Interjections, language and the 'showing'/ 'saying' continuum[*]

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Abstract

Historically, interjections have been treated in two different ways: as part of language, or as non-words signifying feelings or states of mind. In this paper, I assess the relative strengths and weaknesses of two contemporary approaches which reflect the historical dichotomy, and suggest a new analysis which preserves the insights of both. Interjections have a natural and a coded element, and are better analysed as falling at various points along a continuum between 'showing' and 'saying', where showing is relatively natural behaviour, and saying is properly linguistic.

1 Introduction

According to various definitions in the literature, interjections are a fairly heterogeneous class of items. Examples in English include *wow*, *yuk*, *aha*, *ouch*, *oops*, *ah*, *oh*, *er*, *huh*, *eh*, *tut-tut* (*tsk-tsk*), *brrr*, *shh*, *ahem*, *psst*, and even, according to some, *bother*, *damn*, (*bloody*) *hell*, *shit* (etc.), *goodbye*, *yes*, *no*, *thanks*, *well*. I will assume for the sake of argument that many of the above items *do* form a class, but will end up suggesting interjections are very disparate and should not all be treated as contributing to communication in the same way.

Existing studies of the semantics and pragmatics of interjections raise three main questions:

(1) What do interjections communicate?

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(2) How do interjections communicate?
(3) Are interjections part of language?

These questions have been approached from two largely dichotomous viewpoints. Ameka (1992), Wierzbicka (1992) and Wilkins (1992) argue that interjections are "semantically rich and have a definite conceptual structure which can be explicated" (Wilkins 1992: 120). They treat interjections as part of language, and propose complex semantic analyses; I refer to this as the *conceptualist* view. Others, notably Goffman (1981), contend that an interjection "doesn't seem to be a statement in the linguistic sense". Rather, it is "a ritualised act, in something like the ethological sense of that term" (1981: 100). Interjections, according to this view, are not part of language, and are analysed in terms of the socio-communicative roles they play, rather than any linguistic content they may have.

In the light of the above questions, the aim of this paper is to assess the relative strengths and weaknesses of these two contrasting approaches and to suggest a new analysis of interjections which preserves the insights of both.

In Section 1 I offer a brief characterisation of the notion of an interjection. In Sections 2 and 3 I outline the conceptualists' and Goffman's accounts, and suggest they are problematic in certain respects. In Section 4, as a first step toward a new account, and by way of addressing question (1), I discuss various theoretical distinctions made in the analysis of linguistic meaning. In Section 5 I elaborate this account using the framework of *Relevance Theory* (Sperber & Wilson 1986, 1995) and show how it may be applied to the analysis of interjections. The resulting account avoids many of the problems of a conceptualist approach and provides the beginnings of an answer to question (2).

A question that remains is whether this analysis can be maintained in light of the widespread intuition that interjections are *para*linguistic, rather than part of language proper. In Section 6 I examine the reasons for these intuitions, and outline a framework within which I propose to answer question (3).

In Section 7 I argue that to capture their marginal linguistic status, interjections are better analysed as occupying various points along a continuum between *showing* and *saying*, where showing is relatively natural behaviour and saying is properly linguistic. This sheds further light on questions (1), (2) and (3) above, and suggests a way in which the various types of interjection might be related despite their disparities. I then consider whether this new analysis can be reconciled with the proposals made in Section 5, and conclude with a brief discussion of the implications of my analysis for theories of human communication generally.

2 Interjections

Historically, interjections have often been seen as marginal to language. Latin grammarians described them as non-words, independent of syntax, signifying only feelings or states of mind. Nineteenth-century linguists regarded them as para-linguistic, even non-linguistic phenomena: "between interjection and word there is a chasm wide enough to allow us to say that interjection is the negation of language" (Gesch 1869: 295)[1]; "language begins where interjections end" (Muller 1836: 366). Sapir described interjections as "never more, at best, than a decorative edging to the ample, complex fabric [of language]" (1970: 7).

These views can still be found in the contemporary literature: Quirk, Greenbaum *et al*. (1985: 853) describe interjections as "purely emotive words which do not enter into syntactic relations"; Trask (1993: 144) describes an interjection as "a lexical item or phrase which serves to express emotion and which typically fails to enter into any syntactic structures at all"; Crystal (1995: 207) concurs – "an interjection is a word or sound thrown into a sentence to express some feeling of the mind".

There are exceptions, though. As noted above, conceptualists see interjections as properly linguistic, with rich semantic structures. However, whilst the conceptualists are agreed that since they have semantic structure, interjections are part of language, they do not agree on what exactly an interjection is. Introducing the conceptualist view, Ameka (1992) divides interjections into two main classes: *primary* and *secondary* interjections. Primary interjections are words that cannot be used in any other sense than as an interjection, e.g. *oops* and *ouch* in (4):

(4) Patient: Be careful with that needle!
Dentist: *Oops*.
Patient: *Ouch*!

These items are non-productive in the sense that they do not inflect and are not movable between word-classes. Secondary interjections "are those words which have an independent semantic value but which can be used…as utterances by themselves to express a mental attitude or state" (Ameka 1992: 111), e.g. *hell* and *shit* in (5):

(5) Dentist: *Hell*! I'm sorry.
Patient: *Shit*! Get the bloody thing out of my cheek!

[1] Quoted in Jespersen (1922: 415).

Both types of interjection are syntactically independent, in that they can constitute an utterance by themselves, and are only loosely integrated into the grammar of the clause containing them. When written, interjections are separated off from the main clause by means of a comma or exclamation mark. Furthermore, Ameka observes, they "always constitute an intonation unit by themselves" (1992: 108).

Wierzbicka's definition of an interjection correlates closely with Ameka's conception of a primary interjection. She suggests that it is preferable not to regard exclamations such as *shit* and *hell* as interjections, since their semantics should be included in the semantics of the nouns/verbs they are derived from, and I shall follow her on this. While Ameka's definition is too broad for her, for Wilkins it is too narrow. He uses a variety of hedges in his formal definition of interjections (1992: 124), which "catches elements that would be called 'secondary interjections'… 'interjectional phrases' and 'complex interjections' by Ameka" (1992: 125). There is thus no general agreement on how interjections can be defined.

Since Goffman (1981) does not regard interjections as part of language, he does not define them in the same way. In fact, for the majority of expressions I shall look at in this paper, he prefers the term *response cry*: "We see such 'expressions' as a natural overflowing, a flooding up of previously contained feeling, a bursting of normal restraints" (1981: 99). By 'response cry', Goffman is referring primarily to expressions such as *ouch*, *oops*, *yuk*, *wow*, *eh*, *ah*, *aha*, *oh* etc., which he regards as non-words. Since "nonwords as a class are not productive in the linguistic sense, their role as interjections being one of the few that have evolved for them…[they] can't quite be called part of language" (1981: 115). However, he does grant that since these cries are found cross-linguistically, and since certain forms stabilise within a given speech community, the term *semiword* might be more appropriate. Swear words are of course highly productive. But while conceding that they are probably more a part of language than non-words such as *oops* and *ouch*, he does not see this as reason to exclude them from the class of response cries, which exist on a continuum between display and properly linguistic items. One point of agreement between the conceptualists and Goffman is that:

- *an interjection is capable of constituting an utterance by itself in a unique, non-elliptical manner.*

Another point accepted by both camps is that interjections are tied to emotional or mental attitudes or states. From the examples on my introductory list, *wow* might be said to express excitement, delight, wonder etc., *yuk* to express disgust or revulsion, *ouch* a feeling of pain, *aha* surprise etc.. Wierzbicka suggests that alongside these

emotive and *cognitive* interjections, there are some *volitive* ones, used to express wants or desires: *psst*, *ahem*, *shh* and *eh*, for example, serve as requests for attention, quiet or confirmation. A second criterion, then, by which we might classify an expression as an interjection is that:

- *an interjection expresses a mental or emotional attitude or state.*

These two criteria seem to me to form an adequate working characterisation. In what follows I will retain the conceptualists' primary/secondary distinction, and focus mainly on primary interjections, which have no counterparts in other syntactic categories. Focussing on primary interjections also allows me to largely abstract away from linguistic expressions such as *yes*, *no*, *thanks* and *goodbye*, which could be seen as fitting the above criteria, but are not central to the claims of this paper. I will, however, consider the status of certain stylised imitations, such as 'ha ha', 'boo hoo' etc..

3 Interjections and concepts

According to the conceptualists: "interjections have real 'semantic' (i.e. propositional/ conceptual) content…" (Wilkins (1992: 119). They would answer questions (1) to (3) along the following lines: first, interjections communicate complex conceptual structures; second, communication is achieved principally by means of *encoding* conceptual structures; third, since interjections are viewed as having 'semantic' content, they are part of language. Below in (6) is an example of the kind of analysis the conceptualists propose, Wierzbicka's conceptual structure for *wow* (1992: 164):

(6) *wow!*
I now know something
I wouldn't have thought I would know it
I think: it is very good
(I wouldn't have thought it could be like that)
I feel something because of that

As can be seen from this analysis, conceptualist analyses of interjections are massively decompositional, and should be seen in the wider context of Wierzbicka's programme to develop a Natural Semantic Metalanguage. This approach is based on a set of around fifty primitives, designed to represent the innate building blocks of meaning: "research of recent years has proved Wittgenstein wrong…words can be rigorously defined"

(Wierzbicka 1994: 433). Wierzbicka extends this approach to interjections: "we can capture the subtlest shades of meaning encoded in interjections relying exclusively on universal or near-universal concepts such as 'good' and 'bad', 'do' and 'happen', 'want', 'know', 'say', or 'think'" (Wierzbicka 1992: 163).

Although many subtle and intuitively appealing analyses have been proposed within this framework, there are several problems with this approach. Firstly, there are serious objections to decompositional accounts of meaning. Fodor, Fodor & Garrett (1975) provide experimental psycholinguistic evidence against decompositions containing negative elements. If the concept [bachelor] decomposes into a complex negative concept, for example, [unmarried], then difficulties associated with processing and evaluating the validity of arguments containing negative items should arise with processing the word 'bachelor'. However, in tests, this was found not to be the case; (7a) is easier to process and evaluate than (7b):

(7a) If practically all the men in the room are bachelors, then few of the men in the room have wives.
(7b) If practically all the men in the room are unmarried, then few of the men in the room have wives.

