

1 Onomatopoeia – Showing-word or Saying-word?

2 Relevance theory, Lexis, and the Communication of Impressions

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5 1. Introduction

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7 The Oxford English Dictionary defines onomatopoeia as ‘the formation of a word from a
8 sound associated with what is named’. Standard English examples include *buzz*, *meow*,
9 *crash* and *splash*. Onomatopoeia presents an interesting challenge to the assumption
10 that the link between word form and meaning is completely arbitrary (Saussure, 1916),
11 since the sounds of onomatopoeic words seem to resemble or imitate (at least part of)
12 their interpretations. There is something about the word *buzz* that resembles the sound
13 a bee makes.

14
15 According to Saussure (1916) and other proponents of the ‘arbitrariness of the sign’
16 doctrine, onomatopoeia is a marginal phenomenon in the study of language, and does
17 not warrant extensive attention in linguistics, the study of language proper. However, as
18 we will show, this is not the case at all. Onomatopoeia is productive, and it is generally
19 acknowledged that many languages have a means of creating words which imitate
20 sounds. Moreover, onomatopoeia raises issues linked to topics which linguists (and
21 pragmaticists, in particular) are very much concerned with, e.g., word coinage,
22 lexicalisation, wordhood, the nature of conceptual meanings, and the communication of

23 stylistic effects – in particular, those which are impressionistic, indeterminate, and/or
24 non-propositional in nature.

25

26 In some languages, and some genres of text or discourse, or in some speech domains,
27 onomatopoeia is quite prevalent. It is has often been noted, for example, that Japanese
28 speakers use onomatopoeia extensively - to the extent that there are dictionaries
29 devoted to cataloguing examples. Similarly, in other, typologically different languages,
30 onomatopoeia is commonly deployed by children's authors and poets, and is widely
31 encountered in domains of discourse which necessitate reference to the senses, e.g.,
32 restaurant reviews, recipe discussions, advertising, and romantic novels. Consider (1)
33 and (2):

34 (1) He went *galumphing* back.

35 *Through the Looking Glass* by Lewis Carroll

36 (2) Noise of crunchy bones goes crackety-crack for miles around.

37 *The BFG* by Roald Dahl

38 Example (1) contains *galumphing*, which was coined by Lewis Carroll in 1871. Example
39 (2) contains *crackety-crack*. It is very difficult, for both *galumphing* and *crackety-crack*,
40 to describe exactly what these expressions mean. Instead, readers would recover some
41 kind of *impression* that these writers are trying to communicate.

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43 If onomatopoeia is indeed prevalent in the types of contexts mentioned above, then we
44 must consider the nature of these particular contexts in order to shed light on what and
45 how onomatopoeia communicates. We may wish to ask what it is about these particular

46 communicative situations that leads a communicator to use onomatopoeia in the first
47 place. To achieve a full understanding of onomatopoeia, we must treat it, above all, as a
48 *communicative* phenomenon.

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50 The best-known approach to the study of onomatopoeia is the sound-symbolism
51 approach, which seeks to find a systematic relationship between sound and meaning.
52 There is also extensive work by Japanese scholars working on onomatopoeia from a
53 grammatical and semantic perspective (Akita 2013a, Kita 1997, 2013, Tsujimura 2001,
54 Toratani 2013). Onomatopoeia has also been investigated in research on synaesthesia
55 (Ward et al 2003, Ward and Simner 2006)¹.

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57 Our aim in this paper is to provide an account of onomatopoeia as a communicative
58 phenomenon. In section 2, we explore the three main existing approaches to
59 onomatopoeia studies in more detail; in section 3, we discuss some aspects of
60 Relevance Theory that make it particularly suitable for the treatment of onomatopoeia,
61 and in section 4, we present our own account.

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63

64 2. Three approaches to onomatopoeia

65 2.1 Sound-Symbolism

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¹ Onomatopoeia is also approached in other sub-disciplinary frameworks including the biological anatomy of non-verbal sounds (Assaneo et al 2011) and child language acquisition (Imai & Kita 2015).

67 Sound-symbolism scholars often assume that there is a systematic relationship
68 between sound and meaning². Studies within this framework concern word classes
69 whose sounds seem to have iconic links with sensory experience (Kagitani 2014: 2871),
70 where the link between the phonetic form of a word and its meaning appears to be
71 completely natural and non-arbitrary. It does seem, indeed, that there are situations
72 where some kind of non-arbitrary link between a word's phonetic form and its
73 interpretation can be observed, whether or not we understand how such links might
74 obtain. The focus in the framework of sound-symbolism studies therefore has been on
75 the nature of the mapping between sound and meaning, and the mechanism(s)
76 underpinning such links.

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78 To illustrate, Ramachandran and Hubbard (2011) repeat a famous experiment by
79 Köhler (1929), showing a jagged shape and a curved shape to college undergraduates,
80 and asking them to decide which shape is 'bouba' and which is 'kiki'. Almost all students
81 judged the jagged shape to be 'kiki', and the curved shape to be 'bouba'. Moreover,
82 Kagitani *et al* (2014: 2875-2876) report that there is a systematic, statistically significant
83 patterning between the phonetic form and meaning of some onomatopoeic Japanese
84 words for taste and taste texture, e.g., the taste texture 'thick' has a relationship to the
85 sounds /n/, /d/, /m/ and /o/, as in *neba-neba* and *doro-doro*, while /s/ has a supported
86 link to thinness, as in *sara-sara*. Furthermore, it is often noted that many words for

² The volume of work that takes this approach is too huge to cover in this paper. See, for example, Akita 2009, Hamano 1998, Hinton, Nichols and Ohala 1994, or Ahlner and Zlatev 2010 for detailed discussion.

87 shininess or light sources in English begin with /gl/, e.g., 'glow', 'glimmer', or 'glitter'.
88 What such studies and observations show is that there are words that clearly seem to
89 have some kind of systematic and non-arbitrary connection to their meanings.

90

91 It is unsurprising that we find instances of such words, especially given that the cases
92 studied involve the communication of meanings relating to the senses, and to sensory
93 experience. Humans have rich sensory experiences, and we spend much of our time
94 talking about what we have perceived and experienced through our senses. Many
95 aspects of such experiences, however, are highly idiosyncratic, vague, often ineffable,
96 and impressionistic. As a result, we are unlikely to have lexicalised concepts to express
97 them and communicate them to others. Thus, it is unsurprising that we might try to hit
98 upon some other means to communicate them, using 'words' that have a less than fully
99 arbitrary connection to their interpretations. A key question, though, is how and why
100 these links between sound and interpretations obtain in communication.

101

102

103 2.2 The Semantic Status of Onomatopoeia

104 As we have seen in the previous section, most works on onomatopoeia concern the
105 relationship between sound and meaning, iconicity and onomatopoeia, lexical
106 categories, and word classes of onomatopoeic expressions (see, for example, Akita
107 2013b, who reviews the development of onomatopoeia research). However,
108 observations have also been made about the relation between onomatopoeia and
109 semantics. For example, Kita (1997: 380) proposes a two-dimensional analysis, arguing

110 that onomatopoeia/mimetics³ is independent from other parts of the sentence and works
111 at the affecto-imagistic level of meaning, where language is directly linked with sensory,
112 motor, and affective information, while the analytic dimension is ‘the dimension of
113 decontextualized predication’ (Kita 1997: 380). This distinction is illustrated in (3):⁴

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115 (3) a. * [Taro wa] [isogi-asi de] [haya-aruki o] si ta.

116 Taro TOP hurried-feet with haste-walk ACC do-PAST

117 ‘Taro walked hastily hurriedly’ (lit. Taro did haste-walk with hurried feet)

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119 b. [Taro wa] [sutasuta to] [haya-aruki o] si-ta.

