

05. Linguistic analysis of impairment data.

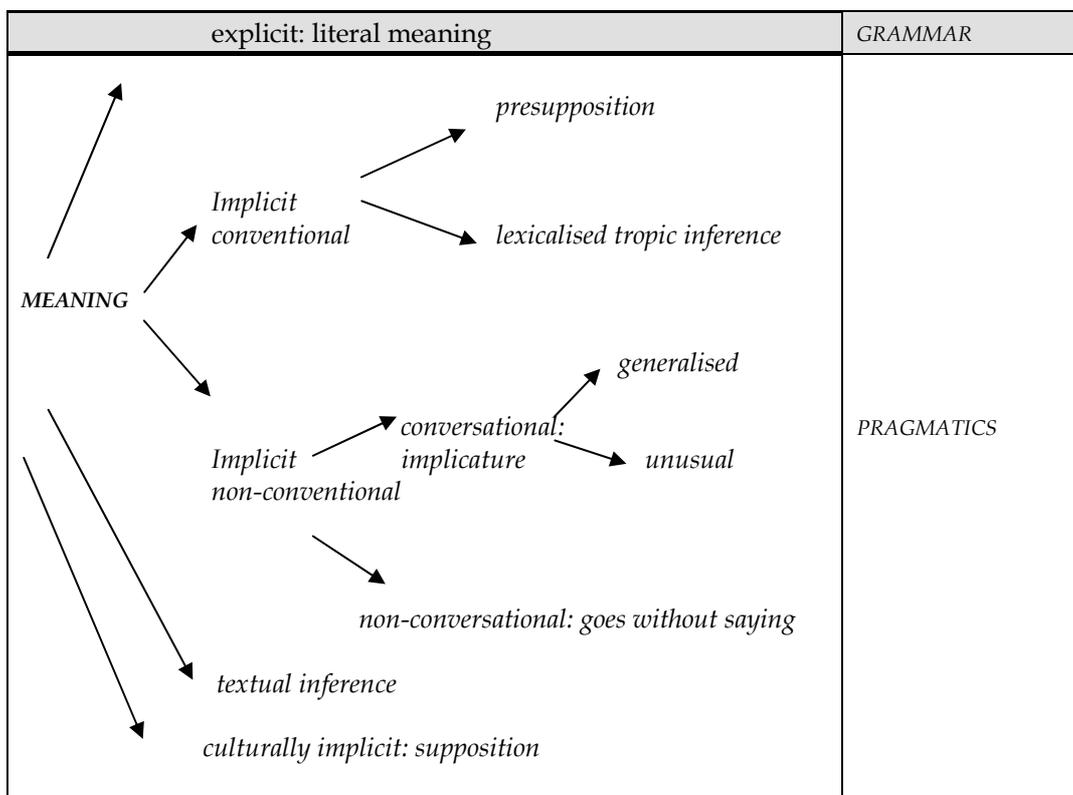
05.02. Enunciative analysis of impaired speech samples: enunciation and utterance, enunciation and reception.

Locutionary, illocutionary and perlocutionary speech acts.

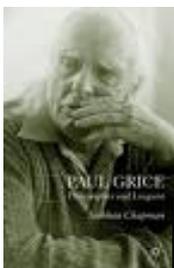
Inferences: conversational presupposition and implication.

Together with the speech acts covered in §05.02.01, inferences are the other "star topic" in enunciative pragmatics. The same method used in the previous section will be used to discuss them: the treatment of inference in everyday speech will be presented, followed by an analysis of its relevance for clinical data.

Our starting-point is the classification of implicit meanings proposed by Grice in his 1957 article "Meaning"; this classification is shown in the following diagram:



[The discussion of this topic takes the article "Categorías inferenciales en pragmática clínica" (Inferential categories in clinical pragmatics) as its starting-point; it can be read in open access in the journal's own archives: <http://www.revneurol.com/sec/resumen.php?or=web&i=e&id=2005373>]



Paul Grice
(1913-1988)

Conventionally implicit (I): presuppositions

Grice does not explicitly discuss PRESUPPOSITION but he does identify a conventionally implicit, arising from the use of certain chains of meaning. Presupposition is a category of inferential meaning handled by speakers from grammatical usage; it is therefore the inference closest to explicit use, since it involves signifieds anchored in the signifier, that is, that they depend on the actual words uttered.

