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99. Semantics/pragmatics boundary disputes

Abstract

The boundary between semantics and pragmatics has been the subject of heated debates, most notably in post-Gricean theories of meaning and communication. I present a survey of the standpoints on the boundary issue beginning with Grice's distinction between what is said and what is implicated, through various attempts at redrawing the boundary towards a version of the contextualist stance in which the truth-conditional content of the utterance is enriched in a way that reflects the speaker's intentions and the addressee's intuitions about what is said. I acknowledge the role of radical pragmatics in the 1970s in putting forward the idea of semantic underdetermination and move on to discussing the most influential concepts and

approaches in post-Gricean accounts. I present some differences between contextualist accounts, mainly with respect to the acceptance or rejection of unarticulated constituents, and place contextualism in the wider perspective of the debate concerning the scope of semantic content, ranging from the minimalist accounts (Borg, Cappelen and Lepore, Bach) to the Wittgensteinian view of so-called meaning eliminativism. I conclude with a brief discussion on the significance of the boundary disputes.

Keywords

semantics/pragmatics interface, contextualism/minimalism debate, post-Gricean pragmatics

1. Sentences, utterances, and truth conditions

Truth-conditional semantics is at present the best developed approach to sentence meaning, benefiting from high predictive power, formal rigour, and intuitive plausibility in that it associates sentence meaning with the truth and falsity understood as correspondence with eventualities in a model. But there are some aspects of meaning that go beyond the meaning of sentences so understood. For example, while the sentential connective *and* in English acquires a truth-conditional analysis that is founded on the properties of its formal equivalent of conjunction in propositional logic, it is evident that English *and* conveys more than its formal equivalent does. Sentence (1) should be true when both conjuncts are true and its truth value should be resistant to the change in the order of the conjuncts as in (1a).

(1) The janitor left the door open and the prisoner escaped.

(1a) The prisoner escaped and the janitor left the door open.

It is clear, however, that (1a) is not as felicitous as (1). In fact, according to the judgment of many native speakers of English, it is plainly false as a description of the situation depicted in (1). This shows that there is more to the meaning of *and* than the straightforward conjunction of two phrases. In (1) and (1a), *and* also conveys the consequential meaning *as a result*, as in (1b).

(1b) The janitor left the door open *and as a result* the prisoner escaped.

Alternatively, we can surmise that it is not the connective *and* that is responsible for the meaning of consequence but rather the very juxtaposition of the description of two events: leaving the door open and the prisoner's escaping. Be that as it may, there is more to the meaning of (1) than the truth-conditional analysis of the sentence reveals. The translation into the metalanguage of first-order logic leaves the consequence relation between the clauses unaccounted for.

It seems that in addition to the analysis of the structure of the sentence and the encoded lexical content attended to in standard truth-conditional analysis, we have to look for information about meaning that comes from other sources. The most important of these sources is the context of utterance, understood broadly as the background knowledge of the interlocutors, information conveyed in other parts of the conversation or written text (co-text), as well as the baggage of world experience brought to the situation of discourse by the interlocutors. But we can only bring this information in when we agree to alter the object of study of the theory of meaning to something more intuitively appealing and useful than an abstract unit of a sentence.

The speaker and the addressee attend to the meaning of the *utterance*: the real, concrete unit of meaning that carries some information content through the words used, the structure, the exact placement in the structure of the conversation, the additional senses it brings to mind in the particular context, the immersion in the overall system of gestures and other ways of conveying meaning, and so forth.

Examples that testify to the importance of the extra-sentential means of conveying information are ample. Deictic expressions such as pronouns and demonstrative noun phrases rely on the context of utterance to convey meaning. In fact, they even rely on the context in order to make a contribution to the sentence that would make this sentence truth-evaluable. Definite descriptions such as 'the best Austrian novelist' are also dependent on the context in their interpretation: they can refer to a particular individual (say, for me, it is Robert Musil and I can make it clear in the conversation that when I use this description I indeed mean Robert Musil) or they can be used attributively, to mean whoever happens to be the best Austrian novelist. Once a truth-conditional semanticist has recognised the importance of these extra-sentential factors and contemplated the alteration of the object of study from the sentence to the utterance, and from sentence meaning to the speaker's meaning, he/she has two options to choose from: either to (i) reject truth-conditional semantics and look for an alternative theory, or (ii) try to preserve truth-conditional semantics and adapt it to the new object of study. Let us assume that our semanticist is a devoted supporter of the methods of truth-conditional semantics and opts for the latter solution. At this juncture he/she is faced with two options again: either (ii.a) to advocate that there is more to meaning than truth conditions alone and allow for a pragmatic overlay to the thereby saved semantic theory, or (ii.b) to propose that pragmatic factors contribute to the truth-conditional content and 'shift' the truth-

conditional analysis from sentences to utterances. The latter avenue opens up the option of adding information about meaning that comes from sources other than the lexicon and the structure.

Let us now see what actually happened in the history of the semantics/pragmatics interface, beginning with the philosopher who is generally recognised as the founder of modern pragmatic theory: Paul Grice. Grice pursued the path of preserving the truth-conditional analysis but was rather ambivalent as to the options (ii.a) and (ii.b) above: he allowed some pragmatic input in the truth-conditional content, while keeping most of it outside of this content. Needless to say, this kind of proposal had to generate a heated debate, a debate that is still at the forefront of theorising in semantics and pragmatics and that is still producing cutting edge analyses.

2. The pragmatic wastebasket: Grice on *what is said* and *what is implicated*

It is a common fact of conversation that speakers often mean more than they physically utter. They also often mean something different from what they actually utter. In the exchange in (2), speaker B communicates that Smith may in fact have a girlfriend, contrary to what A assumes:

(2) A: Smith doesn't seem to have a girlfriend these days.
B: He has been paying a lot of visits to New York lately.

(from Grice 1975: 32). In order to retrieve the relevance of B's statement, one has to perform some basic inference. B's response is relevant and informative but not in virtue of the truth-conditional content of the sentence alone, but rather in virtue of

what it implies (or, to use Grice's term, *implicates*) in this conversation. This implicated meaning, called a conversational implicature, is pragmatic through and through. The implicature 'Smith may have a girlfriend in New York' bears no structural resemblance to the sentence uttered by B, it is constructed by the addressee entirely on the basis of pragmatic inference.

Now, it seems that in the interest of shifting the object of study from sentence meaning to speaker's meaning we may have obliterated the differences in the understanding of the term 'meaning'. In order to clarify the term, we have to go to Grice's (1957) seminal paper 'Meaning' and look for the principles on which his notion of meaning is founded. Grice stresses that he is not interested in the instances of the so-called *natural meaning*, where meaning that *p* entails that it is the fact that *p*. 'These spots mean meningitis' is an example of the natural meaning: there is a natural connection between the symptom and the disease. Instead, he is interested in speaker's meaning which he calls *non-natural meaning* (meaning $_{NN}$). This meaning is conventional but not natural; it does not carry the strong requirement of entailment. Meaning$_{NN}$ will henceforth be the object of study in post-Gricean pragmatics, and also the object of the following discussion of the semantics/pragmatics interface in the remainder of this article. Grice defines this meaning by resorting to speaker's intentions and the recognition of these intentions by the addressee: " 'A meant$_{NN}$ something by *x*' is roughly equivalent to 'A uttered *x* with the intention of inducing a belief by means of the recognition of this intention'." (Grice 1957: 219).

The role of intention, also stressed in the speech-act literature of that period (e.g. Austin 1962; Searle 1969), is further spelled out in Grice's 'Utterer's Meaning and Intentions' (1969):

" 'U meant something by uttering *x*' is true iff [if and only if], for some audience A, U uttered *x* intending:

[1] A to produce a particular response *r*

[2] A to think (recognize) that U intends [1]

[3] A to fulfill [1] on the basis of his fulfillment of [2]" (Grice 1969: 92).

