

representations and can represent states of affairs in the world truly or falsely, only the proposition expressed can be a truth condition. By the same token, while sentence adverbs such as *regrettably* contribute to a propositional representation, they do not contribute to the truth conditions of the utterance, and hence do not contribute to the proposition expressed. This would seem to suggest that there is a role for truth conditions at the level of explicit content after all.

As Wilson and Sperber recognize, this is in line with the traditional account. However, in the course of their paper they mention examples of illocutionary adverbials which do seem to contribute to the truth conditional content of the utterances that contain them. For example, Mary's utterance in (34) would be a contradiction if *on the record* and *off the record* did not contribute to its truth conditional content.

(34) PETER: What can I tell our readers about your private life?

MARY: On the record, I'm happily married. Off the record, I'm about to divorce.

Examples such as this lead Wilson and Sperber (1993:23) to question the assumption underlying their distinction between the proposition expressed and higher-level explicatures, namely, that we have a consistent, coherent set of intuitions about the truth conditions of utterances.

Within the cognitive framework of relevance theory, where the bearers of truth conditions are not utterances but conceptual representations, it might seem that there is no reason to maintain this assumption. On the other hand, if we abandon it, we are left with the problem of explaining the intuition that there is a difference between the role that (32) plays in the interpretation of B's utterance in (31) and the role played by (33a).

(31) A: Are you going away this summer?

B: I have to finish my book.

(32) The speaker must finish the processes involved in preparing the book she is authoring for publication.

(33) (a) The speaker regrets that she must finish the processes involved in preparing the book she is authoring for publication.

A possible way forward here is suggested by an exercise in Blakemore (1992:95). The reader is asked to consider a situation in which a speaker finally utters (35) after strenuously denying the hearer's repeated accusation that he has eaten her chocolates.

(35) OK, I ate them. [uttered in a weary tone of voice]

The proposition expressed by this utterance is (36a), while (36b) is a higher-level explicature.

- (36) (a) The speaker ate the hearer's chocolates.  
(b) The speaker admits that he ate the hearer's chocolates.

However, the speaker does not expect to achieve optimal relevance by communicating (36a), since the hearer has made it clear that she believes this already. If the utterance is relevant, it is relevant by virtue of the cognitive effects the hearer derives from (36b). In other words, the suggestion is that we may distinguish between the assumptions explicitly communicated by an utterance according to their relative contributions to relevance.

Clearly, this suggestion is inconsistent with the traditional view that every utterance expresses a single proposition. However, as we have seen in the previous chapter (2.1), this view is no longer universally accepted. In particular, Bach (1999) has argued that an utterance should be regarded as expressing multiple propositions. As Iten (2000b) has observed, his solution to the problem has left us with the question of how we should distinguish between the explicit and the implicit content of utterances. Her point is that since logical operators such as *if... then* can only take one proposition in their scope, Bach's claim would mean that we cannot use the traditional scope test to test for truth conditionality. However, as Iten recognizes, this is only a problem if testing for truth conditionality were an essential part of the process of determining which propositions communicated by an utterance were explicitly communicated and which propositions were implicitly communicated: as we have seen, the relevance theoretic distinction between explicit and implicit content does not mention truth conditions at all. The key question is not whether an assumption contributes to truth conditions, but whether it is derived by developing the linguistically encoded semantic representation. In other words, the recovery of explicatures involves both decoding and inference, while the recovery of implicatures involves just inference.

### 3.3 Conceptual and procedural encoding

According to the picture painted so far, linguistic semantics does not deliver truth evaluable propositional representations, but rather schematic logical forms which are taken as input by pragmatic inferences constrained by the principle of relevance. The result is a set of communicated assumptions which, as we have seen in the previous section, may either be the product of encoding and inference – that is, explicatures – or be the product of inferential processing

alone – that is, implicatures. In this picture, the question for linguistic semantics is not what contribution an expression makes to truth conditions, but rather what kind of contribution it makes to pragmatic inference, or, in other words, what kind of cognitive information it encodes.

The question I would like to address in this section is whether we should be looking for one answer to this. Should we expect linguistic semantics to provide only one kind of input to pragmatic inference? From a purely theoretical point of view, there is every reason to expect the answer to be 'no'. The picture I have drawn is based, first, on the assumption that there are two distinct processes involved in utterance interpretation – decoding and inference, the first being an input to the second, and, second, that the inferential phase of utterance comprehension involves the construction of conceptual (or propositional) representations which enter into inferential computations. This means that, in principle, linguistic form could encode not only the constituents of the conceptual representations that enter into inferential computations but also information which constrains the computations in which these computations are involved. In other words, it is possible for linguistic form to encode either *conceptual* information or *procedural* information.