120 Taro TOP MIM comp haste-walk ACC do-PAST

121 ‘Taro walked hurriedly’

122 Kita (1997: 8)

123 According to Kita (1997), (3a) is ungrammatical as the two expressions it contains,
124 *isogi-asi de* and *haya-aruki o*, both belong to the analytic dimension and are therefore
125 redundant. In contrast, (3b) is acceptable as it uses an onomatopoeia *sutasuta-to*,
126 *which belongs to the affecto-imagistic dimension*, rather than the analytic dimension.

127

128 Tsujimura (2001), in response to Kita’s two dimensional analysis, questions whether we
129 need a distinction between the affecto-imagistic dimension and the analytic dimension.

³ Generally, mimetics is seen as involving an imitation of non-sound sensory experience while onomatopoeia in the strict sense refers to an imitation of sound. We will come back to this point in Section 3 but, for the time being, we use ‘onomatopoeia’ to include both terms.

⁴ The abbreviations used in this paper are as follows: ACC = accusative; GEN = genitive; MIM – mimetic/onomatopoeia; NOM = nominative; QUO = quotative; SUB = subject; TOP = topic.

130 Tsujimura argues that ‘the meanings of mimetic words are indeed integrated with other
131 parts of a sentence and that they need to undergo linguistic analysis just like other
132 linguistic elements that belong to what Kita calls the analytic dimension’ (Tsujimura
133 2001: 410). It may be, as Tsujimura suggests, that onomatopoeia (and mimetics) are
134 integrated into purely linguistic structures; however, they might also be like some
135 interjections in this respect – that is, they may be borderline linguistic. We will come
136 back to this point later in 3.3.

137

138 2.3 Synaesthesia

139 As Akita (2013b) notes, synaesthesia has recently started to attract the attention of
140 scholars working on onomatopoeia. According to Simner (2010: 2-3), synaesthesia has
141 been historically understood as involving a sensory or perceptual stimulus triggering
142 unusual sensory experiences or responses. A layperson would consider a typical case
143 of synaesthesia to be something like a mathematician who can count to large numbers
144 using colours and shapes to visualise certain figures. This characterisation of
145 synaesthesia as a ‘crossing over’ of the senses is now considered too broad, and
146 somewhat inaccurate, as much more synaesthesia than previously thought appears to
147 be triggered by graphemes, phonemes and words, so there may be more of a role for
148 linguistic processing in understanding synaesthesia than imagined before (Simner,
149 2010: 3). Nevertheless, a broad characterisation allows non-specialists in psychology to
150 grasp the phenomenon at hand.

151

152 With respect to synaesthesia and onomatopoeia, an important point must be made.
153 Synesthesia is not a communicative phenomenon. It involves generally idiosyncratic
154 links between cognitive domains, which are not within the individual's control and which
155 not all individuals share. Onomatopoeia, by contrast, is a communicative phenomenon,
156 which can be voluntarily exploited by speakers and appears to work on similar lines
157 across individuals. Nevertheless, looking at onomatopoeia through the lens of
158 synaesthesia can be useful. Examining what happens in a cognitive condition that may
159 involve both sensory and linguistic processing might shed light on how speakers can
160 consciously exploit connections between sensory domains and linguistic processing for
161 communicative effect. Moreover, if it is right that synaesthesia involves multiple senses
162 or perceptual stimuli from different modes, and if it is right that there is a significant
163 involvement of higher level processes bound up with linguistic production and
164 comprehension (Simner, 2010: 3), then we could develop a challenge to the standard
165 view of onomatopoeia as being only concerned with sound.

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167 It is beyond the scope of this paper to discuss this idea in great detail. However,
168 crucially, there is some empirical evidence to suggest that there can be non-arbitrary
169 links between word forms and senses other than sound. In Ward and Simner (2003), a
170 significant and non-random relationship was found between certain phonemes and
171 certain tastes in the mouth: e.g., a phoneme that occurs in the name of a food can
172 trigger a taste corresponding to that food. In Kagitani *et al* (2014), systematic and
173 statistically significant links were found between particular phonemes and particular

174 tastes, but also between particular phonemes and particular textures of food in the
175 mouth.

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177 The point is that onomatopoeia need not be dominated by, or confined to, the modality
178 of sound. Many cases of onomatopoeia involve a link between two sounds, but it is
179 likely that connections also hold between the form of a word and other sensory
180 domains. We will discuss such connections involving other senses in section 3.2. This
181 has implications for a key component of how relevance theorists view the ostensive
182 *showing* behaviours used in ostensive-inferential communication.

183

184 3 Towards a Relevance-theoretic Analysis of Onomatopoeia

185 3.1 Issues with Existing Accounts

186 These broad approaches to the treatment of onomatopoeia yield a number of insights
187 and empirically supported claims which advance our understanding of onomatopoeia.
188 However, they also raise a number of issues. A chief concern is that virtually every
189 study reviewed for this paper uses examples of established (or fully lexicalised)
190 onomatopoeia, and thus either deliberately or unintentionally restricts the range of data
191 discussed. In fact, many examples are taken from dictionaries, and none of the studies
192 reviewed, with the exception of Hubbard and Ramachandran (2011), aims to investigate
193 what the consequences are from an interpretive perspective of presenting individuals
194 with a novel case of onomatopoeia and asking them what it means⁵. If research into

⁵ In this study, we will present fairly novel examples, although analyses of the comprehension of nonce onomatopoeias based on empirical evidence would add an interesting dimension to onomatopoeia research.

195 onomatopoeia does not address why the speaker coined novel or creative forms, how
196 the hearer interpreted them, and how the expressions became adopted and adapted as
197 fully-lexicalised words, our understanding of the phenomenon will not be sufficiently
198 wide-reaching or explanatory. Addressing this explanatory gap is one of the aims of this
199 paper.

200

201 A further issue raised by the approaches taken in previous studies involves the
202 contribution of onomatopoeia to semantics, understood as the study of linguistically
203 encoded meanings. Either explicitly or implicitly, some researchers suggest that
204 particular phonemes (or combinations thereof) encode particular meanings. Thus, many
205 of these accounts seemingly concentrate on the relationship between sound and
206 semantics. By contrast, there is no discussion at all of the involvement of pragmatic
207 processes – in particular the role of pragmatic inferencing – in the interpretation of
208 onomatopoeia. Furthermore, though several studies (Kita 1997, Toratani 2005, 2013,
209 Tsujimura 2000) note or imply that there are extra stylistic effects associated with the
210 interpretation of many onomatopoeias, these studies offer no cognitively grounded
211 explanation of how these effects obtain. They may present evidence that connections
212 between sounds and interpretations seem to exist, but the question of how and why
213 these effects are recovered is overlooked. We propose that this explanatory gap can, in
214 part, be put down to the lack of a role for pragmatic processes in these accounts.

215

216 To fill the explanatory gap, and account for the interpretation of onomatopoeias in terms
217 of what speakers intend to communicate by them, we need a cognitive account of how

218 these interpretations are recovered, and how any resulting stylistic effects are derived.
219 We will present our analysis using a cognitive pragmatic framework which is well-
220 equipped to allow us to discuss onomatopoeia in cognitive, communicative, and
221 inferential terms: Relevance Theory (Sperber & Wilson, 1986/1995; Carston 2002;
222 Wilson & Sperber 2012).