In some cases, the recognition of the speaker's intentions is short-circuited, so to speak, in that the response is secured because the meaning is so conventionalized in a language that conventions create a 'shortcut' through the recognition of the intentions. By a response Grice means here any physical or a cognitive reaction to the speaker's utterance, including an understanding of what was intended to be communicated. It also has to be stressed that by an 'utterance' he means any act of communication, not only a linguistic one. So, drawing a picture for the addressee or making clearly recognisable facial expressions such as a smile of approval or contempt are also subsumed under the category of an utterance. Bearing in mind this possibility of a conventional uptake, we can sum up that on this account communication is explained in terms of intentions and inferences. An intention to inform the addressee is fulfilled simply by the recognition of this intention by the addressee.

This intention-based theory of meaning lays the foundations for the theory of implicature in which Grice spells out the principles of a cooperative conversational behaviour. Most implicatures are considered to be meanings intended by the speaker but in the case of literary texts, for example poetry, the speaker or writer may intend to leave the range of plausible implicatures deliberately open (see also Davis 1998 on speaker's implicature vs. sentence implicature). *Nota bene*, originally, the term 'implicature' referred to the process of implicating some meaning, while the product

was dubbed an ‘implicatum’ (plural: ‘implicata’). In the post-Gricean literature, however, the Latin nominal has gone out of use and the term ‘implicature’ now serves to name the product of implicating. An utterance can give rise to a number of additional thoughts called implicatures.

In his theory of conversational behaviour, Grice (1975) makes the important assumptions that participants in a discourse are rational agents and that they are governed by principles of rational communicative behaviour. Their behaviour is predictable in the sense that meaning is implicated according to some principles of rationality. The umbrella term for this rationality is the Cooperative Principle:

> “Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.” (Grice 1975: 26. See also Mill 1872: 517; Ducrot 1972: 134).

Subsumed under this principle are particular so-called maxims of conversation, stating that the speaker’s contribution is to be sufficiently but not overly informative (the maxims of quantity); that the contribution is to be true in the sense that the speaker has to say what he/she believes to be true and supported by sufficient evidence (the maxims of quality); that the contribution is to be relevant (the maxim of relation); and that the form of the contribution is to be clear (perspicuous): not obscure, ambiguous, excessively long, or reporting events in the wrong order. The exact content of the maxims will not concern us here, especially in view of the later developments of the theory in which it was demonstrated that there was a considerable overlap and redundancy among the maxims and that we could make do with fewer, perhaps two (Horn 1984, 1988), three (Levinson 1987, 1995, 2000 and Section 4.5 below), or even

one (Sperber and Wilson 1986 and Section 4.2 below) principle instead (See Jaszczolt 2002: chapter 10 for an overview).

It has to be remembered that although Grice's maxims are formulated as if they were prescriptive laws, their raison d'être is to spell out the principles that the human mind naturally follows. Although it is possible to consciously disobey the maxims or even overtly opt out of them, the standard presumption in every conversation is that they do apply. In (3), which we can imagine to be an extract from a review of a piano recital, the implicature that the pianist was a bad one comes from the unnecessary prolixity with which information was conveyed.

(3) The pianist sat down at the instrument and hit the keys in a way resembling Chopin's nocturne in C minor.

Since the description of the performance is clearly more demanding on the reader's time and effort than just reading that the pianist played Chopin's nocturne in C minor, the reader rationally infers that there must be some implicated meaning to it such as that the performance was a particularly bad one. To sum up, implicatures can arise through observing or violating the maxims of conversation.

Implicatures are clearly pragmatic constructs: they are thoughts and do not have direct counterparts in sentences or in physical utterances. So, by the very nature of being inferred meanings, they have to be weaker than meanings of sentences or utterances. They are also weaker than deductive inferences of the type of *modus ponens* (if *p* then *q*; *p*; therefore: *q*). Implicatures are cancellable. We can always cancel the implicatures in (2) or (3) by adding (2a) and (3a) respectively.

(2a) But I don't mean to suggest that he has a girlfriend in New York. His company is based there and he is very busy commuting.

(3a) After a few bars, I realised it *was* Chopin's nocturne in C minor, played with unprecedented skill, insight and feeling.

We are now in a position to discuss and assess Grice's view on the boundary between semantics and pragmatics. The motivation behind the proposal of the cooperative principle and the maxims was to explain how expressions of a natural language differ in their properties from their translations in the metalanguage of first-order logic. The assumption was that the truth-conditional semantic analysis is to be preserved and the discrepancies are to be explained as a pragmatic overlay. But the boundary is not as clear-cut as it may seem. Firstly, words and structures can be ambiguous. In order to assign truth conditions to such constructions, they have to be disambiguated and this disambiguation is a pragmatic process. Next, there are context-dependent expressions such as personal and demonstrative pronouns and demonstrative noun phrases that do not pick out a referent on their own: the referent has to be assigned in a context, in a pragmatic process. Hence, Grice (1978) had to admit the output of such pragmatic processes into the truth-conditional part of meaning$_{NN}$. The remainder, what is implicated, is a graded category: some types of implicatures are closer in their characteristics to the semantic content than others. The implicatures in (2) and (3) are far removed from what is said in that they rely on the particular context: they are what Grice called particularized conversational implicatures (PCIs). But there are also implicatures that occur in virtue of the sentence alone: they are standard, normal predictions, or salient meanings, that arise

independently of the context – unless, of course, the context makes it clear that they have to be cancelled or should not be computed. The implicature of (4) in (4a) is an example of such a generalized prediction, called by Grice a generalized conversational implicature (GCI).

(4) Some of the guests like oysters.

(4a) Not all of the guests like oysters.

The inference from *some* to *not all* is a standard prediction that goes through in virtue of the words used rather than in virtue of the context. Such examples subsequently gave rise to a theory of scalar implicature: lexical items <all, some> form a semantic scale and when the weaker term (the term to the right) is used, it is implicated that the stronger terms (here: *all*) do not apply to the situation talked about. It is possible to expand the scale to <all, most, many, some, few, …>, possibly adding some more terms. Scalar predicates are then semantically lower-bounded: *some* means *at least some*, and pragmatically upper-bounded: *some* means *at most some* (*not all*). This upper bound is provided by the maxim of quantity (see Horn, e.g. 1988, 2004). While it has been demonstrated that scales themselves can sometimes be context-dependent, the fact remains that it is easy to pinpoint a class of implicatures that do not rely on the context of the utterance but instead arise as assumed meanings. And context-free scalar implicatures make a substantial part of such generalized predictions.

When Grice presented his maxims of conversation as a natural complement to the truth-conditional semantics, he thus offered a tool for explaining the behaviour of sentential connectives such as *and* and *or*. Disjunction (*or*) in propositional logic is inclusive: *p or q* means *p, q, or both*. In English, we normally use *or* with an

exclusive meaning: *either p, or q, but not both*. This discrepancy can be explained by means of adding an implicature of exclusiveness that comes from a semantic scale: <and, or> form such a scale and when the speaker utters ‘or’, he/she implicates that ‘and’ does not hold for the described situation. This implicature can, of course, be cancelled as in (5).

(5) In August I will go to the seaside or to the mountains, or both.

GCIs are thus closer to the truth-conditional content than PCIs: they arise in virtue of the words and constructions used, and hence have a strong semantic flavour.

Grice also distinguished another category that blurs the distinction between semantics and pragmatics even further: this is the category of a conventional implicature. This implicature does not share the properties with conversational implicatures: it is not cancellable, not calculable, and detachable when a synonymous sentence is substituted. So, it is in fact a species of lexical content. Words such as ‘but’, ‘manage’, or ‘therefore’ are said to convey conventional implicatures of contrast, overcome difficulty, and consequence respectively. One may wonder why complicate the theory by distinguishing such meanings from lexical, coded content *simpliciter*. The reason was that there are no obvious translations of such expressions into the metalanguage of first-order logic, and Grice assumed that the translation is an indispensable component of truth-conditional semantics, where the latter was itself regarded as indispensable, just in need of some patching up. So, ‘but’ became translated as logical conjunction, on a par with ‘and’, and the contrast sense was dubbed a conventional implicature. To sum up, for Grice, truth-conditional semantics is the core of the analysis of meaning, and pragmatic inference is added as and when it

fits – within the truth-conditional content (disambiguation and reference assignment), or outside it, but with varying degrees of 'semanticity': from conventional implicatures that are a species of coded content, through generalized implicatures that arise in virtue of such coded meanings, and finally context-dependent particularized implicatures that are most 'pragmatic' of them all.