Bach (1999) has argued that this distinction is in fact vacuous since after all, in some way or other anything one utters 'constrains the inferential phrase of comprehension' (1999:361). It is true that the inferences a hearer derives from an utterance depend on its conceptual content in the sense that this is what interacts with the context in the derivation of its explicit and implicit content. However, the interpretation the hearer derives also depends on the contextual assumptions which she uses in their derivation and on the type of inferential computations she performs.

Consider, for example, the sequence in (37) (adapted from Hobbs 1979):

- (37) (a) Tom can open Ben's safe. (b) He knows the combination.

There are two ways in which this sequence might be interpreted, depending on whether the (b) segment is understood as evidence for the proposition expressed by (a) or as a conclusion derived from (a). In the first interpretation, the proposition expressed by (b) is functioning as a premise which has the proposition expressed by (a) as a conclusion, while in the second interpretation, it is a conclusion in an inference that has the proposition expressed by (a) as a premise. The claim that linguistic meaning can encode information about the inferential phase of comprehension means that there are linguistic expressions (*so* and *after all*, for instance) which encode information about which of these

inferential procedures yields the intended interpretation. Hence the difference between (38) and (39).

- (38) Tom can open Ben's safe. So he knows the combination.  
(39) Tom can open Ben's safe. After all, he knows the combination.

As I showed in Blakemore (1987), the fact that there *are* linguistic expressions and constructions which constrain inferential procedures can be explained within relevance theory in terms of the communicative principle of relevance. Recall that according to this principle, a hearer who recognizes that a speaker has made his intention to communicate manifest is entitled to assume that that speaker is being optimally relevant. In other words, in making his communicative intention manifest, the speaker is communicating his belief, first, that his utterance will achieve a level of relevance high enough to be worth processing, and, second, that this level of relevance is the highest level that he is capable of, given his abilities and preferences. Since the degree of relevance increases with the number of cognitive effects derived and decreases with the amount of processing effort required for their derivation, the use of an expression which encodes a procedure for identifying the intended cognitive effects would be consistent with the speaker's aim of achieving relevance for a minimum cost in processing.

Since the distinction between conceptual encoding and procedural encoding is the result of a move away from the assumptions underlying the speech act theoretic distinction between describing and indicating, there is no reason to expect the two distinctions to be co-extensive. However, the story of the development of the notion of procedural encoding began with my (1987) attempt to provide a relevance theoretic analysis of Grice's notion of conventional implicature, and my concern with a limited range of non-truth conditional constructions led me to the hypothesis that the distinction I was drawing might simply be a cognitively grounded version of the speech act theoretic one. If this hypothesis was right, then all non-truth conditional constructions would be examples of procedural encoding and all examples of procedural encoding would be examples of non-truth conditional meaning.

Subsequent research showed that this was not in fact the case. While the notion of a procedural constraint on implicatures has been applied to the analysis of a range of non-truth conditional discourse markers,<sup>4</sup> the investigation of

<sup>4</sup> See, for example, Blass (1990), Higashimori (1994), Itami (1993), Iken (2000b), Jucker (1993), Unger (1996).

the role of inference in the recovery of explicit content has suggested that the notion of procedural meaning can be extended to expressions and constructions which encode constraints on the recovery of explicatures. Some of these constructions – mood indicators, illocutionary particles and attitudinal particles, for example – are analysed as encoding constraints on the inferential processes involved in the recovery of higher-level explicatures (see Wilson and Sperber 1988, 1993, Clark 1991, 1993). Thus Wilson and Sperber (1993) have suggested that the use of the particle *huh* in (40) encourages the hearer to construct the higher-level explicature in (41).<sup>5</sup>

(40) Peter's a genius, huh!

(41) The speaker of (40) doesn't think that Peter is a genius.  
(Wilson and Sperber 1993:22)

In such cases, the equation between procedural meaning and non-truth conditional meaning is maintained, since higher-level explicatures are not regarded as contributing to the truth conditional content of utterances (but see the discussion above). However, it has also been suggested there are expressions, notably, pronouns, which should be analysed as constraints on what Wilson and Sperber (1993) call the proposition expressed (see section 2 above). As we have seen, the pronouns *she* and *him* in (42) cannot be analysed as encoding their referents. Given the role of the context in the interpretation of these expressions, one might want to say that linguistic decoding yields a skeletal conceptual representation such as the one in (43).

