

# The Shared Mind

Perspectives on intersubjectivity

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## Intersubjectivity and the architecture of the language system

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Certain lexical and grammatical units encode aspects of intersubjective coordination. On the basis of discourse connectives, and especially of negation and complementation, linguistic communication is argued to be inherently ‘argumentative’, a matter of influencing other people’s attitudes and beliefs. Intersubjectivity is built into the very structure of grammar, and systematic properties of grammar show that mutual influencing, rather than just ‘sharing information’ or ‘joint attention’ is at the heart of human language. Because of that, language can on the one hand be seen as a special case of animal communication systems, which basically involve management and assessment of other organisms, notably conspecifics. On the other hand, an important difference is precisely that this management and assessment is indirect, presupposing shared knowledge, and aimed at other minds.

### 1. Introduction

Human languages have several features that are candidates for the status of ‘distinctive characteristic’ in comparison to communication systems of other animals (Hockett 1958). Some of these have a special connection to the concept of intersubjectivity, understood as the mutual sharing of experiential-conceptual content between subjects of experience. Thus, the basically *conventional* character of the relation between (observable) form and (unobservable) function in the symbols of human languages presupposes intersubjectivity: conventions are mutually shared solutions to coordination problems, rules that are followed because of the expectation that others will follow them and because one knows that others expect one to follow them (Lewis 1969; Keller 1998; Itkonen, this volume, traces the origins of this insight to Wittgenstein’s famous ‘argument against private language’ and argues that it entails that linguistic phenomena are inherently normative in a way that does not allow a reduction to strictly physical phenomena). Being ‘mutually shared’ is at the core of any definition of intersubjectivity (Zlatev, this volume),

so that linguistic symbols, being conventional, are necessarily intersubjectively grounded. The way linguistic conventions emerge, change and are maintained thus provides a special window on human intersubjectivity.

Another such feature is referentiality: the systematic use of a signal to make another individual pay attention to a specific phenomenon in the world. Systematic links between a signal and the external world have been shown to exist in other animal communication systems, but their character seems to differ systematically from that of linguistic symbols. With respect to the famous case of the different alarm calls of vervet monkeys (Cheney and Seyfahrt 1990) – distinct for leopards, eagles, and snakes – Tomasello (2003: 10) comments:

It seems as if the caller is directing the attention of others to something they do not perceive [...], that is the calls would seem to be symbolic (referential). But several additional facts argue against this interpretation. First, there is basically no sign that vervet monkeys attempt to manipulate the attentional or mental states of conspecifics in any other domain of their lives. Thus, vervets also have different “grunts” that [...] mainly serve to regulate dyadic social interactions not involving outside entities, such as grooming, playing, fighting, sex, and travel. Second, predator-specific alarm calls turn out to be fairly widespread in the animal kingdom. They are used by a number of species – from ground squirrels to domestic chickens – that must deal with multiple predators requiring different types of escape response (Owings and Morton, 1998), but no one considers them to be symbolic or referential in a human-like way.

The special kind of referentiality found in *human* communication by means of language thus also seems to be intimately tied up with intersubjectivity. It crucially involves a triadic relationship of sharing attention for an outside object with another individual. A similar comment applies to the discovery of individual vocal signatures, not dependent on voice characteristics of the caller, used by bottlenose dolphins (Janik, Sayigh and Wells 2006). These have been compared to ‘names’ in human languages, because of the fact that they identify an individual uniquely through the shape of the signal (not by voice characteristics), i.e. a dyadic relationship, in this case between language and the world.

But humans only use their names themselves when introducing themselves to strangers; it is others who use names to address a specific individual and to talk *about* such an individual to others. In contrast, about half of a dolphin’s whistles in the wild consists of signature whistles (Janik et al. 2006: 8295), while in human language use, first person pronouns like English *I*, i.e. the *same* form for different individuals, belong to the most frequent words (e.g. De Jong 1979 for spoken Dutch). Thus, the use of deictic elements such as *I* as well as that of names in human language is dependent on understanding so-called role-reversal, which involves a triadic relationship of joint attention for an object (Tomasello

1999: 103–107). Taking the common core of ‘intersubjectivity’ to precisely consist of ‘sharing’ (of some mental content) and ‘joint attention’ as a paradigmatic instance (Zlatev, this volume), intersubjectivity is precisely what distinguishes the dolphins’ signature calls from the way human names work, and from human ways of referring to oneself.

Still, detailed studies of animal communicative behavior are highly relevant to understanding human behavior and human language, if only because they help to unwrap initially holistic concepts such as ‘referentiality’, ‘names’, and the like into different aspects, some of which have clear parallels in the animal kingdom (in the cases mentioned: picking out a specific category of phenomena in the world, or unique identification of individuals). In that way they contribute to linking human language to other phenomena in the natural world, to the prospect of a more complete understanding of language – a cultural phenomenon – as grounded in biology, and thereby to linking culture to nature.

Now how about the concept of intersubjectivity itself? Can we distinguish different aspects of this phenomenon too, such that at least some of them can insightfully be regarded as comparable to aspects of animal communication? In this chapter, I want to argue that we can, in fact: that we should, given a proper understanding of crucial components of meaning and grammar.

## 2. Is intersubjectivity something ‘completely different’?

Tomasello (2003: 12) lists the following points of difference between language and communicative signals of other primate species:

1. Language is socially learned and transmitted culturally.
2. Linguistic signals are conventional, i.e. understood intersubjectively (cf. Section 1).
3. Linguistic signals “are not used dyadically to regulate social interaction directly, but rather they are used in utterances *referentially* (triadically) to direct the attentional and mental states of others to outside entities” (ibid.).
4. Linguistic signals “are sometimes used *declaratively*, simply to inform other persons of something, with no expectation of an overt behavioral response” (ibid.).<sup>1</sup>

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1. At this point, Tomasello refers to Dunbar (1996), who puts forward the hypothesis that language originated in the process of gossip, the sharing of information for purposes of social bonding.

5. Linguistic signals “are fundamentally *perspectival* in the sense that a person may refer to the same entity as *dog*, *animal*, *pet*, or *pest*, or to the same event as *running*, *fleeing*, *moving*, or *surviving* – depending on her communicative goal with respect to the listener’s attentional states” (ibid.).<sup>2</sup>

Properties (2), (3) and (4) necessarily involve intersubjectivity.<sup>3</sup> Property (5) may function, as Tomasello indicates, in an intersubjective way, but it certainly need not: different construals of the same entity or event may also be useful for a single individual’s interaction with the world, as different categorizations (e.g. as pet or as pest) invite different types of action. Property (2), conventionality, has already been discussed; intersubjectivity here provides the foundation for the way linguistic signals function in a community. It is in properties (3) and (4) that intersubjectivity enters into the character of the messages conveyed by linguistic signals themselves. Moreover, the two – directing someone’s attention to an outside entity, and informing someone of something – are obviously closely connected.

With respect to these two features, Tomasello construes the specific character of human language in opposition to that of communicative signals of other primates; language involves joint attention and sharing information, whereas animal communication is dyadic, and consists of inducing behavior, such as an escape response in conspecifics. Owings and Morton (1998), to whom Tomasello refers in this connection, have developed this idea in great detail for many species using vocal communication. They describe their approach themselves in a programmatic way as follows:

This book provides a discussion of animal vocal communication that avoids human-centered concepts and approaches, and instead links communication to fundamental biological processes. [...]. Animals use signals in self-interested efforts to manage the behavior of other individuals, and they do so by exploiting the active assessment processes of other individuals. [...] Communication reflects the fundamental processes of regulating and assessing the behavior of others, not of exchanging information. (Owings and Morton 1998:i)

Consider the vervet monkeys’ alarm calls mentioned by Tomasello (cf. above). Even if the call is species-specific, there is no reason to say that its meaning consists

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2. In cognitive linguistics, this is known as the fundamental phenomenon of construal (Langacker 1987). For an overview, see Verhagen (2007).

3. Feature 1 does not imply intersubjectivity. For example, elements and structure of birdsong are culturally transmitted (transferred by learning, observation, memorization and copying of behavior; cf. Hultsch and Todt 2004), and intense interaction facilitates this learning and the quality of the result, but it certainly does not presuppose any mutual sharing of memory or experience.

of reference to the predator (the individual, or the category). The meaning of the call is to induce predator-specific escape responses.<sup>4</sup> The way Owings and Morton characterize animal communication presupposes that exchange of information does constitute the basic function of human communication by means of language, and as we have seen, Tomasello also construes some of the crucial differences between animal communication and human language in this way.

But what if human language is also fundamentally a matter of regulating and assessing others, with exchange of information being secondary? No doubt, the descriptive power of human languages greatly exceeds that of animal communication systems (as far as we know), but that does not yet imply that linguistic meaning primarily consists in descriptive information and that regulatory effects are derivative; in principle, it may still be the other way around. Precisely this latter position is a crucial part of the conceptual framework developed in Verhagen (2005). It is this idea that I will develop and demonstrate further in this chapter. The evidence I will be considering consists of *systematic* characteristics of linguistic elements, especially from the domain of grammar, i.e. words and constructions that provide the scaffolding for sentences and discourse.

### 3. Argumentativity: Concepts and methods

#### 3.1 Argumentativity and conventional meaning

When one individual produces a linguistic utterance for another one, and this other individual understands it, the result is in systematic ways always more than the participants jointly focusing on the same object of conceptualization in the same way. It also consists in inducing, and engaging in, inferential reasoning. Normal language use is never just informative, but always ‘argumentative’, in the terminology of Anscombe and Ducrot (1989). Engaging in verbal communication comes down to, for the speaker/writer, an attempt to influence someone else’s thoughts, attitudes, and sometimes immediate behavior – even when a speaker simply says *Over there* in response to a *Wh*-question like *Where is the bus stop?* (cf. below, end of this section). For the addressee it involves finding out what kind of influence it

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4. Behavioral biologists may to some extent differ on the question whether a notion of ‘information’ has any role at all to play in explaining animal communication, but such differences are relatively marginal. Thus, although Bradbury and Vehrenkamp (2000) do not agree entirely with Owings and Morton (1998), their initial statement also reads: “It is widely agreed that animal signals modulate decision making by receivers of the signals” (Bradbury and Vehrenkamp 2000: 259, referring to the seminal work of Dawkins and Krebs 1978).

is that the speaker/writer tries to exert, and deciding to go along or not.<sup>5</sup> In terms of intersubjectivity: the *process* of verbal communication involves *partially* shared and partially divergent experiential-conceptual content, that communicating subjects attempt to coordinate on by means of (the speaker) attempting to influence the other's inferences and (the addressee) assessing such attempts.

In itself, this is not incompatible with an information view of linguistic meaning. The constant, conventional function of ordinary words and constructions might consist in the information they provide, with rhetorical effects coming on top of that, depending on the context, and thus being variable. However, Anscombe and Ducrot argue for the opposite position, which is therefore sometimes characterized as a theory of argumentativity 'in' the language system. The default condition for ordinary expressions, in this view, is that they provide an argument for some conclusion, and this argumentative orientation is what is constant in the function of the expression, while its information value is more variable.<sup>6</sup>

For example, in a commentary to the Dutch national Budget for the year 2001 – the most favorable one in many years – government officials from the Ministry of Finance wrote that there was a prospect of a “negative deficit”, thereby indicating that there were more reasons than ever to control the budget. A criterion of adequacy for a semantic theory is that it should explain why the effect of this expression on addressees is systematically different from that of the expression *surplus*, despite the fact that this is truth-functionally equivalent. The point is that the word

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5. When pronominal reference to the roles of 'speaker/writer' and 'hearer/addressee' is called for, I will adopt the practice of using feminine forms (*she, her*) for the former, and masculine ones (*he, his*) for the latter.

6. This idea of argumentativity in natural language is to an important extent in agreement with the basic position adopted by Levinson (2000): most inferences associated with an expression, even if they are defeasible, are conventional, and not computed on-the-fly, contrary to certain traditional and newer approaches in (Gricean) pragmatics, notably Relevance Theory (cf. Sperber & Wilson 1986); i.e. they cannot be conceived of, in a cognitively realistic approach to semantics and pragmatics, as conversational implicatures that are derived on the basis of some strictly truth conditional content plus knowledge of the context. Rather, such inferences are derived because of the use of the expression itself. Thus, the argumentativity approach I advocate here and Levinson's concept of *generalized* implicatures are in agreement about the idea that 'strength' is a normal and crucial part of semantics, and also with Itkonen's (this volume), notion of conventional meaning as 'frozen action'. An important difference between the argumentativity approach and these other pragmatic-semantic approaches to meaning in natural languages, resides in the distinction, in the argumentativity approach, between 'orientation' and 'strength'. As we will see in the remainder of this chapter, precisely this distinction allows for a general treatment of some seemingly distinct phenomena. More generally, the argumentativity approach comprises, in a single conceptual framework, a number of notions that have been developed independently of each other in different fields of pragmatic research (cf. also Note 8).

*deficit* is conventionally associated with warning, i.e. counts as an argument to cut spending. The use of the word *negative* does not reverse this argumentative status. On the contrary, it strengthens the point because it adds its own rhetorical force, which points in the same direction as *deficit* (that of warning). As with *deficit*, this must be considered an inherent part of the meaning of the word.

It is the conventional meanings of these words that allowed the writers of this text to use them in attempting to regulate the attitudes of their readership in a way that is in their interests. If this effect were something that comes on top of the informational value of the utterance – inferred by readers in context, after having computed the information –, then it is impossible to explain why there is a systematic difference in signal value between *negative deficit* and *surplus*: the information value, which in this view is the starting point for readers' inferences, is not different, so readers should be able to reach the same conclusions *in both cases*. But in fact, the inferences to be drawn from these two expressions are each other's opposites. What we can now observe is that the information value of the term *deficit* is more variable than its argumentative value: in combination with the term *negative*, it is compatible with situations that can also be described as *surplus*, but even in such a combination, what remains constant is the argumentative value of the signal.<sup>7</sup>

Or consider a very simple sentence as in (1) (Ducrot 1996:42).

- (1) There are seats in this room.

What are the properties of situations in which the utterance of (1) is appropriate? At first sight, the argumentative character of (1) may not be apparent, and one might think that understanding the utterance just consists of knowing how to check it against reality: are there seats in the room or not? Here it is crucial to take into account that understanding an utterance at least includes knowing how it fits into the ongoing discourse, i.e. how it relates to preceding and following utterances. People do not communicate by means of isolated sentences, but by means of discourse consisting of multiple utterances that enter into specific relations with each other, such as question-answer, cause-consequence, problem-solution, and the like. There are even special classes of elements that provide instructions on how to connect pieces of discourse, i.e. anaphora, and especially: different kinds of conjunctions (*and, but, because, etc.*) and connecting adverbs and adverbial phrases (*so, as well, yet, etc.*) – jointly: 'discourse connectives'. So when investigating the meaning of an utterance containing the word *seat*, as in (1), we should not

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7. This is not to say that the argumentative value of an expression can never be reversed, but this requires the use of special elements (e.g. a negative argumentative operator like *barely*); cf. Section 4.

only look at how it relates to the/some world, but also at the kinds of discourse that it fits in a coherent way, and the kinds that it does not fit well.

So consider what happens when the utterance following (1) is something like *They are uncomfortable*. How to connect this to (1)? The obvious way is to use a contrastive conjunction like *but*. Something like *and moreover* would be highly incongruous. Schematically ('#' indicating lack of coherence):

- (2) There are seats in this room.
  - a. But they are uncomfortable.
  - b. #And moreover, they are uncomfortable.

The reverse is the case if the next utterance is *They are comfortable*:

- (3) There are seats in this room.
  - a. #But they are comfortable.
  - b. And moreover, they are comfortable.

What (2) shows is that (1) as such induces an addressee to make positive inferences about the degree of comfort provided in this room. This is apparent from the need to use the contrastive conjunction *but* when the next utterance cancels this inference (because of *uncomfortable*), and from the strangeness of the *additive* connective in (2b). Saying that the seats are uncomfortable is not adding a simple piece of information to the information about the presence of the seats. When *comfortable* is used (rather than *uncomfortable*), the pattern is reversed, as shown in (3): here the inference induced by (1) is reinforced, so the additive connective in (3b) is appropriate, and the contrastive one in (3a) is not.

Thus, an utterance like (1) counts as an attempt by the speaker to convince the addressee of some point that goes beyond the information provided. Moreover, this is part of the *conventional* function of the expression in (1). One simply does not know the meaning of *seat* if one can only distinguish objects as belonging to the class or not, but does not know that it licenses this kind of inferences. In view of this, we may say that the meaning of the word is its contribution to the argumentative value of utterances in which it occurs.

On this basis, it can also be seen in what sense even an apparently simple piece of information such as the answer *Over there* to the *Wh*-question *Where is the bus stop?* is argumentative, too (cf. the beginning of this section). Observe the use of the contrastive connective in *Over there, but the last bus has already left* or *Over there, but the line has been temporarily re-routed*. Clearly, it is a matter of convention that providing information about the location of the bus stop counts as inducing the addressee to make certain inferences, probably about the

possibility to take a bus at that location in the near future (the question will also have been taken as having such a desire as its background).

The normal situation for linguistic meanings seems to be that their argumentative value is tied to a particular way of construing a situation or some aspect of it. Having *only* some conventional rhetorical strength constitutes a rather restricted type of language (Verhagen 2005: 18); it may be found in elements such as words for a greeting (*Hello*) or an apology (*Sorry*). Notice that these cases show that the expression of a positive attitude towards the addressee has the status of an interpretation. Using such expressions counts as a greeting or an apology, irrespective of the actual attitude of the speaker with respect to the addressee or the issue at hand, although, naturally, an inference about the speaker's mental state is often justified. In the same vein, the meaning of *That's great!*, for example as uttered in response to an interlocutor's announcement of a job offer, is not primarily an expression of the speaker's attitude, but a signal to the addressee that the speaker acknowledges the addressee's (right to a) positive evaluation. Again, this normally licenses an inference about the speaker's actual mental state, but it is not the primary meaning from which the rhetorical value is derived. Rather, it is the other way around: we infer the speaker's personal mental state from the argumentative value of an expression.

### 3.2 The concept of 'topos'

In exactly what way is the relevant argumentative dimension determined? In order to see how this works, recall that the inferential load of utterances is crucially involved in the way they relate to each other in connected discourse. Discourse consists of chains of inferential steps, including the possibility to reject one or more steps, and change direction. Consider the exchange in (4).

- (4) A: Do you think our son will pass his courses, this quarter?  
 B: Well, he passed those of Winter Quarter.

In a purely information-oriented perspective, B's utterance should be said not to address the question posed by A. So why can this be a coherent piece of discourse? The reason is, again, that every utterance is taken as orienting the addressee towards certain conclusions *by invoking some mutually shared model* in which the object of conceptualization figures, a 'topos' in Anscombe and Ducrot's terminology. In our culture it is a rule, mutually known to the members of the

culture,<sup>8</sup> that passing some test normally licenses the inference that one will be able to pass other tests as well; in other words, the topos is that if someone passed a test, it is more likely that he will be able to pass other tests than that he will not. Notice the use of terms like ‘normally’ and ‘more likely’ in the formulation of this rule – it is a kind of default rule, not a universally valid one.

Given such a topos, it is valid to infer from the statement *He passed his courses*, that he is probably capable of successfully performing certain tasks, like taking courses of this kind. In this way, B’s utterance can count as a coherent, in principle positive, answer to A’s question. That is, creating an argumentative connection is what appears to make a set of utterances into a coherent discourse. Again, an addressee takes an utterance not (just) as an instruction to construe an object of conceptualization in a particular way, but as an instruction to engage in a reasoning process, and to draw certain conclusions; it is typically not just attending to the same object, but understanding what the speaker/writer is getting at (what she wants you to *infer*), that counts as successful communication. And understanding what it is that your interlocutor wants you to infer, constitutes a move from a relatively indirect relation between coordinating minds (through shared attention for some object), to a more direct one; as we shall see, it is this more direct ‘inter-subjects’ connection that certain grammatical constructions operate on.

The predicative use of ordinary adjectives, e.g. about size or quantity, also provides good illustrations (cf. Pander Maat 2006). Saying that someone is tall, in this view, does not primarily provide information about that person’s length, but counts as a recommendation of some kind (depending on the topos being activated), e.g. to select him for the basketball team, or not to select him as a jockey. Notice that a person being called *tall* in the jockey-selection situation may be shorter than a person rejected for the basketball team because he was ‘short’. Again, the constant value of the terms is in their argumentative orientation, not (just) in their information value.

Of course, we are also getting some information about the world from the utterances, just like we are able to get information out of the expression *negative deficit*. In this case, knowing what the relevant topos is (e.g. the taller someone is, the better the chance that he will make a good basket ball player), and knowing something about the average length of persons in general and basket ball players in particular, we can make certain guesses about the range of possible sizes for the person involved. But that is not primary in the conventional knowledge activated by the word *tall*. Activation of a scale of length that allows inferences about a

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8. A topos is thus a component of the ‘common ground’ in the sense of Clark (1996) (cf. Verhagen 2005: 7–16); cf. also Sinha (1999).

person's actual height is dependent on knowledge of the relevant argumentative scale, not the other way around.<sup>9</sup>

### 3.3 Argumentative orientation and argumentative strength

So far I have argued for the inherent argumentativity of language on the basis of phenomena in the domain of the lexicon. Other phenomena in this domain include several kinds of speech act verbs (see also Section 5), evaluative adverbs such as *hopefully* and *unfortunately*, and connectives like *so* and *although*. But arguably the most striking evidence for the fundamental argumentative character of human communicative intersubjectivity comes from the fact that it pervades core parts of grammar. That is what I will turn to in the remainder of this chapter.<sup>10</sup>

The methodology I will be using in order to demonstrate the precise argumentative character of certain parts of grammar is based on the appropriateness or inappropriateness of discourse connectives that was introduced in the previous section, cf. examples (2) and (3). These are taken as diagnostic cues for the argumentative value of the utterances being connected. An important distinction that can be elucidated in this way is that between argumentative *orientation* and argumentative *strength*. Consider the relation between the expressions *a small chance* and *little chance*. These may well refer to the same percentage of probability, for example 20%, but their roles in orienting an addressee to certain conclusions are systematically different. In their import, they are exactly opposite, as can be demonstrated with (5) and (6). Suppose someone is considering whether or not to perform a surgical operation on a patient who is in a serious condition; then it is coherent for this person to say (5a), but not (5b).

- (5) There is a small chance that the operation will be successful.
- a. So let's give it a try.
  - b. #So let's not take the risk.

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9. This does not necessarily mean that such an informational component has to be so indirect for all words in a language, i.e. that it could never be conventional – languages are more flexible than that. For example, Anscombe and Ducrot (1989) propose the interesting hypothesis that numerical expressions in natural languages should be considered a special device, a kind of operator to remove the default argumentative orientation of ordinary expressions. Saying that someone's height is 1.75 meter does not inherently display the argumentative orientation of saying that someone is tall or short. Using precise numeral specifications is obviously more artificial and elaborate than using words like *tall*, *short*, *fast*, *slow*, etc., which testifies to the default condition of the linguistic meaning of everyday expressions being inherently argumentative.

10. These are based on the analyses in chapters 2 and 3 of Verhagen (2005), respectively.

What this shows is that saying *There is a small chance* orients an addressee to the same conclusions as the positive statement *There is a chance*. On the other hand, (6) exhibits the mirror pattern: (6a) is not coherent, but (6b) is.

- (6) There is little chance that the operation will be successful.  
 a. <sup>#</sup>So let's give it a try.  
 b. So let's not take the risk.

