On the possible pragmatic origins of inquisitive disjunction

The hypothesis that a disjunction has the potential to be *inquisitive* has proved to be descriptively and explanatorily fruitful. Its fruitfulness constitutes a strong case in its favor, but one should wish in addition for its truth to be understandable, somehow, as a consequence of more general cognitive or linguistic mechanisms. We will briefly reiterate the algebraic motivation that has been given (Roelofsen, 2013a), but focus on an alternative (but compatible) approach, starting from the *attentional* potential of disjunction (Westera 2017). We use it to answer two more concrete questions as illustrations: (i) why can disjunction be inquisitive, but not conjunction? and (ii) why does the inquisitiveness of a disjunction depend on its focus structure?

1. A minimal attentional semantics Let's suppose that uttering any sentence draws attention to the denotations of each of its constituents (as well as slight refinements of those (e.g., resolving ellipsis) in ways identified in Recanati, 2004). For instance, "John will be at the party" draws attention at the very least to John, to the party, to the act of going to be present somewhere, and to the proposition, denoted by the full sentence, that John will be at the relevant party. Similarly, a disjunction "John [will be there] or Mary will be there" can be assumed to draw attention to, among other things, John, Mary, the proposition that John will be present, the proposition that Mary will be present, and the union of these two propositions (denoted by the full sentence). It is also in part because of this that "Don't think of a pink elephant" will cause you to think of one.

The foregoing constitutes a very minimal "semantics" of attention – it is minimal in the sense that it does not rely on linguistic conventions specific to attention-drawing, but only on an ordinary (say, purely informational) semantics plus a syntactic notion of constituency. In particular, it does not rely on separate meaning conventions for disjunction and conjunction: any type of coordination simply draws attention to its own denotation as well as those of its coordinates. It is from this perspective that the question of why disjunction but not conjunction would be inquisitive is non-trivial. The key to answering this question lies in recognizing that what sentences draw attention to is typically more than what speakers *intend* to draw attention to.

2. Attentional pragmatics We assume that speakers, besides intending to share information (the *informational intent*), may also intend to draw the audience's attention to certain things. Let us concentrate on the case where these things happen to be propositions, and let us call the set of propositions to which a speaker intends to draw attention an *attentional intent*. We adopt from Westera, 2016 the following pragmatics for information and attention sharing (simplified):

- A rational, cooperative speaker, given a certain set of relevant propositions, should intend to:
  - assert all and only relevant propositions the speaker considers true;
  - draw attention to all and only relevant propositions the speaker considers possible, except those not deemed possible independently of any stronger relevant and possible propositions.

This is defined formally as a set of maxims in Westera, 2016, building on much previous work. We will use this formalization in the talk, but omit it here for reasons of space.

The above pragmatics helps narrow down the subset of the propositions to which attention was drawn for which this was done intentionally (i.e., the propositions which are part of the attentional intent), as opposed to those to which attention was drawn as a mere side effect. Of current interest is that the pragmatics predicts that, if relevance is closed under intersection (as often assumed), the asserted proposition must always be the union of the set of propositions to which the speaker intends to draw attention. *Proof sketch: if the union* $\bigcup A$ *of the attentional intent* A *is larger than the informational intent* i*, at least one proposition* $a \in A$ *is not considered possible independently of any stronger relevant and possible propositions (say,* $a \cap i$*); if, in contrast,* $\bigcup A$ *is smaller than* i*, then either there is a relevant independently possible proposition to which no attention was drawn (covering the remainder of* i*), or* i *should have been stronger. Hence* $\bigcup A = i$. Moreover, from this it

follows that disjunction can be used to draw attention to its individual disjuncts, but a conjunction can be used only to draw attention to the conjunction as a whole – for the union of two non-identical conjuncts is never equal to their intersection. (We will present several additional results which show that the predicted attentional intents are equivalent, under certain conditions, to a variant of inquisitive semantics known as *attentive* semantics (Ciardelli, et al., 2009; cf. Roelofsen, 2013b).)

3. The inquisitiveness of disjunction By communicating an attentional intent, a speaker effectively indicates that certain propositions are possible and relevant, say, worth making common ground. A cooperative addressee identifying this intent should provide the relevant information if possible. In this way, an attentional intent can be a means for a speaker to request information, i.e., to raise an issue. If we model issues in the inquisitive semantics way, as sets of resolving pieces of information, then the issue Q raised by means of an attentional intent A can be obtained by applying downward closure to the latter, $Q = A{\downarrow}$. Whenever the attentional intent contains multiple, logically independent propositions, so too will the issue raised. Therefore the potential of disjunctions (but not conjunctions) to serve to draw attention to multiple propositions entails the potential for disjunctions (but not conjunctions) to raise an issue, i.e., to be inquisitive.

It seems that disjunction is inquisitive with, but not without, prosodic focus on the two disjuncts (e.g., Roelofsen & Van Gool, 2010). In principle one could model this by stipulating that prosodic focus semantically interferes with the projection of inquisitive content – but the foregoing opens up a different approach. Our pragmatics permits inquisitive disjunction but it does not force it: the attentional intent and hence the issue raised can also be the singleton set containing just the disjunction as a whole. This predicts that disjunction is inquisitively ambiguous, and suggests that the effect of prosodic focus is a case of disambiguation. To spell this out we adopt the standard view of focus, as indicating those constituents whose substitution yields alternative answers to the same question under discussion (Roberts, 2012), where the latter is understood as a model of relevance. In particular, as we will argue, the two disjuncts must be focused if and only if each disjunct is relevant. It follows from our pragmatics that the attentional intent must contain the two disjuncts in the former case, and only the disjunction as a whole in the latter case.

4. Conclusion Summing up, our answers to the two starting questions is as follows. From the pragmatics of attention and the assumed relation between attention and inquisitiveness, it follows that (i) disjunction but not conjunction can be inquisitive and that (ii) the inquisitiveness of disjunction depends on prosodic focus. This lends new, independent explanatory support to theories based on inquisitive disjunction. To clarify, we do not mean to imply that the pragmatics of attention would be *sufficient* as an account of inquisitiveness; on the contrary, we consider it plausible that inquisitiveness has become a conventionalized, semantic effect of disjunction, which may for instance survive embedding in ways that pragmatic reasoning does not (some examples of which we will review). An important merit of our proposal, which we will cover in more detail in our talk, is that it connects inquisitiveness to existing semantic notions in new ways, such as attentive semantics, but also focus semantics (especially the similarly indirect approach to focus-sensitivity in Beaver & Clark, 2009) and anaphoric potential (especially Roberts, 2011).

5. References

• Beaver, D., & B. Clark (2009). *Sense and sensitivity: How focus determines meaning.* Wiley. • Ciardelli, I., J. Groenendijk & F. Roelofsen (2009). Attention! Might in inquisitive semantics. *SALT 19.* • Recanati, F. (2004). *Literal meaning.* Cambridge UP. • Roberts, C. (2011). Solving for interpretation. Ms. Oslo. • Roberts, C. (2012). Information structure in discourse. *SemPrag 5.* • Roelofsen, F. (2013). A bare bone attentive semantics for might. In Aloni, Franke & Roelofsen (eds.), *The dynamic, inquisitive, and visionary life of φ, $?\varphi$, and $\Box\varphi$.* ILLC. • Roelofsen, F. & S. van Gool (2010). Disjunctive questions, intonation, and highlighting. In Aloni, Bastiaanse, de Jager & Schulz (eds.), *Logic Language and Meaning (AC17).* Springer. • Westera, M. (2016). An attention-based explanation for some exhaustivity operators. *SuB21.*