This objection applies directly to the definition in (6), which also contains negative elements. While there are obvious problems applying the above test to interjections, which do not integrate into syntactic structure, and to definitions such as (6), which are too long to be satisfactorily embedded in their entirety, the proposal that *wow* contains a negative element is not supported by the data in (8ab); (8a) is easier to process and evaluate than (8b), suggesting it does not contain a negative element:

(8a) If the fireworks were good and he didn't say *wow*, he wasn't really impressed.
(8b) If the fireworks were good and he didn't say he wouldn't have thought he would know it, he wasn't really impressed.

Wierzbicka's structures for *oops* (163) and *yuk* (168) also contain negative elements, as do Wilkins' for *ow* (149) and *wow* (see (10) below), and the same objection applies to these structures too.

Fodor (1981) provides further arguments against decompositionalism. Very few words, he claims, are decomposable into satisfactory definitions: in this respect, the classic example 'bachelor' is exceptional. Fodor demonstrates that the task of analysing

other words into necessary and sufficient conditions is a hopeless one.[2] He takes the word 'paint' as an example, and argues that *x paints y* is not satisfactorily defined as *x covers y with paint.*[3] To support his claim, he raises a series of objections, each of which he attempts to counter with a more complex definition. When an explosion at a paint factory covers a passer-by with paint, the factory has not painted the passer-by: perhaps, then, the definition should stipulate an *agent*. However, in covering the surface of the ceiling of the Sistine Chapel, Michelangelo, while most certainly an agent, was not painting the ceiling, but rather painting *a picture on* the ceiling. With these counter-examples in mind, Fodor defines *x paints y* as meaning *x is an agent and x covers the surface of y with paint, and x's primary intention in covering the surface of y with paint was that the surface of y should be covered with paint in consequence of x's having so acted upon it*. However, he finds a counter-example to even this most complex definition. For when Michelangelo dipped his brush in his paint pot, the above conditions were satisfied, but he was not painting his paintbrush: "when it comes to definitions", Fodor concludes, "the examples almost always don't work" (1981: 290).

Along similar lines we can find counter-examples to the conceptualist structures for interjections. Firstly, the definition in (6) includes the line *I think: it is very good*. But this overlooks the fact that *wow* can just as easily express negative feelings, such as outrage, or disgust;

(9) *Wow*! That's outrageous!
Wow! That's disgusting!

This point is also is raised by Wilkins (150). To account for it, and the fact that neither Wierzbicka's nor Ameka's definition capture the immediacy of the kind of reaction expressed by an utterance of *wow*, he proposes the more complex structure below (1992: 151):

[2] See Wierzbicka, A (1996: 253-257) for her response to Fodor.

[3] Fodor's discussion (287-290) revolves around a definition presented in Miller (1978: 285).

(10) "*wow!*"
I_U have just now_T become aware of $this_I$ something,
that I_U wouldn't have expected
[or 'that I_U wouldn't have thought I_U would become aware of']
$This_I$ something is much more $X_{[Pr\text{-}of\text{-}this\ I]}$ than I would have expected,
and this causes me_U to feel surprised,
and to feel that I_U could not imagine this something being more $X_{[Pr\text{-}of\text{-}this\ I]}$
than it already is now_T.
I_U say '/ $\bar{\mathbb{T}}$/' because I_U want to show how surprised (and impressed)
I_U am feeling right now_T.

But as with Fodor's more complex definitions, there are still problems. For example, there are aspects of the meaning of *wow* that the structure in (10) does not adequately capture. Does '*this is much more X than I would have expected and…causes me to feel surprised*' 'rigorously' define the subtle shades of positive meaning that an utterance of *wow* might communicate?: from surprise and being mildly impressed, through amazement and astonishment to jaw-dropping bewilderment?; from satisfaction through enjoyment to absolute exhilaration? Also, is it true that *wow* communicates that the speaker feels they '*could not imagine this something being more X than it already is*'?: does a spectator at a firework-display communicate that he feels that this is the most spectacular firework he can imagine when he utters *wow*? Fodor's point that there are always counter-examples to be found, no matter how complex the definition, appears to hold for interjections too.

The second problem with the conceptualist approach is that an utterance of *wow* seems to communicate something altogether vaguer than the kind of structures they propose would predict: as suggested above, the meaning of *wow* surely cannot be 'rigorously defined'. This is not to deny that interjections can communicate a great deal. However, the range of communicative effects an utterance of *wow* might give rise to, when combined with different intonations and facial expressions, seems to go well beyond anything capturable in conceptual structures such as those proposed above.

An analogy with some of the other methods humans use to communicate is instructive here: paralinguistic phenomena such as tone of voice, or even non-linguistic behaviour. What a speaker might communicate by using an affective tone of voice seems too nebulous to be paraphrased by a fixed structure such as (6). A facial expression or gesture might convey more than a string of words ever could, but it is not obvious that it is *encoding* anything.

The context-dependence of interjections is the third problem for the conceptualist approach. Of course, (6) is not a fully propositional structure, because it contains

uninterpreted indexicals (*I*, *it*, *now*) which are assigned reference by means other than linguistic decoding. Wilkins employs a variety of deictic sub-scripts (see (10)) to account for this context-bound nature: "each deictic element must be filled referentially before the interjection can be fully meaningful" (1992: 137). But the communicative content of interjections is *so* context-dependent that it seems implausible to suggest that the only contribution of pragmatic/contextual factors to their interpretation is the assignment of reference to indexicals. The conceptualist approach fundamentally underestimates the contribution of pragmatic/contextual or *inferential* factors to the interpretation of interjections. I will return to this point below.

The vagueness and context-dependence of interjections also relate to a fourth, more general problem with the conceptualist account. As mentioned above, humans use a wide range of behaviours to communicate. Consider, for example, how an individual might convey a feeling of pain. Methods range from allowing someone to see an entirely natural and instinctive contorted facial expression, to a scream such as 'aaaargh', to a culture/language-specific *ouch*, to a fully linguistic 'it hurts like hell'. No one would propose that grimaces or screams encode conceptual structure, but communicate they do. Interjections retain an element of naturalness and spontaneity that suggests they fall somewhere *between* the natural and the linguistic. With tone of voice, facial expressions and even gestures, they share the property of being partly coded and partly natural: the conceptualist approach overlooks this.

A fifth problem with the approach is that intuitions do not support the claim that interjections encode the kind of conceptual structure the conceptualists propose. Consider (11) below, Wilkins' conceptual structure for *ow* (Wilkins 1992: 149):

(11) *"ow!"*

I suddenly feel a pain (in this part of my body) right now that I wouldn't have expected to feel.

I say '[!]' because I want to show that I am feeling pain right now [and because I know that this is how speakers of English can show (other speakers of English) that they are in pain (in a situation like the situation here)]

While one is happy to concede that the italicised expressions in (12ab) encode the same (or similar) concepts, it is not obvious that the same is true of those in (13ab), which do not *feel* synonymous in the same way:

(12a) Be careful with that *needle*!
(12b) Be careful with that *hypodermic*!

(13a) *Ow*! What did you do that for?
(13b) *I suddenly feel a pain* etc. What did you do that for?

It could, of course, be our unfamiliarity with the sheer complexity of the conceptual structure in (11) that is responsible for this intuition. However, even if we strip the conceptual structure down to its bare essentials, where *ow* encodes something like 'I feel pain', there are still problems. (14a), for example, intuitively involves a conceptual repetition, while (14b) does not:

(14a) I feel pain, I feel pain.
(14b) *Ow*, I feel pain.

And interjections are not interchangeable with their conceptual counterparts; they do not, for example, occur in embedded positions:

(15a) If I feel pain, I'll tell you.
(15b) * If *ow*, I'll tell you.

In a recent talk (Paris 1998), the philosopher David Kaplan addressed (among other things) the linguistic difference between 'I feel pain' and *ouch*. Better known for his work on indexicals, Kaplan sees similarities between them on the one hand, and expressives (interjections – *ouch*, *oops*) and epithets ('that bastard') on the other: all these expressions, he claims, are better analysed in terms of a *Semantics of Use* rather than (or as well as) a *Semantics of Meaning*. To account for the difference between 'I feel pain' and *ouch*, he introduces the notions of *descriptive* and *expressive* content: while 'I feel pain' has descriptive (truth-conditional/propositional) content, *ouch* has expressive (non-truth-conditional/non- propositional) content. This distinction is similar to the distinction drawn by speech-act theorists between describing and indicating, which I will consider further below.

Reasons of space prevent a fuller discussion of Kaplan's proposals here[4], but his notion of descriptive content does seem to parallel the conceptualists' notion of conceptual/propositional content. In this case, the descriptive/expressive distinction supports the above intuitions that one of the reasons *ow* and 'I feel pain' are not interchangeable in (14ab) and (15ab) is that *ow* does not encode conceptual structure. In Kaplan's terms, the *modes* of expression are different.

[4] See Iten (2000) for an overview.

The sixth problem relates to the fact that interjections do not contribute to the truth-conditions of the utterances that contain them. In fact, the non-truth-conditionality of interjections may be one of the factors responsible for the intuitions in (14ab). Consider (16ab):

(16a) I feel pain, the anaesthetic isn't working.
(16b) *Ouch*, the anaesthetic isn't working.

(16a) makes two assertions: it is true when and only when the speaker feels pain and the anaesthetic isn't working; (16b) only makes a single assertion, and is true if and only if the anaesthetic isn't working. The dentist could not respond to a patient's utterance of "*Ouch*!" in (4) with: "You're *lying*, you can't feel any pain". Conceptual representations have logical properties, and are capable of being true or false. As a result, a conceptual representation can contradict or imply other conceptual representations and act as input to logical inference rules. Since interjections do not seem to have these properties, it would be surprising if they encode fully conceptual structures.[5]

To summarise, there are six problems with the conceptualist approach: firstly, there are problems with decompositionalist accounts of meaning generally; secondly, the communicative content of interjections is vaguer than the proposed conceptual structures would predict; thirdly, the highly context-dependent nature of interjections suggests a substantial pragmatic contribution to their comprehension; fourthly, the approach overlooks the fact that interjections share with certain paralinguistic behaviours the property of being partly natural and partly coded; fifthly, the fact that they do not appear to be synonymous with their fully conceptual counterparts suggests they do not encode concepts; sixthly, the non-truth-conditionality of interjections suggests that a conceptual account is inappropriate, and that alternative semantic treatments should be explored.