223

224 3.2 Relevance theory

225 Relevance theory is centred on two principles of relevance: the Cognitive Principle of
226 Relevance and the Communicative Principle of Relevance. The Cognitive Principle
227 describes how our cognition is organised: human cognition tends to be geared towards
228 the maximisation of relevance. That is, we pay attention to what seems likely to create
229 cognitive effects (improvements to our representation of the world) which are worth our
230 processing effort. You have probably had the experience of buying a new jacket and,
231 the next day, noticing that everyone on campus is wearing the same jacket. It is not the
232 case that everyone on campus bought the same jacket overnight. You notice this
233 because the fact that everyone is wearing the same jacket is now relevant to you: it may
234 strengthen your assumption that this jacket is very 'in' for this season, or you may
235 realise that your existing assumption that your dress sense is unique is no longer
236 correct, or you may draw the conclusion that your jacket will be out of fashion soon. In
237 other words, relevance is defined in terms of the balance between cognitive effects and
238 processing effort. Other things being equal, the less effort required to process an input,
239 the more relevant it is. Similarly, other things being equal, the more cognitive effects

240 derived from processing a stimulus, the more relevant it is. Relevance is a balance
241 between processing effort on the one hand, and cognitive effects on the other.

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243 This cognitive tendency explains how and why communication works: when a speaker
244 makes demands on a hearer's cognitive effort by producing an ostensive stimulus such
245 as an utterance, the hearer is automatically entitled to assume that whatever the
246 speaker is trying to communicate must be relevant enough to be worth their attention. In
247 technical terms, the hearer, upon recognising this as a communicative act, presumes
248 that the utterance is optimally relevant, and looks for an interpretation compatible with
249 this presumption. This is described in the Communicative Principle of Relevance:

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251 (4) Every act of ostensive communication communicates a presumption of its own
252 optimal relevance (Sperber and Wilson, 1986/1995: 260).

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254 According to this principle, a hearer is entitled to expect a speaker's ostensive act to be
255 at least relevant enough to be worth processing, and, moreover, to be the most relevant
256 one that the speaker is willing and able to produce at that time.

257

258 (5) Presumption of optimal relevance

259 a. The ostensive stimulus is relevant enough for it to be worth the addressee's effort to
260 process it.

261 b. The ostensive stimulus is the most relevant one compatible with the communicator's
262 abilities and preferences. (Sperber and Wilson, 1986/1995: 270)

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The hearer, motivated by the presumption of optimal relevance, then follows a path of least effort in deriving cognitive effects:

(6) The Relevance Theoretic Comprehension Procedure:

- a. Follow a path of least effort in deriving cognitive effects: test interpretive hypotheses (reference assignments, disambiguations, implicatures, etc.) in order of accessibility.
- b. Stop when your expectations of relevance are satisfied

(Wilson and Sperber, 2002 : 24).

Relevance Theory (Sperber and Wilson, 1986/1995) was developed to explain how humans communicate particular interpretations through particular ostensive behaviours in everyday face-to-face communication. However, as work in this area has progressed, key aspects of the framework have been applied to other stylistic phenomena, some of which have plenty in common with onomatopoeia, including interjections, expressives, repetitions, appositions, and certain aspects of prosodic behaviour. Given that many onomatopoeias have clear stylistic effects and arguably share characteristics with other stylistic phenomena, it is reasonable to anticipate that existing explanations and theoretical notions used to explain these other phenomena can be co-opted to shed light on onomatopoeia.

286 Let us start with the relevance-theoretic notion of ‘representation by resemblance’.
287 Sperber and Wilson (1986/1995) show how communication is not purely a matter of
288 describing the world, and how resemblances of all types – visual, auditory, phonetic,
289 linguistic, semantic, topological – can be exploited in communication. This aspect of
290 communication is generally overlooked by other pragmatic frameworks. As Sperber and
291 Wilson (1986/1995: 227) explain, ‘in appropriate conditions, any natural or artificial
292 phenomenon [...] can be used as a representation of some other phenomenon that it
293 resembles’. For example, when offered a glass of wine, one could raise both hands to
294 chest height and move them as if driving, to produce a communicative act plausibly
295 interpreted as a refusal. Two objects or actions resemble each other to the extent that
296 they share properties. The hearer, following the relevance-theoretic comprehension
297 procedure, must determine which properties are to be identified as shared. The most
298 salient ones yielding enough implications about the stimulus (for example, drinking and
299 driving) will be those that make the communicative act worth the hearer’s attention.

300

301 Relevance Theory also provides an explanatory framework that accounts for descriptive
302 ineffability, or expressive effects (e.g. Blakemore 2008, 2011, 2015, Wharton 2009). Not
303 all communicative acts have the goal of achieving a single strong cognitive effect or a
304 small, determinate array of effects. As Sperber and Wilson (1986/1995) explain,
305 communication is a matter of degree: some utterances are intended to trigger the
306 recovery of a single, strongly evidenced proposition, while others communicate a
307 broader array of weaker assumptions, and, in some cases, what is communicated
308 amounts to no more than an impression, which is hard to render in propositional terms

309 at all (Blakemore 2008, Pilkington 2002, Sperber & Wilson 1986/1995, Wharton 2009).
310 For example, Blakemore (2008), in analysing the use of apposition in a variety of texts,
311 argues that some cases of apposition give rise to apparently non-propositional effects,
312 effects so intangible and ineffable that they cannot be paraphrased without loss of
313 meaning. As a result, word-by-word translation or attempts at paraphrasing such
314 phenomena inevitably destroy some of these effects. According to Blakemore (2011),
315 phenomena such as expletives, epithets, diminutives, and interjections typically
316 communicate expressive effects of this type.

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318 Apart from these specific notions, Relevance Theory offers a number of fundamental
319 assumptions that make it extremely well-suited to developing an account of
320 onomatopoeia. First, there are cases of onomatopoeia which are fully lexicalised. These
321 lexicalised expressions must originate somewhere, and this suggests that there must be
322 plenty of novel, creative and even 'one off' cases of onomatopoeia which are neither
323 coded nor conventionalised and may therefore have something in common with non-
324 verbal communicative behaviours such as affective vocalisations, gestures, and facial
325 expressions. Onomatopoeia should therefore be handled within a framework that can
326 account for the role of both verbal and non-verbal behaviours in communication. A key
327 assumption in Relevance Theory is that both verbal and non-verbal behaviours can be
328 equally communicative, and neither mode has a privileged status within the framework⁶.
329 This is possible because pragmatic inference is seen as playing a crucial role in the
330 interpretation of all communicative behaviours, both verbal and non-verbal. From the

⁶ See, for example, Wilson and Wharton 2006, and Wharton 2001, 2003, 2009

331 interpretation of the most commonplace of lexical items such as *red* or *drink* to the
332 interpretation of spontaneous, non-coded, non-verbal behaviours, audiences must infer
333 what these communicative behaviours are intended to convey, how they are to be
334 optimally processed, and what type of effects it is relevant to derive in particular
335 contexts. This framework enables us to bring inference into the interpretation of
336 onomatopoeia and account for how its effects are derived in a wide variety of cases, but
337 in particular, in the novel and creative cases which, crucially, must be interpreted
338 entirely inferentially because the audience is not familiar with any code or convention
339 governing their use.

340

341 Relevance Theory is not the first pragmatic approach to acknowledge the role of both
342 verbal and non-verbal behaviours in communication. For instance, Grice (1957) was
343 much concerned with establishing a distinction between *showing* (which is typically non-
344 verbal) and *saying* (which is typically verbal) in developing his theory of speaker's
345 meaning. Thus, I may point out of the window to *show* you that it is raining, or I may use
346 the words 'Il pleut' to *say* that it is raining. However, Relevance Theory (see, for
347 example, Sperber and Wilson 1986/1995, Wilson and Wharton 2006, Wharton 2001,
348 2003, 2009) has provided good reason to think that there is a continuum rather than a
349 distinction between *saying* and *showing*, and that a theory of communication should
350 encompass both elements. This makes it easier to account for cases involving a mixture
351 of both *showing* and *saying* (e.g., saying 'I'm angry' in an angry tone of voice). We will
352 argue that lexicalised onomatopoeia provides many cases of this type.

