An inference-centred analysis of jokes:
The Intersecting Circles Model of humorous communication

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ABSTRACT

In my previous research, a distinction was made, in a general classification of jokes, between those jokes that are based on the speaker’s manipulation of the audience’s interpretive steps leading to an interpretation of the joke, and those jokes whose main source of humour lies in the reinforcement or invalidation of commonly assumed social stereotypes. However, interpretive strategies for obtaining interpretations work in parallel to the processing of cultural information and also of mental frames, schemas and scripts that are retrieved by the hearer in order to make sense of the text of the joke. In this chapter, a more realistic picture of joke comprehension (the Intersecting Circles Model) is proposed to account for how some or all of these interpretive procedures may be manipulated for the production of humorous effects.

1. Introduction

In Yus (2008, 2009, 2010, forthcoming), several classifications of jokes have been proposed. The latest classification (Yus 2010, figure 1) starts with a distinction between intentional and unintentional humour and between jokes which are not integrated in the conversation (canned jokes) and the ones which are integrated. This chapter addresses the next distinction in figure 1, namely, the one between jokes whose humorous effects lie in the steps leading to an interpretation of the joke (steps manipulated by the speakers as part of their humorous intentions) and jokes whose humour is based on cultural and collective information stored in the hearer’s mind. These are exemplified in (1) and (2), respectively:

(1) Postmaster: Here’s your five-cent stamp.
    Shopper: [with arms full of bundles]: Do I have to stick it on myself?
    Postmaster: Nope. On the envelope.

(2) Q: Why does Japan have Fukushima and California have all the lawyers?
    A: Because Japan got first pick!

In (1), the speaker predicts that the hearer’s identification of the sentence structure of the shopper’s question will be “Do I have to [stick it on] [myself]?” but this interpretation is invalidated immediately and replaced with a more unlikely (but eventually correct) “Do I have to [stick it] [on myself]?” On the other hand, (2) only focuses on the common social stereotype of lawyers as criticisable people.

This duality does not reflect the real quality of the inferential interpretation of jokes, in which social, collective and commonsense information are often combined with the interpretation of the text of the joke in order to obtain humorous effects. Therefore, a more naturalistic and inference-centred approach to the analysis of jokes is proposed in this chapter, the so-called Intersecting Circles Model, which yields seven types of jokes. And their eventual humorous effects depend on whether the hearer’s inferential accessibility to any of the following three types of information (as predicted by the speaker) plays a part or not in the production of these effects: (a) the explicit and/or implicated information obtained from the processing of the text of the joke together with the necessary contextual information to yield explicit (i.e. explicatures) or implicit (i.e. implicatures) interpretations; (b) the information retrieved by the hearer from background knowledge about default frames of situations, sequences and schemas;
and (c) cultural information (often of a stereotypical quality) assumed to be shared by the community to which the hearer belongs.

Figure 1. Typology of jokes proposed in Yus (2010).

The chapter is organized as follows. First, I provide a brief description of how relevance theory (Sperber & Wilson 1995) pictures interpretation as a mutual parallel adjustment of explicit content, implicatures and contextual information. Second, a description of the frames, schemas and scripts that we retrieve in the interpretation of any utterance is provided and the heterogeneous terminology available is unified under the generic label of make-sense frames. Third, the notion of cultural frame is addressed and its stereotypical and collective qualities assessed. Fourth, the mind reading ability of humans is introduced, together with the part that it plays in the generation of humorous effects. Fifth, some examples of jokes illustrate how all the steps of the aforementioned mutual parallel adjustment of comprehension according to relevance theory may be exploited in the generation of humorous effects. Sixth, some examples illustrate how make-sense frames and cultural frames may be exploited for the sake of humour. Seventh, the Intersecting Circles Model of humorous communication is proposed and the seven types of jokes that it comprises are briefly described and exemplified. Finally, an example of a joke illustrates how the inferential comprehension of jokes and successful derivation of humorous effects often involve a mutual parallel adjustment of the utterance-centred retrieval of (explicit and/or implicated) information, and/or the access to make-sense frames, and/or the identification of cultural frames at work in the comprehension of the joke as predicted by the speaker.
2. Utterance interpretation as mutual parallel adjustment

According to relevance theory, comprehension involves decoding and inference. The former is performed automatically by the so-called language module\(^1\) of the brain (following Fodor 1983), which identifies the semantic representation of the speaker’s utterance (Sperber & Wilson 1995: 9), a zero-context string called “logical form” of the utterance. This phase is decoding, the only context-free phase of interpretation according to relevance theory. Logical forms are acceptable (i.e. grammatical) strings of words, “a well-formed formula, a structured set of constituents, which undergoes formal logical operations determined by its structure” (Sperber & Wilson ibid.: 74). This mental procedure includes parsing operations on sentential constituents which may be controlled by the speaker, since the decoding device tends to identify the most mental-effort-saving grammatical strings.

