

Discourse and addition

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Abstract

The Italian negative particle *neppure* exhibits additive and scalar interpretations. We offer evidence for its characterisation as a particle specialised in adding negative information. Then, we show how the different interpretations follow from different ways of verifying the existential presupposition typical of additive particles. In particular, the order on the set of alternatives observed in the scalar reading is not an independent presupposition but the effect of controlling the increase in information obtained by accommodation rather than by verification.

Pure additive and scalar particles have been studied in relation to the inferences they trigger and the felicity constraints they impose on the context. Although several analyses of their functioning are available in the literature, the reasons for their existence are less frequently explored. Sæbø (2004) offers a partial answer in claiming that obligatory occurrences of pure additive particles serve to accumulate topics while parallel information is added in a text. In this paper we consider the Italian negative particle *neppure*, that can be interpreted as pure additive (1) and as scalar (2), and look at the impact it has on the context. Note *in passim* that this combination of readings for a single lexical form is not unusual, cf. (König, 1991). Furthermore, at least in the Italian case, it does not correlate with a difference in distribution, which undermines an approach that would posit lexical ambiguity.

- (1) Non ha mangiato la mela e neppure la pera
s/he didn't eat the apple, and neither the pear
- (2) Non ha mangiato neppure il caviale
s/he didn't even eat caviar

We will argue for the following two points. First, the accumulation of information is intentional and aims at constructing a class of homogeneous

facts which finds a correspondent in the common notion of set of alternatives associated with items of this type. Hence, the particle has an impact on the conversation insofar as it exposes the intended connection among pieces of information. In the case of *neppure* the facts—i.e. true propositions—must be negative. Second, the particle qualifies the type of information, as it signals that, from the point of view of the speaker, the fact asserted with respect to the associate¹ is necessary and sufficient to reach a certain effect on a given issue with respect to a particular discourse context and the current knowledge status of the speaker.

1 The existential presupposition

Pure additive and scalar-additive particles share an existential presupposition, cf. the standard additive meaning as described by König (1991) and the existential implicature of *even* posited by Karttunen and Peters (1979). Indeed, in both additive and scalar readings, the associate of *neppure* is understood as a member of a class of individuals or actions containing at least another member, cf. (1) and (2). This core meaning is given in (3).

- (3)
- | | | |
|----|--|----------------------------|
| a. | $\text{neppure } (\lambda x[\alpha]\beta)$ | |
| b. | $\alpha(\beta)$ | entailment |
| c. | $\exists y(\lambda x[\alpha]y \wedge y \neq \beta \wedge \alpha(y))$ | existential presupposition |

On the other hand, these particles differ among them with respect to what is usually called the scalar presupposition. Like *either*, *neppure* in (1) does not impose an order on the set constituted by the associate and its alternatives, whereas in (2), like *even*, it seems to provide ordering instructions, the alternatives being ordered with respect to the associate and possibly among themselves (i.e. total or partial order). As a consequence, the presupposition of existence of a set, common to the two interpretations, may well enter the core meaning of the item as a conventional implicature, but the presupposition concerning the existence of an order on such set should be kept aside, since we aim at a unified analysis.

Although the existential presupposition is shared, we are going to argue that it is this presupposition that somewhat causes the reading variation recorded in (1) and (2). In the literature, additive particles are known not to accommodate their presuppositions (Zeevat, 1992). On the other hand, it is customary to assume that additive scalar items can accommodate their

¹The element to which *neppure* associates is called the *associate* following Krifka (1998); Rullmann (2003). The clause that contains it is called the host clause.

presuppositions, and do so most of the time. In the case of *neppure*, we claim that the lexical entry leaves unspecified the strategy to adopt. The existential presupposition can be satisfied either way, but the choice may result in imposing an order on the class.

2 Adding negative information

Let us first make a point on the nature of the information that is added. This paper adopts the proposal made in Tovena and Mari (2005) that parallel information of negative nature is conveyed by antecedent/context and host clause. As a consequence, a grammaticalisation of the additive particle as an NC-word is particularly suitable, because this warrants that the host clause is always negative, since either *neppure* is in the scope of a negative occurring somewhere else in the clause, or it introduces negation itself. However, one could criticise this choice by saying that here syntactic facts are misleadingly reinterpreted under the guise of pragmatics. Although we agree that a characterisation as an NC-word always comes with syntactic requirements on the host sentence, we maintain that other requirements, namely those on the context, do not follow from it, while they can be explained by the hypothesis that *neppure* adds up negative information.

First, support to this hypothesis comes from the contrast between a host clause that must be overtly negative and an antecedent clause where no overt negation is required to occur—as noted by Rullmann (2003) about *either*—although this is possible. This is shown by the *hate/dislike* vs. *not like* contrast in (4).