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354 Grice (1957) introduced another important theoretical distinction, between 'natural' and
355 'non-natural' meaning. Natural meaning is carried by so-called 'natural signs' (e.g.,
356 smoke is a natural sign of fire), and non-natural meaning involves the overt expression
357 of a communicator's intentions. Wharton (2003 a, b) argues that natural signs can also
358 be exploited in overt intentional communication. As he points out, utterances are often
359 accompanied by non-verbal 'cues' such as facial expressions, tones of voice, gestures,
360 bodily movements, etc. Often, these non-verbal cues are not intentionally provided, and
361 the communicator need have no control over them. Suppose you have the flu. Hearing
362 you cough, a hearer might conclude that you are unwell and need to go home. This is a
363 case of accidental information transmission, which provides the hearer with information
364 whether or not you want him to know you are unwell. Unless you make clear that you
365 *intend* to communicate that you are unwell, it would not be a case of overt intentional
366 communication (or *ostensive communication*, in Relevance Theory's terms). However,
367 as Wharton (2003 a, b) argues, there are cases in which the speaker intentionally
368 exploits such natural behaviour to provide overt evidence for an intended meaning. For
369 example, if you cough suggestively in front of your friend, then you have just produced a
370 natural behaviour to give your friend overt evidence that you are unwell and need to go
371 home soon.

372

373 According to Relevance theory, when we communicate, there are two layers of
374 information that the hearer must retrieve. As Sperber and Wilson (1986/1995: 51-54)
375 explain, the first layer is the information that the speaker intends to communicate, and
376 the second layer is the information that the first layer of information is being pointed out

377 intentionally. Recall the earlier example of coughing. By coughing suggestively in front
378 of your friend, not only do you make manifest to the hearer the first layer of information,
379 i.e. that you are unwell, but you also make manifest to the hearer the second layer of
380 information, i.e. that you intend to inform him that you are unwell. That is, ostensive-
381 inferential communication involves making manifest to the hearer that you intend to
382 make the first layer of information manifest. As Wharton (2001) argues, exploitation of
383 non-verbal cues in ostensive-inferential communication is a case of overt intentional
384 *showing* rather than *saying*.

385

386 The difference between *showing* and *saying* is generally analysed in terms of the
387 'directness' of the evidence provided for the first layer of information, where evidence
388 derived via linguistic decoding and inference is relatively less direct, requiring more of
389 an 'inferential leap' from evidence to intended interpretation. In cases of *showing*, the
390 ostensive behaviour of the speaker provides direct evidence for the first layer of
391 information. If you receive a gift and wish to communicate disappointment with it, you
392 can allow people to see your frown, a natural sign of disappointment. Your
393 disappointment is directly inferrable from your frown. Or you can provide less direct
394 evidence for the first layer of information by saying 'I am disappointed', from which the
395 hearer arrives at the first layer of information by a combination of linguistic decoding and
396 inference.

397

398 Cases of *showing* often arise when a communicator wishes to communicate something
399 that is difficult to put into conceptual terms using language. It may be that what the

400 communicator wants to convey is too vague and ineffable, such as a complex feeling or
401 sensory experience. Or, it may be that providing direct evidence is more convincing
402 (e.g., pointing out black clouds to communicate that you expect it to rain). It seems
403 reasonable to say that *showing* often involves the sharing of experiences, or draws on
404 experiential elements of the context.

405

406 Addressing the role of interjections in communication, Wharton (2000, 2009) relies on a
407 distinction between *saying*, where the speaker provides indirect and coded evidence
408 (e.g., utterances), and *showing*, where the communicator provides direct (and often
409 natural) evidence for what he wants to communicate. Wharton (2000, 2009)
410 demonstrates how the continuum between *showing* and *saying* works using
411 interjections and other expressions that straddle the border between natural and non-
412 natural meaning. However, it is worth noting here that most examples of *showing* in the
413 relevance-theoretic literature involve cases of *showing* by bodily expression, or by
414 presenting *visual* evidence to the hearer. Wharton (2009) uses gaze and ostensive
415 sighing. Similarly, Sperber and Wilson (1986/1995) use a range of examples that
416 provide direct visual evidence, e.g., showing a bottle of aspirin to communicate that
417 someone is unwell. Metalinguistic resemblance, that is, exploitation of resemblances in
418 linguistic form, has also been discussed extensively (e.g., Sperber and Wilson
419 1986/1995, Noh (2000), Wilson and Sperber 2012). The case of onomatopoeia adds an
420 interesting extra dimension to the discussion of *showing*, as the evidence it provides is
421 not properly linguistic, but onomatopoeias are not bodily or visual either. Instead,

422 onomatopoeia exploits resemblances between phonetic forms and events in the world.

423 In a sense, *showing* by onomatopoeia is a case of cross-modal *showing*.

424

425 Within pragmatic stylistics and within Relevance Theory, there has also been very little

426 work on onomatopoeia. To our knowledge, the only treatment of it within Relevance

427 Theory is a brief but very promising discussion in Wharton's (2009) analysis of

428 interjections. Wharton (2009: 99) considers that onomatopoeia, and related cases of

429 iconic language use in general, involve an interaction between coding and inference

430 processes at the lexical level, where 'words' which are arguably linguistic in nature

431 seem also to exhibit a degree of *showing*, i.e., to provide more direct evidence for what

432 the speaker intends to communicate. We use these insights to inform our analysis of a

433 range of cases of onomatopoeia, running from those which are novel, natural, and

434 probably characterisable solely in terms of *showing*, through a middle range of terms

435 which combine *showing* and *saying*, through to cases which are so fully lexicalised that

436 there is essentially no *showing* to be identified, and there is only a trace connection to

437 the sensory domain that triggered the original onomatopoeia.

438

439 In the next section, following Wharton's (2003, 2009) discussion, we explore similarities

440 and differences between onomatopoeia and interjections.

441

442

443 3.3 Onomatopoeia and Interjections⁷

444 Intuitively, we might expect to find similarities between onomatopoeia and interjections⁸.
445 After all, if it is right that some cases of onomatopoeia behave as words which are not
446 (fully) integrated into a language, then it is reasonable to expect to be able to make
447 some comparisons between them and interjections, another case of expressions which
448 are generally considered to sit at the edge of the linguistic systems of natural
449 languages, (e.g., Goffman 1981, Trask 1993, cited in Wharton 2003, 2009). In this
450 section, we follow Wharton (2003, 2009) in treating interjections as expressions which
451 can *show* what the speaker wants to communicate, or simultaneously *show* and *say*
452 what the speaker wants to communicate. We establish that, syntactically, there are no
453 grounds for treating onomatopoeia and interjections as facets of the same
454 phenomenon. Thus any similarities between onomatopoeia and interjections must lie, if
455 anywhere, in what they communicate, and how. That is, they must arise from the way a
456 speaker uses both types of expression to provide evidence for the information he or she
457 wishes to communicate, and the nature of the information communicated, i.e., vague,
458 indeterminate, impressionistic, or non-propositional effects.

459

460

461 According to Wharton (2003: 175), interjections are generally considered to be at the
462 edge of language; historically, linguists have regarded them as a paralinguistic, or even

⁷ To be clear on the sort of expressions we have in mind here, the following are standardly considered to be interjections of one type or another: *wow*, *ouch*, *argh*, *yuk*, *hell*, *damn*, and *shit*.

⁸ Some scholars (see, for example, Meinard 2015) suggest that some cases of onomatopoeia might be analysable as a special type of interjection.

463 completely non-linguistic, phenomenon. They have even been described as mere
464 decoration (Sapir, 1970, cited in Wharton, 2003: 175). From a syntactic perspective, it is
465 often claimed that interjections proper are not syntactically integrated into their host
466 utterances (Trask, 1993), and that they always constitute an intonation unit of their own
467 (Ameka, 1992), e.g.:

468
469 (7) Shit! | I've lost my prescription.

470 (8) That | – ow! – | really hurts.