In the early years of pragmatics, O. Ducrot devoted several chapters of his book *Decir y no decir* (1972) to the concept of presupposition. He argues that there are two possible ways of considering this type of meaning:

1. as the necessary conditions for the normal use of the utterance (Frege): referring to the conditions for logical use, that is, veritative, whilst the Oxford school analysed the conditions for pragmatic or illocutional use.
2. as elements of the content of the utterance.



Oswald Ducrot

Both possibilities can be considered simultaneously; the divergence between the two views stems from the priority given to one or the other value. For the former, the presupposition is primarily a condition for use, and secondly it can be the object of a type of affirmation. For those who defend the latter stance, the presupposition is contained in the sense of the utterances¹. Ducrot tried to reconcile both stances, safeguarding the special semantic nature of the presupposition, but without excluding it from the utterance. To do this, he followed a study by Anna Wierzbicka (1968) that included beliefs about the listener's knowledge in the treatment of the presupposition. Thus, an utterance such as

Juan se despertó (Juan woke up)

presupposes:

1. *Yo pienso que sabes que Juan estaba durmiendo (I think you know that Juan was sleeping)*
2. *Yo quiero que sepas que Juan ya no duerme (I want you to know that Juan is no longer asleep).*

The act of affirming can thus have a dual objective:

- it manifests the wish to inform the listener of what is described (on the focus)
- it manifests the belief that the listener already knows the presupposition.

This theory places the presupposition within the utterance. For Ducrot it is a particular speech act, such as the affirmation, order or question.

Kerbrat-Orechioni (1986: 25) defined the presupposition as:

"all the information that, without being openly stated (that is, without constituting in principle the real object of the message being transmitted) are however, automatically contained in the formulation of the utterance in which they are intrinsically inscribed, whatever the specificity of the utterance profile".

¹ "To admit the first solution would really mean returning to approaching the distinction -proposed before- between a discursive implicit and an immediate implicit, to include the implicit once again in the discursive and thus ignore some of the more serious objections that prevent describing language as a code. However, the second solution integrates certain implicit forms into the most central part of language, amongst the immediate constituents of meaning. This consequently implies distinguishing acts of signifying and informing, and considering information as just one form of meaning -the other would be presupposition". (Ducrot, 1972: 28).

Presuppositions are signifieds that are presumed to be true when using certain utterances; thus, *"lamento que llueva"* (I am sorry it is raining) presupposes the truth of *"llueve"* (it is raining), the same as *"¿cuándo vienes?"* (when are you coming?) presupposes *"vienes"* (you are coming), *"¿dónde te dieron la mochila?"* (where did they give you the rucksack?) presupposes *"te dieron la mochila"* (they gave you the rucksack), and *"ha dejado de nevar"* (it has stopped snowing) presupposes *"nevaba"* (it was snowing); likewise, the use of the conjunction *"pero"* (but) in expressions such as *"era pobre pero honrado"* (he was poor but honourable) serves to transmit the presupposition of a certain incompatibility between poverty and honour.

Presuppositions are produced by the use of so-called presuppositional triggers. In Spanish, a number of morphosyntactic categories activate presuppositions:

- non-polar or pronominal questions presuppose the truth of their complement: *"¿dónde te vas estas fallas?"* presupposes *"te vas a algún sitio estas fallas"*, *"¿quién ha dibujado en la pared?"* presupposes *"alguien ha dibujado en la pared"*.
- verbs of changing state presuppose the truth of the complement: *dejar de, empezar a, etc.*
- factive verbs also presuppose their complement: *saber, lamentar, etc.*
- counter-factive conditionals: *Si hubieras cogido el paraguas no estarías empapada* presupposes *"no cogiste el paraguas"*.