Retrospectively, we are in a position to say that the fact that Grice (i) admitted the output of some pragmatic processes in the truth-conditional aspect of meaning and (ii) arranged implicatures on a scale of progressive detachment from the semantic content opened a door for the current boundary disputes in that once some pragmatic inference finds its way into the propositional representation, it becomes a matter of debate (and empirical evidence) how much exactly should be allowed in. Moreover, Grice employed the theory of implicature to argue against the methodological superiority of postulating ambiguities where a unitary semantic account can be given. For disjunction in English, for example, it suffices to admit the meaning of its propositional-logic equivalent as its semantic content and account for the exclusive reading by means of an implicature: there is no need to postulate semantic ambiguity on a par with the lexical ambiguity of 'bank' or 'port'. This economy of senses was spelled out as a Modified Occam's Razor (Grice 1978: 47):

Senses are not to be multiplied beyond necessity.

Again, retrospectively, we can judge that this was a landmark in pragmatic theory and in the semantics/pragmatics boundary disputes. Once unnecessary ambiguities are exorcised on methodological grounds, we are left with semantic meanings that cannot always be precisely delineated. And this was the foundation stone for the radical

pragmatics in the 1970s and for the idea of semantic underdetermination to which we now turn.

3. Redrawing the boundary

Grice's proposal to assign a different status to disambiguation and reference assignment than to the other kinds of pragmatic elaborations of what is contained in the sentence generated many theoretical discussions: if the result of the process of reference assignment and disambiguation belonged to the semantic, truth-conditional content, then why not also include the results of other pragmatic processes that shed light on what is said by the speaker? The slogan 'pragmatics equals meaning minus truth conditions' started to lose its appeal when it was recognised that the truth-conditional content does not correspond to a clear-cut semantic object. Let us take sentential negation for example. Sentence (6) seems to allow for two interpretations, depending on whether the presupposition of the existence of the king of France is fulfilled at the time of the utterance.

(6) The king of France is not bald.

On the reading (6a), there is a king of France and he doesn't have a property of being bald.

(6a) There is somebody who fulfils the property of being the king of France, there is only one such person, and whoever fulfils this property is not bald.

Or, formally:

(6a’) $\exists x\,(KoF(x) \wedge \forall y\,(KoF(y) \rightarrow y = x) \wedge \neg Bald\,(x))$

The other reading is (6b).

(6b) It is not true that the king of France is not bald.

— for example, because there is no such person. Let us try to represent this reading formally just by varying the position of the negation operator as in (6b’) which contains a wide-scope, sentential negation and states that it is not the case (for whatever reason) that there is a king of France who is bald. This reason can be that France is not a monarchy or that the king is not hairless.

(6b’) $\neg\exists x\,(KoF(x) \wedge \forall y\,(KoF(y) \rightarrow y = x) \wedge Bald\,(x))$

It says that it is not the case that there is somebody who fulfils the following two conditions: being the (unique) king of France and being bald. It would be easy and natural to assume on the basis of this analysis that negation is ambiguous in that it can take wide or narrow scope as represented formally by the above logical forms advocated by Bertrand Russell. However, the two logical forms in (6a’) and (6b’) are not disjoint: the former entails the latter. So, representing the difference between the two readings of (6) by invoking these logical forms and ambiguity of negation is not very satisfactory. Moreover, there is no strong intuition among native speakers that negation in English is indeed ambiguous, Instead, why not assume that the semantics of sentential negation in English underdetermines the meaning? According to such a

view, the processing of the lexicon and the structure of (6) results in an underspecified semantic representation and the exact reading, (6a) or (6b), is given by pragmatic enrichment performed in the particular context of discourse. This position of *semantic underdetermination*, also called *sense-generality*, was an important landmark in semantic theory. We owe it to a group of Gricean pragmaticists working in the 1970s, and among others to Jay Atlas's and Ruth Kempson's remarks on the underdetermination of negation – the so-called Atlas-Kempson thesis (see Atlas 1977, 1979, 1989, 2005a, 2006a; Kempson 1975, 1979, 1986; see also Wilson 1975). The movement resulted in the increasing acceptance of the standpoint that there is no semantic ambiguity and the cases such as that of the scope of negation can be handled by the pragmatic additions to the semantically underspecified representation. Semantic analysis takes us part-way, and pragmatic enrichment completes the recovery of utterance meaning. The movement also came to be known as *radical pragmatics* (Cole 1981). To sum up, while lexical and syntactic ambiguity can be represented as two independent logical forms pertaining to the ambiguous sentence, semantic underdetermination is the case where one underspecified logical form ensues in processing and further determinations of meaning take place through pragmatic inference or through some other pragmatic process such as an application of presumed, salient, default interpretations. Underdetermination and inference are two interconnected aspects of utterance interpretation, as is well captured in Atlas's apt pastiche of Kant: "Pragmatic inference without sense-generality is blind, but sense-generality without pragmatic inference is empty." (Atlas 1989: 124). There have been various terms used in the literature for the underdetermination of meaning: underdetermination, underspecification, indeterminacy, sense-generality, vagueness, neutrality, and others (see Zwicky and Sadock 1975: 2; Green 1996: 1). I use

‘underdetermination’ of meaning as a general concept for the phenomenon and ‘underspecified representation’ for the property of the logical form as the output of syntactic processing (see van Deemter and Peters 1996; Jaszczolt 1999, 2005). Zwicky and Sadock (1975) presented a battery of tests that can be used to tell ambiguity and underdetermination apart. Perhaps the most important of them is the identity test: conjoining reduced constituents should be possible only when the conjuncts have matching readings. For example, let us take (7) and (8).

(7) They saw her duck.

(8) They saw her swallow.

The conjunction reduction to (9) allows only to juxtapose matching senses: the action of ducking with the action of swallowing, and a duck with a swallow.

(9) They saw her duck and her swallow.

Crossed readings are not semantically well-formed, unless they are used for punning effect (see Lascarides et al. 1996). This test is modelled on Lakoff’s (1970: 357) ‘and the same goes for…’ reduction. Mixed readings are supposed to be freely available for semantic underdeterminacy. However, as in other aspects of the boundary dispute, even here we cannot point to clear-cut distinctions: some examples of underdetermination fare better than others with the tests and hence the tests are not conclusive. The condition of entailment of the logical form is a much safer criterion to follow.

Semantic underdetermination, a revolutionary idea for the theory of linguistic meaning, was a reaction to a widespread attempt in the 1960s and early 1970s to give syntactic explanations to pragmatic phenomena. This tendency was called Generative Semantics. The influence of the Oxford ordinary language philosophy, and most notably John L. Austin, H. Paul Grice, Peter F. Strawson, late views of Ludwig Wittgenstein in Cambridge, as well as subsequent arguments put forward by Bruce Fraser, Gerald Gazdar, Jerry Morgan, Jay Atlas, Ruth Kempson, Deirdre Wilson, and others contributed to the fall of generative semantics and opened up a way to *pragmatic* explanation of clearly *pragmatic* phenomena such as various uses of negation and other sentential connectives. In his 'A Personal History of Linguistic Pragmatics 1969-2000', Jay D. Atlas recollects as follows:

"I read the first, introductory paragraph to Sadock and Zwicky's paper, and I thought to myself, 'That's it. If 'not' is not ambiguous, it's semantically non-specific. Let's try the tests.' Ten minutes later I had satisfied myself that 'not' in definite description sentences failed Sadock's ambiguity tests. And then the power of Grice's notion of generalized conversational implicatural inference hit me full on. The solution had to be in the utterance-meanings, in one of two ways. Either the utterance-meanings were produced by a Griceanish inference, not from classical logical forms as Grice thought, e.g. sentential exclusion negation, but from a non-specific, semantical representation of a sentence-type whose meaning was not that of either a choice or an exclusion negation proposition, or the utterance-meanings were produced by a classical Gricean inference from the sentential exclusion negation logical form, which on classical Gricean grounds one would have to 'posit' as the semantic content of 'what is said' in the asserted sentence – Grice's version of the 'minimal proposition'."