4 Interjections and 'response cries'

> During the Wimbledon tennis championships in 1981, officials were confronted with an unusual problem. Some male players, notably Jimmy Connors, were regularly grunting loudly as they hit the ball. Their opponents…claimed the noises were distracting and were emitted deliberately to throw off their timing. When officials confronted

[5] This is not to say that all conceptual meaning is truth-conditional meaning. This issue is addressed more directly in Section 5 below. For further discussion see Wilson & Sperber (1993).

> Connors…he explained that he had no control over his grunting; it just happened when he hit the ball hard…Wimbledon officials then observed the different players, trying to discern which grunts were intentional and which were not. (Seyfarth & Cheney 1992: 78)

Goffman (1981) discusses interjections in terms of the socio-communicative roles they play rather than any linguistic content they may have. Of the questions that are the focus of this paper, he is concerned with questions (1) and (3), and not question (2).

He considers three examples of "roguish utterances", which violate the conditions that normal 'talk' observes: *self-talk, imprecations* (swearing) and *response cries*. It is the latter two which are relevant here, and Goffman's distinction between response cries such as *oops*, *ouch*, *wow* etc. and imprecations reflects the conceptualists' primary/secondary interjection distinction discussed in the last section.

Goffman would not support Jimmy Connors' claim that his grunts were unintentional. Indeed, his primary concern is the fact that such sounds are invariably intended for the benefit of others. The purpose of s*train grunts*, for example, is often to warn others to stand clear. He comments, "these sounds are felt to be entirely unintentional, even though the glottis must be partially closed off to produce them and presumably could be fully opened or closed to avoid doing so" (1981: 105): Goffman fifteen, Connors love.

Goffman classifies response cries according to the function they serve. Some are indeed more or less instinctive, natural reactions: the *transition display*, where a person uttering *brrr* when leaving a warm atmosphere for a cold one might not only do so to restore some sort of physical equilibrium but also to "fall into cadence with the others in the room" (1981: 101); the *spill cry*, where a person uttering *oops* on dropping something might do so because it has the effect of "downplaying import and hence implication as evidence of our incompetence" (1981: 102). According to Goffman, the main function of *ouch* (the *pain cry*) is to warn others that a threshold for pain is being reached, or about to be breached. Such response cries are not productive linguistically and are therefore peripheral to language proper.

Imprecations, by contrast, are highly productive linguistically. However, Goffman notes that an exclamation of *shit!* "need no more elide a sentence than need a laugh, groan, sob, snicker or giggle – all vocalisations that frequently occur except in the utterances ordinarily presented for analysis by linguists". Nor does it help "to define *shit!* as a well-formed sentence with *NP!* as its structure". He concludes that "imprecations, then, might best be considered…as a type of response cry" (1981: 112).

One of the most important points that Goffman raises is the notion of a continuum of elements between the properly linguistic and the non-linguistic, or between showing and saying. Since *ouch*, *oops* etc. are not productive linguistically, they "can't quite be

called part of language" (1981: 115). Because of their productivity, imprecations are part of language (17abc) (though recall that when used as interjections they are non-productive):

(17a) That dentist is shit.
(17b) The dentist got really shitty with me.
(17c) He was the shittiest dentist I've ever had the misfortune to see.

The distinction, however, is not clear-cut: "response cries such as *eek!* might be seen as peripheral to the linguist's domain…but imprecations…are more germane, passing beyond semiword segregates to the traditional material of linguistic analysis" (1981: 121).

One illustration of this proposal might be as follows: to show someone you are delighted with a gift you allow them to see your natural reaction, a smile; to tell them you are delighted you utter something like 'it's wonderful!'; to utter an interjection like *wow* is to communicate that you are delighted by adding a certain element of coding which takes it beyond mere display, but falls short of language proper. I will return to this point later below.

Despite regarding response cries as outside language proper, Goffman does not ignore their communicative adaptability. He points out that if you are being told by a friend about a particularly gruesome moment from their last trip to the dentist's, you might utter *ouch* sympathetically on their behalf.[6] Or it might be used as in (18):

(18) Dentist: That'll be £75 for the consultation and £30 for the cavity.
Patient: *Ouch!*

Here, Goffman is distancing himself from the view that primary interjections are a simple "natural overflowing". It is, after all, intuitively clear that while they are instinctive in some respects, *ouch* and most primary interjections are under our conscious control. If I bring a hammer down forcefully on my thumb, the four-letter word I utter is unlikely to begin with 'o'.[7] A person screaming in agony is not screaming *ouch*. We should be careful not to overestimate the expressive, instinctive nature of these primary interjections.

[6] Both this use and Goffman's 'warning' example are "pragmatically determined variants" (150n.) according to Wilkins. He says nothing of the use in (18).

[7] Though, as Goffman points out, it might if I were helping out at the local playgroup.

There are many interesting ideas in Goffman (1981). The question of what interjections communicate is, in some cases, beautifully explicated. The problem, in terms of the questions asked in this paper, is that he says nothing about *how* interjections communicate. In this respect, whilst it affords some insights that are certainly worth preserving, his analysis does not provide a satisfactory theoretical alternative to the conceptualist approach. In the next section, I will look at some analyses of linguistic meaning which offer some alternative to the conceptualist account of interjections.

5 Interjections and meaning: what do interjections communicate?

Over the last 30 years, philosophers of language and linguists have explored the idea that not all linguistic meaning is descriptive, or conceptual. At various times the distinction has been made between *truth-conditional* and *non-truth-conditional*, or *propositional* and *illocutionary* content, and between *describing* and *indicating*, or *saying* and *conventionally implicating*. If interjections do not encode descriptive, or conceptual meaning, it is worth exploring whether they can be analysed as non-truth-conditional indicators of some kind (see Wilson & Sperber (1993) for further discussion).

Of course, interjections are not the only example of non-truth-conditional meaning. Other examples are non-declarative sentences such as (19ab), which in contrast with (19c), are not capable of being true, or false:

(19a) Does Lily go the dentist?
(19b) Lily, go to the dentist!
(19c) Lily goes to the dentist.

Under the Speech-act approach of Austin (1962), Searle (1969), Bach & Harnish (1979), sentences both express propositions, which *describe* the world, and may contain non-truth-conditional expressions, which *indicate* the speech act (illocutionary act) a speaker is intending to perform, or the propositional-attitude a speaker is expressing. The difference in meaning between (19abc) is captured by proposing that although all three sentences express the same proposition – *Lily goes to the dentist at time X* – they differ in their illocutionary force: (19a) has the force of a question; (19b) of a request for action; (19c) of an assertion.

Speech-act semanticists claimed their approach could deal with a whole range of non-truth-conditional linguistic expressions, including mood indicators – the linguistic features which encode interrogatives and imperatives (word-order in (19abc)), and various types of illocutionary or attitudinal adverbials, for example those in (20ab):

(20a) *Sadly*, I don't have any anaesthetic left.
(20b) *Regrettably*, the tooth will have to be extracted.

The philosopher H. Paul Grice also investigated non-truth-conditional phenomena (1975, 1989), in particular discourse connectives such as 'but' and 'moreover', which he analysed as performing higher-order speech acts. Grice distinguished between *what is said*, the truth-conditional content of an utterance, and what is *implicated*. Via the Co-operative Principle and Maxims a hearer could derive *conversational implicatures*, and recover meaning beyond the decoded content of an utterance. This fits with clear intuitions that one can 'say' one thing and 'mean' another, as in (21):

(21) Jack: Would you like some ice cream?
Lily: (regretful tone of voice) I've got toothache.

In (21), the fact that Lily does not want any ice cream is a *non-conventional* conversational implicature. However, Grice also proposed that part of what is implicated by an utterance is *conventionally* implicated, where a conventional implicature is stipulated as part of the grammar. Discourse connectives, such as 'but', conventionally implicate the performance of higher-order illocutionary speech acts. So while a speaker might be asserting (22b) and (22c) in an utterance of (22a), what she is conventionally implicating is that the two assertions are to be contrasted.

(22a) Liz is dentist but she's quite nice.
(22b) Liz is a dentist.
(22c) Liz is quite nice.

Relevance Theory (Sperber & Wilson 1986, 1995) is an account of communication which builds on the foundations that Grice laid. It is, however, based on a fundamental principle of human cognition rather than Grice's more socially motivated maxims. Humans are geared to look for relevant information, information that will interact with existing mentally represented information and bring about cognitive effects in the form of inferences that would not otherwise have been possible. The relevance of information is defined in terms of cognitive effects gained and processing effort expended.

The relevance theory *explicit/implicit* distinction reflects the one Grice drew between saying and implicating; however, the two are not exactly parallel (see Carston 1998 for further discussion). In relevance theory, *explicatures* are recovered via a mixture of linguistic decoding *and* inference: the more decoding involved, the more explicit the communicated content of the utterance. The basic explicature, the proposition expressed

(roughly equivalent to Grice's *what is said*), is rarely recovered by disambiguation and reference assignment alone, and the construction of *higher-level explicatures* requires even more pragmatic enrichment, such as the embedding of the basic truth-conditional content under a speech-act or propositional-attitude description. In this way, aspects of both speech-act theory and Gricean pragmatics are retained within the relevance theory framework.

To illustrate this approach, consider how Jack might interpret Lily's utterance in (21). Having recovered the proposition expressed, he might embed it under a speech-act description, as in (23a), or a propositional-attitude description, as in (23b). These would be higher-level explicatures of Lily's utterance in (21).

(23a) Lily is saying that she's got toothache.
(23b) Lily regrets that she's got toothache.

The framework as presented so far suggests a way we might approach question (1). Interjections might be indicators of higher-level explicatures, containing speech-act or propositional-attitude information. A candidate for an interjection that might encode a similar sort of information to interrogative mood indicators, although it is not as integrated into the syntax, is *eh*. Thus, in relevance-theoretic terms, a patient interpreting the dentist's utterance in (24a) might form the higher-level explicature in (24b), or perhaps (24c):

(24a) Dentist: So you're having three teeth out, *eh*?
(24b) The dentist is asking whether I'm having three teeth out.
(24c) The dentist is requesting confirmation that I'm having three teeth out.

In many languages such particles appear to be fully grammaticalised. Wilson & Sperber (1993) point out that certain dialects of French have an interrogative particle 'ti' which performs the function carried out by word-order in other dialects, and might be analysed along similar lines to the one proposed above. Indeed, in English a similar questioning attitude toward the proposition is often conveyed by the word 'right?', or the tags 'aren't you?' or 'are you?'.