In the extent to which presuppositions are anchored directly in the signifier, it might be thought that their use depended on the semantic component; however, the presupposition constitutes a pragmatic category because it enables the speaker to organise the various informative levels according to their interests. Compared to the signifieds the speaker assumes to be true, their messages make explicit and highlight, in contrast, a complementary pragmatic category: the focus. In normal enunciative syntax our languages identify focus by means of intonative emphasis, but there are also specific syntactic dislocations for focusing certain elements in the utterance, as demonstrated in the following table; the same utterance (*"Juan recogió las fotos en casa"*) can take as presupposition different pieces of information:

POSSIBLE EXPRESSIONS (what is said)	PRESUPPOSITION (implicit)	FOCUS
JUAN recogió las fotos en casa Fue Juan quien recogió las fotos en casa Las fotos en casa, las recogió Juan	"Alguien recogió las fotos en casa"	"Juan"
Juan recogió LAS FOTOS en casa Fueron las fotos lo que Juan recogió en casa Las fotos, las recogió Juan en casa	"Juan recogió algo en casa"	"las fotos"
Juan recogió las fotos EN CASA Fue en casa donde Juan recogió las fotos En casa, recogió Juan las fotos	"Juan recogió las fotos en algún lugar"	"en casa"

The presupposition should not be confused with other information possessed by the speaker of a social and cultural nature (suppositions, encyclopaedic knowledge) or of a cognitive nature. Roth and Spekman, in their discussion of children's pragmatic assessment²

² Roth, Froma P. / Spekman, N. J. (1984a): "Assessing the pragmatic ability of children. Part I: Organisational framework and assessment parameters", *Journal of Speech and Hearing Disorders*, 49, pp. 2-11.

apply the term presupposition to children's ability to suppose mental states in their conversational partner, something that in reality corresponds to theory of the mind and not to a pragmatic linguistic category.

Given its link to the use of certain concrete words, the presupposition does not normally get specific treatment in clinical pragmatics literature; obviously, since it depends on the use of certain words, how presuppositions are handled depends on how much linguistic ability is conserved by the speaker. On the other hand, intonative focusing procedures are clearly upset in people with dysprosodia, a frequent (but not exclusive) symptom in RH injury that affects not only emotional aspects but also, as we have seen, the informativity of utterances.

Conventionally implicit (II): idioms

Tropic inferences or idioms are idiomatic expressions that are fixed in the language, that is, they have undergone a process that linguists term lexicalisation or grammaticalisation, as they are syntagmas that function as an inseparable lexical entity. They are groups of words that any competent speaker knows and whose meaning does not generally depend on the isolated meanings of their constituent words (it is a "transferred" meaning). We basically differentiate between:

- phrasal locutions, that function as elements of the sentence, with no enunciative integrity; according to their syntactic value they can be noun (*mosquita muerta*), adjectival (*de rompe y rasga*), adverbial (*de tapadillo*), prepositional (*gracias a*), clausal (*como quien oye llover*), etc.
- phrasal utterances, that can function as complete utterances; these are divided into two basic groups:
 - parems or proverbs: *Las paredes oyen; En abril, aguas mil; Agua que no has de beber, déjala correr.*
 - and routine formulas that pepper discourse with a number of interactional functions: *¿Qué tal?, Ni hablar; Ya lo creo.*

These phrasal units, as has been said, are part of the grammar of a language, they are lexicalised and it is therefore plausible to compare their semantic treatment to that of other lexical units (words). A common error in the literature consists of handling these idiomatic expressions (idioms) jointly with figurative use ³, which complicates research into the hemispherical participation in their decoding; one thing is lexicalised tropic inference, converted into part of the lexicon of a language, and another is figurative use improvised by a speaker for a particular discursive moment.

Thus, in order to interpret the meaning of the Spanish expressions "*caer chuzos de punta*" or "*llover a mares*", we only need to search in a dictionary and we learn this expression that is shared by all Spanish speakers; however, when the poet Antonio Machado described the sun metaphorically as "*una lluvia de saetas de oro*", he was using an exclusive and personal literary resource, and a dictionary is not sufficient for a correct interpretation; it is a non-lexicalised, or non-conventional trope, that is probably not used by any other speaker (we shall see that this arises from transgressing the conversational maxim of quality). The same type of meaning is

Roth, Froma P. / Spekman, N. J. (1984b): "Assessing the pragmatic abilities of children: Part II. Guidelines, considerations, and specific evaluation procedures", *Journal of Speech and Hearing Disorders*, 49, pp.12-17.

³ Hillert, D.G. (2004): Spared access to idiomatic and literal meanings: a single-case approach. *Brain and Language* 89: 207-215.

Huber-Okraïneç, J. (2003): Dennis M. Idiom comprehension in childhood: an assessment tool and age norms. *Brain and Language* 87: 188-191.