Upon identifying this logical form, a context-dependent enrichment of this logical form takes place subject to the individual’s biologically rooted search for relevance in any stimuli that he/she processes. This enrichment involves (one or) several inferential procedures such as reference assignment (3a), disambiguation (3b), free enrichment of non-coded elements (3c), and adjustment of concepts (3d):

(3) a. I saw her there with him.
   I saw [whom?] there [where?] with him [whom?] .

   b. I came across Thomas this morning. He was at a bank.
   [river bank? financial institution?].

   c. I think Ann is better.
   I think Ann is better [than whom?] [for what?]

   d. John drinks too much.
   John drinks [alcohol] in large quantities.

The outcome of these inferential tasks is the proposition expressed of the utterance, which may be communicated as the intended explicit interpretation (an explicature of the utterance), or used as part of the premises used in the derivation of an implicated conclusion (an implicature of the utterance). In Yus (2008) the example (4) is provided:

(4) Tom: So... Did you buy that table I told you about?
   Ann: It is too wide and uneven.

For understanding Ann correctly, Tom will make inferences in order to develop the schematic logical form provided by Ann’s utterance (“something is too wide and uneven”) into a relevant interpretation. In this particular case, Tom will have to retrieve information from context in order to find a referent (“it” refers to “the table”), to disambiguate “uneven” (a table can be “uneven” in several ways: because its surface is uneven or because its legs are not properly levelled), and engage in free enrichment to make sense of the elided part after “too wide” (too wide [for what?]). The outcome could perhaps be the enriched proposition (5), communicated by Ann as an explicature:

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\(^1\) According to Fodor’s view of the mind, it is made of a (mysterious) central processor, capable of an immense number of computations, and of a number of modules which “feed” the central processor with information. Modules are evolved, special-purpose mental mechanisms, typically automatic and informationally encapsulated. One of these modules is the language module, which is only (and automatically) activated by verbal stimuli, feeding the central processor with a schematic logical form. However, over the last few years, this view of the mind has changed within relevance theory, especially concerning the structure of the central processor, which is also regarded to be modular. The most important module in this central processor, specifically a sub-module of the general ‘theory of mind’ ability, is the pragmatic module, which also exhibits qualities typically associated with modules.
(5) **Explicature:** The table that you told me about is too wide to go through the bedroom door and its surface is uneven.

This is not the actual answer to Tom’s question, so Tom will also combine (5) with further contextual information (*implicated premises*) in order to get the intended interpretation (*implicated conclusion*). In this case *encyclopaedic* contextual information will be accessed by Tom about how unlikely it is for a person to buy a table that does not go through the door and whose surface is uneven (*implicated premise*). This contextual information will help Tom reach, as an implicature, the intended interpretation (6) (*implicated conclusion*):

(6) Ann didn’t buy the table that I told her about.

However, all of these steps should not be understood as sequential, and not even the zero-context identification of the logical has to be performed for the whole utterance before obtaining contextualized interpretations. Rather, relevance theory predicts a dynamic and flexible human cognition capable of decoding the utterance, accessing context, enriching the utterance at the explicit level and deriving implicated conclusions in parallel, all that constrained by our inherent search for relevance. The parallel sub-tasks for interpretation are summarized in (7a-c), and these are performed in parallel to the context-free identification of the semantic representation of the utterance (logical form) and the access to as much context as necessary to yield relevant interpretations:

(7) a. Construct appropriate hypotheses about explicit content (*explicatures*) via disambiguation, reference assignment and other pragmatic enrichment processes.

b. Construct appropriate hypotheses about the intended contextual assumptions (*implicated premises*).

c. Construct appropriate hypotheses about the intended contextual implications (*implicated conclusions*).

Hence, the interpretation of Ann’s utterance would be performed with decoding and inferential procedures in parallel, as suggested in table 1. Unlike Grice’s (1975) dual-stage processing view of comprehension, according to which one necessarily has to access the literal meaning of the utterance before deriving implicatures, in this example Tom easily reaches the implicature even before the explicit interpretation of the utterance has been inferred completely.