471
472 However, there are no syntactic grounds for drawing a comparison between
473 onomatopoeia and interjections. Recall Tsujimura (2001), who argues that
474 onomatopoeia is fully integrated into linguistic structures. Consider (9) and (10):

475
476 (9) | Meow! | The little cat said. | Buzz! | The little bee went. | Splash! | Went the sea
477 lion.

478 (10) | Buzz is the noise a BEE makes |, and cats say meOW. |

479
480 Standard onomatopoeic expressions such as *meow*, *buzz*, and *splash*⁹ constitute their
481 own intonation groups in (9), but are syntactically (and prosodically) integrated in (10).
482 Even if interjections are considered to be syntactically isolated, many onomatopoeias
483 clearly *are* integrated into the utterances that host them. There are thus no syntactic

⁹ As we will see later, onomatopoeic words seem to exhibit different degree of lexicalisation. Classic examples of onomatopoeia such as *splash* are considered more lexicalised than stylised imitations such as *meow* and *buzz*.

484 grounds for drawing parallels between onomatopoeia and interjections. Instead, we
485 have syntactic grounds for saying that onomatopoeias do not necessarily, at least in a
486 syntactic sense, exist at the edge of language proper. In addition, most onomatopoeias
487 inflect morphologically, in a way that true interjections do not.

488

489 What, then, do interjections communicate, and how? From the very broad perspective
490 of the type of interpretations they give rise to, there is a consensus that interjections are
491 used to communicate emotions and attitudes (Wierzbicka, 1991; Wharton, 2003;
492 Meinard, 2015: 151). What is difficult to explain is how such expressions communicate
493 something as idiosyncratic and ineffable as an emotion or an attitude.

494

495 On what is generally described as the 'conceptualist' approach¹⁰, interjections are
496 considered to have a semantics (and, thus, from a semantic perspective, to be part of
497 language) because they have conceptual content (Wilkins, 1992: 119). On this
498 approach, they are analysed as communicating complex conceptual structures, and as
499 doing so by *encoding* them. These conceptual structures are seen as composed of
500 irreducible semantic primitives similar to those in the Natural Semantic Metalanguage
501 (NSM) (Goddard, 2011), e.g., *YOU, THIS, GOOD, THINK, DO, BE, DIE, PLACE*.

502 Wierzbicka (1992: 164) proposes the following conceptual structure for *wow*:

503

¹⁰ There is a great deal of work on the conceptualist approach to interjections. Because of space limitations, we cannot address all of it, particularly with respect to the distinction between primary and secondary interjections (Wilkins 1992, Ameka 1992). The aim here is merely to provide enough discussion to suggest that many interjections do not linguistically encode anything conceptual, and to argue (as Wharton, 2003 does) that what some interjections communicate is the type of thing that is far too nebulous to be linguistically encodable in conceptual terms.

504 (11) *wow*

505 I now know something

506 I wouldn't have thought I would know it

507 I think: it is very good

508 (I wouldn't have thought it could be like that)

509 I feel something because of that.

510

511 A key objection here is that decompositional attempts to define interjections invariably

512 fail, as Wharton (2003, 2009) points out. Whilst it is possible to define *some* words in

513 conceptual terms, the attempt to supply sets of necessary and sufficient conditions for

514 most or all words generally fails (Fodor, Fodor and Garrett 1975, cited in Wharton,

515 2003: 178). Wharton (2003) argues that expressions such as *wow* can be used to

516 communicate a wide range of emotions and attitudes, some of which are negatively

517 oriented. To accommodate such negative emotions, we would need to make the

518 conceptual structure even more complex. Moreover, as he points out, not every element

519 of such a structure, however complex, is always needed – one can felicitously utter *wow*

520 without thinking one would never have expected to know something, for example. Thus,

521 it is difficult to find a set of necessary and sufficient conditions that would allow us to

522 define interjections in conceptual terms. Attempts to paraphrase as a set of propositions

523 what an interjection communicates always lose something 'in translation'. Compare (12)

524 and (13):

525

526 (12) Yuk! I hate worms.

527 (13) I am disgusted. I hate worms.

528

529 *Yuk* and *I am disgusted* do not yield equivalent interpretations, and the latter is
530 paraphrasable while the former is not. Moreover, while *I am disgusted* can be true or
531 false, *Yuk!* has no truth value at all. It then seems reasonable to conclude, as Wharton
532 does, that interjections do not encode concepts. However, and this will be important in
533 our analysis of onomatopoeia, interjections do communicate something. For example,
534 *wow* can communicate a potentially indefinite range of emotions and attitudes
535 depending on the context and the intentions behind its use. Since interjections cannot
536 be seen as encoding concepts, a different analysis of how they communicate is
537 required.

538

539 Drawing on work by David Kaplan (1997), Wharton (2003, 2009) points out that
540 interjections are typically used to reveal something about, or *express*, the speaker's
541 emotional states, and that they fall on the expressive rather than the descriptive side of
542 language use. He concludes that while interjections cannot be seen as encoding
543 concepts, they might be analysed in procedural terms. According to Relevance Theory,
544 two types of information can be encoded: conceptual, and procedural (see, for example,
545 Blakemore 1987, 2002, Wilson and Sperber 1993). Instead of (or as well as) encoding
546 concepts, an expression may encode procedures – instructions for how an utterance is
547 to be interpreted, or for activating particular kinds of representations or effects – just as
548 if a button is being pushed (Blakemore, personal communication). Having argued that
549 interjections do not encode concepts, Wharton (*ibid.*) argues that they encode

550 procedures, which may activate representations of a wide range of emotional or
551 attitudinal states.

552

553 As mentioned earlier, Wharton (2003, 2009) analyses interjections in terms of the
554 *showing – saying* continuum. What he suggests is that interjections can be treated as
555 expressions that *show* and *say* simultaneously. Being partly coded, and partly related –
556 via the use of affective intonation, for instance – to something like natural cries, we
557 might want to analyse them as contributing to an interpretation in two ways: by
558 simultaneously *showing* and *saying*, as in (14):

559

560 (14) Ann: Don't forget, you said you'd proofread Kelly's essay tomorrow.

561 David: Damn!

562

563 In (12), we might say that David, uttering 'damn!', both *shows* and *says* (because of the
564 coded element in the interjection) that he is annoyed at having to correct the essay. The
565 coded element in the interjection (or the procedure encoded by the linguistic form)
566 activates a particular kind of representation (i.e., of states associated with annoyance)
567 while the showing element in the interjection provides the direct evidence for the first
568 layer of information to be picked up.

569

570 In arguing that interjections can *show* and *say* at the same time, Wharton (2003: 206)
571 mentions onomatopoeia as supporting evidence. He says that *clink*, *splash*, and *sizzle*
572 are examples of words which not only encode concepts but also seem to *show*

573 something about the objects they denote, since the link between the sounds of these
574 words and their meanings is not completely arbitrary. Thus, *splash* might encode a
575 concept SPLASH, but there is still an element of *showing* in that the sound of the word
576 bears more than a passing resemblance to the sound of the phenomenon it denotes.
577 This is perhaps because onomatopoeic expressions communicate elements of sensory
578 experience, feelings, or impressions, which are vaguer and harder to pin down in
579 conceptual terms than the meanings of purely conceptual expressions like *dog* or *green*.
580 It would thus be reasonable to hypothesise that the 'meanings' of onomatopoeic
581 expressions range from fully established concepts to apparently 'non-propositional'
582 effects, that they do have a conceptual semantics in some cases, but that other aspects
583 of their meaning fall more on the *showing* than the *saying* side.