- (4)
- a. Detesta mele e pere. A dire la verità, [non gli piace/*detesta] neppure l'uva
s/he hates apples and pears. To say it all, s/he does not like grapes either
 - b. Non gli piacciono mele e pere, e (non gli piace) neppure l'uva
s/he hates apples, pears and grapes too

The constraint bears on compatibility of models, so it suffices that the proposition expressed by the host sentence with an alternative substituted for the associate follows from the context. Hence, the felicity condition that governs the distribution of *neppure* in a discourse, and akin negative additive particles, is a requirement on the type of information that is added and not a question of licensing, which never takes place across a stretch of two or more sentences, whereas the antecedent need not be adjacent to the host clause.

Second, the unacceptability of (5) also follows. *Tutte...tranne...* can be interpreted as a complex generalised quantifier (Keenan and Stavi, 1986). The first clause of (5) is used to provide an argument in favour of her/his having met many people. Although it also conveys the negative piece of information that s/he did not meet Luisa, the latter does not constitute the main communicative goal of the utterance.

- (5) *Ha incontrato tutte le ragazze tranne Luisa e neppure Marco
S/he met all the girls except Luisa and Marco either

Tutte...tranne... cannot introduce a negative orientation in the argumentation, cf. (Anscombe and Ducrot, 1983; Merin, 2003). Then, the clause that contains *neppure* cannot add up to the main argumentative direction, because i) it can only add negative information and ii) it requires homogeneous argumentative orientation between antecedent and host clauses.

3 The role of the associate

As recalled above, a characteristic of scalar particles that sets them apart from purely additive ones is that the associate is understood as ordered with respect to one alternative at least. The whole set of alternatives may be ordered. In either case, we can ask ourselves what is the role of the associate with respect to the class of alternatives, why is it singled out?

The question is not discussed in the literature on additive particles, to the best of our knowledge. As for scalar items such as *even*, there is no agreement about which position the associate occupies in the ordering and its status of scalar endpoint is debated. According to Kay (1990), there is at least one alternative with respect to which the associate ranks higher; But the associate is not ranked with respect to the whole class. For Barker (1991, 1994) the associate is the strongest element of the universal class to which *even* is said to make implicit reference; The notion of scale is not mentioned and no information is explicitly given about whether the class is totally ordered. Fauconnier (1976) explicitly says that the associate occupies the strongest position on the order under consideration.

An antecedent, when present, provides at least another element in the set besides the associate, hence it satisfies the existential presupposition and it also meets the minimal requirement for a scale. In the case of *neppure*, we observe three situations. First, when the set formed by antecedent and associate is perceived as unordered, the additive reading emerges, cf. (1) above. Second, whenever it is perceived as ordered, e.g. by lexical information (6),

the scalar reading emerges. Third, only the scalar interpretation emerges when no antecedent is available (7).

- (6) Non ha studiato questo capitolo, e non l'ha neppure guardato
He didn't study this chapter and he did not even look at it
- (7) Non ha mangiato neppure la pera
He didn't eat even the pear
~~He didn't eat the pear either~~

Following Tovena and Mari (2005), we propose that in both additive and scalar cases the associate has the role of marking the temporary boundary of the class. Before we develop this point, we discuss the way the class is set up.

4 The scalar presupposition

The class of alternatives is constructed in an extensional way whenever its members are overtly provided by the preceding context and the presupposition of existence can be verified. An order may or may not be present. The scalar interpretation emerges if an order is perceived, and the default reading is the purely additive one.

Alternatives are identified using the associate and the content of the host clause. The presupposition that the property predicated by the associate applies to at least another salient entity is verified if and only if the proposition expressed by the host sentence with an alternative substituted for the associate follows from the context. In this case, the associate stands on an equal footing with respect to the contextual alternatives. No inferences are drawn from ascribing universal force to the position of the associate within the class; hence it is the context that must provide overt information supporting the move from one member to the other required to build a class. Let us call ALT_β the set of alternatives for the associate β . This set can be constructed as indicated in (8), but one could also keep track of the order in which alternatives are retrieved.

