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An 'alternative' core for *or*¹

Abstract

Natural language *or* has long been analyzed as the logical connective \vee , where it is measured by its contribution to the truth-conditional content of the proposition it participates in. Its core meaning is then 'inclusive'. We here argue that 'inclusivity' is neither an actual discourse reading of *or* nor its core linguistic meaning. We offer a subjectivist analysis instead, whereby *or*'s core is not truth-conditional. *Or* comes with a procedural, rather than conceptual core, instructing the addressee to construe the listed options as alternatives to each other. We define 'alternativity' as an unresolved competition between multiple options over a single slot, i.e., a single context-specific role. This means that the options are mutually exclusive. Crucially, however, on our account mutual exclusivity is not restricted to the objective world level. It can apply to non-propositional levels too. We can thus offer a unified account for *or* uses, most "non-disjunctive" ones included.

Keywords: disjunction, usage-based approach, alternativity

1. Introduction

What does *or* mean? We have addressed the question of why *or* is used in discourse in Ariel and Mauri (2018), and argued against the dominant classical readings associated with *or* constructions, namely inclusive and exclusive (and Free choice). Based on a bottom-up, usage-based approach, systematically applied to the Santa Barbara Corpus of spoken American English (Du Bois et al., 2000-2005), we offered a set of six main readings, each representing an actual, speaker-intended interpretation. Building on that empirical work, we now address the question of *or*'s core semantic meaning. We here argue for an 'alternativity' semantics for *or*, which treats *or* as a procedural, rather than truth-conditional expression at the core. On our analysis, *or* is silent about the truth of its disjuncts (that is, on how many of its disjuncts may or must be true). It only specifies that the explicitly mentioned disjuncts are associated with alternatives construed as mutually exclusive on *some* level.

'Alternativity', we would like to emphasize, lies at the subjective, rather than the objective level (just like 'contrast' and 'causality'). States of affairs by themselves may be either true or not, but they are not inherently 'alternatives' to each other. It takes a subjective human eye to relate them, and to further impose 'alternativity' on them. Consider in this connection the following:

1. Many treatments, including corticosteroid, gabapentin, acupuncture, heat **or** ice, **and** spinal manipulation, have poor evidence for their use. (Wikipedia, Jan 29, 2017).

(1) lists a number of treatments for Sciatica, all claimed to be ineffective. Objectively, 'acupuncture', 'steroids' etc. are on a par with 'heat' and with 'ice'. Indeed, the speaker could have used an *and* (or an *or*) throughout (e.g., [...] *acupuncture, heat, ice and spinal manipulation*), but that was not her choice. The relation between 'steroids' and 'gabapentin' etc. is subjectively construed differently from that

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between 'heat' and 'ice'. Only the latter two are explicitly profiled as alternatives to each other. They therefore constitute a *single* choice here. We will say that the writer allots only one slot to 'heat' and to 'ice', despite the fact that the two cannot simultaneously occupy that single slot. It is this restriction that construes the two as mutually exclusive alternatives to each other. The other treatments are not so explicitly construed by the speaker, although, of course, in reality, they too are alternatives to each other.

The common practice of linguists analyzing *or* constructions compares the state of affairs depicted by each disjunct separately to the world. This calls for a decision regarding each disjunct on whether it is or is not true to reality, leading to the conclusion that one of the disjuncts or that both of them are true (of course, it's possible that none are true).² Our point is that the primary construal of an *or* construction directs the addressee to an internal relation obtaining *between the options* explicitly mentioned, and not (only) to the external relation *between each of the disjuncts and reality*. This relation must be of 'alternativity'. Now, we will argue that although 'alternativity' can be established between objective states of affairs, it can equally obtain between non-propositional elements, such as arguments at the discourse level. On our account, the relation between the disjuncts and the world is actually indirect, the world constituting just one type of grounds for establishing a discourse-relevant alternativity. Fig. 1 is an attempt to visualize the contrast between the objectivist and the subjectivist analyses:

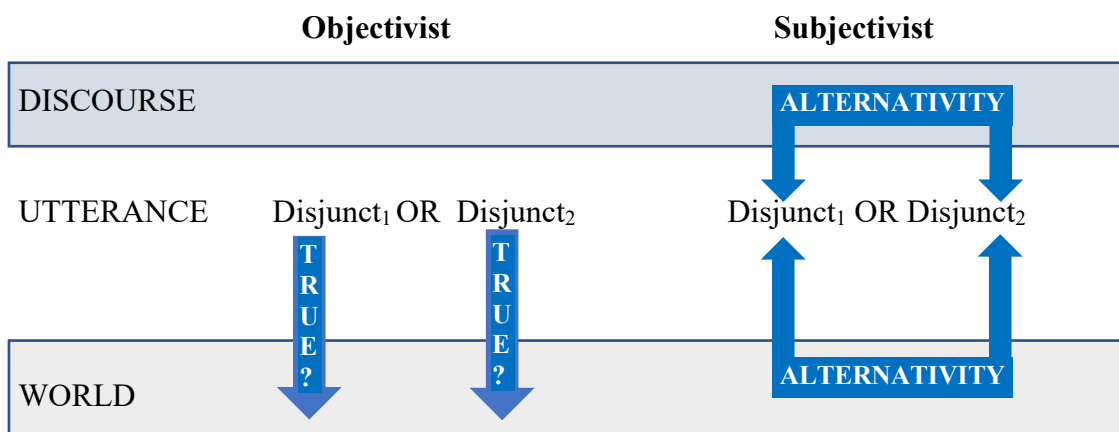


Fig. 1. *The objectivist versus the subjectivist view of or's core*

Now, even if we're correct in identifying *or* as an alternativity builder, one might object to our claim that 'alternativity' is *or*'s core semantic meaning. Such a procedural meaning seems a natural candidate for a pragmatic appropriateness condition imposed on *or* constructions, which can then keep their classical 'inclusive' semantics. While 'inclusivity' is not in principle incompatible with our concept of 'mutually exclusive alternativity', we will adduce a number of independent arguments against 'inclusivity' constituting either *or*'s semantic core or one of its readings. Our paper is then structured as follows: Section 2 focuses on the problems of the objectivist account, our subjectivist analysis in terms of 'alternativity' core follows in Section 3, and we conclude with Section 4.

2. Problems with objectivist accounts

The Gricean Turn (Grice, 1989, Horn, 1972) offered a systematic way to distinguish between context-independent meanings (semantics) and context-dependent interpretations (pragmatics). At the same time, since the theory equated linguistic semantics with formal logic, it also paved the way for a view of grammar as "spontaneously logical" (Chierchia, 2013). Natural language *or* constructions have

² We use 'both' throughout to stand for all alternatives.

been reduced to logical disjunctions, and *or* is seen as the counterpart of \vee . *Or* was then analyzed in terms of its contribution to the truth conditions of the proposition it was part of. The linguistic meaning attributed to it is the truth table of 'inclusivity'. *X or Y* is said to be true under three types of states of affairs: Only X is true, only Y is true, both X and Y are true. *X or Y* is false in case neither X nor Y are true. In other words, at least one of X and Y must be true for *X or Y* to be true.³

Linguists, psycholinguists and philosophers of language mostly adhere to the classical logical core meaning assigned to *or* by Grice (1989) and Horn (1972, 1989) (see Chierchia and McConnell-Ginet, 1990, Geurts, 2010 *inter alia*). Since they assume that *or*'s core is inclusive, they see their goal as providing mechanisms for deriving other readings associated with *or* from the 'inclusive' core. The dominant reading researchers assume they need to account for is the exclusive reading.⁴ To arrive at the exclusive interpretation, 'both X and Y' - which is compatible with the assumed linguistic meaning - must somehow be ruled out. On the neo-Gricean approach, this rejection was derived as a Generalized Conversational Implicature, based on a comparison of *or* with the stronger Horn scale-mate *and*. More recently, the derivation of the exclusive reading from an inclusive semantic core has been integrated into grammar (Chierchia, 2004). On this approach, the added 'not both' assumption is analyzed as part of the compositional meaning of the *or* construction.⁵

A more recent strand of research, associated mostly with philosophers of language, has argued against an inclusive core for *or*. They have argued that the disjuncts in an *X or Y* construction are only epistemic possibilities (Aloni, 2007, Geurts, 2005, Simons, 2001, Zimmermann, 2000). Alonso-Ovalle (2006), whose analysis is closest to ours, takes a further step, proposing that *or* only introduces into the semantic derivation the denotation of its disjuncts, and these must combine with some propositional operator (such as a modal) in order to become propositional. We distinguish our analysis from this new approach in Section 3.

But first, we must argue against the main tenet in the field, namely the 'inclusive' core assumption. Now, core meanings that do not undergo pragmatic enrichment show up as actual (explicated) readings.⁶ We will here first argue that 'at least one of X and Y and possibly both' never surfaces as an actual *explicated reading* for *or* (2.1). We then introduce two *or* constructions whose explicated readings show no necessary commitment to even one of the explicit disjuncts. Since linguistic meanings are uncancellable, there is no way to derive these readings from an inclusive core meaning. We will therefore conclude that there is no justification for attributing an inclusive core to *or* (2.2).

2.1 No 'inclusive' reading for *or*

³ Only 186/1053 (17.7%) of the SBC *or* constructions have an S *or* S structure, where *or* can actually be reduced to the logical \vee (Gazdar, 1980). Some of the phrasal constructions can at least be paraphrased by sentential variants, as assumed in the literature, though not all can. Most crucially, however, we find no difference in the meaning of *or* ('alternativity' according to our analysis) when the structure is phrasal versus sentential, which is why we treat the two syntactic constructions together.