584

585 Following Wharton (2009), we adopt the idea that there is a continuum of cases
586 between *showing* and *saying*. Accepting that onomatopoeia can *show* and *say* at the
587 same time allows us to consider a continuum of cases from pure *showing*, through
588 mixed *showing* and *saying*, to just *saying*, enabling us to account for the disparate
589 range of completely novel to fully lexicalised cases of onomatopoeic expressions. And
590 indeed, some researchers assign degrees of 'lexicality' (or lexicalisation) to
591 onomatopoeias, which can be determined based on their possibilities of inflection and
592 occurrence in quotation. For example, Kadooka (2005) illustrates degrees of lexicality
593 ranging from the least lexicalised expressions, such as the English *hjkrrh* (an
594 exclamation used by Lewis Carroll in *Alice in Wonderland*) and Japanese *bakyuun*
595 (sound of a gun), through middle cases, such as *meow* and *pop* in English and *karari*

596 (onomatopoeia for dryness) and *sowa-sowa-suru* (nervous) in Japanese, to the most
597 lexicalised cases such as English *chatter* and Japanese *odoroku* (surprised). Flyxe
598 (2002) also lists expressions such as *kippari* (clearly) and *odoroku* as examples of
599 highly lexicalised onomatopoeia, and expressions such as *zabun* (splash), or *gān* (an
600 expression often used when someone is shocked) as among least lexicalised
601 onomatopoeia. It seems reasonable to assume that the least lexicalised cases, such as
602 *hjckrrh* and *gān*, exist at the *showing* end of the spectrum while *chatter* or *kippari* are
603 located at the *saying* end.

604
605 Onomatopoeias have iconic features not because there is a form/sound-meaning
606 relationship of the type described earlier in this paper, but because what is being
607 communicated is information about what the speaker perceived. As Wharton (2009:
608 100) argues, ‘in onomatopoeic expressions generally, the link between sound and
609 meaning is not as loose as in most other words, since some element of the natural
610 connection remains’. If a speaker wants to communicate what she perceived, she
611 should use what she thinks is a faithful enough representation of it, that is, one with
612 some natural cognitive resemblance to the original perception. According to Wharton
613 (2009: 101), this suggests that the *showing-saying* continuum applies not only at a non-
614 lexical (non-verbal) level but also at a *lexical* level, contributing to lexical-pragmatic
615 processes.

616
617 In the next section, we present our relevance-theoretic account of onomatopoeia, using
618 examples ranging from relatively creative onomatopoeias to more established ones. In

619 particular, we explain what onomatopoeia communicates, how it communicates, and
620 why the speaker chooses to use onomatopoeia rather than fully lexicalised, non-
621 onomatopoeic, conceptual terms.

622

623 4. A Relevance-Theoretic Approach to Onomatopoeia

624 4.1 The *Showing-Saying* Continuum and Onomatopoeia

625 So far, we have seen how onomatopoeia is analysed in various fields and have
626 demonstrated how little research there has been on the role of onomatopoeia in
627 communication. Against this backdrop, we treat onomatopoeia as a communicative
628 phenomenon and present an alternative explanation of the role it plays in
629 communication. Drawing on Wharton's (2009) account of interjections, we argue that
630 onomatopoeia falls on the *showing-saying* continuum. At the *showing* end of the
631 spectrum, the communicator uses novel (creative) onomatopoeias, such as *hjckrrh*
632 (Kadooka 2005), that are not established as words *per se*, to share his sensory
633 experience similarly to the way non-verbal behaviours can be used to 'show' what a
634 person intends to communicate. At the other end of the spectrum, where the
635 communicator uses more established onomatopoeic *words*, such as *chatter*, there will
636 be less of a *showing* element, and more of a *saying* element. What is interesting,
637 though, is the middle range of cases, such as *pop* or *sizzle* in English, and *sowa-sowa*
638 or *karari* in Japanese, where onomatopoeic *words* seem to have characteristics of both
639 *showing* and *saying*. This is where onomatopoeia exhibits an interaction between
640 coding and inference at the lexical level.

641

642 Why does a communicator use onomatopoeia and what does he want to 'show' rather
643 than communicating via purely conceptual encoding? These questions are related to a
644 very fundamental question: what does onomatopoeia communicate? We have argued
645 that onomatopoeia can *show* and *say* at the same time, and can communicate a very
646 vague, apparently non-propositional, interpretation, which, in relevance theory, has
647 been called an *impression*. An impression is a sub-type of cognitive experience: one
648 that involves a diffuse range of evidence, often sensory or emotional, pointing towards a
649 certain conclusion, or a certain answer to a question (e.g. from the way someone talks, I
650 get the impression that he's nervous; from looking out of the window, I get the
651 impression that it's going to rain; from the word 'sizzle', I get an impression of what
652 sausages sound like when cooking).¹¹

653

654 When reporting impressions from his sensory experience, the speaker 'imitates' the
655 experience using the phonemes available to him. In order to create the most faithful
656 representation possible of the original experience, he would use sounds that most
657 closely resemble the impressions of that experience that he wishes to communicate.
658 Onomatopoeia is not purely 'natural' in the same way that some interjections can be as
659 a physiological response to stimuli. Onomatopoeia is a somewhat stylised and iconic
660 representation of sensory experience via sound, whether the original experience was
661 aural, visual, or of any other sensory type. In other words, onomatopoeia is what the

¹¹ See Sperber and Wilson (2015) for fuller discussion of the role of impressions in communication and cognition.

662 speaker considers a faithful enough representation of the sensory experience that he
663 wishes to share with the audience.

664

665 The alleged systematic link between onomatopoeia and sound comes from this. The
666 sound of each onomatopoeia triggers access to certain qualities often associated with
667 such sounds (voiceless sound = clarity, for example). However, this does not mean that
668 each sound 'encodes' the relevant quality. The triggering is context-dependent, and the
669 quality is accessed only in some specific contexts, and not others.

670

671 Let's take a relatively established onomatopoeia, *sizzle* in English and *sowa-sowa* in
672 Japanese. Even when these expressions and their meaning are fully established, there
673 is still an element of *showing* involved, leading to the communication of a sensory
674 impression as part of the first layer of information the audience is intended to pick up.

675

676 (15) Sausages are *sizzling* in the pan.

677 (16) [Taro wa] [*sowa-sowa*] shiteiru.

678 TaroTOP MIM do-PRESENT

679 '*Taro is nervous.*'

680 While the concept encoded by *sizzle* denotes making a certain type of hissing noise, the
681 word still evokes something more specific by use of the /s/ sound, giving an impression
682 of the kind of sound that the sausages make. Similarly, the concept encoded by *sowa-*
683 *sowa* denotes a certain type of nervousness, although the word still communicates an
684 *impression* of the kind of nervousness exhibited by Taro, presumably by (the repetition

685 of) its phonemes. Thus, using onomatopoeia enables the speaker to communicate not
686 just encoded concepts, but an additional *sensory impression* which is extremely difficult
687 to put into words. While well-established, lexicalised onomatopoeias may have a
688 stronger *saying* element¹², their phonetic link to the senses enables the communicator
689 to include some expressive effects.

690

691 4.2 Onomatopoeia and Sensory Experience

692 Let us move on to a case of creative onomatopoeia. There are a number of
693 onomatopoeias in Japanese commonly used for wind: *pyu-pyu*, *byu-byu*, *hyu-hyu*,
694 *hyuuu*, *sa-*, *soyo-soyo*, and *suu-suu*. However, in (17), the sound *do*, which is not
695 commonly used to describe wind, is used in many variations:

696

697 (17) [Describing the strong wind that is storming through the village]

698 *Doddodo dodō do, dodoōdo, dodō* aoi kurumi mo fukitobase

699 MIM blue chestnuts also blow-away

700

701 Suppai Karin mo fukitobase *Doddodo dodō do, dodoōdo, dodō*

702 sour quince also blow-away MIM

703

704 "*Doddodo dodō do, dodoōdo, dodō; Blow away the green chestnuts too;*

705 *Blow away the sour quince too; Doddodo dodō do, dodoōdo, dodō...."*

706

¹² For this reason, it may be plausible to argue that highly lexicalised onomatopoeia contributes to ad-hoc concept construction.