<table>
<thead>
<tr>
<th>Tom’s decoding and inference</th>
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<tbody>
<tr>
<td><strong>It is</strong></td>
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<tr>
<td><strong>INFERENCE:</strong> reference assignment: “it” refers to “the table I told Ann about.”</td>
</tr>
<tr>
<td><strong>too</strong></td>
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<tr>
<td><strong>INFERENCE:</strong> Anticipatory inferencing: Ann probably dislikes the table if it is “too whatever.” The implicature that she did not buy the table acquires certain likelihood.</td>
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</table>
wide  DECODING: The language module of the brain apprehends “wide” as a correct English word.  
INFERENCe: Background contextual information: “Ann wanted the table for her bedroom.” Therefore, free enrichment leads to “too wide to go through the bedroom door.” At this stage the implicature “I didn’t buy the table” is confirmed as the intended interpretation of Ann’s utterance.  
uneven  DECODING: The language module of the brain apprehends “and uneven” as a correct English words.  
INFEREncE: Background contextual information: “Ann wanted to make drawings on the table.” Therefore “uneven” is enriched and disambiguated to mean “uneven in its surface.” The previously derived implicature on her intention not to buy the table is corroborated.  

Table 1. Interpretation of “It is too wide and uneven.”

3. Make-sense frames and interaction

Inferring the intended interpretation of the utterance also involves the extraction of general information about the world and everyday situations that is stored as accessible chunks of encyclopaedic information (specifically stored as “I conceptualize X as p” or as a more factual “I believe that p”). This information is often retrieved almost unconsciously in order to make sense of the intended “scenario” for the comprehension of utterances. But the terminology used for describing this kind of mental storage is not uniform across authors and schools, as will be briefly commented on below.

“Frame” is a widely used term for this kind of commonsense information about the world and repeated situations. It specifically refers to “principles of organization which govern events - at least social ones- and our subjective involvement in them” (Goffman 1986: 10-11), “mental knowledge structure which captures the ‘typical’ features of the world” (Bednarek 2005: 685-686), “a data-structure for representing a stereotyped situation like being in a certain kind of living room or going to a child’s birthday party. Attached to each frame are several kinds of information... Some is about what one can expect to happen next” (Minsky 1977: 355), and “default tools for meaning construction and construal. They help people recognise and organise in meaningful ways chunks of experience, such as a joke, a dream, an act of deception, a theatrical performance, etc.” (Dynel 2011: 220). All of these definitions share the idea that frames are stereotypical chunks of information that are retrieved from context to understand a new situation.

Secondly, the term “schema” is often suggested for this kind of default general information. These are basic chunks of information that allow us to engage in daily experiences and classify them as prototypical instances, that is, “a dynamic mental representation that enables us to build mental models of the world” (Martin 2006: 85; see also Brubaker et al. 2004: 41).

Finally, “script” is also commonly used in the analysis of this kind of commonsense information, but it refers more to sequences of actions such as “ordering a meal in a bar” or “posting a letter at the post office.” When the script is activated, we expect certain activities to take place in a certain order.

The scopes of these terms overlap enormously and many analysts treat them as interchangeable (e.g. Tannen 1993). For example Scollon & Scollon (2001: 67) seem to treat schemas and scripts as similar concepts. Bednarek (2005: 688) comments that “the competing terms (scenario, schema, script) usually differ only in emphasis and cannot easily be
distinguished.” Therefore, in this chapter I propose to group all of these terms under the generic label of make-sense frame. This term comprises three types of information that we invariably use by default:

(a) **Word-associated schemas.** We tend to attach a number of “encyclopaedic features” (as I prefer to call them) to the referents of the words that we use in our daily interactions. These overlap to a greater or lesser extent with other people’s schemas on the same word, but differences arise both in personal and cultural backgrounds. For example, owners of cats have a more fine-grained word-associated schema for the word “cat” than non-owners. These features are often retrieved automatically without conscious assessment, but on other occasions (and situations) these are subject to a conscious analysis to determine which of these encyclopaedic features is intended. In the case of metaphors, some additional inference is devoted to adjusting these conceptual features so that they can be mapped onto the target domain. Besides, as exemplified in joke (8), these word-associated encyclopaedic features can be exploited for the sake of producing humorous effects:

(8) A: How is your daughter doing with her piano lessons?
B: Good!, her fingers are like streaks of lightning.”
A: Because they are so fast?
B: No, because you don’t know where they are going to fall.