Atlas (2006a: 4).

In short, either there is some underspecified semantic representation given by the processing of the structure, or we adopt (6b') as such an underspecified representation.

The most interesting aspect of radical pragmatics is that such pragmatic resolution of the exact meaning of semantically underdetermined expressions is admitted into truth-conditional semantics. The unit of which we now predicate truth conditions is the *utterance* rather than the *sentence*: it is (6') or (6'') that has truth conditions in any interesting sense, not the sentence in (6). So, the boundary between semantics and pragmatics is shifted even more in the direction of pragmatics. A variety of pragmatic processes of different kinds was allowed to contribute to the truth-conditional representation. For example, in (1) repeated below, the consequence sense of *and* is a pragmatic addition to the semantic content.

(1) The janitor left the door open and the prisoner escaped.

This blurring of the boundary called for further terminological tidying. Carston (1988) proposed to call the output of syntactic processing of the sentence *linguistic semantics*, reserving the term *truth-conditional semantics* for the amalgam of the output of linguistic semantics and pragmatic inference. In (1), $p \wedge q$ is a representation in linguistic semantics, while *p and therefore q* is a representation in truth-conditional semantics. At this point we should add a terminological distinction: the representations in linguistic semantics are called logical forms in that they are the same logical forms as those recognised as the semantic structure of sentences in truth-

conditional Montagovian semantics (see Dowty, Wall, Peters 1981; Lycan 1984). The enriched representations of truth-conditional semantics in the above (contextualist) sense will be called semantic representations.

The exact scope of application of semantic underdetermination is still a matter of debate. For example, it has often been argued that number terms such as 'three' are semantically underdetermined. According to Horn's early analysis (1976: 33), a sentence containing a cardinal number term *n* asserts lower boundedness 'at least *n*', while the upper boundary 'at most *n*' is just an optional addition executed through pragmatic inference. The final product, the 'exactly *n*' meaning, is the output of the two. However, there are also sentences in which the 'at most *n*' meaning is dominant, as in (10).

(10) She can miss the target three times without dropping out of the competition.

According to some subsequent analyses, number terms are just semantically underdetermined: semantically, they are neither *at least n*, nor *at most n*, nor *exactly n* (see Carston 1998). But more recently, this analysis of number terms has been questioned. Examples such as (11) and (12) strongly suggest that the *exactly n* reading is not arrived at pragmatically but instead is the straightforward coded meaning.

(11) I have at least three pounds in my pocket.

(12) Three men carried the piano up the stairs.

Qualifying the number term by 'at least' or 'at most' strongly suggests that the basic meaning is just 'three'. Similarly, (12), where the reading is clearly collective (*three*

men together), does not allow for entailments: three men carrying the piano together does not entail that two did. Neither does it mean that perhaps more than three did. So, perhaps the exactly (punctual) semantics of number terms is correct after all (see e. g. Koenig 1993; Geurts 1998; Bultinck 2005; Jaszczolt 2005; Horn 1992, 2006). While experimental evidence is still inconclusive, it suggests that number terms behave very differently from scalar terms. It also shows that the 'exactly *n*' interpretation is much more psychologically salient (see e.g. Musolino 2004). The example of number terms shows that semantic underdetermination has to be approached with caution: the correct analysis of the particular expression type need not exhibit it just because from the theoretical point of view it seems to apply.

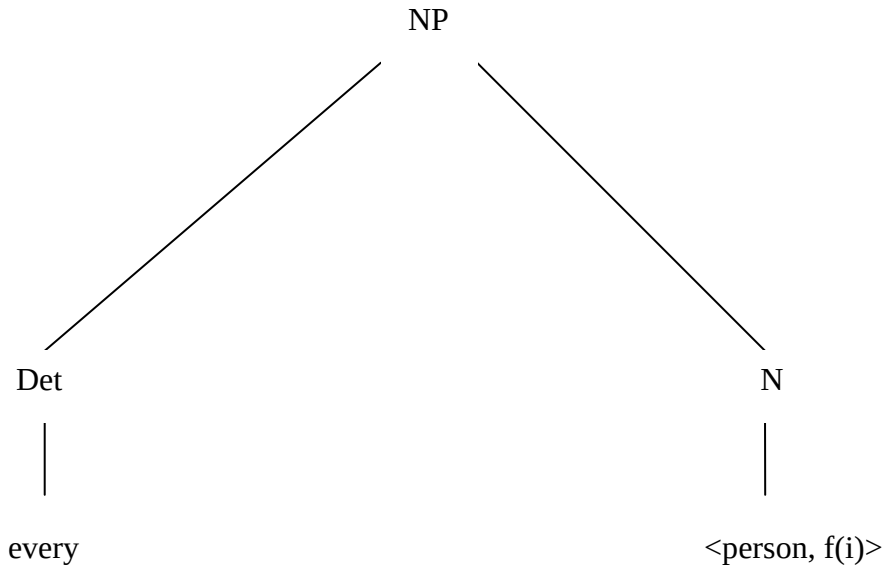
Once a wide variety of pragmatic additions was allowed in semantic representation, it had to be decided what really matters for the boundary: (i) the distinction between the (by now eclectic, semantico-pragmatic) semantic representation and the separate senses that this meaning gives rise to, or (ii) the distinction between the logical form as the 'pure' output of syntax and the 'pure' what is physically uttered on the one hand, and the whole array of implicatures on the other, irrespective of whether they contribute to the semantic representation or to some additional senses this primary meaning of the utterance gives rise to. In the following sections I present and assess various views on this matter.

There have also been other attempts to redraw the semantics/pragmatic boundary that can be subsumed under broadly understood contextualism in that they propose various solutions on how to incorporate contextual information into the semantic representation. The most influential ones are perhaps the unarticulated constituents view and Kaplan's more traditional two-dimensional theory. The unarticulated constituents view is an attempt to explain various pragmatic additions to

the semantic structure as elements of the unarticulated syntactic structure. On this account, pragmatic enrichment has a syntactic provenance and amounts to filling in slots in the logical form: "[m]uch syntactic structure is unpronounced, but no less real for being unpronounced" (Stanley 2002: 152; see also Stanley and Szabó 2000; King and Stanley 2005). For example, according to Stanley and Szabó, sentence (13) obtains an analysis as in (14), where the node N contains information about the contextual restriction of the domain of the universal quantifier 'every': f(i), where *f* stands for a function mapping objects onto quantifier domains and *i* for an object provided by the context. As a result, the enriched meaning in (15) is accounted for by means of the syntactic analysis because 'everybody' is taken to refer to a restricted domain of, say, invited guests (see Stanley and Szabó 2000 for other possible syntactic analyses using unarticulated constituents and their limitations as compared with that in (14)).

(13) Everybody came to the party.

(14)



(15) Every invited guest came to the party.

In a similar vein, Chierchia (e. g. 2004) attempts to derive scalar implicatures such as for example from *some* to 'not all' from the logical form of a sentence. He says that grammar (on his understanding: syntax and semantics) allows for two interpretive procedures which give two kinds of values to expressions: a plain value, say, 'some', and a strengthened, 'scalar' value, say, 'some but not all'. The latter value is normally selected by the system but is defeasible by context. As he says, "some of the Grice-inspired pragmatics is probably part of the computational system of grammar" (Chierchia 2004: 59). Reversing the monotonicity removes the implicatures. So, downward entailing contexts (such as embedding a sentence *p* under 'I doubt that…') remove any scalar implicatures of *p* and add new, indirect ones through a process which is governed by a general rule that implicatures must lead to strengthening.