Levorato, M.C., Nesi, B., Cacciari, C. (2004): Reading comprehension and understanding idiomatic expressions: A developmental study. *Brain and Language* 91: 303-314

handled in other one-off inferences, such as irony, sarcasm, etc. A basic difference between both categories is related to their behaviour in translation: tropic inferences rarely allow an exact literal translation to another language, unlike non-conventional figurative use.

Given this linguistic characterisation, it might be thought that speakers with semantic problems would have difficulty decoding idioms (for example, aphasia sufferers⁴) whilst non-conventional figurative use can be a problem for speakers showing pragmatic type disorders (for example, speakers with autism or Williams Syndrome⁵, or those with RH lesions). This is why it seems pertinent to insist that the non-literal meaning of idioms (tropic inference) cannot be grouped together with the non-literal meaning arising from specific acts of verbal creativity (indirect speech acts); as argued by Papagno, Tabossi, Colombo and Zampetti⁶:

“A problem with the dichotomy between left and right hemisphere is that it is based on a sharp distinction between literal and non-literal language, in which the right hemisphere is viewed as equally engaged in the processing of all sorts of non-strictly denotative linguistic materials, including prosodic cues (typically carrying emotional as well as linguistic information), metaphors, idioms, proverbs, and different types of speech acts.”

Among these different types of "not strictly denotative" material, the lexicalised tropic inference should be separated from the figurative use which, as will be seen below, is based on transgressing conversational maxims.

Non-conventionally implicit (I): implicature

Implicature is a type of non-conventional inferential meaning that is not based on the use of certain words, but on the application of certain norms of communication; it is therefore more social in nature than presuppositional and tropic inferences.

As is known, these meanings derive from the application of four conversational maxims arising from the Cooperative Principle identified in the 70s by the philosopher H. Paul Grice. These maxims are basically applied to informative exchanges, which Grice compared to other possible human exchanges:

- MAXIM OF QUANTITY: "Do not give more or less information than that which is necessary".
- MAXIM OF QUALITY: "Do not say that for which you have no evidence or believe to be false".
- MAXIM OF MANNER: "Be brief and orderly, avoid obscurity and ambiguity".
- MAXIM OF RELEVANCE: "Make relevant contributions, go to the point".

This does not mean that we should always speak following these premises, but that we should speak as if we did and assuming that our conversational partner is also doing so. This is why, although the criticism sometimes levelled at Grice is that maxims are not respected in conversation, it should be said that he explained this idea by stating that maxims are also subject to other rules, such as courtesy. For Brown and Levinson (1978:100)⁷

⁴ Papagno, C., Tabossi, P., Colombo, M.R., Zampetti, P. (2004): Idiom comprehension in aphasic patients. *Brain and Language* 89: 226-234

⁵ Bellugi U, Lichtenberger L, Jones W, Lai Z, St. George M. (2000): The neurocognitive profile of Williams syndrome: A complex pattern of strengths and weaknesses. *Journal of Cognitive Neuroscience*, 12 (Suppl. 1), 7-29.

⁶ Papagno, Costanza / Genoni, Annalisa (2003): "The role of syntactic processing idiom comprehension", *Brain and Language* 87, pp. 73-74.

Papagno, Costanza / Tabossi, Patrizia / Colombo, M. Rosa / Zampetti, Patrizia (2004): "Idiom comprehension in aphasic patients", *Brain and Language*, 89, pp. 226-234.

⁷ "maxims define for us the basic set of assumptions underlying every talk exchange. But this does not imply that utterances in general, or even reasonably frequently, must meet these conditions, as critics of

"maxims define for us the basic set of assumptions underlying every talk exchange, but this does not imply that utterances in general, or even reasonably frequently, must meet these conditions, as critics of Grice have sometimes thought. Indeed, the majority of natural conversations do not proceed in such a brusque fashion at all; (...) politeness is then a major source of deviation from such rational efficiency, and is communicated precisely by that deviation".

In fact, there are two basic types of conversational implicature, arising either from the application of conversational maxims (referred to as generalised implicature) or from their transgression (in which case they are referred to as anomalous implicature).

These transgressions are very frequent in everyday conversation, particularly those that affect the maxim of quality and that can be lumped together under the concept of indirection, already mentioned in the reference to speech acts. If our conversational partner enters the house wet and says "*Llueve un poquito*" (*It is raining a little*), the maxim of quality would make us infer an implicature such as "*Es cierto que llueve un poquito*" (*It is clear that it is raining a little*); but if they said the same phrase on arriving home completely soaked, we would understand that they are speaking ironically and the inference would be an anomalous implicature such as "*está lloviendo muchísimo, no un poquito, y por eso está todo mojado*" (*it is raining a lot, not a little, and this is why he is completely soaked*).

Together with irony, other stylistic resources that arise from the violation of this maxim are metaphor, hyperbole, and sarcasm; these resources have been of especial interest to researchers designing tests of pragmatic evaluation, such as *Profile of Communicative Appropriateness* by Claire Penn, *Right Hemisphere Communication Battery*, by Howard Gardner and Hiram H. Brownell, *Right Hemisphere Language Battery*, by Karen L. Bryan, and *Right Hemisphere Communication Battery* by Zaidel, Kasher, Soroker and Batori⁸. However, research into metaphor and sarcasm is not always framed within the sphere of indirect speech acts or transgression of conversational maxims.

When a metaphor or other type of trope is lexicalised it becomes part of the lexicon of a language and becomes, as we have seen, a tropic inference; in this case, speakers use fixed expression as a compact unit, without the need to know the initial actual meaning (we can use expressions such as "*coger algo por los pelos*" or "*a buenas horas mangas verdes*" without thinking of the sailors who fall overboard or of the uniform of the Guardia Civil).

When the literature does not take into account the lexicalised nature of metaphors and treats grammaticalised metaphors together with those improvised by a speaker at a certain point in their discourse, confusion may arise. Thus, in a study by Schmidt, DeBuse and Seger⁹, this difference (anomalous implicature created by an actual speaker vs. lexicalised tropic inference belonging to a grammar) is shown by using the distinction between "familiar metaphors" and "non-familiar metaphors":

Grice have sometimes thought. Indeed, the majority of natural conversations do not proceed in such a brusque fashion at all. (...) Politeness is then a major source of deviation from such rational efficiency, and is communicated precisely by that deviation". BROWN, Penelope y LEVINSON, Stephen (1978): "Universals in language usage: Politeness phenomena", en E. Goody, ed.: *Questions and Politeness: Strategies in social interaction*, Cambridge: University Press (53-311).

⁸ Penn, C. (1985): *The profile of communicative appropriateness: a clinical tool for the assessment of pragmatics*. *South African Journal of Communicative Disorders*, 32, 18-23.

- Gardner, H, Brownell, HH. (1986): *Right Hemisphere Communication Battery*, Boston Psychology Service

- Bryan, K. (1986): *The Right Hemisphere Battery*, London: Whurr Publ., 1995

- Zaidel, E., Kasher, A., Soroker, N., Batori, G. (2002): *Effects of Right and Left Hemisphere Damage on Performance of the Right Hemisphere Communication Battery*. *Brain and Language* 80: 510-535.

⁹ Schmidt GL, DeBuse CJ, Seger CA. *Right hemisphere metaphor processing? Characterizing the lateralization of semantic processes*. *Brain and Language* 2005.

"The right hemisphere is preferentially involved in the processing of metaphors with the distant semantic relationships found in unfamiliar metaphors, while the left hemisphere processes the close semantic relationships in familiar metaphors."

These "familiar metaphors" are, obviously, those that belong to the lexicon of a language.

Implicatures arise from a cooperative principle that is not exclusive to linguistic activity, but that is characterised by the social interaction of human beings; it is therefore possible to design implicature assessment tests that are not based on their linguistic use, but on their visual use. This is formulated by Zaidel *et al.* in their Right Hemisphere Battery, in which they use famous paintings to test appropriate inference by subjects. The well-known materials that present photographs with erroneous or discordant elements are, in fact, a way of studying implicature of relevance in non-verbal fields (although when these cards are used as a triggering stimulus, the test subject's response is produced in verbal code, and consists of making explicit the correct application of the maxim).

Non-conventionally implicit (II): the implicit

The final type of inference, the implicit, described as non-conventional (not depending on the use of certain linguistic structures) and non-conversational (not arising from the application of certain conversational principles). On the contrary, it is a type of inference based exclusively on the previous relationship between the conversational partners, which supposes that:

- 1) the implicit can only be interpreted by speakers who know that previous relationship, and
- 2) implicits are not demonstrable: nobody can hold a speaker responsible for the implicits that are triggered in their intervention ("No lo decía en ese sentido", "No quería dar a entender eso").

