

Predicative Possessives, Relational Nouns, and Floating Quantifiers

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Abstract

Green (1971) notes the apparent unacceptability of certain quantificational expressions as possessors of singular head nouns. We provide data from a range of English dialects to show that such constructions are not straightforwardly unacceptable, but there are a number of restrictions on their use. We build on Kayne's (1993; 1994) analysis of English possessives in conjunction with considerations on floating quantifiers to explain both the types of possessive that are permitted in the relevant dialects and their distribution, which is restricted to predicative position.

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1 Introduction

In a 1971 squib, Georgia Green makes the following observation (Green, 1971, p.601; numbering adjusted):

The noun phrases of (1):

- (1) a. One of my friends' mother
- b. All of their scarf

- c. Both of our scarf
- d. One of our scarf
- e. Both of my sisters' birthday [My sisters are twins]

which should be well formed paraphrases of (2):

- (2) a. The mother of one of my friends
- b. The scarf that belongs to all of them
- c. The scarf that belongs to both of us
- d. The scarf of one of us
- e. The Birthday of both of my sisters

are ungrammatical.

Green's intuition is correct for the examples in question in the way they are presented. It is not, however, *generally* correct in the sense that forms of the type she cites are grammatical for many speakers of English¹ in specific grammatical contexts. Consider the following example:

- (3) Norman is both of our friend(s)².

For speakers who find (8) grammatical, the possessive DP in predicative position does not receive the pragmatically somewhat implausible reading where the speaker and some other person(s) (*our*) have exactly two friends and these two friends happen to be the same person, (*Norman*). For concreteness and ease of reference, call this *meaning A*. This reading is not altogether impossible, but it is implausible and requires very specific contextual information to work.³

The most plausible and prominent reading (call it *meaning B*), the one we are interested in, conveys the information that one person (*Norman*) is a friend of both

the speaker and the other relevant person(s) (*our*). The kind of examples like (8) that form the core of this paper have not received any attention in the formal literature as far as we know.⁴ They are, however, extant in speech, informal writing and formal writing. A March 2016 headline in *The Guardian* newspaper reads:⁵

(4) Getting a fair deal for millennials is in all our interests.

(4) clearly does not mean that all the interests that a set of people have are served by whatever the subject describes. Rather it means that whatever the subject describes serves a particular interest which is an interest of each of the individuals quantified over by *all*. However, as Green's examples indicate, the same reading is not available when the QP is in argument position:

- (5) a. Both of our friends are here.
b. Both of our friends are coming.
c. *Both of our friend is coming.
d. Jim saw both of our friend(s).

The only available meaning for (10-a)-(10-b) is that the two individuals who are our friends are here/coming. (10-c) shows that singular agreement on *friend*, which could force *meaning B*, is completely impossible. It is possible in (10-d), however, which has the QP in object position. It is in this sense that Green's observation is not *generally* correct. We can therefore ask why such a contrast between argument and predicate positions should actually exist. Does the distinction between argument and predicate positions provide sufficient tools to explain it, and if so, how? Alternatively, is it the case that the restriction to predicate positions should itself be derived from independent properties of the construction?

To understand the differences between the grammatical and ungrammatical

cases we will first tackle the structure of the post-copular phrase in (8), and from that build the meaning compositionally for the examples in the same class as (8). This will also show us what is wrong with the examples of similar form that are *not* in the same class as (8). But before all that, we should characterize the class in which (8) belongs. This is the focus of section 2 where we present the core relevant data. The analysis is developed in section 3. More specifically, section 3.2 develops a syntactic analysis based on Kayne's (1993; 1994) analysis of English possessives, section 3.3 develops the semantic analysis, and section 3.4 deals with some residual issues, including the optional plural agreement on nominals by developing an analysis in parallel with cases of coordination, and the observed dialectal variation as a case of lexical variation.

2 The Core Data

Let us start by documenting in more detail the observation that this construction is only possible in predicative positions and never as an argument. Compare the examples in (11) with those in (12):

- (6) a. Sam is both of our friend(s).
- b. Mary is all of our mom(s).
- c. Archie is each of our son(s).

- (7) a. Both of our friends are in the room.
- b. All of our moms are gone.
- c. Each of our sons has a toy train.