707 (Miyazawa Kenji, *Kaze no Matasaburo* [Matasaburo of the wind], 1934: 1. English
708 translation by Strong and Colligan-Taylor, 2002)

709
710

711 Not only does this example contain creative onomatopoeia, it also has a rhythm that is
712 different to the repetition of two syllables often seen with Japanese onomatopoeia¹³.
713 That is, the sound of wind in (17) is expressed in a multimodal manner via the
714 combination of sound and rhythm. This is particularly effective for communicating the
715 sensory experience evoked in this scene. The voiced plosive /d/ sound, which is often
716 associated with heaviness, evokes the sense of a heavy and strong wind, while the
717 rhythm communicates the somewhat musical, continuous movement of the air. The
718 multimodal nature of onomatopoeia provides evidence that the link between a particular
719 sound and ‘meaning’ is determined by the way the communicator perceives the
720 particular sensory experience in the context of communication, and not because there is
721 a non-arbitrary link between sound and meaning¹⁴.

722 Earlier, we mentioned that onomatopoeia communicates sensory experience via sound.
723 This idea may enable us to distinguish between onomatopoeia in the strictest sense,
724 and mimetics. Typically, as noted above, onomatopoeia is defined as an imitation of
725 sound, while mimetics is defined as mimicry of non-sound. Thus, onomatopoeia, in the

¹³ The repetition of two syllables is also common in English diminutives e.g.,
doggy woggy, potty wotty, daddy waddy. We wish to thank an anonymous reviewer for these examples.

¹⁴ It is also interesting to see how these onomatopoeias are left untranslated in (17). The translator,
perhaps, felt translation of this onomatopoeia into another linguistic form would not achieve similar
effects.

726 strictest sense, is a case of *showing* within the same sensory domain, while mimetics is
727 a case of cross-modal *showing*, where the speaker uses sound as a medium to express
728 a sensory experience from a different sensory domain. Note that it can be very difficult
729 to determine which sensory organs a particular onomatopoeia is linked to. The cross-
730 modal nature of *showing* by the use of onomatopoeia (in a broad sense, including
731 mimetics) could account for the complex layers of expression in onomatopoeia.

732 The use of novel and cross-modal onomatopoeias is nothing special. Example (18) is
733 taken from a children's picture book about a little girl who is out in the field picking
734 flowers. While she picks flowers, a number of animals fall from the sky:

735 (18a)



736

737 Figure 1: Scene containing onomatopoeic expression for a fallen crocodile: *dozuzun*

738

739 (18b)



749

750

751 Figure 4: The use of onomatopoeic expression for a fallen mother: *kuru, suta*

752 (All examples from Izumi Motoshita and Kiyotaka Ishii, *Futtekimashita* [falling down]

753 2007)

754

755 Examples (18a) to (18c) denote scenes where heavy objects (i.e., animals) fall from the

756 sky.¹⁵ The standard onomatopoeic expression for fallen objects is *dosu(n) / dosa /*

757 *doka(n) / doshi(n)*. However, while examples (18a) to (18b) all include /d/, /b/ or /g/

758 sounds which are often associated with the sound of heavy objects falling, none of them

759 uses standard onomatopoeia for fallen objects. Instead, a variety of onomatopoeic

760 expressions that are made up from parts of established onomatopoeia are used. (18)

761 seems to be the combination of *doka* and *doshin*, while *dozuzun* in (18a), possibly

762 related to an established onomatopoeia for falling objects, *dosun*, seems to be

763 associated with the way the action was continuous (or lasted longer than a common

764 instantaneous fall). Moreover, (18c) includes *gorogoro*, onomatopoeia for the manner of

765 objects rolling, as well as a variation of *gashi* and *bako*, which are often used for a

¹⁵ We are most grateful for an anonymous reviewer's comment on these examples.

766 collision with heavy objects rather than a fall. The departure from highly lexicalised
767 onomatopoeia and the use of creative combinations of these sounds associated with
768 qualities in different modalities enables the communicator to convey different
769 impressions of different multi-sensory experiences. Example (18d), in contrast, does not
770 contain /d/. Instead, it contains the voiceless sounds /s/ and /k/, presumably to
771 distinguish the different instances of landing. It also has much a shorter duration,
772 indicating the lighter and more agile manner in which the event took place, where the
773 mother successfully landed like a gymnast. Examples such as these pose problems for
774 the sound-symbolism approach, as it is not clear if deviations from standard
775 onomatopoeic expressions and creations of new ad hoc ones would require new
776 categories. After all, most works taking the sound-symbolism approach concentrate on
777 the iconicity between 'sense / perception' and sounds, while seemingly overlooking
778 communication. To some extent, as we have repeatedly said, it is not surprising that the
779 link between perception and sound is not arbitrary – humans attempt to 'recreate' what
780 they perceive, using the tools available to them, which happen to be language and,
781 hence, onomatopoeia in these cases. This results in some resemblance and, hence, the
782 link between sound and meaning does not appear 'arbitrary'. However, this shouldn't
783 mean that we can pinpoint the 'meaning' of sound; the same sound occurs in a variety
784 of contexts and the interpretation of such onomatopoeia is context-dependent. Nor does
785 it necessarily mean that this alleged link between a sound and its interpretation in a
786 specific context is linked to the arbitrariness of language. In fact, it does not matter to
787 the current study if the link between verbal sound and linguistic meaning is generally

788 arbitrary or not; our aim is to explain how speakers use onomatopoeia, and how hearers
789 recover their intended interpretations.

790

791 As we have seen, it is claimed in Relevance Theory that communication is a matter of
792 degree, and that not all ostensive acts convey a single strongly-evidenced proposition.

793 In some cases, the intended interpretation is an array of weakly evidenced

794 assumptions, or even what appears to be a wide array of intangible, non-propositional

795 effects. This is what (at least, less-established) onomatopoeias communicate.

796 Onomatopoeia, as a tool for *showing* the communicator's sensory experiences, enables

797 the speaker to communicate the impression she experiences in a particular situation.

798 The (non) arbitrariness of the sound-meaning relationship matters little when it comes to

799 what is actually communicated. Whatever the link /b/ or /u/ has with our cognition (or

800 what we perceive in different domains of cognition), the fact is that the speaker uses

801 them as a tool to communicate an intended interpretation that will suit the particular

802 context. In other words, these expressions are just a pointer towards the non-

803 propositional perceptions of the speaker.

804

805 4.3 Context Dependency and Interpretation of Onomatopoeia

806 In (18), we saw how different expressions are used to represent similar sensory

807 experiences. In contrast, as example (19) shows, the same sound *don*, for example,

808 could be used to represent totally different manners of performing different actions:

809

810 (19a) *kare wa dondon to doa o tataita.*

811 he TOP MIM QUO door ACC hit

812 *'He banged the door.'*

813 (19b) Iroirona koto ni *dondon* chosen-shite hoshii.

814 various matter to MIM challenge- do want

815 *'I'd like you to challenge various new things.'*

816 While *dondon* in (19a) is a stylised imitation of the sound of banging a door, in (19b), it

817 is used to denote a more abstract concept: how a person deals with life. Examples (20)

818 and (21) demonstrate similar context-dependency of the interpretation of onomatopoeia.

819 Tsujimura (2001: 45) lists how *burabura* seems to convey a range of meanings as seen

820 in (20), and Mikami (2004: 3) reports similar elusiveness for *gorogoro*, as shown in (21):

821

822 (20a) Doa no totte ga *burabura*-suru.

823 door GEN knob SUB MIM-do

824 *'The doorknob is loose.'*

825

826 (20b) Ashi o *burabura*-si-naide suwarinasai.

827 legs ACC MIM-do-without sit

828 *'Sit without swaying your legs.'*

829

830 (20c) kooen o *burabura*-sita

831 park ACC MIM-did

832 *'I strolled in a relaxed way in the park.'*

833

834 (20d) Otto ga uti de burabura-site iru.