In terms of Searle's (1979) taxonomy, these expressions would be analysed as performing *directive* speech acts: others from my introductory list that might be analysed along similar lines are volitive interjections, *shh* and *psst*. However, the taxonomy contains another class of speech act relevant to the analysis of interjections – *expressives* – in which a speaker conveys an emotional attitude to the proposition expressed: "the illocutionary point of this class is to express the psychological state specified in the

sincerity condition about a state of affairs specified in the propositional content" (1979: 15).

A speech-act theorist might analyse the interjection *alas* as belonging to this class. Thus, if Lily had prefaced her utterance of (21) with *alas*, instead of sighing regretfully, she would have expressed her attitude of regret to the propositional content more explicitly.

Wilson & Sperber (1993) propose that that English interjection *huh* might be used to encourage the construction of higher-level explicatures involving a dissociative attitude toward an attributed utterance or thought. Consider (25a), which might lead a hearer to derive the higher-level explicature in (25b):

(25a) Lily: Dentists are people too, *huh*!
(25b) It's ridiculous to think that dentists are people too.

Particles that might be analysed in a similar way are widespread cross-linguistically. Japanese (Itani 1995) and Sissala (Blass 1989) have hearsay particles, and respectively, which mark propositions as attributed to another speaker (or thinker). Sadock & Zwicky note that Lahu has " a very large number of particles that indicate attitudes, rational or emotional, toward a proposition" (1985: 161).

Since a feature of interjections in general is that they express attitudes, we might consider the extent to which these attitudes are similar to those conveyed in examples such as (20ab). An utterance of (20a) might lead a hearer to embed the proposition expressed under speech-act or propositional-attitude descriptions and construct the higher-level explicatures in (20a') and (20a''):

(20a') The dentist is saying that there is no anaesthetic left.
(20a'') The dentist regrets that there is no anaesthetic left.

In a similar way, utterances of (26a) and (27a) might lead a hearer to form the higher-level explicatures in (26b) and (27b):

(26a) *Aha*! You're here.
(26b) The speaker is surprised that I am here.[8]

[8] I will address the question of whether the hearer might or might not form the higher-level explicature 'the speaker is *saying* that he is surprised I am here' in Section 6 (the same applies to (27ab)).

(27a) *Wow*! You're here.
(27b) The speaker is delighted that I am here.

In speech-act terms these can be analysed as performing expressive speech acts. In fact, all the examples I have considered so far seem to fit the speech-act framework, in that there appears to be an attitude, emotional or otherwise, being conveyed toward the proposition expressed – satisfying Searle's definition. We could devise similar examples featuring other expressions from the introductory list: *yuk*, *oh*, *aha* and *er*.

Consider (28ab), however:

(28a) *Yuk*! This mouthwash is foul.
(28b) *Wow*! This ice cream is delicious.

Here, the attitudes being expressed are not being expressed to an embedded proposition. Utterances of these sentences would not lead a hearer to form the higher-level explicatures in either (28a') or (28b'):

(28a') The speaker is disgusted that the mouthwash is foul.[9]
(28b') The speaker is delighted that ice cream is delicious.

Instead, the attitudes are being expressed to objects rather than propositions: in the case of *yuk*, to the mouthwash (or more particularly the taste of it), and in the case of *wow* to the ice cream (or the sight or taste of it). As another example, consider (29):

(29) Child: (taking foul-tasting medicine) *Yuk!*

Here, the interjection stands alone as an utterance in its own right in the unique non-elliptical manner characteristic of interjections. Not only is the attitude not directed at any embedded propositional content, there *is* no propositional content to embed. For this reason, it is hard to analyse (29) as conveying a higher-level explicature or expressive speech act since there is no linguistically encoded logical form to embed under it.

In fact, we might ask whether what is communicated by the interjections in (28ab) and (29) are emotional attitudes at all; in (29) in particular, what the interjection communicates seems to be something more like a 'feeling' or a 'sensation'.

[9] A dentist might chastise her sloppy assistant by saying 'I am disgusted that this mouthwash is foul', but would not communicate this by uttering (28a).

Rey (1980) defines 'emotion' in terms of a process of interaction of the various elements that he regards as comprising emotional states: *cognitive*, *qualitative* and *physiological*. Thus, sadness might be defined as the interaction between a cognitive element – the knowledge that something has happened which you would prefer not to have happened, or the belief that something which you would prefer not to happen is going to; a qualitative element – that feeling of being 'down' (perhaps accompanied by behaviour consistent with feeling this way, such as drooping shoulders and a flat tone of voice); and a physiological element – chemical changes in the brain (in the case of sadness or depression, depletion of norepinephrine). Whilst emotional states crucially involve the cognitive, as well as the qualitative and physiological elements, feeling or sensations need not. Seen in these terms what is communicated by *yuk* in (29) is indeed a feeling or sensation rather than an emotion, and not an emotional attitude or propositional-attitude proper. It seems, then, the framework as being presented so far is too restrictive: perhaps it is not possible to account for the meaning of interjections *solely* in terms of propositions and propositional-attitudes, as existing speech-act and relevance-theoretic analyses seem to suggest.

As well as the example in (29), other interjections, such as *ouch* (see (4)), are difficult to account for in terms of propositional attitudes; these might also be said to communicate feelings or sensations rather than emotions: the speaker simply reveals something about her internal state. In Kaplan's terms this state is *expressed* rather than *described*. In cognitive terms, we might cash this out by proposing that there is something *non-representational* about interjections. This proposal would be consistent with the arguments presented in Section 2, and is one I explore in the next section.

The question of what interjections communicate, then, requires various answers. In some cases they might be analysable in terms of speech-act or propositional-attitude information they convey. In this regard, interjections such as *eh* and *huh* pattern with discourse particles such as those I mentioned earlier. The interjection *alas* also might express a propositional-attitude proper.

Other interjections (e.g. in (26a), (27a)) also express propositional attitudes: emotional attitudes expressed toward propositions in the sense suggested by Searle above. However, in some instances what an interjection expresses might be directed toward a percept or object which is the cause of a qualitative or physiological response, and not to an embedded proposition (e.g. (28ab)). In these cases, whether or not what is communicated is an *emotional* attitude is dependent on there being a cognitive element interacting with the qualitative and the physiological. The cognitive element is not always present: in fact, it could be argued that interjections are *primarily* geared to the percepts and objects that are the causes of particular responses, and only by extension to

propositions. Finally, some uses of interjections (see (29), (4)) clearly communicate feelings or sensations, and not propositional attitudes proper.

An adequate analysis of what interjections communicate should take account of all these observations. It should also address the fact that whatever interjections communicate – propositional attitudes, emotions, feelings or sensations – it does not seem to be done via encoded conceptual representations. I turn to this question in the next section.

6 Interjections and procedures: *how do interjections communicate*?

Diane Blakemore (1987) reassesses Grice's account of discourse connectives within a relevance-theoretic framework by introducing a distinction between *conceptual* and *procedural* encoding. Having argued against conceptualist accounts of interjections, I now want to explore the possibility of a procedural approach.

Most words encode concepts, constituents of conceptual representations. Most of these contribute to the truth-conditions of an utterance; they have logical properties, can act as input to inference rules, and are used to *describe* the world. Some words, however, do not map onto concepts. Rather than encoding the constituents of conceptual representations, the function of these words in Blakemore's view is to constrain the inferential processes involved in constructing or manipulating these representations. They guide the comprehension process by narrowing the hearer's search space and *indicating* the general direction in which the intended meaning is to be sought. There are a vast number of possible cognitive effects the speaker might have had in mind, and since processing effort is a factor in achieving relevance, such expressions will contribute to relevance by reducing the hearer's effort in finding the intended effects.

Consider Blakemore's analyses of the discourse connectives, 'so' and 'after all'. Two possible interpretations of (31a) would be spelled out more explicitly in (31b) or (31c):

(31a) Jack visits the dentist every six months. His teeth are good.
(31b) Jack visits the dentist every six months; *so* his teeth are good.
(31c) Jack visits the dentist every six months; *after all*, his teeth are good.

On Blakemore's account, in (31b) the word 'so' encodes a procedure which leads the hearer to process the two propositions in such a way that the first is a premise from which the second follows as a conclusion. In (31c) the expression 'after all' encodes a procedure which leads to the second proposition being understood as evidence for the

first. Blakemore's analysis classified them as examples of procedural expressions constraining inference at an implicit level. Wilson & Sperber (1993) extend this analysis to pronouns, mood indicators and discourse particles, which they see as examples of procedural expressions constraining the construction of explicatures. Thus, for example, the construction of the higher-level explicature in (26b) would be encouraged by a procedure encoded in *huh*.

Not all non-truth-conditional meaning is procedural, however. Consider once more example (20b):

(20b) Regrettably, the tooth will have to be extracted.

Despite the fact that 'regrettably' in (20) is non-truth-conditional, there are reasons to think that it does encode something conceptual (Ifantidou (1993)). Firstly, it has conceptual counterparts which *do* contribute to the truth-conditions of utterances containing them (32ab):

(32a) The incident at the dentist's was extremely *regrettable*.
(32b) The dentist *regrets* her actions.

Secondly, illocutionary adverbials such as 'frankly', which do not contribute to truth-conditions in (33a), combine compositionally with other expressions to form complex adverbial phrases, as in (33b):

(33a) Frankly, she's an absolute menace.
(33b) To put it frankly, and more frankly than I would dare if she had her drill in my mouth, she's an absolute menace.

This compositionality is to be expected if these adverbials encode conceptual representations, but it is hard to explain on a procedural account. This suggests an important modification to speech-act analyses, in that not all non-truth-conditional 'indicators' seem to work in the same way.

In the case of interjections, however, we already have good evidence against conceptual accounts. They have *no* truth-conditional counterparts; they are linguistically *non*-productive and are not subject to compositional semantic rules. I would therefore like to explore the idea that rather than encoding conceptual structure, they encode procedural information which 'points' in the general direction in which relevance should be sought.

What exactly does procedural information look like? Drawing on the representational/computational distinction we might characterise it as providing computational *instructions* to the hearer: this is how it is often described in discussions of discourse connectives such as 'although', 'however', 'so', 'after all'. With other non-truth-conditional expressions, however, it might be better to view procedural content in a broader sense, as simply *activating* certain types of representations, or contextual assumptions, or expectations about cognitive effects. Thus, a pronoun might activate a certain class of candidate referents from which the hearer must choose. We might characterise the procedural information encoded by mood indicators in this broad sense, as activating certain propositional-attitude descriptions, which the hearer is expected to draw on during the comprehension process.

One might, in fact, adopt the broader view for discourse connectives too. For what discourse connectives, mood indicators and pronouns have in common is that rather than *translating* into the constituents of conceptual representations[10] they activate something. What is actually activated may be computational deductive rules, or contextual assumptions, or simply expectations about cognitive effects. In each case, the function of the non-truth-conditional expression is to help the comprehension process by reducing the search space the inferential processes are working in.

Along these lines, the procedural information encoded in interjections might activate various attitudinal concepts or types of concepts. Under such an account *wow* would not encode a concept that a hearer translates as 'X is delighted'. Instead *wow* activates a range of attitudinal descriptions which involve delight, surprise, excitement etc.. In the case of *yuk*, the attitude will be one of disgust; in the case of *aha* it will be an attitude of surprise etc.. In the case of *eh* what will be activated is a range of interrogative propositional-attitudes; in the case of *huh*, it will be a range of dissociative attitudes, and so on.

What a hearer does with the attitudinal or speech-act information activated might vary in different situations. In utterances of (24a) and (25a), a hearer might use it to construct a higher-level explicature. Utterances of (26a) and (27a) might also lead to propositional embedding, though it may be that many interjections are primarily geared to suddenly perceived objects and events, and only by extension to propositions.

This kind of account squares nicely with the observation made in the last section that there is something non-representational about interjections. Also, it means we might see some interjections as working in a similar manner to discourse particles – 'please', 'well', 'then', 'now' – with which they share a lack of syntactic integration.

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[10] In the case of the pronouns, the *output* of the procedure does provide a constituent. The constituent itself, however, is not encoded in the linguistic meaning of the pronoun.

It would also resolve five of the six problems I discussed with the conceptualist account in Section 2: firstly, the approach is clearly non-decompositional; secondly, the result of comprehension may be vague, since a wide range of possible propositional-attitude descriptions may be equally activated, and there may be no way for the hearer to choose among them.

As to the third problem, the precise conceptual structure actually arrived at by the hearer will be different in different contexts, since the particular interpretation is the outcome of several overlapping inferential processes it constrains, rather than simply being decoded. Even in the case of *eh*, one of the best candidates for encoding a particular speech-act – i.e. a request for confirmation – it would be unsatisfactory to propose that this is what is encoded. Consider (34):

(34) Dentist: I'm going to polish your teeth.
Patient: *Eh*?

Here, there is no suggestion that the particle functions to request confirmation in the same way as it does in (25a). The patient is simply requesting the dentist to repeat what she has said.

The fifth and sixth problems with the conceptualist account are also solved. The non-truth-conditional status of interjections, which is hard to explain on a fully conceptual account, is to be expected if they encode procedures. And under a procedural account, there is no expectation that *ouch* and 'I feel pain' will be synonymous.

While solving these problems, the procedural account preserves the conceptualist intuition that there is a coded element to interjections, responsible for their language-specific nature, and Goffman's intuition that interjections are more than mere natural display. It also allows us to incorporate aspects of the functional treatment that Goffman proposes by suggesting a plausible way in which the communicative content he describes might actually be communicated: via a combination of procedural encoding and inference.

However, one of the problems I raised with the conceptualist account remains. I claimed that it overlooks the fact that interjections seem to share with para-linguistic or non-linguistic behaviours the property of being partly natural and partly coded. As yet, other than proposing that interjections might work by activating certain attitudinal descriptions, I have said nothing about this partly natural side, nor how it might be reconciled with the coded side. For while we intuitively regard words that encode procedural meaning such as 'so', 'after all', 'however', 'moreover', 'I', 'he' etc. as properly linguistic items, there remains a doubt as to the linguistic status of interjections.

Another issue that I have not yet addressed is the fact that interjections, as we have seen can constitute utterances in their own right in a unique non-elliptical manner; in such cases the higher-level explicature account proposed above would be problematic, since a higher-level explicature, by definition, takes an embedded proposition as its object.

In fact, the two issues are not unrelated, and a way of resolving both would be to see interjections themselves as working more in the manner of paralinguistic phenomena, which might contribute to the construction of higher-level explicatures when used by a hearer to develop a linguistically-encoded logical form, or might communicate at an implicit level when used alone.

However, so far in the literature on the conceptual-procedural distinction, procedural meaning has only been attributed to linguistic expressions, and the question of whether a procedural account is compatible with paralinguistic status has not been addressed. In the next section I examine in more detail the linguistic status of interjections; in Section 7 I argue that being paralinguistic is not incompatible with encoding procedural information, and develop an account which suggests that there is a dissociation between procedural and linguistic meaning.

7 Interjections and language: are interjections part of language?

To know a language is to know a certain set of rules or principles: language is a rule-governed system. It is also a creative, combinatorial system with a finite number of elements (words), which can be combined to create novel utterances of arbitrary length. The set of rules a speaker of a language knows constitutes a mentally represented *grammar*, a *code* pairing phonological and semantic representations of sentences (Chomsky 1986, 1995).

Under a 'code' model of communication, languages are seen as sets of sentences which encode propositional structures, and communication is seen as achieved by coding and decoding. The conceptualist approach is reminiscent of such a model: the interpretation of interjections is seen largely as a coding-decoding process.

Grice (1975, 1989) was the first to propose a viable alternative to this code-based model view of communication, and to treat communication as an intelligent, *inferential* activity. To Grice, understanding utterances was a matter of working out the intentions behind them. Relevance theory builds on Gricean foundations: communication is achieved by a speaker giving evidence of an intention to inform the hearer of something, and the hearer inferring this intention. Of course, there is a coded element in linguistic communication, but the linguistically encoded content of an utterance, i.e. the output of

the grammar, is merely a starting point for rich inferential comprehension processes guided by expectations of relevance.

Narrowly defined, then, knowing a language is having a mental grammar, but we may also want to think of 'language' in wider terms. Human production and understanding of language is mediated by the grammar in conjunction with other cognitive systems. The ability to produce and understand language in this wider sense involves the ability to perform various pragmatic processes of interpretation. It also includes the ability to attribute intentions and beliefs to others.

These observations are crucial in any attempt to answer question (3) above. For while interjections undoubtedly contribute to the interpretation of utterances, the same can be said for the range of para- or non-linguistic phenomena discussed at various points in this paper: although interjections may contribute to linguistic communication, it does not necessarily follow from this that they encode anything linguistic. For an interjection to be regarded as a part of language in the narrow sense discussed above, the rule-governed system must play some role: if interjections are part of language, they must encode *linguistic* information, i.e. that coding must be stipulated in the grammar.

Ameka summarises the conceptualist viewpoint on question (3) thus: "different interjections do have different degrees of integration within the linguistic systems of languages.[…] But the underlying commonality shared by all words which satisfy our characterisation of interjection is that they are linguistic signs" (Ameka 1992: 113). It is clear from the first part of this quote that although they see interjections as part of language, even the conceptualists allow for some borderline cases. Ameka argues there are three respects in which it might be argued interjections are peripheral to language. These provide a convenient framework within which to approach question (3).

The first property of interjections that Ameka singles out is their 'paralinguistic' nature: "there is no doubt that there is an intimate connection between interjections and gestures in general" (Ameka 1992, 112). Wierzbicka describes interjections as 'vocal gestures', which fits Goffman's intuitions that they are paralinguistic, and to a certain extent my own that they are partly natural as well as partly coded.

Wierzbicka does not, however, see this as militating against a semantic analysis, and proposes to capture her intuition by omitting the 'I say' component from her proposed conceptual structure (simplified as in Wierzbicka 1992: 162/163):

(35a) *Ow*
I feel pain.

(35b) *I feel pain*
I say: I feel pain
I say this because I want to say how I feel.

This would remove interjections from the class of assertions, and leave them free to perform other speech-acts – as expressives, for example. I find this an interesting proposal, and more in line with my own intuitions than other aspects of the conceptualist analysis. It seems to echo Kaplan's descriptive/expressive distinction, in that (35b) describes (conceptualises) a feeling, while (35b) just expresses it.

Recall examples (26a) and (27a), repeated below:

(26a) *Aha*! You're here.
(26b) The speaker is surprised that I am here.
(27a) *Wow*! You're here.
(27b) The speaker is delighted that I am here.

A hearer of these utterances might well be led to construct higher-level explicatures such as (26b) and (27b) above. Given Wierzbicka's intuitions, and the framework discussed in Sections 4 and 5, the issue is whether he would also construct the higher-level explicatures in (36ab):

(36a) The speaker is saying that she is surprised that I am here.
(36b) The speaker is saying that she is delighted that I am here.

My intuition is that he would not, any more than he would construct (36a) and (36b) when a speaker says "You're here!" and accompanies it with a surprised facial expression or a smile. This seems to support Wierzbicka's claim and might be taken as evidence that interjections are indeed paralinguistic. However, Wierzbicka is not dissuaded from her conclusion: "interjections – like any other linguistic elements – have their meaning, and…this meaning can be identified and captured in rigorous semantic formulae" (1992: 188).

Wilkins disagrees with Wierzbicka's claim that interjections do not amount to 'saying'. On the contrary, he suggests, native speakers are happy to accept that some interjections are 'said', and presents evidence from his own informal survey to support this. He found that native speakers regarded (37ab) as acceptable, but (37cd) as unacceptable. These latter expressions are, he argues, better reported using the verb 'go' (37ef):

(37a) "Ouch!", she said.
(37b) "Wow!", she said.
(37c) ??"Psst!", she said.
(37d) ??"Shh!", she said.
(37e) "Psst", she went.
(37f) "Shh!", she went.

He concludes that "primary interjections are not merely vocal gestures" and "interjections like *wow* and *ow* do have an 'I say' component in their decomposition, and may be regarded as illocutionary acts" (Wilkins 1992: 147/8). He also claims his survey provides evidence that "interjections that match the typical word phonology of English are regarded by native speakers as words" (Wilkins 1992: 148).

Here Wilkins touches on the second factor Ameka mentions: phonological atypicality. His test in (37) suggests that there is a line beyond which items that are sometimes considered interjections (and are included in my original list) are not classified by native speakers as part of language. Vowel-less vocalisations such as *psst* and *shh* are two examples. Other examples from my introductory list include *brrr*, *hmm*, – the dental click usually orthographically realised as *tut-tut* (or *tsk-tsk*), and *ahem*, often referred to as an interjection but in practical terms usually little more than an ostensive throat clear. *Oops* also fails to fit standard English phonotactics (English words do not begin with [11]). Similarly *ugh* differs from *yuk* in that the former ends in a velar fricative that is not linguistically productive in English.