Another view which is represented in current research is a rather less radical Montagovian formal pragmatics as elaborated by Kaplan (1978, 1989) in his two-

dimensional semantics. Context is represented there by an index with respect to which sentences are interpreted. The interpretation provides contents or, as we could say, propositions (functions from possible worlds to truth values). The scope of pragmatic information contained in the index is, however, rather limited as compared with the free pragmatic modulation of radical contextualism (see e.g. Stalnaker 1999, but also Predelli 2005 a, b, 2006 for a defence). Kaplan's semantics is two-dimensional in that he distinguishes content from character, where the latter is a way of getting from the context to the content. To repeat, content in turn yields a truth value relative to a possible world ('circumstances of evaluation'. Or, as Chalmers (2006: 59) puts it,

"The core idea of two-dimensional semantics is that there are two different ways in which the extension of an expression depends on possible states of the world. First, the actual extension of an expression depends on the character of the actual world in which an expression is uttered. Second, the counterfactual extension of an expression depends on the character of the counterfactual world in which the expression is evaluated. Corresponding to these two sorts of dependence, expressions correspondingly have two sorts of intensions, associating possible states of the world with extensions in different ways. On the two-dimensional framework, these two intensions can be seen as capturing two dimensions of meaning."

There are different varieties of two-dimensional semantics. Kaplan's (1978, 1989) character and content have their equivalents in Stalnaker's (1978) diagonal proposition and proposition expressed, Chalmers' (1996) primary and secondary intension, and several other pairs of constructs (see Chalmers 2006: 62). It is still a matter of debate as to whether this approach can handle a wide range of contextual

enrichment. While its utility for indexical terms is unquestionable, the scope of application is contentious (see also e. g. Stalnaker 1999; Chalmers 2006; Predelli 2005a, b, 2006; Balaguer 2005).

In what follows I focus on approaches to the semantics/pragmatics interface which developed more elaborate, albeit less formal and arguably less formalizable, accounts of the role of various types of pragmatic enrichment for semantic analysis.

4 Delimiting implicatures

4.1 Intentions and intuitive truth conditions

Post-Griceans held different views on how to classify the output of syntactic processing, the pragmatic additions to the semantic representations, and the implicatures proper, understood as separate thoughts implied by the utterance. While for some the main boundary lies between the pragmatically enriched semantic representation and implicatures proper, for others the component of the pragmatic enrichments to the semantic representation is sufficiently distinct in its provenance as compared with the logical form to call for a separate, middle level of meaning. Yet for others all pragmatic aspects of meaning, be it developments of what is said or separate thoughts, should be grouped together as the traditional Gricean category of the implicature. Different views that are in the forefront of the current discussions are presented in the following sub-sections. But before we attend to the differences, it has to be emphasised that there is a lot that unites these views. They are all Gricean in spirit in that they all recognise the important role of intentions in the analysis of meaning. The unit of meaning is an utterance (meaning_{NN}) rather than a sentence, and the route to the recovery of the speaker's meaning is the recognition of the speaker's

intentions. Intentions have received a lot of attention in pragmatic literature. For Bach and Harnish (1979), an intention to communicate certain content is fulfilled when it is recognised by the addressee (see also Bach 1987a, b, 1999; Jaszczolt 1999). They call it an *illocutionary informative intention* and say that it comes with a so-called *communicative presumption*: when the speaker produces an utterance, the hearer assumes that the speaker produced it with some intention. The next common characteristic is the foregrounding of the intuitive truth conditions. With the growth of Gricean pragmatics, and undoubtedly, in virtue of the general tendency in philosophy of language since the late 1950s to talk about speaker's meaning rather than sentence meaning, the balance shifted from the truth conditions of sentences to those of utterances. Although (16) and (16a) 'mean the same' in virtue of the equivalence of $p \wedge q$ and $q \wedge p$, their utterances normally do not.

(16) They earned a lot of money and went to live in London.

(16a) They went to live in London and earned a lot of money.

What became foregrounded instead was the fact that the addressee would be likely to deny (16a) arguing as in (17).

(17) It's not true that they earned a lot of money and went to live in London; they moved to London first and got good jobs there.

The truth conditions of the pragmatically enriched proposition (*p and then q*), that is the proposition intuitively understood as the one meant by the speaker, became the object of analysis in post-Gricean contextualism.

4.2. The explicit/implicit boundary

The pressing problem became to delimit the primary, explicit content of the utterance. To repeat, for some contextualists, what is said include all sorts of developments of the semantic content of the uttered proposition. Sperber and Wilson (1986) and Carston (1988, 1998) dubbed such a development of the utterance's logical form an *explicature*. This unit of 'explicit' content is particularly useful when a sentence seems to convey an obvious truth, as in (18), or a blatant falsehood, as in (19). The enriched proposition, the explicature, is then the intended meaning of he speaker's – as in (18a) and (19a).

(18) I have eaten.

(19) Everybody was there.

(18a) The speaker has already eaten lunch on that day.

(19a) Everybody who was invited was there.

Explicatures are also helpful when a sentence uttered does not convey a complete proposition, as in (20). Pragmatic processing can then result in a proposition that is assumed by the addressee to have been intended by the speaker.

(20) Tom is not experienced enough.

(20a) Tom is not experienced enough to lead a Himalayan expedition.

It has to be remembered, however, that while Grice's programme was to account for *speaker's* meaning, relevance theorists give an account of utterance *interpretation* (see Saul 2002 and Horn 2004: 22). Explicatures were said to be created by means of pragmatic processes that do not differ from those producing separate, implicit meanings. In other words, both the pragmatic developments of the logical form of the sentence and the truly implicated meanings are arrived at through the same kind of pragmatic inference (but see Recanati 2004, 2007; Carston 2007).

The problem is that, in principle, such developments of the logical form of the sentence could proceed *ad infinitum*: we need a demarcation line somewhere in order to understand how and when they stop. Carston (1988: 169) suggests that the enrichments stop as soon as optimal relevance is achieved, where by relevance she means the cognitive and communicative principle proposed by Sperber and Wilson (1986, 1995), according to which the effort invested by the addressee in the processing of the speaker's utterance is offset by the so-called 'cognitive effect': gained information or any other improvement to the addressee's information state. The cognitive principle of relevance says that 'Human cognition tends to be geared to the maximization of relevance' (Sperber and Wilson 1995: 260), while the communicative counterpart says that 'Every act of ostensive communication communicates a presumption of its own optimal relevance' (Sperber and Wilson 1986: 158). To bring the idea down to common-sense intuitions, it says that we stop interpreting what the speaker said once we have reached the satisfactory interpretation. But it does not say more than this intuitive claim: it offers no way of measuring or predicting the explicature in particular cases.

What we also need is a criterion that would tell us which kind of output of pragmatic inference qualifies as part of the explicature and which has to be relegated

to implicatures proper. Carston proposes such a criterion. She says that implicatures are *functionally independent* from the explicature. This means that implicatures, if we wanted to spell them out, would have to have their own logical forms which are independent from the logical form of the sentence. They function as independent premises in reasoning. For example, in (18) repeated below, (18a) is the explicature, while (18b) is a possible implicature.

(18) I have eaten.

(18a) The speaker has already eaten lunch on that day.

(18b) The speaker is not hungry.

By the criterion of functional independence, sentence (1b) repeated below is the explicature of (1).

(1b) The janitor left the door open *and as a result* the prisoner escaped.

(1) The janitor left the door open and the prisoner escaped.

However, functional independence is not a sufficiently precise criterion. When we try to formulate it in terms of entailment, problems arise. The criterion that the implicature must not entail the explicature works for most examples: (1b) entails (1) and hence it would not be plausible to assume that the interlocutors store both propositions in the mind; the propositions are not functionally independent. But entailment does not work when construed in the other direction: it is perfectly normal for an explicature to entail an implicature, as in (21). B's answer entails and implicates that B bought some flowers.

