted for both R_1 and R_2. Abstracting over the set that has the structure in (5) leads to the same interpretation that Eschenbach's original operator predicts although the set is differently structured.

To derive the reciprocal plurality in the case of conjunction we assume that the arguments of the second conjoined relational noun are inversed at the first stage of conjoining. Winter's (2001) conjunction schema is then applied.

Further predictions of the analysis. On my analysis all the essential properties of plural relational nouns that were outlined in Eschenbach 1993 and Winter 2001 (among others) are still captured: the plural relational nouns still quantify over sets. The only thing that is affected is the structure of the complex object that is in the denotation of the plural form.

For the case of conjunction my analysis correctly describes the quantificational properties of the reciprocal plurality. The conjoined relational nouns do not necessarily have the reciprocal meaning if they are separately quantified (6).

(6) A hilarious movie about a husband and a wife who fall in love. Only they are not married to each other.

The sentence in (3) could not receive the continuation similar to the one in (6). This example (taken from the amazon.com description of some movie) demonstrates that the reciprocal meaning becomes rather a pragmatic implicature in this case (it can easily be cancelled).

To be inversed the two arguments of the second noun must not be bound. Hence the reciprocal interpretation is not necessarily derived in (6) although it is still pragmatically salient.

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