Essentially, Wilkins' argument is that if an interjection can be reported using the verb 'say', then it is part of language. However, the situation is more complicated than he suggests, and the argument is not convincing. Not only can we use the reporting verb 'say' with many expressions which are clearly not words of the speaker's grammar, in metalinguistic uses such as direct quotation, but 'go' is a perfectly acceptable verb with which to report linguistic utterances (38abc):

(38a) And so the kid would say, "Blah blah blah?" [tentative voice with rising intonation] and his father would say "Blah blah blah" [in a strong blustery voice], and they would go on like that.[12]
(38b) She looked at me and said "moi, je deteste les dentistes".

[11] I abstract away from a number of dialects in which the word 'up' begins with ĭ ĭĕ

[12] Clark & Gerrig (1990: 780), quoted in Wilson (1999).

(38c) So he comes into the pub and he goes "where's that money you owe me?". "What?", I goes, "I don't owe you anything".

Furthermore, a combination of the conceptual approach and Wilkins' claim that phonologically atypical interjections are not words leads to considerable problems in accounting for the borderline expressions that Ameka alludes to. I don't think I am alone in having *yugh* as well as *yuk* and *ugh* in my interjectional repertoire. Under Wilkins' account, *yuk* is part of language proper and communicates via its precise encoded conceptual structure: to suggest it does so solely because of this, however, leaves no account of *yugh*, which must surely communicate in a similar manner.

The third and final issue in deciding whether or not interjections are part of language is their syntax-independence and non-productivity. Interjections are, as it is often put, 'thrown' (interjected) into utterances. They exist on the edges of utterances, always separated off from the main clause and rarely integrated into intonational units. They do not inflect or combine with other morphemes to change word-class, and often stand alone as utterances in their own right, seemingly without linguistic structure. If the crucial factor in deciding the linguistic status of interjections is whether or not the information they putatively encode is stipulated by the grammar, the fact that interjections operate independently of syntactic structure suggests they operate independently of the mental grammar.

In my introduction I stated that for the sake of argument I would assume that interjections represented a unified class. It should be clear by now, however, that this is not the case. As a further complication, consider (39ab):

(39a) At the Annual Dentist's Convention Mrs. Pulley *wow*ed the audience with her encyclopaedic knowledge of gold teeth.
(39b) That is without doubt the *yuck*iest mouthwash I've ever tasted.

Wow and *yuk* are, of course, not secondary interjections: the linguistically productive expressions *to wow* and *yucky* (and *yummy*) are derived from the interjections rather than the other way round. This phenomenon complicates the picture even further, and the harder one looks, the more complicated it becomes.

Consider the utterances containing *huh* and *eh* in (24a) and (25a): although one can not argue that these expressions are syntactically integrated, there is a sense in which they have to be 'thrown in' in a certain position to mean what they do. With regard to phonology, recall Ameka's quote that "[interjections] always constitute an intonation unit by themselves" (1992: 108). However, despite the comma in (40), *oh* could be the

nucleus, or alternatively the pre-head of a larger intonational unit encompassing the whole phrase.

(40) Lily: That dentist's a complete sadist.
Jack: *Oh*, I don't know. [as in 'she isn't really']

They are such a disparate, non-unified group of expressions that the question whether 'interjections' are part of language may be impossible to answer satisfactorily; an adequate account of interjections should reflect this heterogeneity. It should also reflect the evidence I presented in this section, which suggests that many interjections are indeed paralinguistic.

As mentioned in Section 5, the question remains whether, having argued against a conceptual and for a procedural approach, the procedural approach might be maintained in spite of this uncertain linguistic status. In the next section I focus on this *natural* side of interjections, and see if it might be reconciled with the *coded* side.

8 Interjections and meaning: *the 'showing'/'saying' continuum*

8.0 An inferential model of communication provides more than just an account of *linguistic* communication. The inferential comprehension processes which take linguistic utterances as their input do so not because linguistic utterances are the only form of communicative stimulus, but because linguistic stimuli are one of a wide range of stimuli used in any form of intentional communication.

To reconcile the natural and the coded side of interjections, in this section I propose that they might be seen as falling at various points along a continuum of communicative behaviours between showing and saying. The continuum also better captures the heterogeneity of the class.

8.1 Showing and saying

Showing is relatively natural behaviour, in which spontaneous, instinctive reactions are recruited to serve a communicative purpose. A smile is a good example: Jack gives Lily a gift and Lily allows Jack to see her natural, spontaneous reaction, a smile. From this Jack can infer that Lily likes the gift and feels happy. *Saying*, by contrast, is properly linguistic: Jack gives Lily a gift and Lily responds by uttering "it's beautiful". Jack decodes the linguistic form of the utterance and develops it inferentially to derive the

basic explicature or proposition expressed – what Lily *says*; among the things her utterance might implicate is the fact that she likes the gift and feels happy.

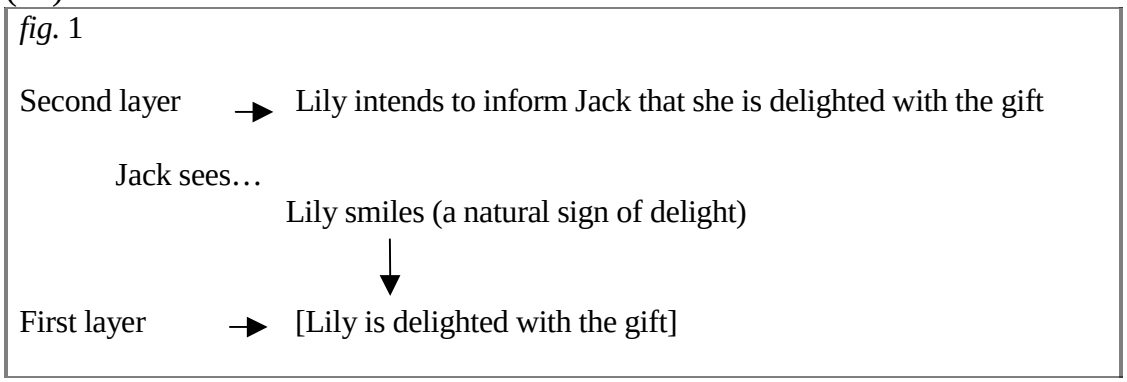
When Lily receives her gift she might utter *wow*. She communicates delight with a degree of procedural encoding which, by activating certain attitudinal concepts, points him in the direction of the appropriate conceptual representation: this takes it beyond mere showing. To a certain extent, however, her reaction is natural, spontaneous and instinctive: it therefore falls short of saying.

But what precisely does it mean to say that a certain communicative behaviour is *natural*? How might *showing* be best characterised in theoretical terms?

Fundamental to an inferential model of communication is the ability humans have to attribute thoughts, intentions and beliefs to one another: the ability to entertain *metarepresentations*, representations of other representations. An act of overt communication – what Sperber & Wilson call *ostensive-inferential* communication – is achieved by a speaker providing evidence of her intention to inform the hearer of something. In any act carried out with the intention of providing evidence of an intention to inform – any *ostensive* act – there are two layers of information to be retrieved. The first layer is the information being 'pointed out', the second consists of the information that the first layer has been pointed out intentionally. Lily's smile provides direct evidence of the first layer of information she wishes to convey: she *shows* Jack that she is delighted with the gift. Actually, that fact that she has shown him intentionally may matter little to Jack, such is the directness of the evidence she produces. He can see she is delighted without necessarily paying attention to her intention to inform him of this (see *fig.* 1 (41)):

(41)

fig. 1

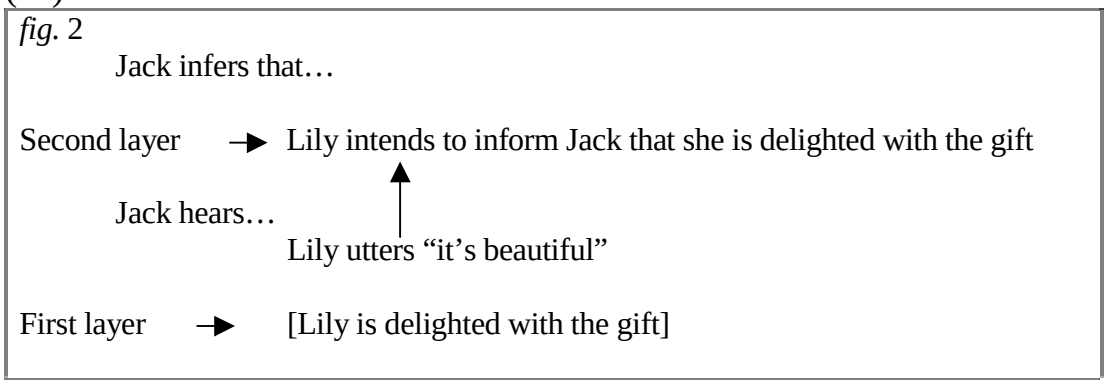


In a clear case of showing, an ostensive act directly reveals the first layer of information. To the extent that we can say Lily's spontaneous smile 'means' she is happy, we might characterise it, following Grice (1957, 1982), as an example of *natural* meaning. Lily's

linguistic utterance constitutes a very different kind of meaning. Here, Jack's recognition of Lily's intention to inform him is vital, since her utterance does not provide direct evidence of the fact she is delighted. Her utterance provides only indirect evidence of the first layer of information, and bears directly on her intention to inform Jack, who cannot get to the first layer of meaning without going via the second. This is a typical case of what Grice would call *non-natural* meaning (*fig.* 2) (42):

(42)

fig. 2



According to Sperber & Wilson (1986/95), both (41) and (42) are cases of ostensive communication. I want to argue that showing and saying are not dichotomous; there is a continuum between the two.

8.2 Degrees of showing

Grice (1957) contrasted non-natural meaning with natural meaning such as smoke meaning fire, and spots meaning measles. He devised several tests to illustrate the distinction, two of which I exemplify below. According to Grice, the fact that (43a) is a plausible paraphrase of the utterance '*spots mean measles*' and (43b) is not, shows this is a case of natural meaning (adapted from Grice 1989: 214):

(43a) The fact that he has those spots means that he has measles.
(43b) ??Those spots mean "he has measles".