The examples in (12) can only receive *meaning A* and the phrases *both of our friends*, *all of our moms*, *each of our sons* will always denote a set of individuals of cardi-

nality 2 (in the case of *both*) or more. It cannot receive a meaning where the phrase headed by *both* denotes a singleton set. However, these constructions do not seem to behave like standard copular constructions as they do not allow in any case the formation of the inverse copular (Moro, 1997).⁶

- (8) a. Both of our friends is/*are Sam.
b. *All of our moms is/are Mary.
c. *Each of our sons is/are Archie.

Furthermore, they also occur in small clauses:

- (9) a. I consider him both of our dad(s).
b. ?I thought her both of our ally/allies.
c. I called her both of our buddy/buddies.

As these constructions have a clearly possessive structure and are restricted to predicative positions, we will refer to them from now on as *Uniquely Predicational Possessives* (UPPs). Turning now to the internal structure of UPPs we will focus in turn on the nature of the determiners available in UPPs, the types of noun, the possessive pronoun and the plural inflection.

2.1 Quantificational determiners in UPPs

As shown in (15), universal quantificational determiners in UPPs give rise to *meaning B* whereas existential and intermediate quantifiers are generally unacceptable.

- (10) a. He is all of our friend(s).
b. He is each of our friend(s).
c. He is both of our friend(s).

- d. He is none of our friend(s).
- e. He is neither of our friend(s).
- f. ??/*He is some of our friend(s).
- g. *He is most of our friend(s).
- h. *He is many of our friend(s).
- i. *He is few of our friend(s).

Further examples using universal determiners are easy to find; the examples in (16) were found using Google on 10th March 2017:

- (11) a. I know, but he is both of our friends and it is driving a wedge between us.
- Unconfirmed dialect⁷
- b. Is this both of our decision?! US English⁸
- c. The Beatles' story is all of our stories. US English⁹
- d. It is all of our responsibility to help girls everywhere defy the odds.
- Canadian English¹⁰
- e. Drink driving is all of our responsibility. Australian English¹¹
- f. He is willing to not invite his friends so she will not come, since she is neither of our friends. Unconfirmed dialect¹²
- g. SV is neither of our friends lately Unconfirmed dialect¹³

The British National Corpus¹⁴ also yields the following examples:

- (12) a. Now that the eight year journey to *Passion* is complete it is all of our responsibility to get out there and get *Passion* into bookshops, onto

bookshelves and onto reading lists.

Text ARW 250

- b. There has been some very unfortunate suicides [...] which is all our responsibility.

Text KGR 697

- c. But clearly some way must be found to prevent the open house that is all our concern to safeguard the amenity and character of the county.

Text KM7 14

Although in some cases (see ??-??) the preposition *of* appears to be optional, the [D [of. . .]] construction must be possible with the relevant Q-Det in order for the UPP to be at all possible. Thus (18), with the intended meaning that Jim is a friend of every one of us, is ungrammatical:

- (13) *Jim is every of our friend(s).

As can be observed, the set of quantifiers that are acceptable in UPPs includes the three quantifiers that *float* in English, *all*, *both*, *each*, an observation which will turn out to be crucial in the analysis. But for now let us turn to the nouns that can appear in UPPs.

2.2 The Nouns

The set of nouns that allow this construction is rather restricted. What one might call the core set of relational nouns like *friend*, *mother*, *father* and other kinship terms are the paradigmatic cases:

- (14) a. He is both of our friend(s).
b. I am both of your son!¹⁵
c. They are both of our parent(s). (2 parents, 2+ children)
d. He is both of our dad(s).

- e. She is both of our great-grandmother(s).

Beyond kinship, UPPs can be found with other relational nouns expressing part-whole and even more abstract relations (with some degradation in judgments as the relations become more abstract). The following list of examples is based on Barker's (1995) discussion of part/whole relations:¹⁶

- (15) a. This is both of our nose(s).
- b. These are both [of these cakes']/their ingredients.
- c. This is all of [these stories']/their ending(s).
- d. This is both of their shape(s).
- e. The Rhine is both of [these countries'/France and Germany's]/their border(s).
- f. The 38th parallel is both of [the Koreas']/their border(s).
- g. Ahab is both of [these ships'/crews']/their captain(s).
- h. Murielle is both of [these students']/their penpal(s).
- i. This is both/all/each of our biography/biographies.