Saying *There is little chance* orients an addressee towards the same conclusions as the negative statement *There is no chance*. Notice that it makes no difference what the actual percentage of the chance of success is. Whatever turns out to be the case, *a small chance* basically orients the addressee to the same general kind of conclusions as *a chance*, while *little chance* orients one to the same sorts of conclusions as *no chance*.<sup>11</sup>

The expressions do not by themselves indicate positive vs. negative *recommendations*. Suppose the context is not that of a surgeon wondering whether or not to perform an operation, but of a policeman wondering whether or not to interrogate a seriously injured victim of a shooting, who is waiting to be operated. In that situation, it may very well be coherent to say *There is little chance that the operation will be successful. So let's give it a try.*, cf. example (6a), employing a topos of the kind 'The more important certain information is, the more acceptable it is to take risks in obtaining it'. In that sense, the pragmatic import of the expression *little chance* is context dependent. But the significant point is that its effect is still the same, in this context, as that of the expression *no chance*, and the reverse of the effect of *a small chance*. In this context, it would precisely be coherent to say *There is a small chance that the operation will be successful. So let's not take the risk.*, cf. example (5a). Thus the conventional, context-independent linguistic meaning of an expression of the type *little X* is to reverse the orientation of the inferences associated with the predicate *X* (with less strength than *no*; cf. below), whatever topos is being employed. The equally conventional context-independent meaning of *a small X* is to maintain the orientation of the inferences associated with the predicate *X*, while their strength is less than with an unmodified assertion.

Thus a generalization can be made over negation and expressions like *little chance* in terms of argumentative *orientation*: their use has the function of directing the addressee to infer that certain conclusions are invalid. The difference must

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11. Therefore, as with the meaning of the expression *negative deficit*, there does not seem much prospect for deriving the difference between the distinct intersubjective functions of these expressions from a descriptive difference without somehow introducing the argumentative orientations in the derivation, i.e. in a non-circular way. The argumentative difference must itself be taken as part of the linguistic meaning of these expressions.

Table 1. Argumentative orientation and strength of [operator]-*chance*

	orientation	Strength
<i>a chance</i>	+	High
<i>a small chance</i>	+	Low
<i>no chance</i>	-	High
<i>little chance</i>	-	Low

be characterized in terms of argumentative *strength*. Straightforward negation has maximal argumentative strength; its use relates a specific situation (the chance of success here and now) to a shared inferential model of a type of situations (THE MORE CHANCE OF SUCCESS, THE MORE REASON TO OPERATE) *without any qualification*: given the topos, the situation in the world provides the strongest possible argument for invalidating the conclusion 'go ahead with the operation'. This is the locus of the difference with *little X*. The latter shares its argumentative *orientation* with negation (the chances of success are not optimal), but presents it as weaker: it is qualified, since the situation in the world comprises a feature that might be construed (in other circumstances, or by another person) as favoring an operation. Similarly, *a small X* shares its argumentative orientation with unmodified predication, but presents it as weaker. This is summarized in Table 1.

The second column does not represent a binary distinction, but a scale on which expressions can also occupy in-between positions. For instance, the strength of *no chance* is arguably maximal, while that of *a chance* may easily be surpassed by that of, for example, *every chance in the world*.

Operators with less than maximal strength leave room for discussion and negotiation. As we have seen before, an utterance that cancels inferences associated with the previous one, must be marked with a contrastive connective like *but*. This also applies to the cases we are considering here; for example, (7a) produces a coherent discourse, unlike (6a):

- (7) There is little chance that the operation will be successful.  
 a. But let's give it a try.  
 b. #But let's not take the risk.

But when the strength of the negative operator is maximal, there is no room for canceling the inference that it is not worth trying; uttering (8) always amounts to inconsistency:

- (8) #There is no chance that the operation will be successful. But let's give it a try.

A difference like this is a natural consequence of differences in strength, and of the scales involved having definite boundaries; it does not undo the parallel in argumentative *orientation*. Distinguishing argumentative strength from orientation precisely allows us to formulate in a natural way what straightforward negation has in common with other expressions that at first sight may not look like negation but nevertheless behave in highly similar ways, as we shall see in the next section.

#### 4. The negation system as an intersubjective coordination system

The claim is that both straightforward negation and the construction *little X* belong to a larger *system* of expressions that share an effect on the argumentative orientation of the utterances they are part of (though they may differ in their strength).<sup>12</sup> To the degree that we can substantiate the claim that this grammatical system must be characterized in this way, we have provided evidence that the nature of intersubjectivity as built into the linguistic system, is basically argumentative.

Consider the following set of expressions containing the expression *let alone*:

- (9) He didn't pass Statistics-1, let alone Statistics-2.
- (10) ??He didn't pass Statistics-2, let alone Statistics-1.
- (11) \*He passed Statistics-1, let alone Statistics-2.
- (12) \*He passed Statistics-2, let alone Statistics-1.

In view of these, *let alone* appears to connect two elements that are ordered on a scale in a specific way, witness the problematic status of (10): presumably, Statistics-2 is harder to pass than Statistics-1. Moreover, *let alone* is also a negative polarity item: since neither (11) nor (12) is fine, it appears to require the presence of a negation operator in the first clause (cf. Fillmore, Kay and O'Connor 1988). Next, notice that *almost X* has a negative entailment, whereas *barely* does not:

- (13) He almost passed  $\rightarrow$  He did not pass
- (14) He barely passed  $\rightarrow$  He passed

Nevertheless, *almost* cannot license the use of *let alone*, while *barely* can:

- (15) \*He almost passed Statistics-1, let alone Statistics-2.
- (16) He barely passed Statistics-1, let alone Statistics-2.

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12. It is especially because of this kind of systematicity that a linguistic analysis provides a powerful window on the mind. The significance of this point is easily overlooked by proponents of the information view, cf. Hinzen & Van Lambalgen (2008) and Verhagen (2008).