(42) She saw him.

(43) Some female saw some male.

However, following Kaplan (1989), Wilson and Sperber (1993) have argued that pronouns do not encode constituents of a conceptual representation, but only procedures for constructing such a representation. In other words, they contribute to truth conditional content only in the sense that they constrain the hearer's search for the representations of their referents. If this is right, it would seem that there are expressions which encode procedures but which contribute to what is traditionally regarded as truth conditional content. In other words, it would seem that it is not the case that all procedural meaning is non-truth conditional.

It may nevertheless be true that all cases of non-truth conditional meaning are instances of procedural encoding. However, Wilson and Sperber (1993) and

Ifanidou-Trouki (1993) have argued that sentence adverbials such as the one in (44) encode a constituent of a propositional representation such as the one in (45).

(44) Unfortunately, Tom is not hungry.

(45) It is unfortunate that Tom is not hungry.

If (45) is not a condition on the truth of (44), then this would amount to saying that there are examples of non-truth conditional meaning which are not procedural.

One might conclude at this point that we should abandon the distinction between conceptual and procedural meaning because it does not provide us with a cognitively grounded account of the distinction between truth conditional meaning and non-truth conditional meaning. However, this would be to assume that the traditional distinction between truth conditional and non-truth conditional meaning is *the* fundamental distinction in a theory of semantics. Let us take stock of the arguments so far:

*First*, we have seen (in chapter 1) that the gap between linguistic encoding and the propositional content of utterances means that semantic representations do not encode truth conditions. The domain of truth conditional semantics is not natural language semantics but propositional thoughts or conceptual representations.

*Second*, it has been argued (in this chapter) that the gap between linguistically encoded representations and conceptual representations is filled by inference. This suggests that the output of linguistic semantics is the input to inferential processes, and hence that the question for linguistic semantics is what kind of information does semantic encoding provide for pragmatic inferential processes. The conceptual-procedural distinction has emerged from the attempt to answer this question.

*Third*, it has been argued (in chapter 2) that attempts to explain what expressions and constructions that do not contribute to truth conditions *do* contribute to have appealed to the notion of indicating, which has been explicated in conceptual terms. As we have seen, this has raised more questions than answers.

*Fourth*, it has been argued that we do not seem to have consistent or uniform intuitions about truth conditionality. Indeed, it has been suggested (in the previous section) that knowing what the truth conditions of the utterance are may not be part of utterance understanding at all.

Taken together, these arguments suggest that the distinction between conceptual and procedural encoding should not be judged according to whether it provides a relevance theoretic re-analysis of the distinction between truth conditional and non-truth conditional meaning (or, indeed, the distinction between describing

<sup>5</sup> See also Blass' (1990) analysis of hearsay particles in Sissala.

and indicating). The question is whether it yields a cognitively justified account of the contribution made by semantic encoding to pragmatic processing. We have seen that within relevance theory, the distinction can be justified in both cognitive and communicative terms. However, before we can say that it provides a framework for the analysis of those expressions which have been classified as non-truth conditional (or as indicators), we need to say a great deal more about what it means to say that a given expression encodes procedural meaning. In particular, we need to know how we would recognize that an expression encodes procedural information rather than conceptual information.

Clearly, this question does not arise in those studies which take non-truth conditionality to be an essential property of discourse markers (see for example Fraser 1990, 1996). However, the move away from the assumptions underlying the speech act theoretic distinction between describing and indicating has not only yielded a different semantic distinction: it has also created the possibility that the expressions classified as discourse markers do not fall into a single class from a semantic point of view. For as we have seen, not all cases of non-truth conditional meaning are cases of procedural encoding. In principle, it is possible for an expression classified as a discourse marker to encode either a concept or a procedure. Accordingly, it is essential for any study of these expressions conducted within the relevance theoretic programme to include tests for distinguishing conceptual meaning from procedural meaning.

If we recall what has been said about procedural encoding so far, we will see that we seem to know more about what procedural meaning is not than what it is. Specifically, an expression which encodes procedural information encodes information which is not a constituent of the conceptual representations over which inferential computations are performed. However, it seems that from this negative characterization we can draw certain conclusions about what properties we can expect an expression which encodes procedural meaning to have. The remainder of this chapter will be an exploration of these properties.

