

Dividing Additives: On *too*, *also* and German *auch*

Starting Point: In research involving additive particles like *too* and *also*, it is implicitly assumed that they contribute the same meaning. That is, (1a) and (1b) are semantically equivalent (capital letters indicate stress).

- (1) a. EMMA went to Germany **TOO**.
b. EMMA **ALSO** went to Germany.

Upshot: In the following, I want to argue that *also* and *too* are not semantically equivalent and discuss environments where their meaning comes apart, also looking at cross-linguistic variation of additives.

I. Basics on Additive Particles

- there are three aspects of meaning that are relevant for the semantics of additives
 - i. Presuppositional Content
 - ii. Anaphoricity
 - iii. Focus-Sensitivity

ad (i) – Presuppositional Content

- *too* and *also* are standardly¹ taken to trigger presuppositions (PSPs), such that the sentences in (2) are split into an asserted meaning and a presupposed meaning

- (2) a. EMMA went to Germany **TOO**.
b. EMMA **ALSO** went to Germany.
Asserts: Emma went to Germany.
Presupposes: Someone besides Emma went to Germany.

- evidence for this characterization comes from the standard family of sentences test (Chierchia & McConnell-Ginet 1990) in (3)-(6) where the assertion from (2) is no longer present while the PSP persists (=projects)

- (3)² a. It's not the case that EMMA went to Germany **TOO**.
b. It's not the case that EMMA **ALSO** went to Germany.
(4) a. If EMMA went to Germany **TOO**, she'll sure go again.
b. If EMMA **ALSO** went to Germany, she'll sure go again.
(5) a. Did EMMA go to Germany **TOO**?
b. Did EMMA **ALSO** go to Germany?
(6) a. EMMA probably went to Germany **TOO**.
b. EMMA probably **ALSO** went to Germany.

(3)-(6) *DON'T Assert:* Emma went to Germany.

(3)-(6) *Presuppose:* Someone besides Emma went to Germany.

¹ In fact, so standardly that I wasn't able to find a specific reference where it was proposed.

² Due to negation associating with Focus just as the additives do, there might be more interpretations available here. What's crucial is that there is one in accordance with presuppositional status.

ad (ii) – Anaphoricity

- Kripke (2009) has argued for an anaphoric analysis of the PSP associated with additive particles, rejecting an existential analysis in the view of data like (7)

(7) #John had dinner in New York last night, **too**.

- thus, the PSP must be satisfied within the context as in (8), otherwise it will yield a presupposition failure (pres-fail) as in (9)

(8) Context Sentence: Sabine went to Germany.

a. EMMA went to Germany **TOO**.

b. EMMA **ALSO** went to Germany.

(9) Context Sentence: Tourism outside the US is expected to increase in the future.

a. #EMMA went to Germany **TOO**.

b. #EMMA **ALSO** went to Germany.

ad (iii) – Focus-Sensitivity

- additive particles are furthermore assumed to associate with Focus (Rooth 1985, Beaver & Clark 2008) indicated by stress in English such that their meaning will be determined by the focus structure of the sentence they occur in

- for instance, the Focus structure from (2) to (10) does not affect the assertion but changes the presupposed content

(10) a. Emma went to GERMANY **TOO**.

b. Emma **ALSO** went to GERMANY.

Asserts: Emma went to Germany.

Presupposes: Emma went somewhere besides Germany.

- from what he have seen so far, there is no significant difference between *too* and *also*, such that we can assume the same semantics along the lines of (11) (from Bade 2016)

(11) $[[\text{too}]]^w = [[\text{also}]]^w = \lambda C. \lambda q \lambda w. \exists p[p \in C \ \& \ p(w) \ \& \ p \neq [[q]]^0]. q(w)$

this being said, I will now turn to the more or less subtle differences between the two particles

II. Difference #1: Focus-Bias

- although very subtle, native speakers prefer to use *too* to indicate Subject-Focus as in (12), whereas they prefer *also* for Focus on V(P) as in (13)

(12) *Context Sentence:* Michael works on semantics and psycholinguistics.

a. Florian **ALSO** works on semantics.

b. FLORIAN works on semantics **TOO**. <- *slightly preferred*

(13) *Context Sentence:* Michael works on semantics and psycholinguistics.

a. He **ALSO** works on PROSODY.

b. He works on PROSODY **TOO**. <- *slightly preferred*

- one explanation for these biases might be found in the respective syntax such that *too* is located in an extra-sentential position while *also* occupies a sentence-medial position³
- assuming that associating leftward is marked, we could make sense of (12) and (13) in terms of competition between the two options

III. Difference #2: +/- Contrast

- a more apparent difference between the particles can be seen in the context in (14) where only *also* seems to be felicitous
- (14) A: This is Krypto the Superdog. He has all the superpowers Superman has.
 a. B: He's **ALSO** a DOG.
 b. B: ??He's a DOG, **TOO**.
- intuitively, what speaker B wants to convey in (14) is how odd it is for a dog to have superpowers which can somehow only be expressed by *also* but not by *too*, which seems to be a **contrast** between the two properties of Krypto
 - despite a variety of linguistic phenomena that have been argued for to involve a notion of contrast (Repp 2014), there is no specific definition of the term