**Table 2.** Argumentative orientation and strength of [operator]-*passed*

	orientation	strength
<i>passed</i>	+	high
<i>almost passed</i>	+	low
<i>did not pass</i>	-	high
<i>barely passed</i>	-	low

From an information-oriented point of view, this is a riddle. An explanation can be based on the insight that *barely* reverses the argumentative orientation of an utterance (as negation does), while *almost* preserves it (despite the facts, so to speak), as can be seen in the following set of connected utterances:

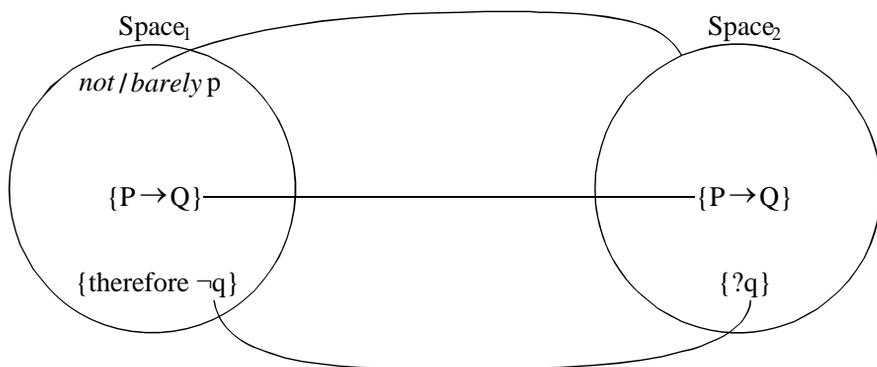
- (17) He passed Statistics-1. So there is hope that he may make it through the first year.
- (18) #He didn't pass Statistics-1. So there is hope that he may make it through the first year.
- (19) He almost passed Statistics-1. So there is hope that he may make it through the first year.
- (20) #He barely passed Statistics-1. So there is hope that he may make it through the first year.

Naturally, as an instrument for reversing the argumentative orientation of an utterance, *barely* is weaker than straightforward negation, just like *almost* is a weaker positive argument for a conclusion than a statement without any hedges. Schematically, this is shown in Table 2.

And just as we saw in the previous section, the weaker argumentative operators allow room for discussion, changing direction in the subsequent discourse (using a contrastive connective), while the strongest one is not defeasible:

- (21) He barely passed the test. But anyway, he did.
- (22) #He did not pass the test. But anyway, he did.

Recognizing *barely* and *almost* as operators and *let alone* as a connector at the argumentative level, allows for a unified explanation of the phenomena mentioned above, including the problem of *barely* licensing the use of *let alone*. What these elements have in common, and what determines the similarity of their grammatical properties, is the fact that their conventional meaning primarily functions at the level of the argumentative value of utterances, not on that of informational



**Figure 1.** A schematic view of the intersubjective nature of the negation system (see the text for discussion)

content.<sup>13</sup> Their common features in terms of intersubjectivity can be depicted as in Figure 1 (cf. Verhagen 2005: 57).

The use of an element from the negation system, e.g. *not* or *barely*, sets up a configuration of two perspectives ('mental spaces' in terms of Fauconnier 1994), the first of which is that of the person responsible for the utterance (including the negative element), which contrasts in a particular way with a projected second perspective (by default: the addressee's). The speaker/writer envisages that the addressee might entertain a thought *q*, for example, that there is hope for their son's making it through the first year. This is represented as '?*q*' in Space<sub>2</sub>. She furthermore believes that she shares the knowledge of a certain cultural model with the addressee, for example, that passing a statistics course in our culture normally provides some ground for the conclusion that one can also pass other sorts of courses. This is represented by the topos '*P*→*Q*' in both Space<sub>1</sub> and Space<sub>2</sub>. Both the use of *not p* and that of *barely p* invalidate *q* (given the topos), inviting the addressee to consider *¬q* more justified than *q*, at least at this point in the discourse. What this explication shows is that intersubjectivity is built into the very semantics of natural language negation elements: they involve multiple distinct perspectives that are to be coordinated in a particular way, and they presuppose shared knowledge that can be invoked as a basis for inferential processes. The fact that it is this argumentative character that determines the coherence of a grammatical subsystem (in this case:

13. Cf. Verhagen (2005, Ch. 2) for a discussion of other phenomena relating to negation that can be illuminatingly (re)analyzed in such a perspective, such as the difference between sentential and morphological negation (by means of prefixes such as *un-*), and the reason why *not impossible* is not functionally equivalent to *possible*, despite the logical equivalence of these expressions.

negation) is in turn strong evidence for the fundamental role of argumentativity in human communicative intersubjectivity. In fact, it is strengthened by the fact that similar properties are found in other subsystems of grammar.

## 5. Complementation as an intersubjective coordination system

Traditionally, a sentence containing a clausal complement such as (23) is viewed as presenting one event or situation as part of another one, i.e. as some (special, structural) combination of two pieces of information about the world.

(23) The envoy reported that the money had been delivered.

The situations being connected are seen as basically characterized by the verbs, i.e. *report* and *deliver* in (23). Thus, the structure of (23) is considered to be essentially the same as that of the simplex sentence *The envoy reported something*, with the slot of *something* being filled by another clause in (23) itself: this 'subordinate clause' fills the direct object slot in the 'main clause'.

However, children do not learn such complex syntactic constructs by combining two descriptions of events, i.e. by combining simplex clauses (Diessel and Tomasello 2001, cf. also Tomasello 2003). Rather, they start, at about 3 years of age, to add certain markers of subjective perspective like *I think* and *you know* to simple clauses of types they have already been producing before. Diessel and Tomasello show that, at least for the children, these are not complex structures that contain two propositions, but single-proposition utterances, the content of which is expressed completely by what would in a traditional structural analysis be regarded as the subordinate clause. It is only over a relatively long period of increasing linguistic experience that children gradually learn to use more verbs, sometimes also in the past tense and/or with third-person subjects, that in the end results in the emergence of a more general complementation construction that allows adults to say and understand things like (23).

These facts cast very serious doubt on the validity of the traditional analysis for complementation in general, especially since a large part of complementation in spontaneous conversation of adults also consists of the elementary, single-proposition type with added perspective-marking that is first acquired by children. According to Thompson (2002), this portion amounts to as much as 80%. It would of course be preferable to have an analysis that acknowledges the basic character of the perspective-marking function, and somehow incorporates cases with third person, past tense 'main' clauses as special cases.

So let us reconsider the issue of the precise relationship between expressions such as (24) and (25)

(24) I think it is raining.

(25) John thinks it is raining.

According to two respectable and long-standing traditions, originating in linguistics (Benveniste 1958) and philosophy (Austin 1962, Searle 1969), these expressions belong to two completely different categories of utterances: either subjective/performative, or objective/descriptive, respectively. In modern linguistics, the performative/descriptive distinction is best known. In this view, the use of the following two sentences exhibits an important qualitative difference:

(26) I promise that I'll have the car up in front at 2 o'clock.