Utterances of this type but which *can* be plausibly paraphrased using direct quotation – such as '*his utterance meant "he has measles*"' – are cases of non-natural meaning. Grice noted "among the things which have natural meaning, besides black clouds, spots on the face, symptoms of this or that disease, are certainly forms of behaviour: things

like groans, screeches and so on, which mean, or normally mean, that someone or something is in pain or some other state" (1982: 232). However, he was less expansive on natural meaning as carried by human behaviour than he was on the examples mentioned above. Nonetheless, according to the Gricean tests 'natural' behaviours do carry natural meaning. Consider the shiver-response described in (44ab):

(44a) The fact that he is shivering means he is cold.
(44b) ??Shivering means "I am cold".

The test shows that shivering is a case of natural meaning. However, since human communication is intention-driven, these natural behaviours might be exaggerated or developed and recruited for use in ostensive communication. This is one reason to believe there are degrees of showing. Consider the following example. Jack and Lily are sitting in a pavement café in London in spring. The sun disappears behind an ominous-looking cloud. She knows he feels the cold a lot less than her (or at least pretends to), but it is suddenly very cold, and she is keen to go inside. She feels herself beginning to shiver, and to ensure that Jack notices, she exaggerates her natural behaviour, perhaps accompanying it with the vocalisation intimately linked with the shiver-response, *brrr*.

While we might characterise this as an instance of natural meaning as shown in *fig*. 1 (41) above, there is a clear sense in which by exaggerating her behaviour, Lily is drawing attention to her intention to inform Jack that she is very cold. Crucially, by making her shiver ostensive she also increases the likelihood that Jack will infer that, actually, she wants to go inside. In fact, in human communication generally, the situation is probably quite often less clear cut than as presented in *fig*. 1 (41). Lily might, for example, choose to make her smile more ostensive, in order to make it absolutely clear that she is delighted with the gift. Or she might give a half-smile and say "it's beautiful" in a less than enthusiastic tone of voice, to implicate that she is not.

This suggests there is a continuum of cases from what we might call 'pure' to more mixed cases of showing. In one sense, whether a particular behaviour is a pure case of showing or not depends on the extent to which it is exaggerated or developed: in other words, the extent to which the audience must pay attention to the intentions behind it. Notice also that natural behaviours can be faked. Consider a situation parallel to the example above, in which Lily fakes a shiver. In this example I think we might be less inclined to regard '*Her shiver means "I feel cold"*' as unacceptable.

Historically, many interjections have arisen as exaggerations or developments of entirely natural responses. In *The Expression of the Emotions in Man and Animals*

(1872)[13] Darwin considers whether "the sounds which are produced under various states of mind determine the shape of the mouth, or whether its shape is not determined by independent causes, and the sound thus modified" (96). In describing the natural human expression of surprise he notes: "Certainly a deep sound of a prolonged *Oh!* may be heard from a whole crowd of people immediately after witnessing an astonishing spectacle" (97). He goes on: "If, together with surprise, pain be felt, there is a tendency to contract all the muscles of the body, including those of the face, and the lips will then be drawn back; and this will perhaps account for the sound becoming higher and assuming the character of *Ah!* or *Ach!*" (97). Despite the fact that interjections that express pain are language specific – English *ouch*, French *aïe*, Spanish *ay* – they do all begin with the same mid-front vowel that Darwin describes as being naturally expressive of pain. Darwin's observations of how humans naturally express surprise and astonishment (and wonder) suggest that certainly *oh* arises out of a natural behaviour. And he notes other natural expressions of surprise: "the dropping of the jaw and open mouth of a man stupefied by amazement" (284); the fact that "when thus affected, our mouths are generally opened, yet the lips are often a little protruded" (285). Given these observations, *aha* and *wow* might also be viewed as developments of natural behaviours.

When discussing the natural expression of disgust, Darwin says: "With respect to the face, moderate disgust is exhibited in various ways…by blowing out of the protruded lips; or by a sound as of clearing the throat. Such guttural sounds are written *ach* or *ugh*…" (256). The interjection *yuk*, then, is closely related to the natural expression of disgust.

This goes some way to explaining why interjections, although not entirely involuntary reactions, *feel* so instinctive both to speaker and hearer. Standing alone in the kitchen, one just does not utter 'I feel pain' if the kitchen knife slips, one utters *ouch*. If you hear a spontaneous utterance of *ouch*, the evidence for that first layer of information, that the speaker is in pain, is relatively direct.

8.3 Degrees of saying

The fact that different forms appear cross-linguistically – *ouch, aïe* and *ay* – however, suggests that interjections are also partly coded; we might therefore examine the extent to which there are *degrees of saying*.

Relevance theory claims that utterances may be more or less *explicit* depending on how much of the speaker's intended meaning is linguistically encoded and how much is

[13] All quotes are from the 1998 edition (see bibliography).

left for the hearer to infer. Compare three ways Lily might reply to Jack's question "Do you like the gift?":

(45a) I think it's wonderful. I like it very much and I feel absolutely delighted.
(45b) (smiling happily) I do.
(45c) I've always wanted an electric toothbrush.

What Lily encodes in (45a) is an incomplete logical form that Jack will decode and develop inferentially into a fully propositional form. In (45b) what she encodes is very fragmentary indeed, and Jack is left to do considerably more inferential work to infer the explicit content of her utterance. In (45c) what she encodes is a conceptual representation that Jack must not only develop into an explicature, but complement with an implicature to derive an answer to his question.

An inferential model of communication predicts that the communicative process will be flexible in this way. In fact, it predicts that there will be degrees of explicitness not only at utterance level, but at word-level too: a particular word may not be used to communicate exactly the concept it encodes, but another related concept which is more relevant in a given context. In such cases, the hearer constructs an *ad hoc* concept guided by considerations of relevance. Consider the word 'bear', the concept for which might be *narrowed* in (46a) to pick out a sub-set of objects which are bears (e.g. polar bears), or *loosened* in (46b) to include objects which are not really 'bears' at all (e.g. large hairy dogs):

(46a) The bear walked out across the frozen sea.
(46b) I loved my Old English Sheepdog: it was a bear.

The fact that there are degrees of explicitness might be one source of evidence that there are degrees of saying.

Another source of evidence, more pertinent to interjections, is the existence of words which carry an element of 'natural' meaning, where the evidence provided for the first layer of information is more direct. Onomatopoeic language is an obvious example – 'clink', 'clank', 'splash', 'sizzle'. In fact, iconic language generally: stylised imitations of non-human sounds – *buzz*, *miaow*, *moo*, *oink*; also, stylised imitations of human sounds – *ha ha*, *tee hee*, *boo hoo*, *boo*, *hiccup*. In these last examples, an element of coding separates clear instances of showing, such as laughing or crying, from clear instances of saying, such as 'I am amused' or 'I am crying'. The link here between sound and meaning is not entirely arbitrary or non-natural.

On this link between sound and meaning, Grice observed that: "Any link will do…and the looser the links creatures are in a position to use, the greater the freedom they will have as communicators, since they will be less and less restricted by the need to rely on prior natural connections" (1982: 236). In such stylised imitations, and in onomatopoeic expressions generally, the link between sound and meaning is not *as* loose as in most other words.

The fact that some of the above stylised imitations are linguistically productive suggests there are degrees of saying in a slightly different sense to degrees of explicitness. This is illustrated in (47abc):

(47a) The bacon was *sizzling* in the pan.
(47b) The cows were *mooing*.
(47c) He *hiccuped* loudly.

This is not to suggest that there are degrees of coding, or to attempt to blur the distinction between coded and non-coded. What it suggests is that there might be different types of coding. In the above examples there is an iconic element, and the hearer is given more direct evidence of the first layer of meaning. Since many interjections are exaggerations or developments of natural expressions of emotion, as was shown in the previous section, they might also be regarded as stylised imitations, and iconic in some way.

In fact, even some of those vocalisations which I have been treating as interjections, but which cannot be shown to be derived from natural expressions of emotion, are iconic to some extent. *Shh* does not convey emotion: but it could be argued that its voiceless quality, together with the fact that it can be uttered continuously, make it a particularly suitable sound for urging someone to be quiet.

More evidence that these expressions exist along a continuum, which may reflect some kind of historical progression, is that there appears to be a gradual increase in stylisation/codification among them. Consider *shh*, *shush* and 'hush'; consider the progression noted earlier from *ugh* to *yugh* to *yuk* (to 'yucky'). Similar progressions can be seen from [ostensive throat clear] to *ahem* to the highly stylised t̄ t̄ , or from [dental click dental click] to *tsk tsk* to *tut tut* (to 'he tutted loudly'). More evidence might be the differing degrees to which interjections and particles are integrated into various languages.

8.3 Natural codes

There is one more aspect of the natural/non-natural distinction that might have a bearing on the analysis of interjections. Since Grice was not concerned with natural meaning as carried by human behaviours, he did not mention cases where the natural behaviour itself might have evolved for the purpose of signalling, where the primary evolutionary function of these natural behaviours was communicative.

A smile is an interesting case. Although it is a natural response, there seems to be a crucial difference between allowing someone to see you shiver and infer that you are cold, and allowing someone to see your smile and infer that you are happy. The primary function of the shiver response is to generate heat by rapid muscle movement. Smiling, however, evolved as a signalling activity (Van Hooff 1972, Hager & Ekman 1979), and its primary evolutionary function is to carry meaning. The meaning a smile carries is none-the-less natural for this; it need not be derived by attributing intentions to the person smiling, but it is not natural in the same way.

The Gricean tests applied to smiles yield interesting results:

(48a) The fact that she is smiling means she is happy.
(48b) ?A smile means "I am happy".

It seems to me that if (48b) is not absolutely fine, it is certainly more acceptable than (44b). As well as natural meaning of the kind conveyed by shivering, we might investigate the extent to which there is natural/*coded* meaning. The eyebrow flash, another universal, natural behaviour with a signalling function (Eibl-Eibesfeldt 1972) is another candidate for this kind of meaning.

The Gricean tests applied to interjections yield similar results to those we get from (48ab):

(49a) The fact that he uttered *ouch* means that he feels pain.
(49b) *Ouch* means "I feel pain".
(49c) The fact that he uttered *yuk* means that he feels disgusted.
(49d) *Yuk* means "I feel disgusted".

These observations are at the very heart of this paper; however, as we have seen, accepting (49b) and (49d) need not commit us to saying that these interjections encode their meaning as *concepts*, any more than accepting (48b) commits us to saying that a smile encodes a conceptual structure.