(21) A: Did you buy flowers for Mary's birthday?

B: I bought some roses.

On some scenarios, it is also problematic to take functional independence to mean the relation of entailment even when it proceeds from implicature to explicature (see Recanati 1989 and Carston 1998 for response; see also Carston 2001).

Now, as can be seen from examples (18) and (19), the sentence uttered by the speaker can be perfectly complete, have a complete logical form, and yet pragmatic inference can take place. According to some pragmaticists then, pragmatic enrichment can be free, not syntactically controlled (see e. g. Bach 2000, Carston 1988, 2002, Recanati 1989, 1993, 1994, 2001, 2002a, 2004, Levinson 2000, Jaszczolt 2005). This argument is often used against the unarticulated constituents view discussed in Section 3. As Recanati (2002a) says, there are unarticulated constituents that do not pertain to any slots in the logical form: they are aspects of the explicit content that are entirely pragmatic in their provenance. Whether this stance necessitates a contextualist orientation will be discussed in Sections 4.4 and 5.

4.3. The pragmatic aspects of *what is said*

The criteria for distinguishing the explicit content from implicatures became an important preoccupation of some post-Griceans in the late 1980s. Recanati (1989: 98) agreed with relevance theorists on the scope of the explicit content, called by him *what is said* – not to be confused with Grice's rather minimal 'what is said'. He distinguishes pragmatic processes of filling in slots in the logical form as in the case of the assignment of reference to personal pronouns (*saturation*) such as 'I' in (18),

and a free, not grammatically controlled process of *strengthening* (or sense modulation, Recanati 2004, 2005), exemplified in (1), (18)-(20) above. Strengthening, or modulation, is a 'top-down' process: it is independent of the constitution of the logical form, where the latter is the output of the processing of grammar. He admits that postulating slots in the logical form is theoretically possible but encounters a quandary: in order to postulate the necessary slots to be filled we already have to know what is said. So, we have circularity in the explanation.

Having objected to compulsory syntactic slots as well as to some aspects of the functional independence principle, Recanati (1989) proposes his own criteria for delimiting what is said. What is said is to be specified intuitively and corresponds to 'pre-theoretic intuitions', as his Availability Principle states:

"In deciding whether a pragmatically determined aspect of utterance meaning is part of what is said, that is, in making a decision concerning what is said, we should always try to preserve our pre-theoretic intuitions on the matter."

Recanati (1989: 106).

This principle, being rather general, is adopted in conjunction with the Scope Principle, adapted from Cohen (1971) who, *nota bene*, used it to the opposite effect; to argue for the rich *lexical* meaning of sentential connectives:

"A pragmatically determined aspect of meaning is part of what is said (and, therefore, not a conversational implicature) if – and, perhaps, only if – it falls within the scope of logical operators such as negation and conditionals." Recanati (1989: 114).

So, to invoke Cohen's own example, in (22) below, the temporal 'and then' meaning of conjunction *and* in English is part of what is said because in the scope of implication (*if…then*) it is necessary in order to make sense of the assertion.

(22) If the old king died of a heart attack and a republic was declared Sam will be happy, but if a republic was declared and the old king died of a heart attack Sam will be unhappy.

Formally, the first of the contrasted conjuncts can be represented as in (22a) and the second as in (22b). Since in our metalanguage of propositional logic $(p \wedge q) \leftrightarrow (q \wedge p)$, the contrast in r and $\neg r$ only makes sense when we enrich $\wedge$ to mean 'and then'.

(22a) $(p \wedge q) \rightarrow r$

(22b) $(q \wedge p) \rightarrow \neg r$

Another interesting aspect of Recanati's solution is his claim that what is said is the smallest constituent available consciously. In other words, what is said is arrived at through pragmatic process which is not consciously available. It is sub-personal, automatic, and it cannot be properly called 'inferential': "communication is as direct as perception" (Recanati 2002b: 109). He dubs this process a primary pragmatic process, to distinguish it from a secondary type of inference proper that produces implicatures (see e.g. Recanati 2004: 38-44, 2007). All in all, the truth conditions of the utterance depend on the interplay of a variety of sources of information. As a result, we obtain what is sometimes dubbed Truth-Conditional Pragmatics (Recanati 2002a).

Recanati advocates a rather strong view of pragmatic enrichment (modulation). He claims that such contextual modulation is *always* present: "there is no level of meaning which is both (i) propositional (truth-evaluable) and (ii) minimalist, that is, unaffected by top-down factors" (2004: 90). This view is thus a strong variety of contextualism and it is currently the subject of heated debates with those who would rather keep semantics simple, 'minimal', close to what is physically uttered.

4.4. The middle level: an implic*i*ture

Kent Bach (1994, 2001) recognises the difficulty with subsuming the output of pragmatic inference under the label 'explicit' content and offers a more intuitively acceptable solution: there is what is said and what is implicated, but there are also parts of the content that are *implicit in what is said* and yet are not implicatures proper. He acknowledges that people often speak loosely, non-literally, and that fact is not a deficiency of human communication but rather a positive trait: it is more efficient to do so and to rely on the addressee to recover the missing aspects. For example, when a mother reacts to a child's crying about a cut finger in saying (23), she uses the sentence non-literally:

(23) You are not going to die, Peter.

(from Bach 1994: 267). While the content of the sentence (called the *minimal proposition*) is that Peter is going to live forever, the implicit constituents inferred by him from his mother's utterance ensure that the message is something to the effect of (23a).

(23a) You are not going to die from this cut, Peter.

So, what is meant by the speaker is the expansions of such a minimal proposition.

Similarly, sentences that are semantically incomplete in that they do not have clear truth conditions such as (20) repeated below, require implicit constituents of what is said.

(20) Tom is not experienced enough.

Sentence (20), Bach argues, does not express a proposition; it only expresses a *propositional radical* which is in need of pragmatic completion in order to produce the intended meaning, such as, for example, (20a).

(20a) Tom is not experienced enough to lead a Himalayan expedition.

In short, we have two similar phenomena here: sentence non-literality, where the minimal proposition requires expansion, or, as Bach calls it 'fleshing out', and semantic underdetermination, where the propositional radical requires completion, or 'filling in' (see Bach 1994: 269). Such expansions and completions constitute a 'middle ground' between what is said and what is implicated: they do not belong to what is said and they are not implicatures either. There is no clear boundary to discern. A proposition enriched through expansion and completion he calls an implic*i*ture. For Bach (2004, 2006, 2007), although there is a middle ground between

what is said and what is implicated, this does not mean that the boundary between semantics and pragmatics is blurred: semantic properties belong to sentences, and pragmatic to acts of uttering them: “Sentences have the properties they have independently of anybody’s act of uttering them. Speakers’ intentions do not endow them with new semantic properties…” (Bach 2004: 27). Here Bach takes issue with the contextualist idea that semantics must produce truth conditions and when it does not produce them as in (20) or produces ‘wrong ones’ as in (18), context ‘intrudes’ into the domain of semantics in the form of pragmatic inference and supplies missing information. So, he takes issue with relevance-theoretic and Recanati’s positions. For Bach, the semantic content of sentences and the intended content of utterances have to be kept apart. Sentences uttered normally underdetermine what the speaker means but there is nothing extraordinary about this fact: semantics ends with the sentence meaning, even if it is counterintuitive or incomplete, and pragmatics begins with utterance meaning. In this perspective, the middle level of implicitures is not the middle level between semantic and pragmatics: it is fully pragmatic, it is just not the level of implicatures proper.