It is well known that some words are easier to paraphrase than others. For instance, it is easier to find a universally acceptable paraphrase for words such as *tree* or *lecture* than it is for words such as *love* or *freedom*. Nevertheless we do feel that we should be able to provide paraphrases for all of these words, whether we agree on them or not, and we can discuss whether one paraphrase is better than another. That is, even when the definition of a concept proves controversial, there is a sense in which each speaker can bring it to consciousness and say whether two expressions encode the same concept without having to actually test whether they can be substituted for each other in all contexts. As anyone

who has tried to analyse them will know, the situation is very different with expressions such as *but* and utterance initial *well*. Ask a native speaker what these mean, and you are much more likely to receive a description or illustration of their use than a straightforward paraphrase. Moreover, native speakers are unable to judge whether two of these expressions – say, *but* and *however* – are synonymous without testing their inter-substitutability in all contexts. As I have said in the introduction of this book, it is the elusiveness of these expressions which is the source of their fascination.

If it is difficult for native speakers to make synonymy judgements, then it is not surprising that the translation of these expressions is notoriously difficult. Nor is it surprising that they are challenging for second language learners. According to Wilson and Sperber (1993), the elusiveness of these expressions can be explained if they are analysed as encoding procedures rather than concepts: 'Conceptual representations can be brought to consciousness; procedures cannot. We have direct access neither to grammatical computations nor to the inferential computations used in comprehension. A procedural analysis would explain our lack of direct access to the information they encode' (Wilson and Sperber 1993:16).

Applying this to so-called discourse markers, we might expect to find discourse markers whose analysis provides considerably less of a challenge to the theorist than others. And indeed, this does seem to be the case. For example, while the analysis of *but* has proven extremely controversial – almost to the extent that it has created an industry amongst semanticists – one does not find the same controversy surrounding the analysis of *in contrast*. I shall be returning to the difficulties of analysing *but* (and some of its less notorious relatives) in the following chapter. In the meantime let us continue with the question of how we can recognize procedural encoding.

As we have seen, it has been argued that not all non-truth conditional meaning is procedural. For example, it has been argued (by Wilson and Sperber 1993 and Iatridou-Trouki 1993) that sentence adverbs such as *seriously* or *in confidence* encode constituents of conceptual representations even though they do not contribute to the truth conditions of the utterances that contain them. Why are these expressions not analysed in the framework I suggested for expressions such as *but* or *so*? According to Wilson and Sperber (1993), there are important differences between these expressions which provide indirect support for the distinction between conceptual and procedural encoding.

First, while sentence adverbials such as *seriously* have synonymous VP adverbial counterparts, it is not the case for expressions such as *but*, *after all* or *well*. Thus while the sentence adverbial *seriously* in (46) encodes the same

concept as the truth conditional VP adverbial in (47), it is not the case that the discourse connective *well* in (48) is synonymous with its truth conditional counterpart in (49).

- (46) Seriously, you will have to leave.
- (47) He looked at me very seriously.
- (48) A: What time should we leave?
- B: Well, the train leaves at 11.23.
- (49) You haven't ironed this very well.

As I have argued (Blakemore 1996), it seems that some expressions analysed as discourse connectives behave more like sentence adverbials in this respect. Thus it seems likely that *in other words* as it is used in (50) encodes the same concept as *in other words* as it is used in (51).

- (50) In other words, you're banned.
- (51) She asked me to try and put it in other words.

Second, while sentence adverbials can be semantically complex, it does not seem that expressions such as *but* or *so* can combine with other expressions to produce semantically complex expressions. Thus the meanings of the complex sentence adverbials in the following examples are compositional in the sense familiar to semanticists.

- (52) In total, absolute confidence, she has been promoted.
- (53) Speaking quite frankly, I don't think people ever ask themselves those kind of questions.
- (54) Putting it more brutally, you're sacked.

As Wilson and Sperber (1993) say, this semantic compositionality is not surprising if we analyse these expressions as constituents of conceptual representations that undergo regular semantic interpretation rules. By the same token, one would not expect expressions which encoded procedures to combine to be a constituent of a complex expression. Hence the unacceptability of (55).