(27) John promised that he'll have the car up in front at 2 o'clock.

The point is, according to Austin, that it makes no sense to characterize (26) in terms of truth conditions, i.e. to treat it as a description of an act of promising. In uttering (26), one performs an act of promising, and the performance of an act can be felicitous or infelicitous, but not true or false. An utterance such as (27), on the other hand, constitutes a description of an act of promising, and thus its semantics can be characterized in terms of truth conditions. Accordingly, the two sentences belong to two wholly distinct categories of speech acts: (26) constitutes a 'commissive' one, (27) a 'constative' one. Benveniste (1958) had already classified speech act formulas like (26) and first-person present-tense uses of verbs of cognition like (24) together as 'subjective' utterances, and (25) and (27) as 'objective' ones. More recently, what is basically the same insight has also been formulated by others, e.g. Nuyts (2001), Diessel and Tomasello (2001: 103/4). According to Nuyts, expressions like *It is probable that...* and *I think* are used 'performatively' (in the sense that the speaker 'performs' an epistemic evaluation by uttering these expressions), while third person ones (*Mary thinks that...*) are used 'descriptively': "the speaker reports on someone else's epistemic evaluation of a state of affairs without there being any explicit indication as to whether the speaker personally subscribes (i.e., is committed) to the veracity of the evaluation or not" (Nuyts 2001: 385).

But from a grammatical and especially a functional point of view, such a dichotomy is unsatisfactory, as it implies a rather serious discrepancy between structure and function: Why are such dissimilar functions expressed in similar structures, i.e. complementation constructions? Also, the basis for children's gradual extension of the use of complementation, observed by Diessel and Tomasello,

remains a mystery, because under this analysis, it involves an abrupt shift from one category of communicative functions to a wholly different one.

However, the argumentative perspective developed above precisely allows for a natural unification of these phenomena. Consider the way (26) and (27) function in the context of (28).

- (28) A: Can I be in Amsterdam before the match starts?  
 B1: I promise that I'll have the car up in front at 2 o'clock. [= (26)]  
 B2: John promised that he'll have the car up in front at 2 o'clock. [= (27)]

Both can count as an affirmative answer. Both can felicitously be followed by the explicit reassurance *So don't worry* (notice the use of *So*). That is, both saying *I promise that X* as well as saying *John promised that X* count as arguments for an addressee to strengthen the assumption that X will happen, they have the same argumentative orientation.<sup>14</sup> The difference is one of *strength* rather than argumentative orientation. Whereas the argumentative strength of the first-person, present tense utterance is maximal, the strength of the third person, past tense utterance is less, as the cognitive coordination between author and addressee is indirect, 'via' the onstage perspective of a third person; but it still functions to coordinate the perspectives of speaker and addressee, just like a first person utterance.

According to this analysis, a difference between first person, present tense, and third person matrix clauses should be that the invited inference is defeasible in the latter case, but not in the former, which has a maximal strength. This is borne out, for both speech act verbs, witness (29a) and (29b), and verbs of cognition, witness (30a) and (30b):

- (29) a. John promised that he'll have the car up in front at 2 o'clock. But he might have forgotten the route to your new home.  
 b. #I promise that I'll have the car up in front at 2 o'clock. But I might forget the route to your new home.
- (30) a. John believes that the mission has been successful. But in fact, it has failed.  
 b. #I believe that the operation has been successful. But in fact, it has failed.

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14. In Verhagen (1995), it is argued that it is precisely this constant argumentative orientation of the report of someone promising something that provides the basis for the development of the epistemic/evidential use of *promise* as in *The debate promises to be interesting*; in such cases the verb only functions as a speaker-oriented marker of argumentative orientation, and does not designate an act of promising.

The fact that the contrastive conjunction *but* has to be used in (29a) and (30a) once again illustrates that the first sentence by itself has the argumentative orientation that I ascribed to it. The difference between performative/subjective and ‘constative’/objective use of verbs of communication and cognition turns out to be exactly parallel to that between maximally and less strong argumentative operators, observed in Section 4. Consider the parallel of the difference between the a and b cases in (29) and (30) with the difference between (21) and (22), repeated here for convenience:

(21) He barely passed the test. But anyway, he did.

(22) \*He did not pass the test. But anyway, he did.

This parallel confirms the idea that third person matrix clauses of complementation constructions differ only in strength from first person ones, not in kind. In this analysis, the difference between these two types of uses appears to be not categorical, as they have the same argumentative orientation, but a matter of degree: they differ only in argumentative strength.

This functional unification of first and third person matrix clauses of complementation constructions makes the discrepancy between structure and function inherent in the traditional approach disappear. The picture of the acquisition of complementation constructions also becomes more coherent: it starts with learning to add explicit markings of perspectives to utterances; initially these are completely grounded in the speech situation (*I, you*, present tense), they are formulaic, and have maximal strength; with experience, the child learns to understand and produce more and more indirect and general perspective markings, allowing for more nuances and for defeasibility.

As with the system of negation, we find that the conventional meaning of complementation primarily functions at the level of the argumentative strength of utterances, not on that of informational value. Utterances that instantiate complementation do not consist of structural combinations of pieces of information, but of a constructed representation of some situation, structurally embedded in a perspective indicator (or more than one) that serves, sometimes in conjunction with other elements, to coordinate cognitive processes of speaker and addressee.<sup>15</sup>

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15. And as with negation, this view is instrumental in solving a number of other long standing problems of grammatical analysis (cf. Verhagen 2005, Chapter 3). Among these are the issue of the precise grammatical analysis of sentences like *The danger is that things will get out of hand* (is the complement clause the subject or the predicate of the entire sentence?), the precise status of complements in sentences with copular predicates, like *He is afraid that things will get out of hand* (such predicates do not take direct objects, cf. \**He is afraid a disaster*), and the analysis

## 6. Discussion and conclusion

The evolution of cognition is to a considerable extent a story of subsequent generations of organisms interacting more and more indirectly with their environment (Dennett 1995: 370–400). The capacity for categorization and insight into causality allow an individual to act on the basis of prediction, i.e. selection of the hypothetically best course of action from two or more alternatives, without having to interact with the environment immediately; the potential advantages are obvious. The evolution of intersubjectivity fits into this picture: it provides a step beyond categorization and causality in that it allows individuals, among other things, to act on the basis of predicting what another individual will do, viz. by mentally putting oneself in the other's position and consider what one would do oneself.