I will discuss two ways of how to think of the make sense of the supposed contrast in (14) although they are not mutually exclusive

(i) Contrast as Incompatibility

- one option for defining the contrast in (14) would be by putting it in terms of an **incompatibility of the two predicates** that are being compared, namely *being a dog* and *having superpowers*
- with *too*, on the other hand, the relation is merely additive, namely stating that two properties hold of one individual without relating them to each other
- this would make the right predictions for a context like (15) where *being rich* is incompatible with *justifying the ability to pay the bills with a fellowship*

(15) [A who has very wealthy parents just won a fellowship]
 A: I'm glad I have the fellowship to pay the bills.
 a. B: You're **ALSO RICH**, so why does it matter?
 b. B: ??You're RICH **TOO**, so why does it matter?

- ❖ this notion of contrast might also extend to explaining the Focus-biases insofar as it makes only sense to speak of incompatibility in terms of properties and not of individuals, thus giving the preference of *also* for V(P)-Focus

³ There are also cases of using *also* sentence-finally and *too* in sentence-medial position, but I take these to be less natural and simply assume base positions as so far discussed.

(ii) *Contrast in terms of Discourse Relations*

- another way to make sense of (14) would be in terms of the respective discourse relation à la Asher & Lascarides (2003) in (16)

- (16) a. *Contrast (i)*: Infer $p(a_1, a_2, \dots)$ from the assertion of S_1 and $\neg p(b_1, b_2, \dots)$ from the assertion of S_2 , in which for some property vector q , $q_i(a_i)$ and $q_i(b_i)$ for all i .
- b. *Contrast (ii)*: Infer $p(a_1, a_2, \dots)$ from the assertion of S_1 and $p(b_1, b_2, \dots)$ from the assertion of S_2 , in which for some property vector q , $q_i(a_i)$ and $\neg q_i(b_i)$ for all i .

- somewhat loosely deciphering this, we might say assume the representations in (17) for the respective discourse segments to see how the contrast comes apparent

- (17) S_1 : *has-superpowers*'(KRYPTO)
 S_2 : *dog*'(KRYPTO) \rightarrow \neg *has-superpowers*'(KRYPTO)

- interestingly, the Contrast relation is usually associated with the sentential connective *but* which can give rise to a difference between the particles as in (18)

- (18) a. John may be SENSITIVE, but he's **ALSO** the QUARTERBACK.
b. ??John may be SENSITIVE, but he's the QUARTERBACK **TOO**.

IV. Crosslinguistic facts: German, Russian and Korean

- German, in contrast to English, expresses additivity mostly by just one lexical item, namely *auch* in (19) (as the translation of (1))

- (19) EMMA ist **AUCH** nach Deutschland gegangen.
E. is also to Germany went

- curiously, *auch* patterns with *too* in the discussed examples as shown in (20) and (21)

- (20) A: This is Krypto the Superdog. He has all the superpowers Superman has.
B: # Er ist **AUCH** ein HUND.
he is also a dog

- (21) [A who has very wealthy parents just won a fellowship]
A: I'm glad I have the fellowship to pay the bills.
B: #Du bist **AUCH** REICH...
you are also rich

- ❖ from this we might be justified in concluding something about the paradigm of additivity across languages such that mere additivity is the stereotypical case and contrastivity an evolution of this that comprises additive relations, thus explaining the higher restrictions on *too*

- additional evidence for this comes from Korean and Russian which has several lexical items to express additivity which pattern with the differences observed for *too* and *also*, see (22) for the Korean translation of (14) and (23) for the Russian translation of (23)

(22) a. Ku salam-**to** kay-ta.
 DEM person-ADD dog-DECL
 b. #Ku salam **ttohan** kay-ta.
 DEM person also dog-DECL

(23) a. Ty **takže** bogat.
 you also rich
 b. #Ty **tože** bogat.
 you too rich

V. Conclusion & another puzzle

- so far, I have provided data that reveals differences between *too* and *also* in English, two elements who are usually taken to be semantically equivalent
- I tried to put the difference in terms of contrastivity: *also* is able to express a contrast between two properties while *too* cannot
- contrastivity could be framed in terms of an incompatibility of properties or in terms of discourse relations (or both)
- I will refrain from making a decision on this, as well as attempt a formal implementation given the remaining uncertainty about which way to go
- instead of ending with a solution I'd rather present another puzzle regarding additives, namely occurrences of multiple additives within one sentence which might add to the argument that they serve different functions, see (24)-(26)

(24) I have **also** dabbled in other areas of research **as well**.

(25) You **also** have to worry about your internal validity **too**.

(26) That **also** ties into exhaustivity **as well**.

References

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