- (55) ?Tom likes pop art. Totally however, Anna prefers Renaissance art.  
Notice that some discourse connectives – including so-called 'contrastive' ones – can occur in complex constructions. Compare (55) with (56).

- (56) Tom likes pop art. In total contrast, Anna prefers Renaissance art.

As Rouchota (1998) has shown, while expressions that have been analysed as encoding procedures can combine in some way, it does not seem that they

combine in the same way as the conceptual expressions in (52–4) or (56). Consider (57–8).

- (57) The cat left footprints all over the manuscript of my book. But after all, he can't read.
- (58) The exam scripts are covered in mud. So he must have walked over them too.

To say that an expression does not encode a concept is to say that it does not encode a constituent which undergoes the inferential processes involved in developing logical forms into explicatures. This means, amongst other things, that it does not encode a constituent of a representation that undergoes the inferential processes involved in the development of highly fragmentary utterances such as (59).

- (59) Coffee.

However, as I have shown (Blakemore 1997a), it seems that there are some expressions which are analysed as encoding procedural information which can be used as fragmentary utterances. For example, consider (60), produced following a rambling account of the trials and tribulations of having to spend the entire summer vacation finishing writing a book.

- (60) But still.

Similarly, consider (61), produced by a university professor after hearing the secretary's summary of the explanation given by a student for the failure to submit her assessed work.

- (61) Nevertheless.  
(from Blakemore 1997a)

It should be noted that neither of these utterances was produced with the rising intonation characteristic of an unfinished utterance. They were intended as complete utterances – in the same way as (59) was.

In fact, there is an important difference between the fragmentary utterance in (59) and the fragmentary utterances in (60) and (61). Moreover, this difference helps clarify the distinction between conceptual and procedural encoding, and accordingly, it is worth spending a little time on it.

If (60–1) were like (59), then we would have to say that the hearer is expected to use contextual assumptions and pragmatically constrained inference to develop their linguistically encoded semantic representations into an enriched propositional representation that can be assessed for relevance. For example,

given certain contextual assumptions, the hearer might derive the explicature in (62), while in another context she might derive the explicature in (63).

- (62) It is time to have a coffee break.
- (63) The speaker believes that we need to buy coffee.

Since the construction of the explicature is the responsibility of the hearer, there is no way for the speaker to predict exactly how his utterance will be interpreted. Thus even in a particular context, for example, the one in which the speaker and hearer are checking the contents of their cupboards before they go to the supermarket, there is a range of explicatures that the hearer might construct. For instance:

- (64) (a) The speaker believes that coffee should be included on the shopping list.
- (b) The speaker believes that there is not enough coffee for the rest of the week.
- (c) The speaker is telling the hearer to buy coffee at the supermarket.

and so on. Any of these assumptions could be consistent with the principle of relevance in the circumstances.

At first sight this might seem to be what goes on in the interpretation of (60–1). Thus according to my (1987) analysis of (61), there is a range of assumptions which the hearer might have recovered, for instance:

- (65) (a) The student could have handed in some of the work.
- (b) The student's circumstances do not justify bending the rules.
- (c) There are other students whose circumstances have been difficult.
- (d) The student has not tried hard enough.

and so on.

However, whereas the assumptions in (64) are all a development of the concept encoded by *coffee*, none of the assumptions in (65) can be regarded as a development of a concept encoded by *nevertheless*. The role played by *nevertheless* in the recovery of these assumptions is quite different. Although there is a whole range of assumptions that the hearer of (61) might have justifiably constructed, this range is constrained: it does not matter what assumption the hearer constructs as long as it gives rise to the right sort of cognitive effects. More specifically, it does not matter what assumption the hearer constructs provided that it achieves relevance in the way that is prescribed by the meaning of *nevertheless*. In other words, the speaker's intention in (61) is

simply that a hearer construct an assumption which gives rise to the cognitive effects consistent with the constraint encoded by *nevertheless*. We shall see exactly what this constraint is in the following chapter. My aim here is simply to underline the difference between the role played by an expression which encodes a concept in the interpretation of fragmentary utterances and the one played by an expression which encodes a procedure. The point is that in an utterance such as (60) or (61) it does not matter what assumption the hearer constructs as long as she recovers the cognitive effects consistent with the constraint encoded by the expression or construction used by the speaker. Indeed, as Deirdre Wilson (personal communication) has pointed out, it is conceivable that the speaker's intention in such utterances might not include the construction of an assumption at all, in which case the discourse connective simply serves as a means of activating the right kind of cognitive effects. This would seem to be the case in an example such as the following:

- (66) [speaker and hearer(s) are subjected to a long and angry speech by someone who then leaves the room slamming the door. There is a brief and stunned silence] Well.