Exactly what kind of information smiles, spontaneous expressions of emotion and universal behaviours such as the eyebrow flash might encode has, as far as I know, not been discussed in cognitive terms. One obvious possibility is that the encoding might be procedural, particularly given the broader characterisation of procedural meaning – as "activation" – I offered earlier. This proposal has particularly interesting implications for the analysis of interjections, since it would entail a double dissociation between linguistic meaning and procedural meaning: *linguistic meaning need not be procedural* – it can, in fact usually does, involve the encoding of conceptual representations; *procedural meaning need not be linguistic* – it can be encoded by facial expressions and perhaps even gestures.

This proposal has interesting implications for the questions I am considering here. The conceptualists argue that interjections encode concepts and are therefore part of language. My response has been to argue that this simple view is false: interjections might not encode concepts, but they might still be part of language. With this in mind, I argued that interjections are better seen as encoding procedures, though it was left open whether this idea could be reconciled with the paralinguistic/natural side of interjections.

In order to try and capture the intuition that interjections are also partly natural, I then looked in more detail at how we might characterise natural meaning. One aspect of natural meaning is that a speaker provides direct evidence of the first layer of information being conveyed. However, this investigation revealed that as well as traditional Gricean natural meaning, there are also examples of natural/coded meaning: in other words, *natural* does not preclude *coded*. The position we have reached now, then, is that yes, interjections encode procedures, but it does not automatically follow that they are part of language. The procedural account offered in Section 5 *is* compatible with the observations in this section that interjections are partly natural.

8.4 The showing/saying continuum

The showing/saying continuum works on two levels. On the first level, the intentions behind the exaggeration or stylisation of a 'natural' behaviour in an act of communication might make the result a less than pure case of showing. Historically, the accumulation of these individual intention-driven acts might lead to the stabilisation in a population of what began as an innovation, and may offer an account of the diachronic development of interjections.

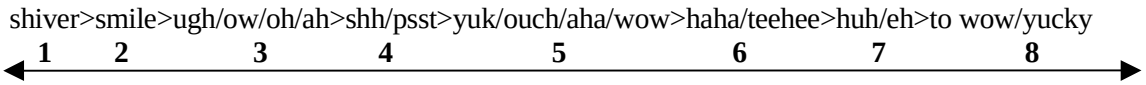
On the second level, more general properties of communicative behaviours are described. Some behaviours are better examples of showing or saying than others: at the showing end, natural behaviours differ in that the primary evolutionary function of some is to communicate, while others have a purely physiological function and are co-opted to

serve a communicative function; at the other end of the continuum the link between sound and meaning in properly linguistic items may have an iconic element, rather than being entirely arbitrary. There are degrees of showing and degrees of saying.

Since it works on these two levels, representing the continuum graphically is not easy. Nonetheless, I have attempted to do so below. I would, however, add the following comments. Positions that expressions or behaviours occupy on the continuum are not fixed. This reflects the fact that as well as describing more general properties of communicative behaviours (the second level referred to above), the continuum also captures the fact that in different situations the same behaviour might be used to communicate in different ways.

The positions of *huh* and *eh* on the continuum below are intended to reflect their use in (24a) and (25a), where they are more integrated into, or at least more closely tied to, properly linguistic utterances. Putting these expressions near the saying end of the continuum also illustrates the close relationship between certain interjections and fully grammaticalised particles:

showing ***saying***



1 Natural – yawn
2 Natural/coded – eyebrow flash
3 Natural expressions of emotion – groans/screeches (possibly natural codes as in **2**)
4 Phonologically atypical (possibly iconic) vocal gestures
5 Stylised imitations of natural expressions of emotion
6 Stylised imitations
7 Interjections functioning as particles
8 Language proper

9 Conclusion

I began by asking three questions. I can now summarise my answers.

What do interjections communicate? Interjections communicate attitudinal information, relating to the emotional or mental state of the speaker. In some instances the attitude might be genuinely propositional: say, an attitude of questioning or regret, or

an emotional attitude directed at embedded propositional content. However, sometimes the emotional attitude is expressed not toward an embedded proposition, but toward a percept or object which is the cause of a feeling or sensation. In some instances, what is expressed is merely a feeling or sensation with no propositional content. In these latter cases, what is communicated is extremely vague: in relevance-theoretic terms it will involve only a marginal increase in the *manifestness* of a wide range of assumptions, where an assumption is *manifest* to an individual if it is capable of being inferred. Such vagueness is captured by the procedural account proposed earlier: the greater the range of attitudinal concepts activated by the procedure, the greater the vagueness.

How do interjections communicate? Interjections are partly natural and partly coded. They fall at various points along a continuum between showing and saying. The continuum captures the partly natural, partly coded nature of interjections, together with their heterogeneity and marginal linguistic status. Seeing interjections in this way, we should not be surprised that the attitudes they communicate are not always propositional. Nor should we be surprised that they are too nebulous to be paraphrased in fixed conceptual terms: they are partly natural responses.

In fact, there is good reason to suppose that some interjections are derived from natural expressions of emotion. However, the element of stylisation or coding takes them beyond pure showing. This stylisation is also present in some aspects of language proper, at the saying end of the continuum. Other interjections are not 'natural' in this sense, but may also be iconic – e.g. *shh*: these also fall between showing and saying. With all interjections, the evidence provided for the first layer of information is more direct than with saying, but less direct than with entirely natural behaviours.

I have argued that the coded element of interjections is procedural, and that what is activated by the use of an interjection might be used by the hearer in a variety of different ways. When combined with a sentence, it may function in a similar way to other paralinguistic phenomena, by encouraging the construction of higher-level explicatures. Some of these paralinguistic behaviours may themselves contain a coded element (certain facial expressions, gestures), which may also be seen as encoding procedural information.

In an utterance which consists of *just* an interjection, and expresses no explicit proposition, a hearer can only use the procedural information to derive implicatures: what the attitude is, what it is to, what the emotional/mental state of the speaker is. In this respect, interjections pattern with paralinguistic and non-verbal behaviours generally; for while these might help a hearer construct higher-level explicatures when interpreting a linguistic utterance, they cannot communicate in the same way when used alone as an ostensive stimulus.

Non-verbal communication is typically weak and vague; an adequate theory of human communication should accommodate these vaguer aspects. I showed earlier how an inferential model of the kind proposed in relevance theory predicted a certain amount of looseness in the communicative process: "The type of co-ordination aimed at in most verbal exchanges is best compared to the co-ordination between people taking a stroll together rather than to that between people marching in step…" (Sperber & Wilson 1998: 199).

If this is the case in *verbal* exchanges, the most precise form of human communication, then there is likely to be even greater looseness in non-verbal communication: it has been a recurring theme of this paper that language is not the only means by which humans make clear their intention to communicate. Given the kind of attitudes that interjections communicate, it seems clear that this intention is not always reducible to an intention to communicate simply a single proposition and propositional attitude.

To account for vague communication, including the communication of impressions, emotions, attitudes, feelings and sensations, Sperber & Wilson propose that the informative intention might be better characterised as an intention to modify a hearer's *cognitive environment*: this includes "not only all the facts that he is aware of, but also all the facts he is capable of becoming aware of, in his physical environment" (1995: 39).

Consider the following example. Jack and Lily have returned by ferry to the Greek island on which they first met. They disembark. Having scanned the quayside, he smiles at her; then he looks back ostensively to the quayside again, urging her to look too. She gazes along the quayside. What is Jack drawing her attention to? Is it the *taverna* at the water's edge, the octopus drying in the breeze, the ragged cats sniffing the nets, the bougainvillea in the *kastro*, the brilliant light? Is it one, many or *all* of these things?

Lily does not turn to Jack and say "What do you mean?". She acknowledges him and smiles back, because she understands him. The sights, sounds and smells of her *physical* environment interact with her knowledge and her memories to alter her *cognitive* environment, provoking further thoughts, memories and feelings similar to his own. This is all that Jack intended: to convey an impression. Sometimes showing is preferable to saying. On other occasions, when the intention might be to communicate something equally intangible, and equally hard to convey with words – emotions, feelings, sensations – it might be preferable to use a behaviour that falls somewhere between the two.

Are interjections part of language? Since there is a continuum involving different combinations of natural and coded information, we would expect expressions to move

along it. In historical terms, when an interjection moves far enough along the continuum it may become relatively productive ('to wow', 'yucky'), and some of its uses may be properly linguistic (verbs, adjectives etc.). When used as an interjection, though, given its similarities to paralinguistic phenomena, it seems to retain its independence from the mental grammar.

The answer, then, is no, interjections are not part of language; but the continuum does offer a framework within which they might be seen as on the edge of language, integrated to a greater or lesser extent: to use Goffman's expression – *semiwords*. This conclusion is further supported by aphasiological evidence of a dissociation between interjections and language proper. Goodglass (1993) demonstrates that interjections such as *ouch* remain within the repertoire of certain grave aphasics. If one can have interjections, but not language, it is hard to see how the former can be viewed as part of the latter.

In neurological terms, there is other evidence of a dissociation between language and interjections: use of interjections is associated with phylogenetically ancient limbic sub-cortical circuitry linked with emotion, as opposed to the more recent cortical structures implicated in the production of language proper.[14] As well as confirming the link between emotions and interjections, touched on at various times in this paper, we might also consider the extent to which this suggests that the showing/saying continuum might be viewed from a diachronic, as well as a synchronic perspective, i.e. as an evolutionary time-line, as well as a snapshot of human communicative behaviours. Recent work on the evolution of metarepresentation by Dan Sperber (forthcoming), of social intelligence by Byrne & Whiten (1988) and Cosmides (1989), of language by Dunbar (1998) and Donald (1998) suggests that it is indeed the case that showing came *before* saying.

From a diachronic perspective, then, the showing/saying continuum may have evolutionary implications. From a synchronic point of view, it may lead to a better characterisation of some of the vaguer elements of human communication, of which the use of interjections is but one example.

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[14] The neurological distinction between the rational neocortex and the limbic system is the psychological distinction between cognition and emotion neurologically instantiated. Sebeok (1972) observes: "[I]n speech, emotions may be codified in *analog* terms, in which case neocortical as well as limbic or neurohumoral areas are simultaneously involved; other, i.e. 'rational' aspects of existence are codified in *digital* terms" (1972: 10) (my emphasis). The analog/digital distinction may be one worth adding to the *non*-linguistic/linguistic coding and the conceptual/procedural coding distinction. It might, for example, account for the difference between linguistic/procedural encoding and *non*-linguistic/procedural encoding.

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