The evolution of communication is a special case of increasing indirectness: it allows organisms to influence other organisms – conspecifics and others – by means of signals, without physical engagement and all its hazards. The evolution of language constitutes a further step of increasing indirectness, as a linguistic signal does not have a single directive nature, but one that is variable, since its contribution to the argumentative character of an utterance is dependent on the relevant topos, a shared cultural model; moreover, by means of argumentative operators, the argumentative orientation of a signal may be reversed, and its strength may be modified. This kind of indirectness presupposes a form of intersubjectivity: mutual recognition of the inferences the other is capable of making, given the shared model.

This high degree of indirectness and this dependence on shared models provide room, in fact a basis, for referentiality: what different topoi associated with a signal have in common may be identified with the signal's referent, the concept of some aspect of a phenomenon in the world that activates a topos. The difference with the functional referentiality of animal calls like the vervet monkeys' predator-specific alarm calls (cf. Section 2), is that there is no one-to-one link between a specific category of phenomena and a particular type of response, but a one-to-many relationship (in modern, adult human beings). But this increased flexibility does not imply that human language is essentially informative or referential, and no longer a system for mutual management and assessment of senders and receivers of signals. In fact, as we have seen, mutual influencing is built into the very structure of grammar.

Much of language use is only indirectly aimed at a behavioral response, and primarily a matter of manipulating the mental states and processes of others

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of *Wh*-questions like *Who do you think pays the rent?*, in which the question word seems to be extracted from its own clause (for the latter phenomenon, see also Verhagen 2006).

(although such a manipulation may well constitute a particular way of eliciting a behavioral response). But a considerable portion is also *conventionally* aimed at *immediate* effects, such as making a request, asking a question, or issuing a warning, i.e. typically non-assertive speech acts. The latter point and its significance have also been noticed by Owings and Morton (1998). Discussing relations between communication and cognition in animals, they conclude “that animal knowledge structures are fundamentally pragmatic, i.e. about what to do about objects, events, and states [...]. According to this approach, signals are not statements of fact, that can be judged to be true or false, but are efforts to produce certain effects.” (Owings and Morton 1998:211). They then notice a parallel with speech act theory, which is also specifically concerned with utterances that cannot be judged to be true or false – the discovery of which provided the original motivation for Austin’s (1962) proposals. As is well known (cf. Section 5), utterances of the type *I promise to help you with your homework, Take your hands off of me!, I now pronounce you husband and wife* are not to be understood as informative, they are not descriptions of states of affairs. Rather, their utterance constitutes the performance of an act; they are efforts to accomplish goals. To be sure, certain systematic conditions (called ‘preparatory conditions’ in the speech act literature) have to be satisfied in order for these utterances to count as a promise, a command, and a legitimate wedding. Owings and Morton notice that “a dedicated proponent” of the information view might try to construe these as the actual meaning of the expressions:

Are these correlates, an information advocate would ask, not the information made available by these signals? No; this question confuses time frames of causation. Such correlates validate the cues as useful to assessing individuals [...], but are not the immediate cause of the assessing individual’s reaction to the statement. Note that [this] proposal turns the usual view of the role of information on its head. The correlates of signals (‘information’) are not immediate causes of the behavior of targets of signals, they are instead long-term validators of the signal’s utility. (Owings and Morton 1998:211)

As we have seen in Section 5, the argumentative view of intersubjectivity in the language system allows for a substantial generalization of speech act theory. Standard speech act theory restricts its domain of application to non-assertive utterances, which simply cannot be understood as truth-functional. Nuyts (2001) has extended this domain to include epistemic verbs and predicates, but even then it is still limited to first person present tense use. But we have seen that the argumentative orientation of third person uses of such verbs is the same as that of first person ones. As instruments for influencing, they differ in strength, not in kind. More generally, assertive utterances which are in principle analyzable as

truth-functional, such as *There is going to be a negative deficit*, *There are seats in this room*, *John is tall* (cf. Section 2) are also attempts to accomplish something, of the same type as standard speech acts (like warning, reassurance, or advice).

In view of this generalization, we may broaden Owings and Morton's view on the secondary character of referentiality in animal communication systems, to include human language: real-world correlates of signals are 'long-term validators' of argumentative cues. Human language may certainly be said to allow for distinguishing innumerable more distinctive 'long-term validators' of such cues than known animal communication systems. But that in itself does not turn human language into a system of information exchange rather than a system for mutual influencing. Since topoi are shared, they may usually remain implicit, and establishing joint attention suffices for a sender to get a receiver to make the desired inferences. But the way discourse units are systematically connected to each other, especially by means of linguistic elements, and systematic properties of the grammatical systems of negation and complementation reveal that the argumentative character of language is still basic.

The parallel between the argumentative view of language and the modern ethological view of animal communication will now be obvious. It concerns the fact that human linguistic communication is primarily also a matter of influencing one another, by exploiting the cognitive capacities of others. Human language is more involved than (most?) animal communication with influencing mental states, with consequences for long term behavior, rather than with immediate behavioral effects, but this is a matter of degree. Since the intersubjective coordination of mental states and attitudes, according to this view, is a special form of mutual influencing, it is not to be put into opposition to the basic character of animal communication – rather, it is its specifically human variant.<sup>16</sup>

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16. Beside involving a special kind of mutual influencing, human language also exhibits a number of other special features as mentioned in the beginning of this chapter. Some of these have their basis in intersubjectivity, such as the symbolic character of language (cf. Sinha 2004), its conventionality and normativity (Itkonen, this volume; Zlatev, this volume), and the exceptionally large size of the inventory of signals (due to, primarily, duality of patterning; cf. Martinet 1949; Hockett 1958), which allows for the emergence and survival of signals for other purposes than the immediate elicitation of a behavioral response.

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