This dissociation of semantics from truth conditions has important consequences for the current minimalism-contextualism debate to which I turn in Section 5. At this point however it is important to add that the impliciture view is gaining popularity in the latest discussions on the boundary dispute. Horn (2004: 22) stresses its compatibility with other neo-Gricean approaches, and most notably with the observation that Grice’s account concerned speaker’s meaning, not utterance interpretation (Saul 2002). In his (2006: 24), he adopts Bach’s traditional semantics/pragmatics distinction, as well as his notion of impliciture. Similarly, Atlas (2005b, 2006b) argues for keeping semantics and truth conditions apart. The

conclusion that must be drawn from these most recent developments is this. After three decades of the emotions stirred up by semantic underdetermination, it is now being emphasized that there is nothing so very interesting in the fact that semantic content underdetermines the speaker's intended meaning. The fault lies in the repeated attempts to use truth conditions as theoretical framework and argue from this that, since the analysis is truth-conditional, it has to be semantic and semantics has to be construed as allowing for the intrusion of context and the result of pragmatic inference. For Bach and his sympathisers, this is an obvious *non sequitur*.

4.5. Presumptive meanings: Between semantics and pragmatics

Bach's tri-partite distinction is not the only way to cut the pie. Levinson (1995, 2000) proposes a level of meaning that lies between semantics and pragmatics while retaining the contextualist assumptions. Unlike Bach, he allows for the contribution of pragmatic inference to the propositional representation, and unlike Bach, he retains the dominant role of truth-conditional analysis of meaning in semantics. But unlike relevance theorists, he does not emphasise the importance of such an expanded and embellished representation of meaning. For him, there is a sub-category of such embellishments that is neither semantic nor pragmatic. These are presumed, default interpretations, arrived at by virtue of the repeated scenarios from the past, knowledge of language and the world, and other salient information, processed with the aid of some general principles of human reasoning. These general principles correspond loosely to Grice's generalized conversational implicatures and hence Levinson's theory of presumed ('presumptive') meanings is also called a theory of generalized conversational implicature (Levinson 2000; for other default-based approaches see Asher and Lascarides 2003 and article 40: Theories of discourse relations; Blutner and

Zeevat 2004 and article 104: Optimality-theoretic pragmatics; and an overview in Jaszczolt 2006).

According to Levinson, there are three levels of meaning: sentence meaning, utterance-type meaning, and utterance-token meaning. Default interpretations, and among them most notably GCIs, belong to the middle level of utterance-type meaning. Such middle-level meanings are neither properly semantic nor properly pragmatic. Presumptive meanings are dubbed GCIs but they have one important feature that distinguishes them from Grice's GCIs. For Grice, pragmatic inference operated post-propositionally. The output of syntactic processing had to be completed and had to deliver a logical form of the sentence before the speaker's utterances were inferred on the basis of the maxims of conversation. Levinson's GCIs are 'local': they arise at the point at which they are triggered. For example, the word 'some', even when it is the first word of an utterance, gives rise to the default presumption 'not all', unless there are contextual clues that prevent it from arising. Naturally, the presumptive meaning can be cancelled at any later stage as the utterance continues.

Presumed meanings are very useful for human communication. Levinson observes that human speech is transmitted quite slowly: phonetic representations are encoded as acoustic signals with a rate of approximately 7 syllables per second. This is about twenty four times slower than the rate at which standard personal computers work. On the other hand, humans' mental capacity for speech production and speech comprehension is much higher. He calls this situation a 'bottleneck in the speed of human communication' (Levinson 2000: 28) and presents it as a motivation for communicating through implicatures: while producing speech slows communication down as compared to what it could have been given the mental architecture, inference can help speed it up. As he says, "inference is cheap, articulation expensive, and thus

the design requirements are for a system that maximizes inference" (Levinson 2000: 29).

Pragmatic inference proceeds according to three general heuristics which constitute one of three main attempts at a revision of the Gricean maxims of conversations, along with Horn's Q and R principles and Sperber and Wilson's principle of relevance. On the most general formulation, they say the following (from Levinson 2000: 35-39):

Q-heuristic: 'What isn't said isn't.'

This heuristic is responsible for scalar implicatures: if the speaker utters (24), a Q-implicature as in (24a) is normally produced.

(24) Some people have a sense of humour.

(24a) Not all people have a sense of humour.

I-heuristic: 'What is expressed simply is stereotypically exemplified.'

For example, the phrase 'three men' in (25) is presumed to give rise to the collective interpretation ('together') by force of the I-heuristic.

(25) Three men pushed a lorry out of a snowdrift.

M-heuristic: 'What's said in an abnormal way isn't normal.'

This heuristic works as a complement to the I-heuristic in that while the I-heuristic takes the addressee to the standard, stereotypical interpretation, the M-heuristic captures the fact that when the speaker used a marked rather than an ordinary expression, the intended interpretation is also marked. For example, in (26), the use of 'it is not impossible that…' construction rather than the standard 'it is possible' signals that the probability is low: lower than in the case of the alternative expression.

(26) It is not impossible that she will win the piano competition.

To sum up, presumptive meanings are default interpretations in the sense of being context-free. As such, they are also 'cheap' in that they require less effort to process than consulting the particular context would. But it seems that they also demand some effort in that, if they are produced on-line, locally, as soon as the triggering word or construction arises, they are likely often to be cancelled.

4.6. Radical contextualism of Default Semantics

Default Semantics (Jaszczolt 2005, 2009, forthcoming) goes further than the contextualist accounts discussed earlier in that the explicit (called: *primary*) meaning of an utterance does not have to bear any structural resemblance to the logical form of the sentence. It need not constitute a development of the logical form of the sentence or, in other words, need not obey the *syntactic constraint*. All sources of information about meaning identified there are treated on a par: the output of any of them can override the output of any other. For example, the most salient meaning of B's response in (2) repeated below is something like (2Ba).

(2) A: Smith doesn't seem to have a girlfriend these days.

B: He has been paying a lot of visits to New York lately.

(2Ba) Smith may have a girlfriend.

On the Default-Semantics construal, (2Ba) is the primary content of B's utterance and it is this content that enters into the compositional semantic representation (called *merger representation*) of (2B). So, semantics is understood here as the theory that provides the intuitive truth conditions of utterances, but these truth conditions are even 'more intuitive', so to speak, than those of truth-conditional pragmatics discussed above. We drop the restriction that one of the sources of speaker's meaning, namely the logical form of the sentence, has priority over the others and that the contribution of inference and presumed, salient enrichments is to be limited to embellishments of this logical form. This view does not come free though. It requires a substantial rethinking of the principle of compositionality of meaning. Recanati (2004) already observed that, with intuitive truth conditions of truth-conditional pragmatics, we need a more 'pragmatic' approach to compositionality: composition of meaning will have to proceed not on the level of the logical form of the sentence but rather on the level of the semantic representation of the intended proposition. In the above spirit, merger representation is conceived of as an interaction of various sources of meaning identified in the theory. What a semantic theory needs is an algorithm to show how all the sources of information about meaning interact. Another (related) consequence of extending what is said in this way is that we need a new criterion for distinguishing what is said (and a merger representation) from implicatures proper. In Default Semantics, implicatures are produced by two out of the four sources that also

build merger representations: conscious pragmatic inference and social-cultural defaults. The source of information and the process through which the implicature arises cannot differentiate it from the explicit content. In this Default Semantics is closer in spirit to relevance theory than to Recanati's truth-conditional pragmatics. To repeat, in relevance theory, the same processes are responsible for the explicatures and the implicatures, while in truth-conditional pragmatics, all modulation is automatic, unconscious (i.e. *subdoxastic*), while the processing of implicatures is conscious and more effortful.

In the following section I attend to some differences in the contextualist views and to the opposing view according to which no contextual information is allowed in the semantics (semantic minimalism). This overview will allow us to better assess and compare different stances discussed here.