835 husband SUB home LOC MIM-is doing

836 *'My husband is wasting time at home (without doing anything important).'*

837

838

839 (21a) [The sound of thunder, or a thunder-like sound]

840 Enrai ga gorogoro-to narinagara dandan chikaduite kuru youda.

841 far-thunder SUB MIM-QUO roaring dandan approach-come looks-like.

842 *'It looks like thunder is gradually approaching.'*

843 (21b) [The manner in which heavy objects or bodies roll in sequence]

844 danborubako o katamukeru to, migotona jagaimo ga gorogoro

845 korogarideta.

846 cardboard box ACC tilt case impressive potatoes SUB MIM roll-out PAST

847 *'When we tipped the cardboard box, impressive-looking potatoes came*

848 *rolling out.'*

849 (21c) [To spend time without working or doing anything particular]

850 shisshoku shite inaka no oyamoto ni kaeri, ichinen hodo gorogoro-to kurashiteita.

851 lost-job did hometown GEN parents to return, a year about MIM-QUO lived.

852 *'(I) lost my job, went back to my parents, and lived doing nothing for about a year.'*

853

854 (21d) [The way an item does not have a special quality]
 855 ano teido no bijin nara, Tokyo ja gorogoro iru yo.
 856 That degree GEN beauty if, Tokyo in MIM exist SF.
 857 *'Beautiful ladies of that level will be plenty in Tokyo.'*

858
 859 (21e) [The feeling of discomfort when a foreign item enters]

860 gomi ga haitte me ga gorogoro suru.
 861 rubbish SUB enter eye SUB MIM do.
 862 *'Something got into my eyes and it hurts.'*

863 These examples show how the same sound can communicate similar 'meanings' or
 864 different ones, raising questions for the sound-symbolism approach.

865
 866 So far, we have seen examples where the differences in meaning are relatively obvious.
 867 However, differences in what onomatopoeia communicates can be very subtle.
 868 Examples (22) to (24) show the use of the Japanese onomatopoeia for silence:

869 (22)



871 Figure 5: The use of onomatopoeia for silence in picture book

872 (Mako Taruishi, *Atatakai Okurimono* [warm gift], 1992)

873 [annotation of the text on the top right of the page]

874 Mori no naka wa shin to shite kooru yona samusa desu

875 Forest GEN inside TOP MIM QUO do freeze as-if coldness COP

876 'It is very quiet and freezing cold in the forest.'

877 (Mako Taruishi, *Atatakai Okurimono* [warm gift], 1992)

878

879 (23)



880

881 Figure 6: The use of onomatopoeia for silence in manga

882 (Yuto Tsukuda and Shun Saeki, *Food Wars*, in Weekly Shonen Jump, issue no 16,
883 (15th March 2015): 256)

884

885 (24)



886

887 Figure 7: The use of onomatopoeia for silence in action manga

888 (ONE and Yusuke Murata, *One-Punch Man*, Volume 4 2012: 24-25)

889 Example (22) is taken from a children's picture book. In this scene, animals visit the
890 forest with Christmas gifts for the trees. Here, *shin* is used to communicate the
891 impression of a quiet morning in a winter forest. In (23), a scene taken from manga, a
892 long-vowelled version *shi-n* is used with 'silence' as the English annotation. Here, the
893 characters, who had been gossiping about the protagonist, fall silent when they realise
894 he is within earshot. *Shi-n* is also used in (24), this time to describe the disappearance
895 of the enemy¹⁶. What is interesting is not the fact that (variations of) *shin*
896 imitate silence. The point here is that all three situations that are suitable for *shin*

¹⁶ We are grateful to Olivia Rohan, PhD candidate in the School of Applied Language and Intercultural Studies, Dublin City University, for sharing examples (23) and (24).

897 communicate different ‘feels’ or impressions of particular silences. The silence in (22)
898 communicates the crisp and peaceful feel of a winter morning, while the silence in (23)
899 involves the awkwardness of the situation. The silence in (24), on the other hand, yields
900 a sense of unknown danger. The point is that the same onomatopoeia communicates a
901 range of different impressions in different contexts, and it is not clear how a sound
902 symbolism account explains such cases, especially where non-auditory sensory
903 experiences come into play. Examples (25a) and (25b) illustrate this point:

904

905 (25a) [Description of bread]

906 shittori amafuwa ren-nyu pan

907 moist sweet-MIM milk-bread

908

909 *‘moist, light, sweet milky bread’*

910 (cookpad.com, 2015)

911

912 (25b) [Caption for a model photo]

913 amafuwa girlie short

914 sweet-MIM girlie short

915

916 *‘sweet and airy girlie short-hair’*

917 (beauty.hotpepper.jp, 2015)

918

919 In (25a) and (25b), the onomatopoeia *fuwa* is combined with *ama*, which is part of the
920 adjective *amai* (sweet). In both cases, this semantically complex expression denotes
921 something airy and sweet. It is interesting that not only are the two constituents of this
922 compositional phrase from different sensory modes (taste and texture), but the
923 composite expression is used to describe items in different modes: one in taste (bread),
924 the other in vision (hairstyle). However, this is not particularly surprising, given Ward *et*
925 *al*'s (2006) argument that synaesthesia arises via a cross-modal channel rather than by
926 activating two unimodal regions. Ward *et al* (2006) show that stimuli from particular
927 domains can be 'translated' into others. Examples such as these show that
928 onomatopoeia can be used to communicate representations of experience in different
929 sensory domains.

930

931 As these examples show, from a communicative perspective, it does not matter whether
932 the link between sound and meaning is arbitrary or not . If there is a link between sound
933 and meaning, then a theory that appeals to such a link should be able to explain how
934 the hearer would choose one 'meaning' over the others in a specific context. As it
935 stands, no existing study on onomatopoeia seems to explain this. Relevance theory, on
936 the other hand, enables us to explain this in terms of the relevance-guided
937 comprehension heuristic: the hearer chooses one meaning over the others because of
938 considerations of relevance. What is interesting is the fact that humans are capable of
939 using such expressions as a tool to 'show' our perceptions to each other so that we can
940 share impressions and feelings, which are quite often difficult to put into words. Some
941 onomatopoeias might be more established as words and, of course, a link between

942 sound and meaning is established, as this stems from attempts by humans to 'recreate'
943 their sensory experiences.

944

945 5. CONCLUSION

946 In this study, we have analysed onomatopoeia as a communicative phenomenon, and
947 argued that it falls on the *showing* - *saying* continuum, as suggested by Wharton (2009).

948 We have argued that many onomatopoeias have elements of both *showing* and *saying*,
949 and all provide *direct* evidence for the first layer of information that the communicator

950 intends to point out. As onomatopoeia often communicates extremely vague

951 impressions which are hard to render in purely propositional terms, it falls within the

952 *expressive* dimension of communication (Blakemore 2008, 2011, 2015, Wharton 2009).

953 We have shown that so-called sound symbolism, or the systematic (non-arbitrary)

954 relationship between sound and meaning, is a result of the communicator's attempt to

955 recreate sensory experiences using whatever tools are available to him, and in

956 particular, by exploiting resemblances.

957

958 This communicative approach enables us to account for the subtle difference(s)

959 between closely-related onomatopoeias as well as the variety of 'meanings' a single

960 onomatopoeia can communicate.

961

962 This analysis, hopefully, sheds light on how *showing* can take place across different

963 modes and behaviours, which has not been explicitly investigated in the relevance-

964 theoretic literature before. This is made possible by treating onomatopoeia as a case of

965 *showing* in the modality of sound, while suggesting the possibility of treating mimetics
966 as a case of cross-modal *showing*. This should pave the way for further investigation of
967 the interface between verbal and non-verbal communication.

968

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976

977

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