- (8) $\{x \mid \alpha(\beta) \rightarrow \alpha(x)\}$

On the contrary, in the absence of overt information on the alternatives, the presupposition triggered by *neppure* that should have been satisfied by the missing antecedent(s) is met by accommodating missing bits of information in the least costly and most effective way. The class is reconstructed

on the basis of information coming from the associate. But the only way to control such an operation, i.e. to license the move from the associate to some alternative, is by invoking the scalar scenario which licenses inferences running down a relevant scale, and allows one to identify the class intensionally. Therefore, the associate comes to play the role of scalar endpoint, even if only temporarily, and the scalar interpretation emerges. Indeed, any salient (i.e. relevant in the context with respect to the associate) suitable (i.e. satisfying the entailment) element can be imagined as member of the class, and more than one class can be put together. In the worst case, the participants in the conversation all think up somewhat different scales, but in all of them the relevant portion has the associate as endpoint.

In short, the price for accommodating the existential presupposition is paid by ‘moving’ from unordered to ordered sets and ‘upgrading’ the property predicated by the associate to intensional criterion for membership so that we can identify a relevant scale in context. Under this interpretation, *neppure* plus an NP associate is viewed as a generalised quantifier, cf. (9).

$$(9) \quad \lambda P. \exists P', scale_i, ALT_\beta [P(\beta) \wedge P'(\beta) \wedge \forall x \in ALT_\beta (P'(x) \wedge \beta >_{scale_i} x) \wedge \forall y \forall z (y >_{scale_i} z \rightarrow (P(y) \rightarrow P(z)))]$$

Such generalised quantifier combines with any property P such that first, P corresponds to the host clause minus the associate, second, there exists a type (property) P' , a scale $scale_i$ and a set of alternatives ALT_β such that β satisfies P and P' , and every member of ALT_β satisfies P' and is less than β with respect to the scale (i.e. on the scale), and third, the scale determines an entailment order with respect to P . The intensional facet of the characterisation comes from the dependency between the scale and the P -relativised entailment.

In this way, we are able to predict the general correlation between overt antecedent and additive interpretation and the mandatory one between no antecedent and scalar interpretation mentioned above.

Our analysis treats the additive reading as the basic one and the scalar reading as derivative. At first sight, this goes against the observation that when *neppure* is looked at in isolation, native speakers interpret it almost exclusively as scalar, and realise that it has an additive interpretation too only when prompted with a suitable context. However, given our hypothesis that *neppure* is underspecified with respect to the strategy to satisfy the existential presupposition, the prediction we make is that in isolation the reading that emerges more easily is the one that imposes less constraints on the context, and this is the scalar one.

5 Reasons for adding

It is a standard assumption that assertions are felicitous only if they add new information to the common ground (Stalnaker, 1979; van der Sandt, 1992). In this respect, sentences containing *neppure*, and additive particles at large for that matter, may stand on an uncomfortable posture. The addition operated by a sentence containing *neppure* cannot always be justified entirely on the basis of the Gricean maxims of quantity and quality. For instance, in a situation where the weather is not nice and this is known to speaker and hearer, a sentence such as (10) can be used felicitously, yet it cannot be said to increase the information on the weather strictly speaking.

- (10) E non fa neppure bello.
and the weather is not nice either

We claim that for (10) too it holds that the goal of asserting a sentence that contains additive *neppure* is to add information that is not recoverable on the basis of what is available up to that point in the discourse. What is peculiar to this type of example is that the new information being contributed is limited to the relevance of the weather conditions for establishing an (here unspecified) argumentative goal.

In uttering a sentence containing *neppure*, the speaker chooses to add information and signals that she is not ‘obliged’ to do it. This is the core component of the particle. But the addition is not gratuitous, recall that an agent undertakes a procedure if this is profitable (Van Rooy, 2004). In this case, the particle marks the fact that adding the piece of information contained in the host clause is going to lead to modifications in the information state that would not occur without such addition. This point can be characterised as a generalised conversational implicature.

The addition is relevant with respect to an implicit goal, for instance being informative but also providing evidence for an intended conclusion, as in the case of (10). The use of the particle signals that the piece of information that is being added has a particular function, therefore it triggers a search for a discourse goal by the hearer. Furthermore, the particle marks the piece of information as precisely the one that was missing to get the intended effect. Hence, it is a sort of endpoint, in terms of utility with respect to the information state and to the intended effect. It is maximally useful for the goal. There is a conclusion that can be reached thanks to the added bit and that could not be reached without it. This can be expressed in terms of deductibility or probability. The additive particle signals that the speaker has chosen to add p and that the preferred interpretation of this operation ADD p in the information state s is as in (11).

$$(11) \quad \exists q(s + p \Vdash q \ \& \ s \not\Vdash q \ \& \ p \neq q)$$

q represents the intended effect, and $s \Vdash q$ means that q is true everywhere in s , i.e. in every world of s . Alternatively, we can express it as in (12) that says that the probability of q in $s + p$ is greater than its probability in s .