An obvious example of this inferential category is an exchange from *A Streetcar Named Desire*, in which the question "What happened?" was answered by the second speaker directly with "It's so easy for you to blame me for everything!". It is evident that this idea of blame is not inferred from the question "What happened?" and that to arrive there the second speaker has to base themselves on non-linguistic elements.

In the field of pathologies it is not frequent (or easy) to assess this kind of inferential meaning, as it is highly irregular and unpredictable, and very much linked to each speaker's psychological attitude (suspiciousness is a predisposition to interpret negative implicits in other people's speech).

Inferential textual categories: morals and conclusions

The inferences discussed above are at the enunciative level and are activated by the speaker in their language use, but there are other inferences at a more complex level, based on textual superstructure, that is, on the abstract discursive framework of each text.

In the field of argumentative superstructure, the syllogism can be used as the most obvious example of textual inference: when someone provides us with two premises, we tend to infer the conclusion without the need for the speaker to explain it. For example, to the question "Have you spoken to Martin?" our conversational partner replies: I called him and he was engaged"; in this case we deduce that they had not been able to speak thanks to a logical inferential process.

In the field of narrative superstructure, the morals and assessment aspects of the story are frequently entrusted to the receiver's inferential processes, particularly in conversational stories;

neurolinguistics literature has paid special attention to how these textual inferences are processed in Alzheimer's cases, or lesions to LH or RH; as argued by Garayzábal (2004)¹⁰:

"Patients with right-hemisphere injury have great difficulty making inferences when understanding stories. Beeman, Bowden and Gernsbacher (2000) carried out a study with left and right-hemisphere injured patients, in which they aimed to assess two types of inference, predictive inferences (predicting subsequent consequences) and coherence inferences (resolving a break in coherence) during the understanding of a discourse. Whilst the latter are more probable, because they are compulsory to understanding the story, the former are less so and are more influenced by factors that are intrinsic to the receiver and to the story itself. Patients with right-hemisphere injury, despite obtaining good scores in simple linguistic tests, present difficulty in generating inferences; this penalises them when they have to reply to questions about inferable information and the connection between the various parts of the discourse. It seems that the right hemisphere specialises in maintaining the activation of semantic relations distant from words and of the several interpretations of ambiguous words, whilst the left hemisphere activates close associations and a sole interpretation of each word".

The ability to infer an element of the text from information that is explicit is related to the ability to maintain textual coherence (both in emission and reception). Schmitter-Edgecombe and Bales¹¹ argued that speakers with cráneo-encephalic trauma experience difficulty not only with inferential processes guaranteeing the coherence of narrative texts, but also with the relations of cohesion that shape the textuality of utterances at syntactic level. Some studies attribute responsibility for connective and cohesive relations (syntactic) to the left hemisphere and for relations of coherence (textual inferences)¹² to the right hemisphere.

Cultural inferences: assumptions

Lastly, language use can activate another type of inference based on speakers' encyclopaedic knowledge, that is, their general cultural baggage. For example, if a television programme with sexual content is referred to as "*Dos rombos*" (two diamonds), an inference of this type is activated, as it requires familiarity with the classification system used by the Franco regime's censors to know that the programmes regarded as "not suitable for minors" were marked with two diamonds in the upper corner of the screen. In this case, there is a cultural implicit, or assumption.

¹⁰ Garayzábal Heinze, E. (2004): "Lesionados del hemisferio derecho y dificultades de aprendizaje no verbal: similitudes lingüísticas" (Right-hemisphere lesions and problems with non-verbal learning: linguistic similarities) in B. Gallardo and M. Veyrat (Eds.): *Estudios de lingüística clínica (Clinical linguistics studies)*, Valencia: *Lingüística y patología (Linguistics and pathology)*, Valencia: Universitat/AVaLCC

¹¹ Schmitter-Edgecombe, M. and Bales, JW. Understanding text after severe closed-head injury: assessing inferences and memory operations with a think aloud procedure. *Brain and Language* 2005.

¹² Virtue, S. and Van der Broek, P. Hemispheric processing of anaphoric inferences: The activation of multiple antecedents. *Brain and Language* 2005.

Heath, R.L. and Blonder, L.X. Spontaneous humour among right hemisphere stroke survivors. *Brain and Language* 2005