⁴ But recently, a free choice reading has been added to the repertoire (following Kamp, 1973).

⁵ But grammatical theories are not the only ones to attribute truth-conditionality to the exclusive meaning. Relevance theoreticians have reanalyzed GCIs as explicated inferences (inferences that constitute part of the truth-bearing proposition) (Carston, 1990), and (Neo-)Griceans recognize what they call "intrusive" cases, where implicatures contribute truth-conditional aspects in special cases (Horn, 2009, Levinson, 2000).

⁶ An explicated reading is a reading where the core meaning is developed up to the Relevance-theoretic 'explicature', namely, a full, verifiable proposition.

We here argue that would-be inclusive *or* readings are either stronger than 'inclusive' (the conjunctive cases in 2.1.1), or weaker than 'inclusive' (the Truth-Compatible inferences in 2.1.2).

In order to show that the readings interlocutors derive from *or* constructions which seem compatible with 'inclusivity' are not in fact inclusive, we need to first identify an unequivocal case of an inclusive reading, so that we can compare candidate inclusive cases to it. If the inclusive meaning is 'possibly X, possibly Y, possibly X and Y', a true inclusive reading of *X or Y* should introduce three alternatives on a par: 'X', 'Y' and 'X and Y'. *And/or* does precisely that (Dik, 1968):

2. All the sections are kind of self-sufficient, having kitchen units **and/or** bathrooms (LSAC).

(2) indeed introduces 'X', 'Y' and 'both X and Y' on an equal footing, and is thus faithfully paraphrased by (3):

3. All the sections are kind of self-sufficient, having kitchen units **or** bathrooms, **or** both kitchen units and bathrooms.

Sections 2.1.1 and 2.1.2 introduce would-be inclusive cases, but, as we show below, none of them patterns with the true 'inclusive' in (2).

2.1.1 Stronger than 'inclusive'

We're not the first to argue that some *or* readings are stronger than the inclusive interpretation predicts. Free choice *or* (Kamp, 1973), as well as *ors* under the scope of a counterfactual (Alonso-Ovalle, 2006), have been recognized as such cases. We here discuss different cases, where no special operator can account for the stronger reading. Hence, even on the recent semantic analyses, and specifically under Alonso-Ovalle's analysis, they are predicted to be merely 'inclusive'.

Consider the following:

4. a. FRANK: it's,
 .. % .. easier to do naked eye. ((5 LINES OMITTED))
 Or binoculars. (SBC: 019)
 b. MARIE: I've seen it i zi zi a si,
 or i zi a a si, (SBC: 036).

The explicated readings derived in (4) are much stronger than the inclusive meaning specifies. The speaker is not merely conveying that 'possibly X and Y'. She actually commits to 'X and Y' *necessarily* being the case. Frank asserts that both naked eye and binoculars are easier (than telescope) (a), and Marie testifies that she's seen the same name spelled both as Izzac and as Izaac (b).

Since these are conjunctive uses, taking 4(a) as an example, *or* is substitutable by *and* (5a), an inference to the truth of only one of the alternatives is valid (5b), and another interlocutor can oppose the *or* speaker by denying the truth of any one of the alternatives (5c):⁷

5. a. It's easier to do naked eye **and** binoculars.
 b. → It's easier to do naked eye.
 c. ~FRANK: It's easier to do naked eye **or** binoculars.

⁷ ~ indicates a constructed example.

B: **That's not true!** Naked eye is not easier than telescope. Only binoculars are.

This is why substituting *and/or* for the *ors* in (4) would not preserve their original meanings. Compare the different discourse patterns of the stronger, conjunctive reading (5c) (declaring the speaker wrong because one of the alternatives is false is acceptable) with the truly inclusive case (2), where declaring the speaker wrong because one of the alternatives is false is unacceptable:

6. A: All the sections are kind of self-sufficient, having kitchen units **and/or** bathrooms.

~B: ?? That's not true. My section doesn't have a kitchen.

We note that the conjunctive examples in Section 2.1.1 do not involve special operators, such as negation, modals or counterfactuality, which have been argued to account for conjunctive readings. If so, under current analyses they should have received an inclusive reading (or an exclusive one, if strengthened by a 'not both' implicature). But they obviously don't. Next, 2.1.2 discusses classical inclusive cases.

2.1.2 Weaker than 'inclusive'

Section 2.1.1 showed that some *or* constructions actually receive a stronger, conjunctive reading. In fact, the same is true for the prototypical "inclusive" *or* constructions within conditional antecedents, which we analyze in Section 2.1.2. Uttering *If X or Y then Z* (as in 7 below) necessarily commits the speaker to the conjunctive 'if X then Z and if Y then Z' (Ariel and Mauri, 2018). But we here address the status of a different, inclusive assumption, commonly associated with such constructions, namely the possibility that 'if X and Y then Z'. The goal of Section 2.1.2 is to argue that this "inclusive" interpretation is actually quite weaker, and does not qualify as a 'reading'. 'Possibly both' is here neither explicated nor even implicated, we argue. Instead, such assumptions are mere Truth-Compatible inferences, namely inferences only potentially associated with *or* constructions, and crucially, not included under the speaker's *communicative intention*.

Consider Chierchia's (2013:11-12) analysis of (7) (his ex. 1b), a classical inclusive case:

7. Background: What will be the future departmental hires?
If we hire either **Mary or Sue**, everything will go well. [Inclusive].

This is how Chierchia (2013: 12) explicates (7):

8. "(1b[=7]) **says** that if we hire Mary or Sue we will be lucky; but it **also seems to convey** that if we **wind up** hiring them both, we will be (**all the more**) in good shape, a typical *inclusive case*" (bold emphases added).⁸

A comparison between this case and the uncontroversial inclusive case in (2) brings out the difference between the two. Chierchia's hedgy-style paraphrase is quite inappropriate for truly 'inclusive' readings:

9. ?? (2) says that all the sections are kind of self-sufficient, having kitchen units **or** bathrooms; but it *also seems to convey* they may have both kitchen units and bathrooms.

⁸ We here ignore Chierchia's switching from *everything will go well* to 'we will be lucky/in good shape'

Why is that? And why does Chierchia's explication distinguish between a "said" part ('Mary or Sue', 'any one of Mary and Sue', we would say) and an "also seems to be conveyed" part ('possibly both'), which comes with a remarkably weaker cognitive and discourse status? Note that when he analyzes what he views as an exclusive case (10a, his 1a), Chierchia uses a uniformly strong terminology, referring to intentions and expectations (b):

10. a. If everything goes well, we'll hire either Mary or Sue [exclusive].
- b. "(1a[=10a]) indicates an *intention/expectation* to hire one of two candidates, with *no expectation* of hiring both" (p. 11, emphases added).

We maintain that Chierchia's intuitive distinction between "saying" and the hedgy "also seems to convey" (p. 12) for (7) reflects the fact that in allegedly inclusive cases the speaker does not intend/expect that 'possibly both Mary and Sue will be hired'. If 'possibly both' is not explicated, what status does it have? Not only is there no intention to directly express 'possibly both' (as in 2), 'possibly both' is not indirectly conveyed (as an implicature) either. The speaker uttering (7) is simply *silent* about 'possibly both'. Should reality *happen* to be that both Mary and Sue are hired, however, the speaker is likely (though not certain, as Chierchia himself notes) to endorse that 'everything will go well'. This is the hallmark of Truth-Compatible inferences (Ariel, 2004), inferences about states of affairs *not communicated* by the speaker, but ones nonetheless potentially compatible with her utterance.

The crux of the problem is that linguists adopted as a *linguistic* meaning (and as a result, as a reading sometimes) the inclusive interpretation, which we claim is only potentially *compatible* with *X or Y*. Truth-compatibility must absolutely be distinguished from a speaker-intended meaning. It relies on world knowledge about potential states of affairs, rather than on interpreting speakers' utterances. Chierchia's conclusion about the positive state of affairs following the hiring of both Mary and Sue relies on the assumption that "the more faculty the merrier", a common enough assumption among academics, indeed. But what about *If you take Advil or aspirin you'll feel a lot better*? Here most likely taking both will not help the addressee feel better. On yet other occasions we simply don't know what the effect of 'both' is. Suppose the doctor tells a patient with high blood pressure that *If you take a Beta Blocker or Diuretics your blood pressure will be within the norm*. Does that mean that should the patient take both his blood pressure will be (all the more) within the norm? Some patients need both. For others it may lower their blood pressure too much.

The only status available for 'possibly both' is that of a Truth-Compatible inference, which explains Chierchia's roundabout style, we surmise.⁹ In fact, Truth-Compatible inferences about the *accidental cooccurrence* of the two alternatives, which the speaker is ok with, are not restricted to so-called inclusive readings. Chierchia's exclusive case (10(a) above) too can receive a Truth-Compatible report: just like the speaker of the "inclusive" (7) does not expect 'possibly both X and Y', but should both be true the proposition may still count as true, so the speaker of the "exclusive" 10(a) doesn't expect 'possibly both X and Y', but should both be true the proposition may still count as true. The "possibly both" understanding need not be part of the semantics of *or*, then, although *or* itself neither includes nor excludes it per se.

One of our main points in Ariel and Mauri (2018) was that we must absolutely distinguish between *speaker-intended interpretations* (pragmatic inferences included) and potential inferences which may objectively be legitimate, but that do not fall under the speaker's communicative intention. The 'inclusive' assumptions considered in 2.1.2 are Truth-Compatible inferences. They do not constitute

⁹ Note also Chierchia's additional "all the more", which no doubt points to a potential inference status, rather than to a necessary meaning.

explicated readings. While most linguists define meaning/readings based on how utterances *mesh with the objective reality* behind the utterance, thus privileging 'inclusivity', we insist on measuring meaning by speakers' *subjectively intended construals* of reality.

Other than (i) conjunctive readings (2.1.1), where 'possibly all' is compatible with the intended reading but is quite weaker than the intended 'necessarily all', and (ii) cases where 'possibly both' is a mere Truth-Compatible inference, rather than an explicated reading (2.1.2), there were no bare *or* constructions which received truly inclusive readings among the 1053 SBC examples. We therefore conclude that 'inclusivity' is not a reading that (a bare) *or* gives rise to.

But even if it isn't an explicated reading, might inclusivity nonetheless constitute *or*'s linguistic core? We argue against this position in 2.2.

2.2 No 'inclusive' core for *or*

Hypothesized semantic meanings are not invariably realized "as is" in discourse. The Gricean semantics of *and*, whose core is reduced to the logical Λ , must be contextually enriched by some coherence relation (e.g., of temporal or causal ordering). We may similarly consider adopting an underlying core semantic meaning for *or*. Since explicated readings are enriched linguistic meanings, the idea would be that although that meaning is never discourse-functional by itself, it is the one that enables the derivation of the pragmatic polysemy found. In order to argue against an inclusive core for *or* we must show why such an assumption fails to account for at least some *or* constructions. In other words, we must argue that even if we rely on relevant linguistic and extralinguistic factors we cannot develop an inclusive core into some of the explicated readings attested for *or* constructions.

2.2.1 No necessary commitment to even one alternative

Consider the following:

11. MARIE: .. people that are that low there's,
 .. they have asthma and stuff like that. ((2 LINES OMITTED))
 LISA: Yeah.
 Or emphysema. (SBC: 036)

The explicated reading associated with the *or* construction in (11) has been termed 'Raised options' (Ariel and Mauri, 2018). On this reading the speaker raises a non-exhaustive set of options in an attempt to zero in on a single option, but crucially, she does not commit to any one of these options being the case. Lisa is not committed to one of the two alternatives ('asthma and stuff like that' and 'emphysema') necessarily being true.

In this respect, 'Raised options' is quite similar to 'Possibly X, possibly Y', where the speaker does not commit to any of the options she raises. Compare 11(a) with (12):

12. ~Possibly it's asthma and stuff like that. Possibly it's emphysema.

Note that this paraphrase is not available for other *or* readings. For example, *Possibly your money, possibly your life* is not synonymous with *Your money or your life* (39b, below), because the former is a weaker statement (leaving the possibility that the addressee might be able to keep both his life and his money).

The inappropriateness of a *That's not true (it's Z)* response is another test. Note that according to *or*'s accepted semantic meaning, should neither one of the options be the case, the utterance expresses a false proposition. If so, (13) should be an acceptable response to (11). But just like it's an inappropriate response to (12) it's inappropriate as a response to (11):

13. ~?? B: That's not true (it is a total system collapse).

Since Lisa's alternatives are only possibilities, not even one of them guaranteed by her to be true, asserting that what she said is false is not acceptable. Note that other *or* readings, where the speaker does commit to one of the alternatives can be so denied:

14. ALINA: Right next door is !Ted !Rich,
 who's uh=,
 .. (H) one of the biggies at MTM,
 (TSK) **or**,
 Lorimar **or** MGM, (SBC: 006)
 B: ~ That's not true. He's at CBS.

Let us now consider Higher-Level Category *or* constructions (Ariel and Mauri, 2018), which introduce alternatives which point to a single, abstract category. On this reading, the listed alternatives are taken as exemplar members of a higher-level category, which may very well include additional members not explicitly mentioned. What is crucial for our point here is that the explicit alternatives predominantly serve as pointers to the higher-level category, and it is *that category* that the speaker intends to express. Here is such an example:

15. CYNTHIA: .. There are four tents, ((3 LINES OMITTED))
 and then a .. traditions tent.
 Where everyone can come and just,
 share their memories of growing up,
or,
 (H) world war whatever,
o=r,
 (H) .. f- first time you ever rode in a train,
 .. all of those things,
 it's a won=derful family event. (SBC: 054)

Cynthia lists 'memories of growing up', 'world war whatever stories' and 'first time you ever rode in a train' as pointers to a more abstract category, most likely, 'personal events dear to the teller's heart'. In Higher-level category readings the listed alternatives exemplify and conjure up a *single* (often ad hoc) concept that the speaker is after.¹⁰

Crucially, just like 'Raised-options' cases, should none of the explicit alternatives in a Higher-Level Category construction be the case, the proposition is not necessarily false. This is why one can confirm the truth of *X or Y* utterances such as (15), while offering a seemingly altogether different alternative (B₁). Even more pertinently, note that one cannot assert it to be false under such circumstances (B₂):

¹⁰ See Ariel and Mauri (2018) and Section 2.2.2 for the explicature test, which shows that the 'Higher-Level category' interpretation constitutes the explicated reading of such *or* constructions, rather than a special nonliteral use, or an added implicature.

16. ~B₁: Yeah, your horrible fight with your sister.
 ~B₂: ?? No, your horrible fight with your sister.

Since 'your horrible fight with your sister' is a member of the same higher-level category that Cynthia explicated with her *or* construction, B₁ is natural. It confirms the speaker-intended higher-level category, while listing another exemplar of the very same category. B₂ is not natural, because the initial *no* denies the higher-level category, while 'your horrible fight with your sister', being a relevant category member, confirms it. The only acceptable way to assert the falsity of such utterances is to deny the higher-level category itself, as in (17), where the alternative asserted is not a member of the relevant higher-level category:

17. ~B₃: That's not true. You share your memories of tribal ceremonies in the traditions tent.

We thus have at least two distinct *or* readings, Raised options and Higher-level category, where the speaker is not necessarily committed to even one of the explicit alternatives being the case. Note that these two readings cannot be dismissed as just a negligible minority. There are only 61 Raised options cases in SBC, but the 244 Higher-Level category cases actually constitute *or*'s most frequent reading. Together, these two readings, where speaker commitment to even one of the alternatives is not guaranteed, account for 29% of the data (305/1053). It therefore means that should we insist on an 'inclusive' core, it will have to somehow be cancelled. But can it? We address this question in 2.2.2.

2.2.2 Loosening or "special" uses are not the solutions

By definition, semantic meanings cannot be pragmatically cancelled, which is why we've claimed that 'inclusivity' cannot be *or*'s core: recall that 'Raised Options' and 'Higher-level category' readings do not necessarily commit the speaker to even one alternative being the case (2.2.1). However, as Sperber and Wilson (1986/1995:Chapter 4) have convincingly argued, speakers do cancel linguistic meanings in the service of economy, for example. According to Carston (2002:Chapter 5) linguistic meanings are *routinely* contextually adjusted to convey ad hoc explicated meanings, and such adjustments include broadening, where semantic properties must be ignored (see also Lasnik, 1999). For example, the meaning of *never* in (18) must be loosened into 'rarely', where the literal 'at no time' is cancelled:

18. JAMIE: ... You know how boys are.
 ... They **never** buy clothes. (SBC: 002).

Note that although objectively false, Jamie's point is that boys' rare rate of clothes buying is discursively/argumentatively equivalent to no buying at all. In other words, the literal and the derived explicated meanings here share the relevant contextual effect intended: 'Boys are extreme in not buying enough clothes'.

The question, then, is whether we can apply the same procedure to cancel a core 'at least one of X and Y and possibly both X and Y' to fit cases where the speaker undertakes no commitment to either alternatives. In other words, can we loosen the inclusive meaning into a 'close to inclusive' explication, which would carry virtually the same contextual implications? It's hard to see how an inclusive meaning for (15), specified in 19(a), can be loosened into its explication in (b):

19. a. '... World war whatever or first time you ever rode in a train **or both world war whatever and first time you ever rode in a train**'.

b. '... **Personal events dear to the teller's heart, such as** 'World war whatever or first time you ever rode in a train.'

Whereas the literal and the derived meaning amount to the same thing in terms of the contextual effects in (18), this is not at all the case for 19(a) and (b). The latter do not virtually amount to the same thing, and they do not contribute to essentially the same contextual effects. The conjunction of the different memories ('possibly world war whatever **and** first time you ever rode in a train') plays absolutely no role in the contextual effects intended here, the construction of a higher-level concept, which includes other members of that category. It doesn't seem like a more economical way to guide the addressee into the contextual effects sought.¹¹

Moreover, we absolutely need an 'at no time' core for *never*, because first, it is often read as literally 'never'. This is not true for inclusivity with respect to *or*. As we've seen in Section 2.1, *X or Y* never receives an inclusive reading ('X or Y or X and Y'). Consider an uncooperative, "wise-guy" interlocutor, i.e., one who pretends to have understood the speaker literally, sticking to the linguistic meaning (Ariel, 2002). Such a move would result in the following uncooperative but not baseless exchange:

20. JAMIE: You know how boys are. They **never** buy clothes.
Wise-guy: That's not true. They buy clothes once a year.

As argued in Ariel (2002), even when contextually inappropriate, an imposed linguistic meaning (here, 'at no time' for *never*) is not unacceptable (although it is certainly uncooperative). Linguistic meanings have such a strong standing that they can be imposed by uncooperative speakers. If inclusivity is *or*'s linguistic meaning we should be able to get the same result when an uncooperative interlocutor tries to impose it on a Higher-level category *or* construction. The unacceptable exchange in (21) shows otherwise:

21. CYNTHIA: There are four tents, and then a traditions tent, where everyone
 can come and just share their memories of growing up, **or** world war whatever.
Wise-guy: ?? That's not true. It's impossible to share both memories of growing
 up and of world war whatever. Only one of these.

Thus, while wise-guy interlocutors can insist on inappropriate linguistic meanings (20), since 'inclusivity' is not *or*'s linguistic meaning they cannot uncooperatively impose it on an *or* construction.

Second, 'at no time' is the only meaning that can serve as a basis for an explicated 'at no time', as well as an explicated 'at almost no time'. Interpreted less rigidly (applying a lower standard of precision), 'at no time' gets us to the somewhat weaker 'for all intents and purposes at no time'. Short of an ambiguity analysis, it's hard to see what other core meaning we could assume here. This is not the case for the inclusive representation with respect to the various readings *or* constructions are developed into. The explicated reading of the *or* construction in 19(a) is not at all 'close to world war whatever or first time you ever rode in a train or *both of these*'. It's not a loosened reading of the *or* construction components within an 'inclusive' interpretation.

¹¹ Incidentally, going via the exclusive reading doesn't get us any nearer:

'... World war whatever or first time you ever rode in a train **but not both world war whatever and first time you ever rode in a train**'.

Semantic aspects may then be overridden, provided the literal and the derived meanings share relevant contextual effects. The difference between the inclusive meaning and the derived Raised options and Higher-Level category readings, however, cannot be defined in terms of lowered standards of precision. Nor do these readings share contextual effects with the 'inclusive' meaning.

The last line of defense for an inclusive core supporter might be that what we have analyzed as 'Raised options' and Higher-Level category readings are merely "special, nonliteral uses", as is the case for ironies, for example. Yet, as we argued in Ariel and Mauri (2018), special uses are faithfully reported by a two-tier paraphrase, the first tier reporting the literal meaning and the second tier specifying the indirectly derived interpretation (a strong implicature) that replaces the literal level as the speaker's intended meaning (Ariel, 2016b).

Such a report of the Raised options example in (11) is not a faithful report, however (and the same applies to HLC cases):

22. ?? Lisa **literally** said that people that are that low have asthma or emphysema or possibly both, **but actually she indirectly conveyed** that it's possible that they have asthma and it's possible that they have emphysema.

In fact, the 'Raised options' and HLC readings are *directly expressed as explicatures*, and hence are faithfully reportable by the That is (to say)-style report (Ariel, 2016b):

23. Lisa said that people that are that low have asthma or emphysema **that is (to say)** that it's possible that they have asthma and it's possible that they have emphysema.

So, while the core meaning we attribute to linguistic expressions must play a crucial role in the development of the explicated readings they give rise to this does not seem to be possible if we assume an inclusive core for *or*. Hence, inclusivity cannot be *or*'s core meaning.

2.2.3 'X and Y' is not an explicit alternative

2.2.1 and 2.2.2 made the argument that there is no justification for analyzing 'possibly X and Y' as part of *or*'s core meaning, because this interpretation has no role to play. However, if we find a discourse role for an 'X and Y' alternative, even if as a *rejected* alternative, then the classical inclusion of an 'X and Y' alternative in the core may be justified after all. Here is such an 'Exhaustive' case, where 'X and Y' is an alternative that the speaker wishes to rule out:

24. ... It's an either or situation, you **either** give me quality **or** you give me productivity. ... Why does it have to be either or? Isn't, isn't it supposed to be both? (LSAC)

The speaker uttering 'either... quality or... productivity' in (24) clearly wants to also convey 'not both quality and productivity'. Such examples, where 'not both' is a speaker-intended implicature, are rampant in the literature, and seem to support the assumption that 'X and Y' is a discourse-relevant alternative just as 'X' and as 'Y' are (except that 'X and Y' needs to be rejected). But examples such as (24) are hard to come by, in fact (there were none among the 37 'Exhaustive' cases in SBC). Prototypical 'Exhaustive' examples do not at all privilege the 'X and Y' alternative in order to actively reject it. While they are mostly *compatible* with 'not both X and Y', they are sometimes actually compatible with 'both X and Y' (see Ariel and Mauri, 2018 for examples). However, they do remove some alternative from discussion, but this rejected alternative is independently accessed from the *context*, and it is altogether different from 'X' and from 'Y'. Consider:

25. BETH: I mean I went in at twelve weeks,
and he said,
.. this is a big baby **or** twins. (SBC: 031)

The obstetrician quoted by Beth does not intend to implicate 'it's not both a big baby and twins', although he most likely endorses this assumption (it's a Truth-Compatible inference here). The alternative he actually wishes to rule out is that the baby is a single, normal-size baby, which is a culturally salient and highly relevant alternative assumed about pregnant women. Since this is the prototypical 'Exhaustive' case, the 'X and Y' as a single (rejected) alternative case can be seen as a *special case* of an implicit alternative rejected by the speaker (via implicature), as in (25).

What is crucial for our argument here is that the rather rare cases where 'X and Y' is indeed a relevant alternative because it is rejected by the speaker ('both quality and productivity'), pattern just like an implicit 'Z' alternative which is salient in the context ('a normal-size baby'), and is rejected. There is then no reason to privilege 'X and Y' as an alternative introduced by *or* constructions. While 'X' and 'Y' must be the case in conjunctive readings, and 'X' and 'Y' may be the case when it constitutes a Truth-Compatible inference, 'X and Y' does not constitute a *single* alternative in either case. They must still manifest an alternativity relation between them for the conjunctive reading (see 3.3). When 'X and Y' is a speaker-intended *single* alternative rejected by the speaker, as in (24), 'X' and 'Y' do not constitute alternatives to each other. It is context that makes 'X and Y' a (single) salient alternative, not the *or* construction itself.

Further evidence for our claim that 'X and Y' is not intended as another single alternative by a speaker uttering *X or Y* comes from cases where the speaker does intend to profile 'X and Y'. Such utterances, however, invariably mention 'X and Y' explicitly, *as one of the explicit alternatives*. This is the case in 27(a) below.

Finally, and seemingly surprisingly, constructions specialized for so-called exclusive readings are nonetheless compatible with an added 'X and Y' alternative. For example, Turkish has a correlative 'or' marker *ya... ya...*, which has been analyzed as marking 'exclusivity' by Mekik and Singh (2016). To first see that Turkish *ya... ya...* 'or' is restricted to cases where the speaker excludes the possibility of 'both X and Y', consider the following examples, the *ya... ya...* counterparts of which were rejected by the Turkish speakers we consulted:¹²

26. a. You must have **apples or oranges** when you come to Israel. They're best eaten together in a fruit salad.
b. I need the strawberries for a tart, I'm afraid. But you can have **apples or oranges**. They make a nice combination, so feel free to make yourself a fruit salad.

Had *ya... ya...* been merely 'Exhaustive', its use in 26(b) should have been acceptable, since there is a discourse-salient alternative (the strawberries) which is rejected. The unacceptability of 26(a) and (b) is therefore nicely accounted for by an 'exclusive' analysis for *ya... ya...*

Surprisingly, however, there are acceptable sentences where a third 'X and Y' alternative is introduced, apparently contradicting the restriction to 'just X' or 'just Y'. Here are two examples the Turkish counterparts of which containing *ya X ya Y ya(da)* both *X and Y*, were accepted by native speakers of Turkish:

¹² We thank Aldo Sevi, Ehud Toledano and his Turkish colleagues and Can Mekik for providing us with the judgments above.

27. a. A: Ellen got a fellowship to go to Harvard.
 B: Amazing. It's so hard to get! I guess she is **brilliant or poor or both**.
 b. A: Why doesn't your mom watch TV anymore? She must be bored!
 B: Something is wrong with that TV, **visually or audio or both**.

Since the speakers are not contradicting themselves, here it looks as if *ya... ya...* does not after all exclude the possibility that 'X and Y' hold. So, is this 'or' 'exclusive' or not?

We suggest that the difference between the acceptable (27) and the unacceptable (26) is that the latter mentions only apples and oranges in the 'or' construction. If so, those two are the only relevant alternatives put on the table. The "fruit salad" conjunctive interpretation is ruled out by the 'exclusivity' constraint. This is not the case in (27), however, because the speaker here puts on the table the 'both X and Y' option as a third explicit alternative. Note that unlike conjunctive cases, where X and Y each constitute a separate alternative, in the (27) cases the two constitute a *single* alternative.

Hence, contra the massive claims in the literature, we propose that 'X and Y' is not a profiled alternative (not even in order to be rejected), unless it is explicitly mentioned as a single alternative. If we're right, 'exclusivity' rules out the cooccurrence of more than one alternative. According to our analysis only 'X' and 'Y' are the set of alternatives considered for *X or Y*. A speaker using sentences such as (27) treats 'X and Y' as a separate, additional, single alternative. While in reality, of course it necessarily entails both 'X' and 'Y', this is not how the speaker construes the 'X and Y' alternative.

The upshot of Section 2 is that 'inclusivity' provides neither a necessary nor a sufficient condition on *or*. 'Inclusivity' is not an *or* reading (2.1), it cannot constitute *or*'s core (2.2.1, 2.2.2), and there is no need for a special scalar implicature mechanism to rule out 'X and Y', because the latter is not profiled as a (single) alternative in the first place (2.2.3). But if *or*'s core is not 'inclusive', what can it be? In Section 3 we propose that *or*'s core is 'alternativity'.

3. A subjectivist account

Since *or* constructions can commit the speaker to none, one, or all alternatives (depending on the reading) we partly adopt Alonso-Ovalle's (2006) minimal core, where *or* itself only introduces the *denotation* of its disjuncts into the semantic derivation. Their existential force must be "earned" from the linguistic and/or extralinguistic context, as part of the routine enrichment into a full proposition (an explicature). But we disagree with Alonso-Ovalle's account on three points: (i) Formal semanticists of all stripes have insightfully identified specific linguistic contexts which are highly associated with specific *or* readings. They have then proceeded to propose semantic operations for deriving specific readings from the core meaning they each assume. We definitely welcome such proposals, but we find that such linguistic contexts do not automatically trigger the semantic operations offered, and worse yet, the readings derived by these operations arise even in the absence of the linguistic triggers (see again e.g., 4). We therefore view these linguistic features as *biasing cues*, which, alongside *pragmatic cues*, help the addressee zero in on the speaker's intended reading. On our analysis, the reading associated with an *or* utterance is constructed just like any other reading is, namely, by combining the core meaning with external cues, be they linguistic or extralinguistic.¹³ (ii) Although 'inclusivity' is not *or*'s core according to Alonso-Ovalle, he considers it to be *or*'s default reading, which is why he proposes a default operation which turns nonconjunctive cases into inclusive

¹³Still, not all formal markers constitute mere cues. Some constitute actual codes. Turkish *ya... ya...* seems to be one such example, as are some specialized *or* sub-constructions, such as Adverbial *whether X or Y* (Ariel, 2016a), which encodes the irrelevance of the alternatives to the main assertion.

ones. In view of the arguments in Section 2 we reject his assumption, along with the default 'inclusivization' procedure. (iii) We propose a procedural 'alternativity' sense as *or*'s core meaning.

We elaborate on our concept of 'alternativity' in 3.1, we exemplify its differential applications in various *or* readings in 3.2, and we argue against competing analyses in 3.3.

3.1 Alternativity at the core

Objectivist accounts measure *or* constructions against the world (see again Fig. 1), in an attempt to offer the truth conditions associated with the so-called logical connective *or*. Dik (1968:276) rejects a truth-conditional analysis for *or* and proposes a semantic analysis in terms of alternativity and choice. Harder (1996:88) proposes a similar analysis, whereby *or* "always involves **seeing p and q one at a time** rather than together; the possibility of having both at the same time, although not prohibited, is not part of the meaning" (emphasis added). We follow Dik and Harder in adopting a procedural, non-truth-conditional analysis of *or*. On our analysis, an *or* construction introduces a set of multiple options, crucially, ones which are construed as *alternatives* to each other. We propose that expressing an 'alternativity' relation between options entails the construal of a (i) plurality of (ii) distinct, (iii) equivalent, and most crucially, (iv) competing options (on some level). These features, which we explicate below, allow us to define the concept of 'alternativity', at the same time distinguishing it from partially similar sets such as lists and *and* constructions.

At a very basic level, *or* constructions introduce a (i) *plurality*, because in order to establish an 'alternativity' relation the speaker must profile more than one option. But, of course, the plurality introduced by *or* is different from that introduced by plurals (e.g., 'chairs') or collectives ('the team'), because in the construal of the latter two the individuality of the members is suppressed. The multiplicity for *or* is instead construed as profiling (ii) *distinct* individual discourse referents, which at the cognitive level correspond to autonomous profiles (see coordination according to Langacker, 1987:436-483). Thus, each member of the set of 'chairs' is not individually profiled, and neither are 'team' members. But in *a red or a white chair*, each member of the set constitutes an individual discourse referent.

Next, the plurality of the distinct referents in *or* constructions is also different from that involved in constructions such as comitatives (e.g., 'The mother with her daughter'), where the members are numerous and distinct, but they are not functionally equivalent (this is a head-dependent relation). The options within an *or* construction must in addition be construed as (iii) *equivalent* in that the contribution they make to the interpretation of the whole construction is equally important. Equivalence has been extensively addressed in the literature with respect to coordination (for overview, see Mauri, 2008:31-41). What we have in mind is a procedural concept of equivalence, where the linked constituents function symmetrically in the process of meaning construction (see below).¹⁴

In effect, the coordination of an unlimited number of distinct and equivalent elements defines a pure list (see Jefferson 1990, Selting 2007, Masini et al. 2018). On our analysis, *and* constructions and *or* constructions each constitutes a specialized type of list. So we now need to distinguish 'alternativity' lists from 'pure listing' on the one hand, and from conjunctive listing on the other hand. *And* lists profile *additivity*, whereby the speaker is committed to each and every one of the members, as well as to the whole set. Neither 'alternativity' nor 'pure listing' impose additivity on the members. The distinguishing feature for 'alternativity' is that the members must be construed as competing options

¹⁴ Actually, this is true for what Ariel (2012) has defined as Independent *and* conjunctions. Relational *and* conjuncts are not equivalent in all respects.

(on some level) (v). In other words, they are not only equivalents, they are also *competitors for a single functional slot*. It is in this sense that (all) *or* constructions introduce mutually exclusive alternatives.

The role of the four features which combine to define 'alternativity' is summarized in Fig. 2, which illustrates both the similarity and the differences between the relevant categories within the domain of plurality. Concentrating on the closest competitors for *or*, Fig. 2 shows that pure listing profiles a plurality of distinct and equivalent members. We propose that *and* and *or* inherit these features from pure listing, but they are each further specialized. *And* profiles additivity in addition, and *or* profiles alternativity (at some level) in addition.¹⁵

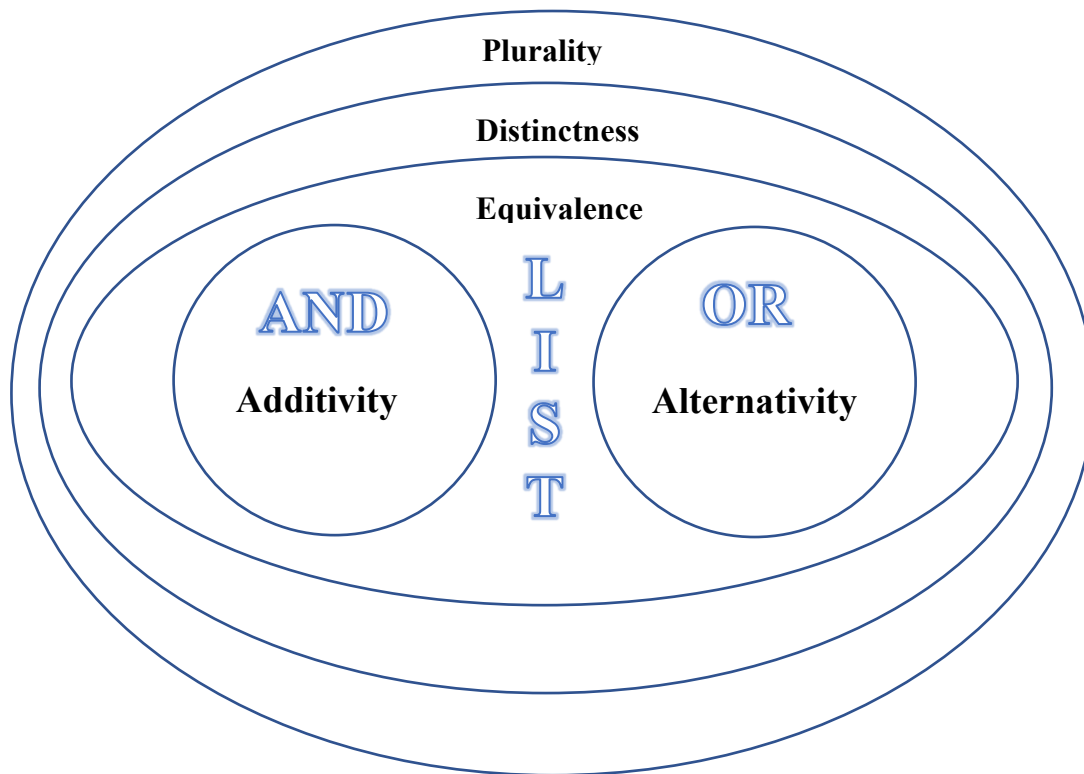


Fig. 2. Locating 'alternativity' within plurality

Both pure listing and *and* listings profile multiple slots for the multiple listed members, so that each member has an independent role, and occupies its own slot. But *or* listings profile only a single slot for however many listed members it contains, and the members compete with each other for that one slot. But what is a slot exactly? We use 'slot' here as a cover term for the *identical, context-specific role* assigned by the speaker to each of the options. The slot is then a variable, which assumes different values (the different alternatives) from a given set: Each member on the *or* list is a different instantiation of the single variable.¹⁶

¹⁵ In fact, pure listing is probably never realized in discourse as is (Barotto, 2017). Naturally used lists are most likely interpreted either additively (as an 'and' list) or 'alternatively' (as an 'or' list). For example, the following announced list can be construed either additively (the flight attendant has all three items) or alternatively, calling for an addressee choice of one of the items:

i. Coffee water tea! (Delta Airline, 9.24.2017)

¹⁶ Actually, as we see below, each explicit alternative must be *associated* with a mutually exclusive alternative.

Consider for example:

28. DARRYL: ... play the game, ((2 LINES OMITTED))
 ... For whatever you wa=nt.
 ... Be a= doctor,
or a screen writer,
or an actress, ((3 LINES OMITTED)) (SBC: 005)

We analyze the slot for the *or* construction in (28) as 'what you should be in life', and the instantiations of this variable are: 'doctor', 'screen writer', 'actress'.

Note that expressing an unresolved competition over a single slot poses a challenge for natural language. As argued by Mauri (2008:156), the challenge is to present elements that do *not* cooccur (the competing alternatives), in a linguistic system restricted to the cooccurrence of linguistic expressions ("limitation of the medium" Haiman, 1985:102). Indeed, Jakobson (1960) had already discussed linguistic utterances where a speaker "projects the principle of equivalence from the axis of *selection* into the axis of *combination*" (p. 358, original emphases). Using an *or* construction, the speaker projects the noncooccurring, paradigmatic competitors onto a co-occurring, syntagmatic linguistic string. *Or* actually signals that the linked elements are not to be considered as conceptually co-occurring, even though they are linearly ordered, as shown in Fig. 2:

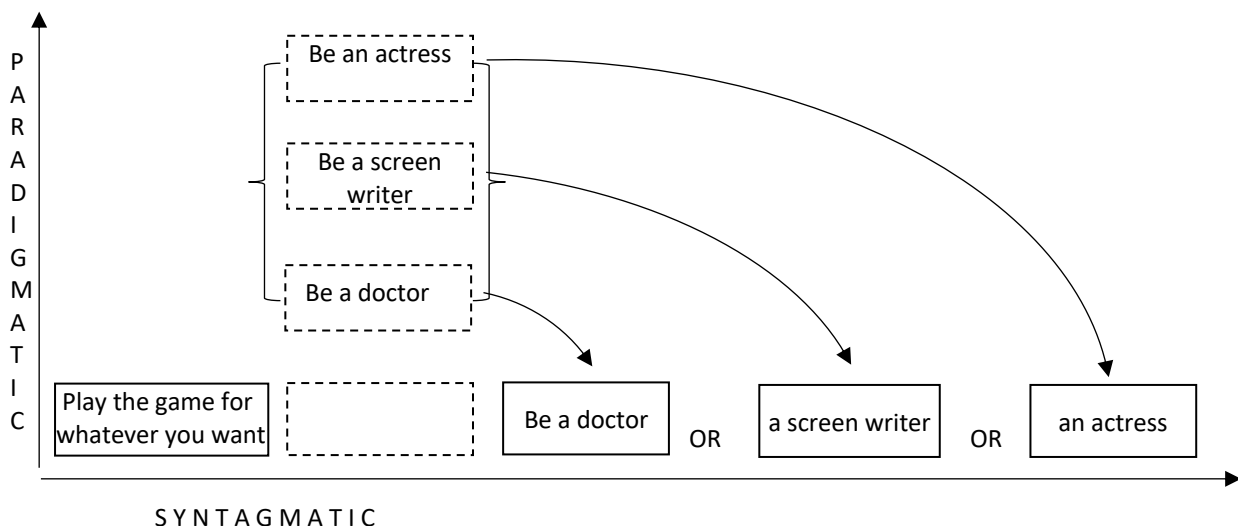


Fig. 3. *Projecting noncooccurrence on cooccurrence* (adapted from Mauri 2008: 156)

We claim that *or* constructions reflect a speaker-unresolved conflict. On the one hand, she indicates that there is only one slot, namely only one role to be played, by only one member. At the same time, there is more than one option competing for the fulfillment of that role, and the speaker is not able (or willing) to choose between these competitors, because they are all appropriate, successful, or at least, adequate. Given that the slot admits only one option (at a time), which must exhaust it all by itself (sharing is not allowed), the listed options are necessarily mutually exclusive.

We argue, however, that the application of 'mutual exclusivity' is not restricted to the truth-conditional level, whereby the fact that one option is true in reality excludes the possibility that the other option is also true of reality. While this has been the practice among linguists, on our account mutual exclusivity between competing alternatives may apply at non-propositional levels as well. One familiar non-propositional case is so called metalinguistic *or*, where two alternative linguistic expressions are used to refer to a single referent (see 36 below).

If we're correct, an addressee processing an *or* construction needs to determine at what level the alternatives are to be assessed as mutually exclusive. We briefly discuss the propositional and non-propositional application of mutual exclusivity in the next section. But before we proceed, we need to mention a caveat. While we talk about *or* alternatives as if they are identical to the explicit disjuncts, this is not quite right. The relevant alternatives need not correspond to bare 'what is said' representations, nor even to the richer 'explicatures'. They can be completely implicit assumptions. Here is a case where the alternatives do not at all correspond to the semantic representations derived from the disjuncts:

29. JDB: Yuka is the sister of Mika? **Or** Mika is the sister of Yuka? (22 February 2001).

As is, there is no distinctness between the options here, because if Yuka is Mika's sister, then Mika must be Yuka's sister, and the question makes no sense. But if we consider the conversational implicatures derived from each of the disjuncts in the original context, we can derive two distinct options: 'Is Yuka the nonoriginal babysitter (who was later on brought by the original babysitter we hired)? Or is Mika the nonoriginal babysitter?'

(30) summarizes our proposal regarding the core meaning of *or*:

- 30. a. An *or* construction offers *only one slot*, namely, only one role to be played, where more than one option can fulfill that role.
- b. All the options are *adequate* for the fulfillment of the function, each *by itself*, such that the speaker is unable to choose between them.
- c. Given a+b, the listed options are necessarily mutually exclusive.
- d. The relevant function (slot) may be propositional or non-propositional.

Section 3.2 examines a variety of *or* constructions, where we show how the competition between mutually exclusive alternatives applies at either propositional or non-propositional levels.

3.2 The 'alternativity' core and discourse readings

Our claim is that speakers use *or* constructions in discourse because the reading they intend involves 'alternativity'. Crucially, however, speakers may impose an alternativity relation on world referents, on epistemic hypotheses, on cognitive processes or on discursive arguments. This choice is inherently tied with the specific reading intended by the speaker. We therefore discuss a few *or* readings below, manifesting different levels at which 'alternativity' plays out.

We start with a few different readings where 'alternativity' plays out at the propositional level. The first two would be considered 'exclusive' cases under conventional wisdom. According to Grice (1989), speakers use *or* constructions just because they're not in a position to provide a more informative assertion, which would commit them to only one of the disjuncts. Here's a case in point:

- 31. KEVIN: How old was she? ((2 LINES OMITTED))
- LISA: Right now she's like nineteen **or** eighteen. (1 LINE OMITTED))
- MARIE: She's seventeen.
- LISA: Still?
- MARIE: ... She's seven- --
- She just turned seventeen in September (SBC: 036).

Lisa's goal is to narrow down the options regarding the girl's age. The two possible ages mentioned are mutually exclusive at the world level (a person can only be one age), and thus compete for the truthful age. In other words, according to our analysis 'the correct age' is the single slot, over which 'nineteen' and 'eighteen' compete. Let us now see another case:

32. LAJUAN: Did she tell your dad **or** did you tell your dad. (SBC: 044)

Lajuan's goal is to have his addressee choose the correct answer from the two he provides, namely 'she told your dad'; 'you told your dad'. While in the previous case one could rely on one's general knowledge to infer mutual exclusivity, here mutual exclusivity is imposed by the specific *or* reading ('Choice' according to Ariel and Mauri, 2018). The relevant slot is 'the identity of the person who told Lajuan's dad'.

Example (33) is a 'Raised Options' case (see again 2.2.1), where the speaker doesn't remember what happened. Crucially, he doesn't commit to even one of the explicit alternatives being true:

33. S: At a certain stage part of the shares were transferred to the children before going out on the stock exchange **or** they were returned and divided up **or** partly returned I don't remember... you have our prospectus here. (Originally Hebrew, Lotan, 1990).

On our analysis what S is not sure of is which of the listed options he should be *asserting*. In other words, S is searching for a *single* assertion about the event(s) (the slot), which is actually not different from the 'Choice' cases above with respect to 'alternativity'.

The next example is a different world-couched alternativity case:

34. DARLENE: (H) something was wrong,
you need to call the telephone company then.
Because,
I,
(H)= either me **or** ans- --
uh ~Jenn answered it about five times. (SBC: 052)

The objective reality is that, between the two of them, Darlene *and* Jenn answered the phone five times. This is a conjunctive case, where each of the options was realized (though less than 5 times). But since the speaker chose an *or* (rather than an *and*, which she could have) the addressee is to identify a level at which 'Darlene answered the phone' and 'Jenn answered the phone' are mutually exclusive. In order to do this, the addressee needs to decompose the overall state of affairs (5 events of phone-answerings) into separate sub-events. Now, at each such sub-event 'Darlene answering the phone' excludes 'Jenn answering the phone' and vice versa. Therefore, the slot competed over is 'the specific person answering the phone on each sub-event'.

But the relevant level for alternativity ('mutual exclusivity') need not be the objective world.¹⁷ Consider the Higher-level category *or* in:

35. NORA: Wonder who was the ruler. ((1 LINE OMITTED))
in nineteen ten.
DIANE: Who was the king **or** queen? (SBC: 023).

¹⁷ This is not surprising given what is known about other connectives, e.g., *if*, *but*, *because* etc. (Dancygier and Sweetser, 2005, Sweetser, 1990).

While one could of course establish mutual exclusivity between 'king' and 'queen' based on the mutual exclusivity of male and female genders, this would not be faithful to the speaker's intention here. The alternativity relation plays no role at the propositional level. Rather, the addressee needs to access the higher-level concept 'monarch', based on two mutually exclusive *routes* to that concept, namely, 'king is an exemplar instantiating monarch' and 'queen is an exemplar instantiating monarch'. Here then, we propose, the slot is 'the *route* to the abstract category of monarch'. These alternative routes to the higher-level category have nothing to do with the objective world. They only pertain to the interpretative processes competing to achieve the construction of the higher-level category.

Next, consider a metalinguistic use of *or* (termed Equivalence by Ariel, 2016c):

36. MONTOYA: Demos ... cratos.
 People ... govern,
 or people rule. (SBC: 012)

The provision of an adequate explanation/translation for the Greek expressions *demos* and *cratos* is the relevant slot in (36). Montoya comes up with two competing options, namely, 'people govern' and 'people rule'. Here again mutual exclusivity lies at a pre-propositional level, leading to a *single* referent.

The next two examples demonstrate how mutual exclusivity can be realized at the argumentative level (in the sense of Anscombe and Ducrot, 1976):

37. FRANK: starting in November,
 we're gonna be looking at the sky. ((7 LINES OMITTED))
 RON: .. Do you have a telescope?
 FRANK: ... Well no I-,
 just naked eye stuff
 MELISSA: .. He has a telescope though.
 FRANK: Well,
 it's,
 easier to do naked eye. ((5 LINES OMITTED))
 Or **or** binoculars. (SBC: 019)

Ron and Melissa think that they should perhaps use a telescope. Frank's position is that one doesn't need a telescope. His choice of *or* indicates that he provides two alternative arguments to reject the telescope proposal, namely, (i) naked eye is better, and (ii) binoculars are better. Of course, these two arguments are not (objectively) mutually exclusive as such. So, in what respect can we view the two alternatives as mutually exclusive after all? We claim that they compete over which of them should fill the slot of a *single*, sufficient *argument* for rejecting the position that they should use a telescope. Frank doesn't use *and* because he does *not* mount two arguments additively, such that *together* they make a case against using a telescope (this would have been served by *and*). Rather, he wants to make the point that each argument constitutes a *sufficient reason all by itself* to reject using a telescope. If each is sufficient all by itself, it makes the other unnecessary.

In the next example, the conjunctive reading is normally explained by reference to the logical function of negation scoping over disjunction:

38. JULIE: ... (H) Well it cost her a lot less to level hers,
 but it wasn't as big as mine,

or as ... unlevel. (SBC: 056)

Referring to facts about the world, namely 'her arena is smaller than Julie's' and 'her arena is more level', the speaker mobilizes these as arguments for explaining her assertion that the project cost the person referred to less money than it cost Julie. Again, each of the disjuncts provides a *sufficient* reason, so the speaker is unable to zero in on a single sufficient argument, which is why she introduces these two competing arguments in support of her point. We should emphasize that while the two are not at all mutually exclusive arguments (indeed, Julie could have used an *and* here) they are mutually exclusive as 'a *single* sufficient argument' for Julie's point.

Finally, we should point out that while our claim is that each alternative is construed as an equally successful instantiation of the variable, this does not mean that the speaker's goal is achievable by any one of the single alternatives. Indeed, this is why the speaker does provide more than one alternative. But we are claiming that each alternative is *construed* by the speaker as *equally successful* as the other(s) in achieving that goal. Thus, while *nineteen* and *eighteen* are both as good instantiations as the speaker can think of for the variable of 'the girl's true age' in (31), neither is perfect. Similarly, while *king* and *queen* are equally good pointers to the higher-level category 'monarch' neither one of them alone can guarantee the retrieval of that category, for after all, if the speaker only said *queen*, for example, she could have meant 'queen', rather than 'monarch'. Thus, the competitors are equivalent in that taken by itself, each of them is as successful as any of the others in fulfilling the very same single function.¹⁸

3.3 Why an alternative 'alternativity' analysis?

The fact that the *or* disjuncts constitute alternatives to each other has actually been widely recognized in the literature, and the most elaborate account for the 'alternativity constraint' is Simons (2001). While eminently insightful, her proposal will nonetheless here be challenged. First, Simons' account is restricted to *propositional* alternativity, which, moreover applies to *disjunctive* uses where *X or Y* are 'at-issue'. We see no justification for such exclusions, and opt for a more general account. Second, Simons' 'alternativity' is offered as an extra-linguistic, felicity condition on *or* constructions. We argue that it is *or*'s linguistic meaning.

Although Grice (1989) was the one to initiate the reduction of natural language 'or' to its logical counterpart \vee , he also recognized that unlike their logical counterparts, natural language disjuncts cannot be randomly selected by speakers, because they must meet additional appropriateness conditions. Indeed, they must be distinct from each other (Hurford, 1974), and they must be relevant to each other (Gamut, 1991, Grice, 1989:Chapter 4, Quirk et al., 1985:932). The natural 39(a & b) must be distinguished from the unacceptable constructed (c) and the attested (d):

- 39. a. Peter would you want **pie** or **cake**, or **both**? (LSAC)
- b. **Your money** or **your life**.
- c. ~?? **Beef** or **a newspaper**?
- d. **Cake** or **death**? (Eddie Izzard, Courtesy of Don Daniels,
 <https://www.youtube.com/watch?v=BNjcuZ-LiSY>)

¹⁸ This is not true, however, for one subset of Repair *or* constructions, where the subsequent disjunct ousts the first one, thus winning the competition over the slot. We note that such uses, while quite common in English, are the result of a later grammaticization process, not attested for all languages.

Assuming a discourse topic of a speaker eliciting a choice between alternatives in all cases, (a) is natural in that 'pie', 'cake', as well as 'both pie and cake' (see again 2.2.3), are equally relevant choices in a context where the speaker is offering dessert. Similarly, the highwayman's threat in (b) renders 'one's money' and 'one's life' equally relevant ad hoc choices. While both 'beef' and 'newspaper' are routinely offered to travelers by flight attendants, they are not offered as *alternatives to each other*, which is why (c) is inappropriate. (d) is part of a patently absurd stand-up comedy, where the addressee is asked to choose between getting a piece of cake and death.

Lieberman (1973) proposed that each of the *or* disjuncts constitutes an independent solution for the same problem. According to Grice (1989:68), each of the possibilities must be "relevant in the same way to a given topic". Following Grice, Simons (2001) formulates this appropriateness condition as a constraint that each disjunct must constitute a distinct and relevant answer to a single Question Under Discussion.¹⁹ Now, Simons' constraint on *or* constructions works well in disjunctive examples such as (31) and (32). But since her constraint only applies to disjunctive *or* constructions, she cannot account for the majority of *or* constructions, which are actually "non-disjunctive" (779/1053, 74%). These include the most frequent *or* reading, namely Higher-level category, all conjunctive uses, as well as other cases. This is a serious problem. Moreover, by definition, QUD can only constrain 'at-issue' material (roughly, the prominent component of the utterance). While *X or Y*'s do often present 'at issue' content, they need not always do so. Here's such an example:

40. A: And that goes to Don <name> who is on our board list **or** at a different address
 B: Uh huh (LSAC).

The QUD here is who gets the money, and the disjuncts do not address this question. Unlike philosophers, linguists cannot afford to pick and choose their research territory. Since *or* does not constitute a case of homonymy, we need to account for all *or* constructions. And in fact, we claim that a single constraint can account for all productive *or* constructions, be they disjunctive or non-disjunctive. The only cases that must be excluded from our 'alternativity' constraint are specific *or* sub-constructions, where a process of grammaticization has indeed eliminated the 'alternativity' component.²⁰

We have already seen in 3.2 that non-disjunctive *or* constructions manifest 'alternativity'. The only difference is that it needn't apply at the propositional level. For the Higher-level category *or* construction in (35), 'king' and 'queen' are equally adequate alternative *routes* to the speaker-intended concept ('monarch').²¹ The same is true for 'people govern' and 'people rule', which are alternative linguistic translations for *demos cratos* (36). The conjunctive cases manifest clear 'alternativity' as well, sometimes at the propositional level even (see again the discussion of 34). On other occasions 'alternativity' applies at the argumentative level. Each of the disjuncts in (37) and (38) constitutes an alternative argument for the speaker's position. Moreover, 'alternativity' is not incidental to conjunctive *or* constructions. All these examples would not be appropriate if they did not include an 'alternativity' component. A mini-questionnaire conducted on Hebrew negative conjunctive *or* constructions showed that *and* and *or* paraphrases differ from each other precisely on the point of

¹⁹ Note that these appropriateness conditions apply to questions as well, since the alternatives asked about at the same time specify the set of relevant answers.

²⁰ These mostly include idiomatic cases such as *more or less*, a subset of *or something* cases (hedging constructions) and two sub-types of Repair constructions, which manifest a resolved 'alternativity'. These grammaticized constructions constitute less than a quarter of the data.

²¹ Incidentally, even if we were to treat the *or* construction here as propositional, the gender of the monarch is certainly not the QUD in (34). Rather, the name of the monarch is the QUD.

'alternativity'. While the *and* counterparts of both 41(a) and (b) were accepted at ceiling rates, note the marked acceptability difference between the *or* versions in (41):

41. a. I'm very optimistic about the elections in three days. This time **Eli Yishai or Avigdor Liberman** will not be in the government (Acceptability rating: **4.8/7**).
b. I'm very optimistic about the elections in three days. This time **Bibi or Sara** will not be back in the prime-minister's residence (Acceptability rating: **2.2/7**).

41(a) is an acceptable *or* construction (graded above 4). But 41(b) is definitely *not*. Note that this is so despite the fact that both are conjunctive cases, where negation scopes over both disjuncts. The reason is that Eli Yishai and Avigdor Liberman each headed a different political party running in the Israeli elections at the time. As such, the two politicians constitute alternatives to each other as to joining a Netanyahu government. Bibi Netanyahu and his wife, Sara Netanyahu, do not constitute such alternatives to each other. Only he is entitled to live in the prime-minister's residence, although she lives there too. Hence, the unacceptability of 41(b).

So, our first point of contention is that Simons' constraint is not general enough. It fails to account for a substantial number of perfectly acceptable *or* constructions which in fact require 'alternativity'. The second point on which our analysis diverges from Simons' (and others') solution pertains to the status of the 'alternativity' constraint (e.g., 41). Now, we too label *or* constructions violating the alternativity constraint as 'unacceptable', rather than as 'ungrammatical'. We here follow the linguistic tradition of reserving the term "ungrammatical" to a linguistic string that is unacceptable under *any* circumstances. Indeed, we can never claim that specific *X or Y* strings are invariably unacceptable, for there may be a context where the listed options do function as alternatives to each other (e.g., 41b). Still, this "softer" judgement does not mean that the 'alternativity' constraint is necessarily extra-linguistic. While many linguists automatically relegate non truth-conditional procedural meaning aspects to pragmatics, we see no justification for such a move. Linguistic meanings are defined as *conventionally* associated with linguistic forms. Although the great majority of such meanings indeed contribute truth-conditional content, not all do. We reserve "pragmatic status" to interpretations mediated by contextually-induced *inferences*, based on some rationality-based principles, such as the Gricean maxims or the Principle of Relevance (Sperber and Wilson, 1986/1995). And we claim that (i) 'Alternativity' is *not* an interpretation *mediated* by contextual inferences when *or* is concerned. Rather, (ii) it is an *obligatory* meaning aspect imposed by *or*, which is why it is *not cancelable*. We therefore next address inferrability and cancelability.

Starting with inferrability, we maintain that the 'alternativity' constraint does not simply fall out of the Gricean requirement for informativity, as Simons assumes. To see that, consider the following *maybe X, maybe Y* utterance, which is quite similar to a 'Raised options' *or* construction in terms of the speaker's commitment to zero, one or both options being true (see again 11, 36):

42. ALICE: my garage is.. filled with... dead people's things. ((3 LINES OMITTED))
 ... I wanna toss em.
 But it just --
 ... **Maybe** worth something,
 maybe somebody'll surface, (SBC: 051)

Alice's two *maybe* clauses are relevant to one and the same QUD, namely, why Alice doesn't throw away the things her garage is filled with. She thinks maybe the candidate item for throwing away is worth something and maybe someone will show up and be interested in it, in which case she will give them the item. But the utterance is *underspecified* for the type of relation obtaining between the two pieces of information. While both are informative regarding the QUD, (42) does not force them to

stand in a specifically 'alternativity' relation. It's quite possible that the relation is one of consequence, where the fact that the item is worth something will motivate someone to want it.²² Indeed, unlike (12), where the *or* construction and a correlative *maybe* construction were interpreted quite similarly, this is not necessarily so for (42) and (43):

43. ~ Maybe it is worth something, **or** somebody'll surface.

While (42) is compatible with either an alternativity or a consequence interpretation (43) restricts the interpretation to 'alternativity'. In other words, equal relevance to a single QUD does not in and of itself single out 'alternativity'. It is specifically *or* that imposes 'alternativity'. Hence, 'alternativity' must be conventionally encoded for *or*.

'Alternativity' is indeed a procedural, implicit meaning (a not-at-issue meaning in the sense of Potts, 2005). Hence, a speaker denying Darlene's assertion in (34) would deny the asserted conjunctive 'me or Jenn answered...' (B₁), rather than the alternation between them (B₂):

44. ~Darlene: Either me **or** Jenn answered it.
 B: That's not true.
 (1) You didn't always answer it.
 (2) ?? You both picked up the phone at the same time.

At the same time, 'alternativity' is uncancelable. The second utterance in (45) is a failed attempt to cancel the alternativity relation:

45. ~Either me **or** Jenn answered it about five times. ??We both picked up the phone at the same time.

If Darlene and Jenn answered the phone simultaneously there is no alternation between the two disjuncts. In the absence of any other basis for an alternativity relation between the two (45) is unacceptable.

All in all, the 'alternativity' interpretation associated with *or* best fits Grice's category of conventional implicature: 'Alternativity' is not asserted, and hence immune to negation. Yet, it is conventionally specified and uncancelable. But then, it is not clear that such in-between phenomena should be considered a special *pragmatic* category (the Gricean view) rather than a special *grammatical* category. If it is grammatically specified on the one hand, and obligatorily applied to all *or* constructions on the other hand, the only obstacle to analyzing the 'alternativity' constraint as *or*'s core meaning is linguists' reluctance to analyze non truth-conditional aspects as semantic core meanings.²³ But we see no reason to restrict linguistic meanings to truth-conditional content. We then think that if all *or* uses share an "extra-linguistic/pragmatic" constraint this constraint should be analyzed as its semantic meaning, even if it is procedural, rather than conceptual.

Summing up, if one can provide a uniform account for all uses of *or*, one definitely should. Indeed, whether they are disjunctive or non-disjunctive, whether 'alternativity' plays out at the propositional level or at some non-propositional level, *or* constructions must manifest 'alternativity'. 'Alternativity' is the only constant interpretation obligatorily associated with all productive *or* constructions. We

²² Other correlative *maybe* constructions found in the Longman corpus show the second clause elaborating, specifying or justifying the first clause.

²³ See Ariel (2010:9.6) for a discussion of the status of similar grammatical pragmatic phenomena.

therefore propose that the non truth-conditional concept of 'alternativity' constitutes *or*'s core meaning.

Before concluding, however, we should also point out an important difference between our analysis and the one offered by Harder (1996), despite the deep similarity between our approaches. We propose that *or* encodes a *symmetric* concept of alternativity, whereas Harder's analysis is asymmetric in that *or* instructs the addressee that the *subsequent* disjunct is "insertable *instead* of what came before" (p. 88). We believe that despite the structural asymmetry (syntactically, *or* modifies the *subsequent* disjunct, Haspelmath 2004: 6-8) the whole point of *or*'s basic *meaning* is to *counter* this syntactic asymmetry, forced by the linearity of language (see again 3.1). Support for this anti asymmetry force at the interpretative level comes from the finding that half of the *or* constructions in SBC do not position *or* specifically in the intonation unit that introduces the subsequent disjunct (521/1053, 49.5%). Attaching it to the first disjunct, to both disjuncts or assigning to it a separate intonation unit is an attempt to overcome the syntactic fact and to comport with *or*'s semantics. We also do not see a difference in the concept of 'alternativity' relevant for bare *or* constructions and for syntactically clearly symmetric correlative constructions, such as *either X or Y, be it X be it Y*.²⁴ We believe that Harder's asymmetry analysis is more appropriate for cases where the alternatives are introduced by *if not* and *or else*.

4. Conclusions

The main goal of this paper is to propose a subjectivist account for *or* instead of the classical (and non-classical) objectivist accounts. We first criticized the objectivist accounts, specifically their assumption that 'inclusivity' is central to the interpretation of *or* constructions. (i) We argued that 'inclusivity' does not function as an actual discourse reading (an explicature): It is too weak in cases the speaker actually commits to all alternatives, and it is too strong in cases the speaker only intends one alternative to be realized, even if she allows for the possibility that *any one* of the alternatives is possible. Indeed, as already argued by Dik (1968), inclusive interpretations are restricted to the very rare complex connective *and/or*. (ii) We also showed that inclusivity cannot be *or*'s core meaning, not even an abstract meaning, because there is no way to derive a substantial number of actual *or* occurrences from such a meaning. Taken together, our arguments supported the conclusion that the objectivist accounts cannot explain the rich variety of *or* uses in our data.

We then argued that *or* only has a procedural, subjective meaning (rather than a conceptual, truth-conditional one), where the disjuncts must be associated with options construed as *competing alternatives*. Alternativity means that the options are mutually exclusive on some level, because the construction provides only one slot, namely one functional role, available to only one option, which must exhaust that slot. Crucially, however, the arena for this competition over the single slot is not limited to the propositional level, and may very well apply at pre-propositional levels (e.g., for Higher-level category and Equivalence cases) or at a post-propositional, argumentative level. Conventional 'exclusivity' (namely, only one state of affairs can be true of reality) is simply a special case of our broader concept of 'mutual exclusivity'. Our account is then subjectivist not only because the very concept of 'alternativity' depends on a thoroughly human perspective (see again example 1), but also because its application is not limited to propositional aspects of *or* utterances.

On our view, the interpretation of an utterance containing an *or* construction involves a few steps. The addressee must first establish what the alternatives actually are (they may be implicit representations). He then needs to determine what the single slot is that the multiple alternatives compete over. This involves choosing a specific level for which the alternatives are to be assessed as

²⁴ This does not mean that the constructions are equivalent in every respect, of course.

mutually exclusive. Finally, the addressee needs to proceed to construct a contextually plausible reading, integrating the relevant alternativity into the surrounding meaning.²⁵ We should emphasize that the core meaning is not only compositionally, but also noncompositionally (pragmatically), enriched into a variety of complete truth-verifiable propositional forms (such as ‘Choice’, ‘Higher-level category’, ‘Separative conjunction’ etc.—see Ariel and Mauri, 2018), a procedure only briefly touched on in this paper.

Our main conclusion is that although ‘alternativity’ is procedural and non truth-conditional, it is nonetheless *or*’s linguistic core. The (truth-conditional) reading associated with each *or* construction is developed by reference to the surrounding context in a way that guarantees some function to the alternativity relation between the listed options. This subjectivist position sharply contrasts with the objectivist accounts: We reverse the linguistic/extra-linguistic division of labor for *or*. The cognitive concept of ‘alternativity’ is normally relegated to pragmatics, but it lies at *or*’s linguistic core on our analysis. At the same time, existential force (how many of the alternatives the speaker commits to) is often viewed as *or*’s linguistic meaning (specifically, ‘at least one’ according to the ‘inclusive’ doctrine), but it is contextually derived on our analysis (see Ariel, 2004 for a similar reversal of the semantics/pragmatics division of labor for the scalar quantifiers).

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²⁵ We are not, however, proposing that this is the actual processing order.

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