$$(12) \quad \exists q(P_{s+p}(q) > P_s(q))$$

In the scalar case it is straightforward to see that the associate has the role of marking the temporary boundary of the class. Furthermore, the fact that the information contributed has to be maximally relevant for a specific goal and not in absolute terms makes it possible to account for cases such as (13) whilst sparing us the need to claim that some scalar particles are specialised for bounded or unbounded scales, as done by Schwenter and Vasishth (2000).

$$(13) \quad \text{Non ha vinto neppure la semifinale!} \\ \text{s/he did not win even the semifinals}$$

Given the physical or mental shape of the athlete, it was possible for her to win the semifinals and possibly the finals. When it comes to evaluating her performance, information that she did not make it to the finals is more relevant than knowing that she didn't win them. Similarly, in the additive case exemplified in (10), for instance, the bad weather is presented as what should tip the balance in favour of dropping a planned outing.

Then, in (14) the goal of using *neppure* seems to be to mark the exhaustiveness of the mentioned options with respect to an understood question.

$$(14) \quad \text{Intanto, il supergiudice inquirente del caso, Baltasar Garzon, tace} \\ \text{come d'abitudine. Nessun commento neppure dal governo di Josè} \\ \text{Maria Aznar. (1/2/2000LR)} \\ \text{in the meanwhile, the super state prosecutor concerned, i.e. Bal-} \\ \text{tazar Garzon, keeps silent as usual. No comments from the govern-} \\ \text{ment of Josè Maria Aznar either}$$

Since the type of effect obtained by adding information may vary from a conversational situation to another, it can best be characterised as a particularised conversational implicature.

6 More on the role of the antecedent(s)

We have assumed that the scalar reading of *neppure* can emerge also in the presence of an overt antecedent, if a relevant order is perceived as in (6). It was said that in this case the two strategies for satisfying the existential presupposition converge. This point may help in understanding Fauconnier's famous example (15) and Rooth's example (16)², that have nonscalar readings although scalar-additive French *même* and its English counterpart *even* in general do not have purely additive readings.

- (15) Georges a bu un peu de vin, un peu de cognac, un peu de rhum, un peu de calva et même un peu d'armagnac. (Fauconnier, 1976, 17)
Georges drank a little wine, a little cognac, a little rum, a little calvados, and even a little armagnac
- (16) Because they had been stolen from the library, John couldn't read 'The logical structure of linguistic theory' or 'Cartesian linguistics'. Because it was always cheked out, John didn't read 'Current issues in linguistic theory'. The censorship committee kept John from reading even Syntactic structures. (Rooth, 1985)

As said, in the literature, it is more or less understood that scalar particles are always willing to accommodate. Let us reword this point and say that particles that always exhibit a scalar interpretation are always willing to accommodate. It is also commonly agreed that additive particles do not accommodate. Now, *even* is an additive scalar particle. The general wisdom seems to be to ignore the constraints coming from a characterisation as additive as far as the order on the class is concerned but also as far as the need of verifying the presuppositions is concerned. In doing so, one wipes out all differences between items that can have a purely scalar reading and additive scalar particles.

On the contrary, we propose that traces of the additive characterisation can be found in the behaviour of additive scalar items. In particular, we claim that when a candidate for the role of antecedent is overtly present, scalar particles try to verify their presuppositions in the context first, before trying to accommodate. As a result, an independent additive reading can

²Rooth uses example (16) to argue against Karttunen and Peters (1979) scope analysis of *even*. Note that the same type of 'missing existential implicature' he uses as evidence for an NPI characterisation of part of the distribution of *even* is also found with positive additive particles, which clearly are not NPIs. Consider (i) as a substitute for the last sentence in (16).

(i) The censorship committee kept John from reading Syntactic structures too.

emerge. If it is possible to perceive an order, scalar and additive readings can converge. As a last resort, if no salient order is perceived, a scalar reading can be built by exploiting an order based on quantities, since the associate is the last element of a sequence. In short, whenever possible, the implicature computed on the basis of the host clause is verified in the context.

7 Summary and conclusion

Neppure exhibits additive and scalar interpretations. First, we have offered evidence for its characterisation as particle that increases negative information. Second, we have proposed a way to reconcile the apparent contradicting requirements of unordered vs. ordered sets of alternatives associated to these interpretations by drawing a distinction between core constraints and contextual effects. The characterisation is made up of layers of increasingly context sensitive constraints. The assumption behind it is that, on the one hand presupposed information that has to be accommodated is discourse new, hence relatively context ‘free’ in its content when compared with verified presuppositions, but on the other hand, it must be more tightly constrained in its form if one wants to keep comparable the increase in information resulting from verification and that obtained by accommodation.

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