5. Minimalism, contextualism, and beyond

In the preceding sections I discussed the view that every instance of utterance interpretation involves 'top-down' processing, called contextualism. I also mentioned briefly one non-contextualist view while introducing Bach's notion of impliciture. In more general terms, contextualism is a position in the philosophy of language that a sentence expresses fully determined content only in the context of a speech act. This view did not arise in a void. It is a development of the position held in the 1950s by ordinary language philosophers such as later Wittgenstein, J. L. Austin, and subsequently J. Searle. Contextualism has now become one of the leading orientations in the study of meaning. To repeat, on the assumption that we want to retain truth conditions in semantic theory, we have to admit context into that theory. And once it is admitted, there is one step from there to saying that talk about meaning only makes

sense when the sentence is immersed in the context in which it was uttered. This view holds equally of the Gricean developments and Montagovian approaches such as two-dimensional semantics introduced in Section 3 which, to repeat, are also contextualist in a broad sense.

Contextualism is best seen as a reaction to the traditional view that sentences themselves can be ascribed truth conditions. The latter view we shall call, after Recanati (2004, 2005), *literalism*. Examples of semantic underdetermination and sentence non-literality discussed in Section 4.4 testify to the deficiencies of this view, and so does the requirement of psychological reality of the object of study (see e. g. Clapp's (2007) argument against minimal semantics). Now, according to Recanati's (2005) historical overview, literalism has gone through a 'gradual weakening': it has become less and less radical, until it gave rise to stronger and stronger forms of contextualism.

In the current debates on the semantics/pragmatics boundary, only the weakest form of literalism, called *minimalism*, is a real contender. Minimalism itself has two versions. One says that truth-conditional content is indeed permeated with the result of pragmatic inference but this inference is constrained by the grammar: there are slots in the syntactic representation that are to be filled in. This is how utterance meaning is kept very close to the meaning of the sentence type. The main representative of this view is Peter Stanley whose views were briefly introduced in Section 3. The other version, dubbed by Recanati 'the syncretic view', holds that there is a minimal semantic content, but on the other hand there is also intuitive utterance content. Since the latter can be freely modulated to reflect the speaker's intended meaning as assessed by the addressee, the first can be kept even 'more minimal': slots provided by deictic and other context-dependent expressions have to be filled but

there is no temptation to postulate any other contentious slots just in order to capture the intuitive meaning of the utterance: sentence-type meaning and speaker's meaning can be safely kept apart. A syncretist, Emma Borg (2004), claims in her theory of *Minimal Semantics* that semantic theory is unaffected by any intrusion of aspects of meaning that are not present in the sentence itself. Semantic theory is a theory of 'literal linguistic meaning' and its task is only to provide 'pure' sentence meaning. She assumes that the understanding of sentence meaning is modular and should be kept apart from the understanding of speaker's intentions and from any non-deductive inference. Sentences have truth conditions even if it would not be possible to tell what situation would make the sentence true. There is no need for the intrusion of the contextual enrichment. Truth conditions are not conditions of verification as contextualists have it. A similar orientation is presented in Cappelen and Lepore's (2005) *Insensitive Semantics*: a truth condition can be produced for a sentence even if we are not in a position to discern possible situations that would verify the sentence. So, on this account, Tarski's T-sentence (27) produces a truth condition just in virtue of having a form of a T-sentence (see Bach 2006 for criticism).

(27) 'Tom is not strong enough' is true if and only if Tom in not strong enough.

Cappelen and Lepore claim that it is a mistake to assume that a semantic theory should account for speakers' intuitions about the content of the utterance, i.e. about the speaker's meaning. They argue that there is no strong connection between the content of speech acts and the content of sentences and that they should be kept apart. By the same reasoning, semantics and pragmatics should be kept apart.

The boundary dispute would be simple indeed to solve if semantics and pragmatics could be delimited in the way Cappelen and Lepore suggest. However, they seem to cut off parts of each discipline in order to keep the boundary clear: composing sentence meaning is not a simple enterprise of combining clear-cut word meanings in the way provided by the grammar. Neither is pragmatics merely a description of what people say. Post-Gricean pragmaticists aim at generalizations about the speaker's meaning that stem out of the principles of rational conversational behaviour. Most of them are also interested in the psychology of utterance interpretation and in the application of such principles during this process. So, even leaving aside the debate concerning the unit of which truth conditions should be predicated, it is evident that one must resort to unwarranted simplifications in order to force semantics and pragmatics into separate moulds.

Semantic minimalism gave rise to ample criticism from the contextualists. As we know from the earlier discussion of Recanati's version of contextualism, the main objection to the first version of minimalism is that there is no evidence for the kinds of syntactic slots that have to be postulated in order to maintain the view that syntactic form alone accounts for the intuitive truth conditions. The main objection to the second version of minimalism, the syncretic view, is the lack of practical utility of a minimal proposition. The syncretists who opt for verification-free truth conditions are also attacked on the count of redefining truth conditions:

"This move strikes me as an unacceptable weakening of the notion of truth-condition. The central idea of truth-conditional semantics (…) is the idea that, via truth, we connect words and the world. If we know the truth-conditions of a sentence, we know *which state of affairs must hold for the sentence to be true*." Recanati (2005: 185).

The truth conditions of syncretists do not have to fulfil this requirement of 'connecting words with the world': they only provide a formal procedure for a theory of meaning. The debate is at present in the focus of attention of most post-Griceans and is likely to occupy us for some time. Suffice it to say that objections to weakening truth conditions should not be taken lightly.

There is another view that we should consider in that it shares some assumptions with the above versions of minimalism, while rejecting others. We have seen in Section 4.4 that Kent Bach advocates a clear-cut boundary between the tasks of semantics and those of pragmatics. He does so by claiming that the semantic analysis of a sentence need not result in a truth-conditional content: not every declarative sentence expresses a proposition, even if it is free from indexical expressions. Instead, sentences can just express propositional radicals. Bach (2006) calls this view Radical Semantic Minimalism. This view seems to have been increasing in popularity recently (see e. g. Horn 2006; Atlas 2005b). But, as we have seen, other minimalists do not share this view of the dissociation of semantics from truth conditions, so it has to be distinguished as a separate variety, only tentatively subsumed under the umbrella label of 'minimalism'.

Returning to contextualism, we can go even further in the direction of context-dependence. We can assume that words don't have determined, coded sense. Instead, they act like pointers to particular senses in particular contexts. Truth conditions are then assigned to utterances that owe nothing to sentence-type meaning, but neither do they owe anything to lexical meanings. Neither of the two exists. Words have only a so-called *semantic potential*. All they have is particular uses. This view is thus clearly reminiscent of later Wittgenstein's view that meaning *is* language use and thus of the

theoretical orientation of ordinary language philosophy. Although this view is not currently in the forefront of theorizing, it is the next logical step from the contextualist stance represented in truth-conditional pragmatics and other approaches that allow top-down pragmatic enrichment which is not dictated by grammar.

6. Summary: The significance of the boundary disputes

The current state of the debate concerning the interface between semantics and pragmatics is to a large extent the upshot of the revolutionary period in the study of meaning known as radical pragmatics, aided by the views of ordinary language philosophers. Two relatively separate disciplines, the formal study of sentence meaning and the relatively informal study of the properties of speech acts became more and more intertwined as a result of the adoption of semantic underdetermination and the admittance of pragmatic inference about the speaker's intentions, as well as some other context-bound information, into the semantic content. This facilitated the shift of the centre of attention from the sentence to the utterance. However, the direction of change has not been steady throughout the past three decades. There are attempts to keep semantics and pragmatics apart either through denying that semantics has to provide propositions and hence truth-conditional content, or through keeping the objectives of semantics and pragmatics apart and stressing the theoretical utility of the sentence's truth conditions, like minimalists of the syncretic flavour do. At present the dominant orientations seem to be various forms of contextualism. This state of affairs is undoubtedly aided by the overall desideratum to stay faithful to speakers' intuitions about meaning and to the view that semantic theory should not ignore these intuitions. The desideratum to account for *all* kinds of enrichment by postulating one type of mechanism is also an important consideration. Whether contextualism will

retain its power, succumb to minimalism, or evolve into a radical form of occasion-meaning of meaning eliminativism remains to be seen.

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