On the other hand, absolute/non-relational nouns give consistently bad results:

- (16) a. *Rex is both of our dog(s).
- b. *The pink fleece is both of our sweater(s).
- c. *The Skoda is both of our car(s).
- d. *The Toshiba laptop on the right is both of our computer(s).

An apparent exception to this is the example of the more abstract kind of relational nouns that involve a representation of an individual. To clarify, a noun like *birthday* is relational because its use entails the existence of an individual whose it is the *birthday*. The same goes for *mother*, *friend* and so on.¹⁷ Now if we turn to some-

thing like *statue*, *picture* or *photo* then we can make the equivalent argument that a statue entails the existence of the individual it represents.¹⁸ These nouns, and by extension nouns like *paper* or *book*, can also be thought of as relational in the sense that they entail the existence of an individual who is the author of the book or paper. This is pretty much the argument in Barker (1995). A critique of this argument is found in Adger (2013). Interestingly though, Adger’s critique is based almost entirely on examples of the representation type.¹⁹ Nonetheless, the following examples appear to be fine:

- (17) a. This is both of our paper(s).
 b. The statue in the garden is both of our sculpture(s).
 c. The picture on the stairs is both of our photo(s).

Crucially, in examples (22-b) and (22-c), the subject (*statue*, *picture*) can only be interpreted as belonging to or being created by the possessors; it is not possible, or at the very least extremely difficult outside very specific pragmatic contexts, to interpret them as *representing* the possessors:

- (18) The sculpture in the garden is both of our statue(s)...
- a. ... we worked on it together.
 b. ... #we sat for it at the same time.

The significance of these facts is that they suggest that these nouns can be construed as relational in the relevant sense with the proviso that what seems to be prominent is not the individual that is represented but the individual that is the thematic *creator*.

Somewhere in between these categories falls a group of nouns consisting of nouns like *teacher*.²⁰

- (19) a. ?She was both of our teacher(s).
 b. ?She was both of our doctor(s).
 c. ?She was both of our therapist(s).

These can be thought of as more or less inherently relational, although not in as straightforward a manner as the previous ones, given that, for example, one can be a teacher but an unemployed one (i.e. a teacher of no students). As Partee and Borschev (2003, p.82) have observed ‘... *teacher*, unlike *father*, is lexically supplied with equally salient and closely related relational and non-relational readings, so that one would not have to suppress the relational reading by shifting in order to interpret *teacher* [...] non-relationally.’

It is instructive to compare them with similar deverbal nouns that produce consistently bad results:

- (20) a. *He was both of our cleaner(s).
 b. *He was both of our bank manager(s).
 c. *He was both of our bicycle-repairman/men.

Another class of derived nominals, namely those that according to Grimshaw (1990) and subsequent literature are supposed to have their own argument structure (inherited from the verb from which they derive) are permitted in UPPs, with some interpretive subtleties:

- (21) a. This is both of our announcement(s) to the commission.
 b. This is both of our examination(s) (of the patient).
 c. This is both of our condemnation(s) (of the invasion).
 d. This is both of our claim(s) (to the presidency of Burundi).
 e. I consider this both of our examination(s).

With these nouns, judgments are somewhat more subtle because there is a plurality of events leading to a meaning that can be construed in ways to render them irrelevant. The important generalization from our point of view is that for those nouns that obligatorily take arguments, the “subject” or agent, in fact *the highest*, argument can be possessivized in this construction. Crucially, lower arguments cannot. This fact will become important later on.

Finally, the noun in these constructions can be in the singular or plural, but some speakers strongly prefer for it to appear in the plural with relational nouns. The fact that relational nouns are in the plural for these speakers does not have an interpretive effect that is immediately clear. With event nominals, on the other hand, it seems to signal the plurality of the events. Given the patterns observed so far it is clear that there are some important questions that require further scrutiny. In the next section we develop the syntax of these sentences.

3 Analysis

3.1 Initial Assumptions

Before we turn to the main part of the analysis we need to spell out two assumptions that we will be making. The first and rather uncontroversial one regards the structure of the phrases that we are analyzing when they are in argument position:

(22) Both of our friends came.

(23) I gave a book to all of our friends.

The relevant structure is as follows: