

1 The Heterogeneity of Procedural Meaning

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4 Abstract

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6 The distinction in Relevance Theory between two kinds of encoded meaning,
7 conceptual and procedural, has evolved so that more and more components of
8 encoded meaning, both linguistic and non-linguistic, are now taken to be
9 procedural (non-conceptual). I trace these developments and assess the extent
10 to which these diverse elements share properties that distinguish them from
11 concept-expressing words. While the notion of procedural encoding has lost
12 some of its original distinctiveness, it may make sense to think of all encoded
13 meaning as procedural (including the meaning of concept-expressing words),
14 but this necessitates the drawing of new clarifying distinctions among kinds of
15 procedural meaning.

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17 **Key words:** relevance theory, procedural meaning, concepts, meaning modulation,
18 discourse connectives, expressives

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21 1. Introduction

22

23 Within Relevance Theory, an important distinction between two kinds of encoded (or
24 conventional) word meaning was initiated by Diane Blakemore in the 1980s: the
25 distinction between words that encode concepts and words that encode procedures.
26 At the time, it looked as if the distinction she had in mind would line up pretty much
27 with the elements of linguistic meaning that contribute to truth-conditional content
28 (the conceptual) and those that do not (the procedural). So it could be seen as a

29 recasting of the truth-conditional/non-truth-conditional semantic distinction in
30 cognitive terms, drawing on the basic distinction in cognitive science between
31 representations (descriptions of the world which are true or false) and computations
32 over representations (including inferential processes that relate representations to
33 one another in different ways, e.g. as premise and conclusion, as contradictory, as
34 collective evidence for another representation):

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36 On the one hand, there is the essentially *conceptual* theory that deals with the
37 way in which elements of linguistic structure map onto concepts – that is, onto
38 constituents of propositional representations that undergo computations. On the
39 other, there is the essentially *procedural* theory that deals with the way in which
40 elements of linguistic structure map directly onto computations themselves –
41 that is, onto mental processes.

42 (Blakemore 1987: 144)

43

44 This broad alignment of conceptual encoding with mental representations in
45 the language of thought and of procedural encoding with mental processes has been
46 largely maintained in subsequent work on the distinction. However, the notion of
47 procedural meaning has been considerably extended since Blakemore's early work
48 so as to encompass encoded constraints on a range of pragmatic processes; for
49 instance, it has been suggested that pronouns encode procedural meaning which
50 constrains the process of reference assignment, and that morphemes indicating
51 grammatical moods such as the indicative, the imperative, and the subjunctive, and
52 modal particles (e.g. in Japanese), encode procedural meaning that constrains the
53 pragmatic process of identifying the speaker's attitude or degree of commitment to
54 the proposition she has expressed (Wilson & Sperber 1993; Wilson 2011). On this
55 basis, it might look as if the conceptual-procedural distinction more or less meshes
56 with the traditional distinction between the substantive lexicon (open class words

57 such as nouns, verbs and adjectives) and the functional lexicon (closed class words
58 like determiners, pronouns and connectives).

59 However, the notion of procedural (nonconceptual) meaning has also been
60 applied to an array of what might be called 'expressive' communicative devices,
61 including interjections, expletives, manual and facial gestures of certain sorts, and
62 emotional prosody (Wharton 2009, Wilson & Wharton 2006). This is a curious
63 situation as we now have under the banner of 'procedural meaning' some of the
64 deepest components of I-language, such as pronouns and indicators of tense,
65 aspect, and mood, together with communicative devices such as 'oops!', 'dammit!',
66 winking, shrugging, and emotion-indicating tones of voice, which would seem to fall
67 well outside I-language. This is not to say that the claim is wrong but it does call for
68 some closer investigation.

69 The paper consists of two main parts, structured by the distinction between
70 conceptual encoding and procedural encoding. In section 2, I focus on the idea that
71 many words (nouns, verbs, adjectives) encode a concept, raising some problems for
72 this view and presenting some other ways of construing their linguistic meaning and
73 its relation to the concept communicated on an occasion of use. This section is
74 relatively short, as I have discussed my thoughts on this at length elsewhere
75 (Carston 2012, 2013, forthcoming). In the longer section 3, I turn to the more
76 innovative aspect of the relevance-theoretic view of lexical semantics, according to
77 which certain closed-class words and other units of (ostensive) communication
78 encode 'procedural meaning'. As noted, the idea of procedural encoding now
79 encompasses a vast range of items, linguistic and nonlinguistic. I try to assess
80 whether they constitute a single category of meaning in any positive sense, other
81 than just all being 'non-conceptual'. Finally, in section 4, I consider whether there
82 might be a case for treating all encoded meaning as procedural in a broad sense
83 (much broader than Blakemore's initial idea) and then making a range of important
84 distinctions among different kinds of procedural meaning.

85

86

87 **2. Conceptual meaning and concepts/senses expressed**

88

89 This section provides an overview of current ideas about the meaning of substantive
90 (open class) words, which are standardly taken to encode or at least express
91 concepts. It is not intended to be comprehensive or to provide detailed argument, but
92 to set out those features of the story that may need to be called on when discussing
93 the main topic, procedural meaning, in the next section. A terminological clarification:
94 I use 'meaning' for the encoded or standing meaning of a word and 'sense' or
95 'concept' for those contents that can be expressed or communicated by the use of
96 the word. In principle, at least, it could be that the sense/concept communicated on
97 some occasion is in fact the (standing) meaning of the word.

98

99 **2.1 The standard relevance-theoretic (RT) account**

100

101 According to the RT view of linguistic communication, many substantive words
102 (nouns, verbs, adjectives) encode an unstructured (atomic) concept,¹ which has an
103 externalist semantics (what it denotes in the world) and various kinds of internalist
104 informational connections, of which the key one here is its associated 'encyclopaedic
105 entry', a repository of general knowledge (in the form of conceptual representations)
106 about the object/property/activity in the world it denotes. To take a simple example,
107 the word 'child' encodes an atomic concept CHILD which denotes or refers to a certain
108 category of human beings. It also comes with a stash of general knowledge/beliefs
109 about that category of individuals, perhaps including that they are young, need to be
110 nurtured and looked after by adults, cannot take full responsibility for their own

¹ Sperber & Wilson (1998) suggest that there are also numerous content words that do not encode a full-fledged concept but what might be called a 'pro-concept', e.g. 'my', 'have', 'near', 'long' (ibid: 185).

111 decisions and behaviour, are still developing physically and psychologically, and so
112 on.

113 Understanding the sense or concept intended by the use of a word on a
114 particular occasion of utterance typically requires some degree of modulation or
115 adjustment of its encoded meaning. As discussed in relevance-theoretic work on
116 'lexical pragmatics', this involves an interaction among the lexically encoded concept,
117 other concepts encoded by the utterance and contextual information, constrained by
118 the hearer's expectation of relevance (Wilson & Carston 2007). The outcome of this
119 process is what is known as an ad hoc concept ('ad hoc' in that it has to be
120 inferentially derived on the particular occasion of use), which is marked with an
121 asterisk (HAPPY*, CHILD*, OPEN*, etc.) to distinguish it from the context-independent
122 lexical concept (HAPPY, CHILD, OPEN, etc.). The pragmatically derived concept may be
123 more specific or more general than the encoded concept; that is, its denotation may
124 be either a proper subset or a superset of the denotation of the linguistically encoded
125 concept, or it may be a combination, both extending the lexical denotation and
126 excluding some part of it. Consider the concepts that might be communicated by the
127 following uses of the word 'child'/'children':

128

129 1. a. A father is shouting at his 10-year-old son who has been misbehaving.

130 Mother: 'You're too hard on him. He's still a child.'

131 b. Woman (speaking of her middle-aged husband): 'Boris is a child.'

132 c. 'Our priority is to move the women and children to safety.'

133 d. 'My children don't visit much anymore – they are terribly busy and live on the
134 other side of London.'

135

136 The use of 'child' in (1a) seems to be literal, but it is very likely a narrowing of the
137 encoded concept CHILD to something paraphraseable as young person who cannot

138 be held fully responsible for his behaviour and has yet to acquire some social skills
139 (implicating that the boy should not be too strongly reprimanded); this occasion-
140 specific sense may exclude some individuals who fall in the denotation of the
141 encoded concept CHILD, those who always behave well and have precocious social
142 know-how. In (1b), on the other hand, we clearly have a broadening of the encoded
143 concept so that it can include in its denotation a 45-year old man, who has certain
144 qualities that a child typically has.

145 When a lexical concept is decoded, the encyclopaedic information associated
146 with it is activated. Some elements of it are more highly activated than others (as
147 there are multiple sources of spreading activation, including other concepts encoded
148 in the utterance and conceptual representations derived from the wider discourse
149 situation). The most highly activated items of conceptually represented information
150 are accessed and deployed as contextual assumptions in deriving contextual
151 implications, which form an initial interpretive hypothesis about the utterance. Then,
152 via a mechanism of mutual parallel adjustment of explicit utterance content,
153 contextual assumptions and contextual implications, concepts in the decoded
154 meaning string (the logical form of the utterance) are adjusted by backwards
155 inference, so that only implications that are ultimately grounded in the explicature are
156 confirmed. The overall interpretation is accepted provided it meets the addressee's
157 expectation of relevance. So, in the case of (1b) '*Boris is a child*', depending on the
158 wider discourse situation, contextual implications such as Boris doesn't earn his
159 keep, expects others to look after him, is irresponsible, etc. may be inferred, based
160 on assumptions accessed from the encyclopaedic entry for CHILD, which, by
161 backwards inference, lead to a particular ad hoc concept CHILD*. In another utterance
162 situation, different items of encyclopaedic information about children might be more
163 highly activated, making most accessible such implications as that Boris is sweet and
164 innocent, untouched by life experience, naïve, etc. resulting in a distinct ad hoc
165 concept CHILD** in the explicature. And there are many other possibilities.

166 The two uses of ‘children’ in (1c) and (1d) are interesting in that, although they
167 are clearly related, the sense of the first entails ‘not adult’, while the second does not,
168 entailing rather a certain relationship with the speaker, that of being her offspring.
169 These are both pretty conventional senses of ‘child/children’, which is thereby a case
170 of a polysemous word, a lexical vehicle for a family of related senses (Carston 2013,
171 forthcoming). I take it that all substantive words are polysemous or potentially so, and
172 that polysemy is fundamentally a matter of pragmatics (see Falkum 2015) with a
173 subsequent process of conventionalisation (of course, the vast majority of
174 pragmatically derived senses/concepts are ephemeral and so don’t become
175 established senses of a word). The polysemy of substantive words plays a central
176 role in the discussion to follow on different construals of a substantive word’s
177 standing meaning and will also be considered in section 3 as a property that may
178 distinguish conceptual meaning from procedural meaning.

179 Note that in the RT lexical pragmatic account of word meaning modulation just
180 sketched, all the heavy lifting is done by the encyclopaedic entry of the encoded
181 concept. This is the RT equivalent of what Fodor (2008: 94) talks of as the
182 informational memos stored inside the file whose name or label is the lexical concept
183 (e.g. CHILD, BLUE, TEACH). The role of the atomic concept itself (the address or file
184 name) in this pragmatic process is just to provide a gateway or link, a means of
185 access to the information that is used in constructing the ad hoc concept.

186

187 **2.2 Semantic underspecification views of word meaning**

188

189 According to the RT account given above, the encoded or standing meaning of the
190 words discussed is a full-fledged concept, that is, a semantic entity, which can
191 contribute directly to truth-conditional content. As Fodor (1998: 24) puts it,
192 applications of lexical concepts are susceptible of ‘semantic evaluation’, that is, the
193 concept CAT is correctly applied to Felix the cat but incorrectly applied to Dumbo the

194 elephant; equivalently, 'Felix is a cat' is true while 'Dumbo is a cat' is false. Intuitive
195 though this may be, it is worth pausing here and considering whether *the* lexical
196 concept CHILD is correctly or incorrectly applied in the examples in (1) above, and
197 from there, what exactly that concept is. In previous work, I have argued against the
198 view that there is one particular concept that constitutes the encoded or standing
199 meaning of a word (Carston 2013).

200 According to a range of other views, a word's meaning is semantically
201 underspecified: it does not specify a concept/sense which can contribute directly to
202 truth conditions, but is either too rich or too meagre and has to be transformed in
203 some way before it can contribute a specific semantic content. Recanati (2004) calls
204 these 'wrong format' positions, that is, they are positions on which word meaning *per*
205 *se* is the wrong kind of thing to figure as a component of content. Consideration of
206 the phenomenon of polysemy plays a major role in motivating these accounts, both
207 at the level of theoretical argument (e.g. Bosch 2007, Carston 2013) and of empirical
208 results from testing the processing of polysemous words (e.g. Frisson 2009). I will not
209 reiterate the details of either of these lines of argument and evidence here. Suffice it
210 to say that the 'Underspecification hypothesis' concerning standing word meaning is
211 currently in quite a strong position and meshes well with the kind of pragmatic
212 account of communicated senses/concepts advocated by relevance theory,
213 according to which: '...all words behave *as if* they encoded pro-concepts: that is,
214 whether or not a word encodes a full concept, the concept it is used to convey in a
215 given utterance has to be contextually worked out' (Sperber & Wilson 1998: 185). In
216 other words, the (alleged) lexical concept is never simply decoded and taken to be
217 the concept communicated.

218 There are, however, some difficult issues to be resolved before we could take
219 on either of the two different manifestations of the underspecification view. I look at
220 these in some detail in Carston (forthcoming), so will simply summarise briefly some
221 problems with each view. According to the overly rich (semantic underspecification)

222 position, a standing word meaning consists of information from which a selection has
223 to be made in grasping the concept/sense a speaker intends to convey by her use of
224 a word on any given occasion. Pustejovsky's (1995) 'generative lexicon' is a well-
225 known case in point and, more recently, Vicente (2015) has advocated another such
226 rich view. He suggests that the standing meaning of words used to denote kinds (e.g.
227 'horse', 'leaf', 'gold') should include information about the essence (the intrinsic
228 properties) of the kind and about its superficial perceptible properties (which can be
229 altered). In that way, the now famous case of variable truth conditions for utterances
230 of the sentence 'The leaves are green' can be explained as involving different
231 selections from this information-rich standing meaning of the word 'leaf' making for a
232 different concept/sense expressed on different occasions of use.

233 The obvious question here concerns the grounds for singling out certain
234 elements of our general knowledge about objects in the world and claiming that they
235 constitute *lexical meaning*. This question arises equally for the general knowledge
236 included in Pustejovsky's (1995) 'qualia structures', e.g. for the noun 'book': books
237 come into being via a writing process; the purpose of a book is to be read. On both
238 accounts, there is a degree of arbitrariness in the real world knowledge invoked.
239 Certainly, that knowledge does play a role in accounting for the derivation of some
240 common ('default') senses associated with the words, but that is equally well
241 accounted for by the relevance-theoretic pragmatic account on which the key
242 information is not duplicated in the lexicon but maintained as components of the
243 encyclopaedic entry. The pragmatic account is needed anyway for explaining other
244 (non-default) senses/concepts communicated by a word and so provides a unitary
245 account of all cases, while maintaining a clear principled distinction between standing
246 word meaning (an atomic concept) and knowledge about the entities denoted by that
247 encoded concept.

248 On the other underspecification view the standing word meaning is too
249 meagre to play the role of a concept (a semantic content), so in any instance of

250 grasping the sense/concept communicated by a speaker on an occasion of
251 utterance, the addressee must flesh out or enrich the decoded lexical meaning.
252 Prima facie, this seems an attractive position, answering to a strong intuition that the
253 various senses associated with a word must share a common core and any new
254 uses must be constrained by this. However, reflection on the pragmatics of ad hoc
255 concept construction indicates that this is not the case. Cases of narrowing or
256 meaning precisification, such as the much discussed uses of verbs like 'open', 'cut'
257 and 'bear' (Ruhl 1989, Carston 2012, Pritchard forthcoming) might seem to support a
258 schematic meaning view, but there are just as many cases of broadening,
259 narrowing/broadening combinations and metonymic use which typically require the
260 dropping of some component of the alleged skeletal constraining meaning. As Bosch
261 (2007: 7) puts it: 'there are arbitrarily many parameters with respect to which
262 contextual concepts [i.e. occasion-specific senses] can differ from one another.' So
263 any attempt to maintain a thin core lexical meaning requires that it be further
264 attenuated in the face of these acceptable new uses, some of which will become
265 conventionalised, thus adding to the polysemy of the word. In other words, the
266 alleged schematic meaning does not restrict the senses/concepts that can be
267 communicated, but must itself be adjusted in order to accommodate those uses if it is
268 to represent the common core meaning.

269 Furthermore, it is striking in the work of advocates of this view that attempts to
270 articulate any one of these schematic meanings are either inadequate or completely
271 absent. Ruhl (1989) justifies this on the grounds that the schematic meaning is
272 something unconscious and subpersonal: '... concrete meanings [senses] become
273 pragmatic specifications of the abstract meaning, which is the meaning of the word.
274 Such a meaning may seem nearly empty ... General abstract meanings elude
275 consciousness' (ibid: 51).

276 Finally, there is the even greater 'idle wheel' problem: even if these abstract
277 non-semantic lexical meanings could be elucidated, it is entirely unclear what role

278 they would play in the account of language meaning and use. On the relevance-
279 based pragmatic account of how ad hoc concepts/senses are contextually
280 constructed in the process of utterance interpretation, the real work is done by the
281 encyclopaedic information associated with a concept (a semantic entity) and there is
282 no further constraining or guiding role to be played by a schematic meaning. Nor
283 does the schema appear to play any role in a child's acquisition of word meaning; in
284 fact, the child's first 'meanings' for a word are the (fully semantic) concepts/senses
285 grasped in communication, so the abstract (non-semantic) meaning could only be
286 acquired subsequently by some process of induction. Even supposing we could give
287 an account of how this is done, what would be missing is an explanation for why it
288 would be done, what purpose it would serve.

289 I have argued in more detail against these two 'underspecification' accounts of
290 word meaning in Carston (forthcoming) and tried there to make a start on developing
291 a quite different account. This requires making a distinction between the kind of
292 lexicon that features in a narrowly construed I-language, with its focus on syntactic
293 computations and constraints, and the lexicon of the broader public language
294 system, which is a repository of communicative devices whose conceptual contents
295 are what the inferential pragmatic system operates on. In the narrow I-lexicon, the
296 words (or roots) listed have no meaning, conceptual or schematic, while in the C-
297 lexicon of the broader communicational language system, words are stored with their
298 polysemy complexes (bundles of senses/concepts that have become conventionally
299 associated with a word and perhaps others that are not yet fully established as stable
300 senses). The account, as I conceive it, is fully compatible with the relevance-theoretic
301 account of lexical adjustment/modulation in utterance understanding without requiring
302 that a word has an encoded meaning which consists of a single concept/sense from
303 which all context-specific uses are derived. Attempting to spell that story out here
304 would take up too much space and is not necessary for the reflections on procedural
305 meaning that take up the next section and are the main focus of this paper.

306 In what follows, I will continue to talk of ‘conceptual meaning’ or ‘conceptual
307 encoding’ in order to keep congruent with the way in which the conceptual/procedural
308 meaning distinction is usually discussed. However, I hope it’s clear from the
309 discussion just given that the position I am taking on substantive words is not that
310 their lexical meaning is a full-fledged concept, but that they are typically used to
311 express concepts (some of which become conventionally associated with them).

312

313

314 **3. Procedural meaning (linguistic and nonlinguistic)**

315

316 **3.1 The ever increasing domain of procedural meaning/encoding**

317

318 In her first major work on procedural meaning, ‘Semantic Constraints on Relevance’,
319 Blakemore (1987) introduced the idea that there is a class of words, ‘discourse
320 connectives’, whose function is not to contribute to the propositional content of an
321 utterance but rather to constrain and guide the inferential phase of accessing the
322 intended contextual assumptions and implications (that is, the implicatures of the
323 utterance). These words do not encode concepts but provide a directive or instruction
324 on how the propositional contents that they connect are to be deployed within the
325 inferential process of deriving implicatures, e.g. as a premise in the cases of
326 ‘moreover’ and ‘after all’, as a conclusion in the case of ‘so’, as a means of blocking
327 or eliminating some other assumption in the cases of ‘but’ and ‘however’.

328 Blakemore’s focus then was on a fairly circumscribed small set of lexical items, which
329 coincided quite closely with those cases of conventional (encoded) meaning which is
330 non-truth-conditional, discussed by Grice under the label ‘conventional implicature’
331 (Grice 1989), although it was obviously framed in much more cognitive-scientific
332 terms. Let’s call this Stage I in the history of procedural meaning.

333 Blakemore's idea caught on and was subsequently applied to a range of other
334 linguistic elements whose meaning seems to be similarly non-truth-conditional and
335 inference-guiding, for instance, various so-called discourse particles, which function
336 as clues to the speaker's propositional attitude or speech act rather than providing a
337 component of propositional (truth-conditional) content, e.g. 'please', 'huh', and 'alas'
338 in English, or the evidential particles 'yo' and 'kana' in Japanese which indicate a
339 speaker's degree of certainty about the proposition expressed. These elements are
340 all in some sense appended to sentences, not integrated into phrasal structure, but
341 occurring before or after the propositional vehicle. However, it was soon noted that
342 other linguistic devices that *are* fully integrated into the sentential syntax might also
343 be best thought of as encoding procedural meaning. For instance, Wilson & Sperber
344 (1993) discuss the syntactic elements that encode declarative or imperative mood
345 and interrogative word order as illocutionary force indicators that constrain the
346 pragmatic inferential process of determining the speaker's propositional attitude or
347 speech act; e.g. the imperative might indicate the desirability (and potentiality) of the
348 state of affairs described by the proposition expressed and this could be
349 pragmatically interpreted as a case of requesting or ordering (hence as desirable to
350 the speaker) or as a case of advising, warning, or permitting (hence as desirable to
351 the hearer), depending on the context of use.

352 Other elements at the very heart of verb phrase grammar (e.g. inflections
353 marking tense and aspect, modal verbs) have been analysed as cases of procedural
354 encoding (see Escandell-Vidal et al. (2011a) for details and references). This marks
355 another development too, which is that procedural meaning is no longer confined to
356 attitudes toward, or inferences performed on, propositional contents, but is taken to
357 play a role in the expression of the propositional content itself. A major move in this
358 direction was made by Wilson & Sperber (1993) with their procedural account of the
359 linguistic meaning of pronouns. As often noted, on any occasion of their
360 communicative (deictic) use, the encoded meaning of pronouns like 'I' or 'she'

361 functions merely as a constraint or guide in ascertaining the intended referent and
362 then drops out of the picture; it is the individual concept of the referent (e.g. the
363 concept that uniquely picks out the person speaking in the case of 'I') which is the
364 'semantic value' of the pronoun on that occasion and which enters into the
365 proposition expressed. The idea has been naturally extended to other referential
366 devices which work in a very similar way, e.g. demonstratives (Scott 2011, 2013).
367 This period of extending the application of procedural (nonconceptual) encoding well
368 beyond the initial domain of discourse connectives is Stage II in its history.

369 Although the reach of procedural meaning was considerably increased during
370 this stage (from being only syntactically peripheral to also being syntactically integral,
371 from being only non-truth-conditional to also being truth-conditional), there is a
372 unifying characterisation of the role of all these kinds of procedural encoding: what
373 they all do is constrain and guide pragmatic processes which are essential in deriving
374 the intended interpretation (processes of reference assignment, identification of
375 propositional attitude and/or speech act, and implicature derivation). Given the
376 widely accepted underdetermination of communicated content by linguistically
377 encoded meaning and thus the necessity of pragmatic processes to bridge the gap,
378 procedural meaning can be seen as a natural complement to encoded conceptual
379 meaning in that what it does is 'constrain the inferential phase of comprehension by
380 reducing the hypothesis space that has to be searched in arriving at the intended
381 interpretation' (Wilson & Sperber 1993: 21).

382 Subsequently, however, procedural meaning has been extended considerably
383 more and in two quite different ways. First, it has been applied to a range of
384 expressive devices, including interjections (e.g. 'ouch', 'oops'), expletives (e.g.
385 'damn', 'that bastard Bloggs'), prosody (both linguistic and 'natural') and inherently
386 communicative facial gestures (e.g. smiles, frowns) (Wharton 2003, 2009; Wilson &
387 Wharton 2006; Blakemore 2011). Call that Stage III. Second, it has been suggested
388 that all concept-expressing words (e.g. 'red', 'book', 'love', 'dance') might also encode

389 a procedure that initiates a process of ad hoc concept construction (Wilson 2011).
390 Call this Stage IV. These two developments are considered in sections 3.2 and 3.3
391 respectively. I think they are so substantial as to require some major rethinking about
392 what procedural meaning is and whether there is anything interesting in common
393 between, say, the kind of meaning encoded by the pronoun 'I' and the kind of
394 meaning encoded by the interjection 'ugh'.

395 To end this section, I will mention some of the tests and probes for
396 distinguishing between conceptual and procedural meaning that have been
397 proposed, with a view to considering their adequacy, especially when applied to the
398 expansions of the category of procedural meaning discussed in the next two
399 sections. I simply list them here with a brief discussion of how each applies to the first
400 two stages of the conceptual/procedural meaning distinction. Each heading gives a
401 property that procedural meaning has been suggested to have (and which
402 distinguishes it from conceptual meaning):

403

404 *1. Introspective inaccessibility*

405 The basic idea here is that while we can consciously access the meaning of
406 conceptual words like 'chair', 'bachelor', 'teach', 'murder', 'intelligent', 'nasty', and
407 provide at least a rough paraphrase of them, it is much harder, perhaps impossible,
408 to do this for words with procedural meaning. In discussing discourse connectives
409 like 'however', 'furthermore', 'anyway', and 'well', Wilson & Sperber (1993: 16) point
410 out how difficult it is to describe their meaning and explain this in the following way:
411 'Conceptual representations can be brought to consciousness; procedures cannot.
412 We have direct access neither to grammatical computations nor to the inferential
413 computations used in comprehension.' It has also been suggested that discourse
414 connectives and particles are more difficult to translate into other languages than
415 conceptual words and more difficult for L2 learners to grasp (the latter is certainly
416 attested in the essay-writing of students whose non-native English is excellent except

417 for their use of such elements). These would be natural consequences of being
418 'relatively inaccessible to consciousness and resistant to conceptualisation' (Wilson
419 2011: 11-12).

420 However, this property of inaccessibility to our conscious descriptive
421 capacities does not serve to separate out all the cases of putative procedural
422 meaning discussed so far from cases of conceptual meaning. No-one finds much
423 difficulty in mentally accessing and giving a description of what the pronouns 'I' and
424 'she' mean – in fact, this seems a lot easier than paraphrasing the meaning of the
425 quite common conceptual words 'meaning', 'standard', 'mention', 'direct' (to pick out
426 a few from the book page currently in front of me). I'll return to this property in the
427 next section, on expressives, to which the rather similar property of 'descriptive
428 ineffability' has been ascribed.

429

430 *2. Non-compositionality*

431 Compositionality is usually taken as a fundamental property of language and thought,
432 and in both cases the basic compositional unit is taken to be the lexical concept. It is
433 quite hard to conceive of what compositionality of procedures could amount to, given
434 their characterisation in Stages I and II above as instructions or constraints on
435 inferential pragmatic processes. Occasionally two discourse connectives or particles
436 may occur together in a single utterance, but when they do it seems that they each
437 apply to a distinct component of the discourse and are applied in sequence rather
438 than composing with each other. For instance, in the following, which is slightly odd
439 but could perhaps arise, 'Moreover, anyway, she has four children to look after', the
440 'moreover' procedure indicates that the sentence that follows provides another piece
441 of evidence strengthening some salient conclusion (e.g. She's unlikely to be able to
442 come out for dinner), while the 'anyway' procedure indicates that some consideration
443 previously raised (e.g. 'We don't have her phone number to call and invite her for

444 dinner') is of low relevance compared with the following information (i.e. that she has
445 four children to look after).

446 Discourse connectives and particles fall outside the proposition-conveying
447 sentence; they are prosodically and semantically sealed off from it, like
448 parentheticals, which might seem to be what accounts for their noncompositionality.
449 However, the point is that they don't compose phrasally in the way that concept-
450 expressing words situated parenthetically outside the proposition-conveying
451 sentence do. For instance, when used sententially, as a comment on a proposition,
452 adverbials like 'frankly', 'seriously', 'regrettably', which are arguably conceptual, can
453 be semantically composed into a more complex phrase: 'To put it rather frankly but
454 without malice, he is not up to the job' (Wilson & Sperber 1993: 18). So there seems
455 to be something right about this diagnostic for distinguishing procedural and
456 conceptual meaning, and it carries over to the illocutionary devices claimed above to
457 encode procedural meaning (e.g. 'huh', 'alas', indicative mood and interrogative word
458 order). Again, though, it is less clear that it supports a procedural analysis of
459 pronouns and demonstratives, which seem able to enter into phrasal compositions,
460 e.g. 'we lucky people', 'she alone of all my friends', 'you three lovely ladies who just
461 came in', etc.

462

463 *3. Rigidity*

464 Escandell-Vidal & Leonetti (2011) provide another diagnostic for whether some
465 component of meaning is conceptual or procedural, based on the 'rigidity' of
466 procedural meaning as opposed to the flexibility of conceptual meaning. They show
467 that when there is a mismatch between an element of procedural meaning, on the
468 one hand, and a contextual assumption or an element of conceptual meaning, on the
469 other hand, it is procedural meaning that always prevails, such that the context must
470 accommodate (by adding an assumption) or the conceptual meaning is 'coerced' into
471 compliance with the procedural meaning. For instance, they discuss a clash between

472 a conceptual predicate 'to be silly', which is stative, and the procedural instruction
473 encoded by progressive aspect, 'be + -ing', which indicates that the event is to be
474 viewed as an incomplete action in progress at the time of utterance, as in 'John is
475 being silly'. It is the former that gives way to the latter, so that the property or state of
476 being silly is represented as an action in progress, hence a dynamic situation; there
477 is no possibility of reinterpreting the procedural 'be + -ing' as stative. They provide a
478 range of other examples which demonstrate the rigidity of the meaning of tense and
479 grammatical aspect morphemes in the face of mismatches with conceptual meaning,
480 which inevitably adjusts to conform to their procedural meaning. Somewhat similarly,
481 discourse connectives force the retrieval of contextual assumptions that may be at
482 odds with other strongly manifest assumptions, e.g. 'Max was a millionaire but he
483 had a lot of money'; in this case, we find no contrast between the two conjuncts as
484 we assume that anyone who is a millionaire has a lot of money, but the presence of
485 'but' forces us to search for a context in which these two facts could be at odds with
486 each other, perhaps a context in which millionaires are deemed poor relative to some
487 other group (trillionaires), and/or we might pragmatically adjust the conceptual
488 content of 'a lot of money' so it does contrast with being a millionaire.

489 Again, it's worth bearing in mind that all the cases of putative procedural
490 meaning that Escandell-Vidal & Leonetti consider fall within stages I and II of the
491 history of procedural meaning, so it remains to be seen how well this criterion stands
492 up to the later extensions of the notion to expressives (e.g. interjections and
493 expletives) and to typical conceptual words.

494 The next two proposed characteristics of procedural meaning are doubtless
495 consequences of this general property of inflexibility, but I'll separate them out here,
496 so as to draw on them individually in the following subsections of the paper.

497

498 *4. Non-susceptibility to nonliteral use*

499 For my purpose here, I distinguish two broad families of nonliteral use, the one
500 typified by metaphorical use (which is essentially a descriptive use of language,
501 geared to conveying an observation about the world or our experience of it) and the
502 other typified by irony (which is metapresentational, echoing a thought or utterance
503 and expressing a dissociative attitude to it). It seems reasonably clear that discourse
504 connectives, illocutionary force indicators (the syntactic moods, particles like 'huh',
505 'please', and evidential markers like 'yo' and 'kana'), tense and aspect morphemes,
506 and determiners ('a', 'the') cannot be used metaphorically nor modulated more
507 generally (narrowed or broadened) as concepts can be; they are not denotational
508 and so don't come with associated encyclopaedic information which plays the key
509 role in metaphor understanding and meaning modulation quite generally. Similarly,
510 although these procedure-encoding words might occur within a representation that is
511 being treated ironically, they themselves are not the target of the ironical attitude, e.g.
512 when mockingly echoing someone's earlier utterance of 'Moreover, the conditions
513 are perfect for viewing the comet' after it turns out to be a very cloudy night making it
514 impossible to see anything in the sky, the irony is directed just at the sentential
515 content of the utterance.

516 Again one might wonder about pronouns, whether they are all incapable of
517 being used metaphorically; consider, for instance, the use of 'she' to refer to one's
518 car, or 'we' to refer to oneself and one's laptop (e.g. patting the laptop and saying
519 'We are not doing any more work today') might be some kind of metaphorical
520 extension. Equally, ironical uses of pronouns may be possible, although they are
521 perhaps better thought of as components of the closely related phenomenon of
522 parody, e.g. 'We are proud of our achievements; we have made Britain strong; we
523 ...', echoing Mrs Thatcher's use of the royal 'we', or 'She still sounds like a man to
524 me', said of a transgender woman and dissociatively echoing others' use of the
525 pronoun 'she'. Whether expressives can be used metaphorically or ironically is
526 discussed in the next section.

527

528 *5. Not polysemous*

529 The phenomenon of polysemy is ubiquitous for concept-expressing words (nouns,
530 verbs, adjectives); they are all, potentially at least, associated with families of related
531 concepts. As discussed in section 2, polysemy is the conventionalisation of
532 senses/concepts that were originally derived by online pragmatic processes of
533 concept adjustment (meaning modulation). It is quite hard to conceive of procedural
534 meaning as being modulated in any comparable sense; that is, used to convey a
535 procedure, a constraint on pragmatic processing, which is more specific or more
536 general than the one it encodes. It should follow, then, that words that encode
537 procedural meaning are not polysemous (or ‘polyprocedural’), that is, are not
538 associated with a family of related uses. Whether this is, in fact, the case is
539 somewhat hard to assess: the word ‘but’ and its counterpart in other languages has
540 often been claimed to have two or more related uses (Blakemore 1989, 2002); the
541 array of (related) speech acts associated with the imperative mood (order, request,
542 advice, permission) could be thought of as a case of polysemy, and so also for the
543 other mood indicators. Whatever is the right way to think about these multiple related
544 uses and how they arise, it seems safe to say that the words being discussed here
545 as procedural are much less susceptible to developing new uses than the standard
546 concept-expressing words.

547

548 I draw two conclusions from this brief survey of diagnostics for procedural meaning.
549 First, it looks unlikely that there is any watertight test for telling whether some
550 element of encoded meaning is conceptual or procedural. The most we can hope for
551 is trending evidence: if it can’t be pragmatically adjusted in online comprehension,
552 there’s a high likelihood that it is procedural; if when in conflict with some clearly
553 conceptual component it forces an adjustment to that component, it’s probably
554 procedural; if it’s difficult to translate and otherwise competent non-native speakers

555 tend to get it wrong, then it may well be procedural, and so on. Second, it is striking
 556 how variable the profiles of the various expressions proposed during Stage II of the
 557 history of procedural meaning are with regard to this list of properties or diagnostics;
 558 pronouns, in particular, seem to be out on their own. This heterogeneity of (alleged)
 559 cases of procedural meaning becomes all the more evident in the following sections.

560

561 **3.2 Expressives and procedural meaning/encoding**

562

563 The topic of expressives and the distinction between expressive meaning and
 564 descriptive meaning was brought to prominence by Kaplan's important formal
 565 semantic work on expressions such as 'ouch', 'oops' and 'That bastard Bloggs'
 566 (Kaplan 1997). I will sidestep a lot of interesting issues here in order to focus as
 567 squarely as possible on the work within relevance theory that maintains that a
 568 substantial subset of expressives encode procedural meaning. These include
 569 interjections and certain facial signals (Wharton 2003, 2009), tones of voice and
 570 other kinds of emotional prosody (Wharton & Wilson 2006), expletives, diminutives
 571 and NP epithets like 'the bastard', 'the poppet' (Blakemore 2011, 2015).² One of the
 572 issues I will set aside is the extent to which the cases included here count as properly
 573 linguistic or not: some clearly do (e.g. the various NPs cited above), others clearly do
 574 not (e.g. facial signals and other expressive vocal and bodily signals), and the status
 575 of others is somewhat unclear (e.g. interjections; see Wharton (2003)).

576 For a serviceable working conception of 'expressive' meaning, we can follow
 577 Potts (2007) in characterising it as a dimension of meaning that is distinct from the
 578 dimension of descriptive truth-conditional meaning in that it does not impact on the
 579 truth/falsity of an utterance and is not put forth for the endorsement or denial of an

² As Blakemore points out, there are a range of other communicative devices that seem to fall under the label 'expressive' which do not involve procedural meaning. In this regard, she discusses the expressive effects of certain kinds of repetition (e.g. 'My childhood days are gone, gone') (Blakemore 2011) and the special properties of the socio-politically charged case of slurs (Blakemore 2015).

580 interlocutor. It has some quite other kind of purpose and impact, which can be
581 roughly thought of as the expression or communication of an emotive attitude to
582 some component of the context (a person, object, action or situation). This is rough,
583 but will do for the current purpose of looking at the attribution of procedural meaning
584 to these sorts of expressions.

585 In her discussion of linguistic expressives (expletives and NP epithets),
586 Blakemore (2011) suggests that: 'Like discourse markers, these expressions
587 correspond to procedures for interpretation. However, in contrast with discourse
588 markers, they activate procedures for retrieving representations of emotional states.'
589 So this is a different role for procedural meaning from that of the Stage II
590 characterisation of it as 'facilitating the identification of the speaker's meaning by
591 narrowing the search space for pragmatic inferential comprehension', where this was
592 a matter of recovering the intended propositional content (explicatures and
593 implicatures). Rather, what is going on here is the activation or triggering of
594 something non-propositional, something with a distinctively emotive evaluative
595 content.

596 The big move for the notion of procedural meaning/encoding is its application
597 beyond the clearly linguistic to other kinds of codes, natural and conventional, as
598 developed by Tim Wharton. For the case of interjections (e.g. 'ugh', 'wow', 'oops',
599 'aha'), Wharton (2003) argues against accounts that have offered rich conceptual
600 analyses (e.g. Wierzbicka 1992) and in favour of encoded procedures which '...
601 activate various attitudinal concepts or types of concepts. Under such an account
602 *wow* would not encode a concept that a hearer translates as 'X is delighted'. Instead,
603 *wow* activates a range of attitudinal descriptions which involve delight, surprise,
604 excitement etc. In the case of *yuk*, the attitude will be one of disgust; in the case of
605 *aha* it will be an attitude of surprise, etc.' (ibid: 60). Of course, the attitudinal and
606 emotional descriptions triggered by the interjection will be modulated by other
607 components of the ostensive stimulus, including decoded concepts (e.g. 'Wow, I'm

608 crazy about your new dress'), other expressive devices (emotional prosody, facial
609 expressions), and the wider context. In Wharton's view, most interjections are best
610 viewed as originating from something akin to Goffman's (1981) 'response cries', that
611 is, spontaneous natural expressions of feeling, that have become coded devices
612 available for ostensive communication.

613 As he notes, this marks a departure from the way in which procedural
614 meaning/ encoding had often been characterised up to that point, especially with
615 regard to the Stage I discussion of discourse connectives as 'computational
616 instructions to the hearer'. He suggests a broader construal of procedural meaning
617 'as simply *activating* certain types of representations, or contextual assumptions, or
618 expectations about cognitive effects. Thus, a pronoun might activate a certain class
619 of candidate referents from which the hearer must choose ... mood indicators [can
620 be seen] as activating certain propositional-attitude descriptions' (ibid: 59). And the
621 procedural meaning of discourse connectives can be viewed along the same lines:
622 'For what discourse connectives, mood indicators and pronouns have in common is
623 that rather than *translating* into the constituents of conceptual representations they
624 *activate* something. What is actually activated may be computational deductive rules,
625 or contextual assumptions, or simply expectations about cognitive effects.' (ibid: 60).
626 This broader construal of procedural meaning as activating or triggering kinds of
627 representations or computations provides a unitary characterisation of all the cases
628 discussed so far (discourse connectives and particles, illocutionary indicating
629 devices, pronouns and interjections), but at the cost of losing the sharp distinction
630 between conceptual and procedural encoding in Blakemore's original work.

631 There is a final step in this incorporation of a range of expressives into the
632 class of procedural encoding and that is the inclusion of certain natural facial
633 gestures like smiling, frowning, shrugging, and (perhaps) nose-wrinkling and lip-
634 curling, and certain natural prosodic gestures like affective tones of voice. These are
635 components of what Wharton calls natural codes, that is, they are 'signals', natural

636 behaviours which have evolved for the purpose of conveying information to others.³
 637 These too fall under the characterisation of procedural encoding as activating or
 638 triggering mental states of one sort or another; in these cases, it seems that, as with
 639 interjections, what is activated is a representation of something non-propositional (not
 640 evaluable as true or false), an attitudinal or emotional state. Wilson & Wharton (2006)
 641 further elaborate on this way of thinking about communicative devices that encode
 642 procedural meaning: ‘such expressions might be described as encoding meta-
 643 procedures, which manage the accessibility or activation levels of the regular
 644 relevance-oriented procedures for perception, memory retrieval or inference ...’ (ibid:
 645 1570-71).

646 The question that needs to be revisited at this stage concerns the distinction
 647 between procedural encoding and conceptual encoding. It might seem that this
 648 broader construal of procedural meaning is so inclusive that it draws in concept-
 649 expressing words, in that they too can be thought of as encoding (meta)procedures,
 650 procedures which activate a cluster of related concepts (with their encyclopaedic
 651 entries), thereby giving the pragmatic system a strong steer towards the speaker’s
 652 intended meaning. However, this is not the intended idea and a distinction is
 653 retained. Wharton (2009) maintains that a word with conceptual meaning activates a
 654 concept via *translational* encoding while procedural meaning activates concepts via
 655 *non-translational* encoding (ibid: 60). Wilson (2011) makes the distinction in a
 656 somewhat similar way, saying that conceptual expressions (e.g. ‘dog’, ‘jump’,
 657 ‘happy’) ‘are systematically linked to concepts, which are constituents of a *language*
 658 *of thought* while procedural expressions ‘are systematically linked to *states of*
 659 *language users*’ (ibid: 10). Both are assuming that concept-expressing words like
 660 ‘dog’, ‘jump’, and ‘happy’ encode a single concept (a constituent of the language of

³ Wharton (2003, 2009) makes an important distinction between these natural coded ‘signals’, which have evolved for the purpose of conveying information, and natural signs from which information may be derived but which have not evolved for that purpose and do not encode that information (e.g. shivering).

661 thought) as their standing lexical meaning. As noted at the end of section 2, I've tried
662 to argue for a different position on concept-expressing words (Carston 2013,
663 forthcoming), a view whose implications for the conceptual/procedural distinction I'll
664 briefly consider in the conclusion (section 4).

665 The heterogeneity of communicative devices (linguistic and nonlinguistic)
666 claimed to encode procedural meaning is greatly increased by the inclusion of the
667 expressive items discussed in this section: it now runs from 'but' and 'she' through to
668 'yuk', a smile and an angry tone of voice.

669 Let's briefly run through some of the diagnostics for distinguishing procedural
670 meaning from conceptual meaning given in the previous section, to see how the
671 expressives fare and whether they line up in this respect with any of the procedural
672 expressions previously discussed. Potts (2007) and Blakemore (2011) have ascribed
673 the property of *descriptive ineffability* to expressives: speakers are unable to
674 satisfactorily paraphrase expressive content using descriptive (conceptual) terms.
675 This property is somewhat similar to, but weaker than, the property of *introspective*
676 *inaccessibility* discussed in the previous section, so any element that has this latter
677 property (e.g. discourse connectives and particles) will have the former property;
678 pronouns seem to have neither, as it is pretty easy to describe their meaning in
679 conceptual terms. Most theorists seem to agree that expressives like 'blimmin heck',
680 'crikey', 'that bastard X' are descriptively ineffable (see Potts 2007, Geurts 2007,
681 Blakemore 2011, Drożdżowicz forthcoming) and Wharton's (2003) critique of
682 attempts to provide adequate conceptual meanings for interjections would indicate
683 that they too have this property. As for affective facial expressions and tones of
684 voice, Wilson & Wharton (2006) point out that they tend to create 'diffuse impressions
685 ... involving marginal alterations in the strength or salience of a wide array of
686 conclusions rather than providing strong support for a single, determinate conclusion'
687 (ibid: 1566), indicating that they too are unlikely to be satisfactorily captured in
688 descriptive (conceptual) terms. The problem with this diagnostic, though, as with

689 'introspective inaccessibility', is that it applies to plenty of concept-expressing words
 690 too; as Geurts (2007: 210) puts it: '...“descriptive ineffability” is not the prerogative of
 691 expressives. As a matter of fact, it is all over the lexicon, as witness such disparate
 692 items as *the, at, because, languid, green, pretty*, and so forth.'⁴

693 Consider next the property of non-compositionality with regard to the
 694 expressives under discussion. It seems to me to do pretty well – not only is
 695 expressive content largely independent of descriptive content so unable to compose
 696 with it (see Potts 2007), but expressive items do not compose with each other in
 697 anything like the phrasal manner of descriptive/conceptual content. They are, of
 698 course, highly interactive: the expressive content of an utterance of 'wow' or 'you
 699 bastard' will be modulated by an accompanying facial expression (a smile, an
 700 eyebrow raise) and/or an affective tone of voice (affectionate, dismissive), but this is
 701 more a matter of blending into a single emotive attitude than of composing meaning
 702 constituents into more complex structures.

703 Whether expressives evince the kind of rigidity, overruling
 704 descriptive/conceptual content, that Escandell-Vidal & Leonetti (2011) attribute to
 705 procedural meaning (as discussed in the previous section) is an interesting question.
 706 It does seem that tones of voice and natural signals like smiles and frowns hold sway
 707 when they are at odds with the conceptual content of an utterance, e.g. 'I'm not angry
 708 – don't imagine you have that sort of power over me' delivered in a tone of voice that
 709 indicates fury bordering on hysteria, or 'Yuck, that smells delicious' where the
 710 interjection seems to force an ironical or otherwise dissociative interpretation of the
 711 conceptual content of 'delicious'. As for the possibility of using expressives non-
 712 literally, at least some seem amenable to metaphorical use, e.g. 'Ouch' as a
 713 response to some minor bad news (e.g. a parking fine), involving a transfer from the

⁴ See Drożdżowicz (forthcoming) for a nuanced discussion of the notion of descriptive ineffability, in which she argues against its utility as a criterion for distinguishing different types of meaning, such as expressive vs descriptive or procedural vs conceptual.

714 domain of physical discomfort to psychological annoyance; 'That bastard computer
715 has crashed again', involving a personifying use of the epithet 'bastard'. However, it
716 is difficult to imagine a metaphorical use of most expletives ('Damn!', 'Bugger!') or of
717 facial expressions (smiles, frowns), or tones of voice.

718 Ironical, echoic and other non-serious uses are certainly possible for many
719 interjections, and for NP epithets, e.g. ironical uses of 'wow', 'oops', 'yuck', are easy
720 to concoct (an exercise for the reader) and 'I see that bastard Boris has rescued you
721 again' could be understood as irony directed at the addressee's earlier use of the
722 epithet 'bastard' with regard to Boris or perhaps at her generally negative
723 complaining attitude toward Boris. With regard to the diagnostic of non-polysemy,
724 Geurts (2007) maintains that at least some expressive terms have multiple related
725 contents/use, discussing in particular the NP epithet 'bastard'. By and large, though,
726 the kind of wide-spread ever-evolving polysemy that is typical of concept-expressing
727 words does not seem to be in evidence across the broad class of expressives.

728 Again we have a very mixed profile of properties for the various
729 communicative devices now included under the 'procedural encoding' umbrella and it
730 is worth considering whether this now much broader, more abstract construal of
731 procedural meaning is providing any interesting insight into the many different kinds
732 of cases it subsumes, beyond merely indicating that they are all different, in one way
733 or another, from conceptual encoding. In the next section, we move to Stage IV in the
734 history of procedural meaning, the final stage, where it is proposed that all concept-
735 encoding words also encode procedural meaning.

736

737 **3.3 Concept-expressing words and procedural meaning**

738

739 In a major assessment of the conceptual-procedural distinction ('past, present and
740 future'), Deirdre Wilson (2011) has given increased significance to the role of
741 procedural meaning in lexical semantics and has, in effect, suggested that all words

742 encode a procedural component of meaning while some (the open classes) also
743 encode a concept. She attributes to Dan Sperber the idea that all words with a
744 conceptual meaning may also encode 'an instruction to inferentially construct an ad
745 hoc concept using the encoded conceptual content as a starting point'. She endorses
746 this suggestion and elaborates it as follows:

747
748 'On this approach, most words would encode some procedural content. Some would
749 also encode conceptual content, whereas others (e.g. *however*) would not. Among
750 words with both procedural and conceptual content, some (e.g. *giraffe*) would
751 automatically trigger a procedure for constructing an ad hoc concept on the basis of
752 the encoded concept, whereas others (e.g. *unless*) might encode a more specific
753 procedure of the type familiar from Blakemore's work.' (ibid: 17)

754
755 She goes on to mention some advantages of this account over the standard
756 RT position according to which most substantive words encode just a concept. One
757 is that it would make sense of the recurrent claim, arising from work in lexical
758 pragmatics, that words function as 'pointers to' or 'pieces of evidence about' the
759 speaker's meaning. Another is that it would dissolve a certain tension in the RT
760 account of metaphorical and other nonliteral uses of words. The account has always
761 rejected the Gricean treatment of nonliteral uses in terms of a flouting of a maxim of
762 truthfulness and has maintained that it is not the case that the literal meaning (the
763 encoded concept) is always the first to be considered as the correct interpretation
764 and is only discarded in favour of another interpretation if it doesn't meet certain
765 pragmatic standards (of informativeness, relevance, etc). However, the worry is that,
766 given that the relevance-based comprehension heuristic explicitly licenses hearers to

767 follow a path of least effort in accessing and testing interpretations for relevance,⁵ it
768 seems natural to suppose that the encoded concept, which is made instantly
769 available by the word form, would be tried first and only pragmatically adjusted if it
770 didn't meet the required standards of relevance. The suggested move to incorporate
771 into the meaning of content words a procedural component which requires that a
772 relevance-driven process of concept construction is undertaken ensures that,
773 although the encoded concept is activated by the word uttered, it is not necessarily
774 the first one to be composed into the interpretation. Rather, the concept expressed
775 by a loose or metaphorical use of a word can be the first one that a hearer following
776 this procedure recovers and tests for relevance.

777 This new conception of the meaning of open-class words as both conceptual
778 and procedural raises a number of questions. First, it is difficult to see why a word
779 that encodes a concept (a semantic entity with a 'linguistically specified denotation')
780 would also encode a procedure that makes it obligatory for a hearer to build an ad
781 hoc concept from the encoded one, especially when the encoded concept can, on
782 occasion, be the concept communicated (Sperber & Wilson 1998). Second, the
783 procedure involved would be identical across all words which are taken to encode a
784 concept, that is, the words 'giraffe', 'milk', 'run', 'speak', 'raw', 'red', and every other
785 open-class word would come with the same component of procedural meaning,
786 namely, 'Construct an ad hoc concept based on the encoded concept', which seems
787 odd since, by and large, the lexical meanings of words are distinct from each other
788 and this goes as much for procedural meaning as for conceptual meaning, e.g. the
789 procedural meaning of the pronouns 'he', 'she', 'we', 'they' is plainly distinct for each
790 one, and linguists working on the procedural meaning of such closely related
791 discourse connectives as 'but', 'however', 'nevertheless' and 'although' have put a lot

⁵ In brief, the relevance-based comprehension heuristic says: (a) Follow a path of least effort in constructing an interpretation of the utterance; (b) Stop when your expectations of relevance are satisfied. For more detail, see Wilson & Sperber 2004, 2012.

792 of effort into pinpointing the fine differences in the inferential procedures they encode
793 or activate (see Blakemore 2000, 2002).

794 More important, it is entirely unnecessary on the relevance-theoretic account
795 of utterance interpretation to issue instructions to the pragmatic system to construct
796 ad hoc concepts. The goal of utterance interpretation is to recover a speaker's
797 meaning, that is, the thought or thoughts she intends to communicate, where
798 thoughts are structured arrays of concepts. On the account suggested, the words at
799 issue encode concepts, so it is already evident that these words are contributors of
800 concepts to the interpretation. The general relevance-based comprehension heuristic
801 takes care of the rest, that is, it ensures that the concepts recovered as speaker-
802 meant are those that contribute to an optimally relevant interpretation, which may
803 entail that the concept encoded is pragmatically adjusted (narrowed, broadened, or
804 both), as discussed in section 2.1. So, the idea that, in addition to all this, every
805 open-class word comes with (or triggers) an instruction to build an ad hoc concept
806 seems otiose.⁶

807 Furthermore, there is a way of capturing the desirable aspects of the proposal
808 while avoiding these problems and that is to construe the meaning of concept-
809 expressing words along the lines I discussed in section 2, that is, as not encoding a
810 particular concept (a potential component of a thought or truth-conditional content),
811 but something more minimal, something essentially non-semantic ('wrong format' in
812 Recanati's (2004) terms), which merely makes the occasion-specific communicated
813 concept accessible to the addressee. In Carston (2013) I discussed the hypothesis
814 that so-called 'content' words have a semantically underspecified schematic lexical
815 meaning, that is, they encode a concept schema or blueprint which constrains the
816 concept they can be used to communicate. However, as discussed in section 2.2
817 above, there is a range of problems with this idea: it seems nigh impossible to spell

⁶ See Curco (2011) for independent arguments against treating ad hoc concept construction as a matter of procedural encoding.

818 out what these ‘thin meanings’ amount to; given the pragmatic processes that
819 underpin the formation of families of senses, schematic meanings don’t seem to play
820 any role in comprehension; they are forced to become more and more attenuated in
821 response to new uses/senses of the word. So it may be that we need to move to an
822 apparently even more extreme position according to which lexical ‘meaning’ consists
823 in nothing more than a pointer, a connection or gateway to a space of conceptual
824 information from which the addressee is to access or construct the relevant
825 (intended) concept. As the work in lexical pragmatics indicates, all we want from the
826 stable substantive lexicon is a means of interfacing with the conceptual system so as
827 to access thoughts that bear an appropriately close relationship with those the
828 speaker has in mind. On such an account, each word comes with its own distinct
829 pointer or interfacing component, which constrains the general pragmatic process of
830 accessing or constructing a concept, a process which is wholly motivated by the goal
831 of the pragmatic system which is to deliver speaker meaning. As the lexical ‘meaning’
832 is not conceptual (not semantic), but is merely a means of locating an area of
833 conceptual space (which may include a cluster of concepts comprising the polysemy
834 complex associated with a word), concept construction is an obligatory pragmatic
835 process.

836 This sort of account, assuming it can be properly worked out, is not prey to the
837 problems I mentioned above for the concept-plus-procedure account: it does not
838 entail an obligatory process that is, paradoxically, sometimes unnecessary (when the
839 encoded concept is the concept communicated), it doesn’t entail a component of
840 lexical meaning that is the same for thousands of words (that is, the instruction to
841 build an ad hoc concept) and it doesn’t formulate within the lexical semantics of a
842 language a process (concept construction) that is entirely a matter of pragmatics.
843 Furthermore, the advantages that Wilson discusses for the concept-plus-procedure
844 account, are equally carried by this alternative ‘gateway’ account: it makes perfect
845 sense of the idea that all words are merely pointers to, or evidence for, a speaker’s

846 meaning, and, since there is no encoded concept, it allows for any one of a range of
847 concepts to be the first one accessed or constructed, as determined by
848 considerations of relevance.

849

850

851 **4. Final remarks: Is all encoded meaning procedural (in a sense)?**

852

853 In discussing the processes involved in utterance interpretation, relevance theorists
854 have long made one major distinction, that between linguistic decoding and
855 pragmatic inference, both of which are inevitably involved in linguistic communication
856 (that is, comprehending an utterance is never simply a matter of linguistic decoding).

857 The conceptual/procedural distinction has been conceived as two kinds of linguistic
858 meaning, two different sorts of information that can be linguistically encoded, but
859 perhaps all linguistic encoding is fundamentally procedural in a certain sense, a
860 much broader sense than that originally envisaged. Building on the discussions in
861 Wharton (2009), Blakemore (2011) and Wilson (2011), we might wonder whether
862 what happens when, as addressees, we 'decode' any component of an ostensive
863 stimulus (whether linguistic or non-linguistic) is the triggering or activating of certain
864 information structures (for want of a better term) in our minds: these may be

865 conceptual, inferential ('procedural', in the original Stage I sense), attitudinal or
866 affective (perhaps even sensori-perceptual). In the case of interjections, expletives
867 and expressive prosody, what is activated is information about attitudinal and
868 emotional states, while what is activated in the case of discourse connectives is
869 information about how to inferentially relate propositional representations formed in
870 understanding the utterance. As for the case of substantive words (typical nouns,
871 verbs, and adjectives), which have been standardly assumed in RT to encode a
872 single lexical concept, perhaps they too are procedural in this broadened sense. It's
873 not that they encode an instruction to construct or access an ad hoc concept, but that

874 they activate or trigger a polysemy complex, a bundle of related concepts (perhaps
875 not all conventionalised to the same degree), with their accompanying encyclopaedic
876 information. From there on the standard RT pragmatic account kicks in, 'homing in'
877 on the specific concept intended, possibly involving an adjustment/modulation of one
878 of the activated concepts in the polysemy cluster.

879 This would really amount to a reconstrual of what 'decoding' is, one that
880 applies to all basic units of communicative codes (linguistic and nonlinguistic). When,
881 as addressees, we identify a word or some other conventional unit of communication,
882 some information structure (conceptual, computational or affective/attitudinal) is
883 triggered or activated in our minds as part of that identification process. Within this
884 very broad unifying construal of procedural meaning as having a triggering/activating
885 role, there would obviously be important distinctions to be made and subcategories to
886 be investigated, so the focus would shift from trying to understand the
887 conceptual/procedural distinction to trying to understand different categories of
888 procedural meaning.

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890

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901 nuance coupled with analytical and theoretical rigour has inspired and illuminated

902 me over several decades. Diane is also one of the most widely read people I know
903 and has a fund of brilliant and lively examples of every conceivable use of
904 language, from air-blueing expletives to highly poetic metaphors. Looking forward
905 to more!

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