Once again, the nature of the constraint imposed by *well* will be discussed in the following chapter. The point is that while it is difficult to identify any proposition that the speaker might have intended to express, knowing the meaning of the expression *well* enables us to say something relatively specific about the range of cognitive effects that he intended to achieve.

This is not the case in (59). Here the hearer is simply expected to construct an assumption which has the concept encoded by *coffee* as a constituent and which yields the intended cognitive effects. However, which cognitive effects are recovered by the hearer depends entirely on the context and his assumption that the utterance is optimally relevant. There is no linguistically encoded constraint on these cognitive effects, and in particular, one cannot say that knowing the meaning of *coffee* helps us say what they might be.

As I observed in Blakemore (1997a), non-truth conditional sentence adverbials may be used as fragmentary utterances. For example, a child may produce (67) in response to her mother's question whether she has much homework:

- (67) Unfortunately.

However, this example is much more like the *Coffee* example in (59), since the hearer is expected to construct explicatures which include one which has the concept encoded by *unfortunately*, for example (68):

- (68) It is unfortunate that the speaker of (67) has a lot of homework.

As in (59), the meaning of *unfortunate* plays no role in determining how the proposition that the daughter has a lot of homework is relevant: this is determined by the context and the principle of relevance. In this way, fragmentary utterances may be used as evidence for the distinction I have drawn between two different types of non-truth conditional meaning, or in other words, for the claim that there cannot be a unitary account of the expressions that have been identified as non-truth conditional.

If this claim is right, then there cannot be a unitary account of the semantics of expressions which have been classified as discourse markers or discourse connectives. Some turn out to encode concepts, and can be treated – from a semantic point of view – alongside expressions such as *coffee* or, perhaps more accurately, alongside expressions such as *unfortunately*. This makes the analysis of their meanings relatively unproblematic, although like sentence adverbials, they raise interesting and important questions about truth conditionality and the distinction Wilson and Sperber (1993) have drawn between the proposition expressed and higher-level explicatures (cf. Ifantidou-Trouki 1993). Others turn out to encode procedures, and as a result resist straightforward analysis. The complexity and elusiveness of the meanings encoded by these expressions provide part of the justification for the content of the chapter that follows: not only does it include yet another attempt to provide an analysis of *but*, but it will be restricted to the analysis of relatively few expressions, namely, a selection of the so-called *contrastive* or *adversative* expressions, *but*, *nevertheless*, *however* and perhaps the most slippery of all the English discourse markers, *well*. However, my primary objective in this chapter is not so much to provide the definitive analysis of these expressions, but rather to develop a better understanding of the notion of procedural encoding. For while I might have given some theoretical and empirical justification for the existence of procedural meaning, we still have no real idea of what procedural information is.

## 4 Procedural meaning

### 4.1 Constraints on relevance: new questions

According to the arguments of the previous chapter, the distinction between conceptual and procedural encoding cross-cuts the speech act theoretic distinction between describing and indicating: not all of the expressions defined within the speech act theoretic framework as indicators can be analysed as encoding procedures, and not all expressions which encode procedures are analysed within the speech act theoretic framework as indicators. In view of the fact that the two distinctions are not co-extensive, the decision to take the relevance theoretic distinction as the fundamental one in a theory of linguistic semantics could be construed as a recommendation to simply forget the speech act theoretic distinction, and in particular, as a recommendation to drop the notion of indicating or signalling or pointing altogether. After all, it seems that we now have something less metaphorical to work with, namely, coded means for constraining the inferential tasks involved in utterance interpretation. However, in this section I shall show that we still have much to learn about what it means for an expression to encode a procedure. Moreover, it seems that it may be illuminating to compare such expressions with natural or non-coded means for pointing to something.

Let us recall my (1987) analysis of the role of *after all* in (1):

- (1) Ben can open Tom's safe. After all, he knows the combination.

A hearer who interprets (1) will take the conceptual representation in (2a) together with the conceptual representation in (2b) and derive the conceptual representation in (2c). The effect of this inference will be a strengthened assumption, or, in other words, a conceptual representation which is held with a degree of strength that is higher than it would have been prior to the interpretation of the second segment.

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