

Am I My Own Sibling?

Itai Bassi, Keny Chatain, Sherry Yong Chen, Filipe Kobayashi

November 19, 2021

In a debate on logic and grammar, the medieval grammarian al-Sirafi ([Margoliouth, 1905](#)) notes that his opponent accepts (1) as a valid sentence, but does not list Zaid among Zaid's brothers in (2):

- (1) Zaid is the best of his brothers. (2) _ Who are Zaid's brothers?
 _ (*Zaid,) Amr, Bakr, Khalid

The puzzle raised by (1) (accepted by all speakers consulted) is that partitive superlatives, like "*X is the A-est of the Y's*", presuppose that X is a Y ([Stateva, 2002](#)). But this presupposition cannot be met in (1): as the diagnostics in (2) and (3) show, Zaid is not his own brother.

- (3) a. # Every one of Zaid's brothers, including Zaid, came.
 b. **Context:** *Zaid's father has exactly four sons: Zaid, Amr, Bakr and Khalid.*
 # Three of Zaid's brothers came.
 (proper partitive constraint, [Jackendoff \(1977\)](#))

Characterization of the puzzle. Other operators, like *only* or *first*, and other partitives, like *out of* or *among*, are also read as including the subject among the subject's siblings (al-Sirafi's reading). (4d) shows that a partitive structure is crucial to bring about al-Sirafi's reading.

- (4) a. I am the only one of my siblings who smokes.
 b. Out of all my siblings, I am the tallest.
 c. I am the first of my siblings to get a PhD.
 d. # I am the tallest sibling of mine.

Even when an operator can yield al-Sirafi's reading in principle, we find that some conditions, listed in (5), must be fulfilled for the reading to arise. Evidence for these conditions is provided below.

- (5) In "*X is OP out of/of/among Z's NP*", Z can be counted among Z's NP iff
- a. Z co-refers with X.
b. NP lexically expresses a symmetric relation

In support of (5a). When the subject does not co-refer with Z, Z cannot be in the comparison set denoted by “Z’s NP”. In particular, (6a) does not entail that Bakr is taller than Zaid.

(6) Bakr is the tallest of Zaid’s brothers. #So, in particular, he is taller than Zaid.

In support of (5b). The noun used in the partitive construction must express a symmetric relation (R symmetric iff $\forall x, y, R(x)(y) \rightarrow R(y)(x)$), as illustrated in (7b). The relation need not be transitive like *sibling* (R transitive iff $\forall x, y, z, (R(x)(y) \wedge R(y)(z)) \rightarrow R(x)(z)$), as illustrated in (7).

- (7) a. **Non-transitive symmetric relation:** *friend*
Zaid is the only one of his friends who suffers from self-hatred.
 $\not\rightarrow$ Zaid is his own friend.
- b. **Transitive non-symmetric relation:** *ancestor*
I am the only one of my ancestors with green eyes.
 \rightsquigarrow I am my own ancestor.
- c. **Non-transitive non-symmetric relation:** *son*
Zaid is the only one of his sons who smokes.
 \rightsquigarrow Zaid is his own son.

Symmetric relations formed compositionally do not give rise to al-Sirafi’s reading.

(8) #Boston is the only one of the cities connected to it that has good food.

But morphologically complex nouns like *co-worker* can:

(9) I am the only of my co-workers who works at a standing desk.

One clue. Although we cannot explain al-Sirafi’s reading, Kai von Fintel (p.c.) notes a related paradox. If *other* is co-indexed with *I* in (10), then its presupposition (Heim et al., 1991) should require that I am my own sibling. Here too, the reading only arises with symmetric relations, as the contrast with (10b) shows.

- (10) a. I live in Burma. My other siblings live in Tanzania.
b. I lived in Burma. # My other ancestors lived in Tanzania.

References

- Heim, I., Lasnik, H., and May, R. (1991). Reciprocity and plurality. *Linguistic inquiry*, 22(1):63–101.
- Jackendoff, R. (1977). X syntax: A study of phrase structure. *Linguistic Inquiry Monographs Cambridge, Mass*, (2):1–249.
- Margoliouth, D. S. (1905). The Discussion between Abu Bishr Matta and Abu Sa’id al-Sirafi on the Merits of Logic and Grammar. *The Journal of the Royal Asiatic Society of Great Britain and Ireland*, pages 79–129.

Stateva, P. T. (2002). *How different are different degree constructions?* University of Connecticut.