(b) **Sequence-associated scripts,** such as “coffee-shop,” that contain a number of prototypical, taken-for-granted actions such as finding a seat, determining one’s order, placing one’s order with the waiter or waitress, receiving one’s food and, when one finishes eating, paying the bill at the cashier’s (Scollon & Scollon 2001: 67).

(c) **Situation-associated frames,** based on an accumulation of words whose conceptual referents suggest a prototypical situation such as “being at the doctor’s” or “buying food at the supermarket.” Instead of a list of predicted actions, as in (b) above, situation-associated frames are accumulations of concepts regarding a prototypical situation.

4. Cultural frames

People also store prototypical information about their culture and community. Instead of the personal storage of “I conceptualize X as p” or “I believe that p” that is typical of make-sense frames, in this case the individual acknowledges that certain information is typically cultural, stored as “in this culture X is conceptualized as p” or “in this culture it is believed that p.” Both types of frames overlap to a certain extent, to the extent that some stereotypes may also be part of the individual’s make-sense frame, whereas other stereotypes are clearly not supported. In any case, though, its existence is acknowledged.

In previous research, I distinguished between the mental representations which people consider their own acquired thoughts (labelled private beliefs), and those which they regard as belonging to a community (labelled metarepresented cultural beliefs), and which may match, contradict, overlap with, or complement each other (Yus 2002, 2004). The ability to have parallel representations of the same referent, one regarded private and the other ascribed to a culture, is an interesting human capacity which improves interaction with the environment. In Pilkington (2000: 112f) we find the following example:

(9) Richard is a gorilla.
(10) a. Gorillas are fierce, nasty, prone to violence.
    b. Gorillas are shy, sensitive creatures, given to bouts of sentimentality.
This metaphor relies on cultural stereotypes regarding the gorilla’s behaviour in (10a) which are then mapped onto Richard’s own attributes. However, an ethologist may well have reached a different conclusion intuitively, after a direct observation of gorillas, for instance (10b). Even so, the ethologist will still understand (10a) when listening to (9). The explanation of this dual-access, parallel view of the behaviour of gorillas lies in the aforementioned mental storage, direct and factual in (10b), that is, directly grasped from observation, and metarepresentationally stored following a schema such as “it is believed in this culture/society that $p$” in (10a). Cultural stereotypes such as the qualities in (10a) are normally salient to a whole community, becoming what is usually called collective representations attributed to a whole social group and need not be erased when a person privately constructs parallel but differing beliefs about the same referent. 

5. Mind reading and predicted humorous effects

Human beings engage in the interpretation of utterances for one reason: because they carry a presumption of their eventual relevance (Sperber & Wilson 1995). We have developed an ability to focus our cognitive resources on what seems to be relevant and dismiss potentially irrelevant inputs. As such, this cognitive principle (defined as “human cognition tends to be geared to the maximization of relevance”) is at work when we select one interpretation from competing possibilities, when we select one sense of a polysemous word, when we search for a referent for a word, when we derive implicatures, etc.

Humans are also equipped with a mind-reading ability. We cannot enter other people’s minds, of course, but we can predict that one interpretation is more likely to be selected as the intended one, that certain make-sense frames are going to be activated, that the interlocutor is aware of certain cultural frames, etc. This is precisely what humorists do when they devise their jokes, as will be illustrated below. Indeed, they design their jokes knowing that certain inferences are more likely to be made in their processing, and that a number of assumptions will necessarily be entertained by the audience in their search for the most relevant interpretation. Sperber & Wilson (2002) acknowledge this ability to predict the mental states and inferential patterns of others as part of the general human tendency to maximise relevance. Specifically, humorists can predict which background information from the hearer’s memory is likely to be retrieved and used in processing the joke and which inferences the hearer is likely to draw. Consider the joke (11):

(11) Customer: “I’d like to buy a novel, please.
Bookshop assistant: “Certainly, madam. Do you have the title or name of the author?”
Customer: “Not really. I was hoping you could suggest something suitable.”
Bookshop assistant: “No problem. Do you like light or heavy reading?”
Customer: “It doesn’t matter. I’ve left the car just outside the shop.”

In this example, the speaker knows that the hearer will activate the “buying a book” make-sense frame at the beginning of the joke, which connotes the processing of subsequent stretches of
text. In this scenario, the speaker knows that, despite being polysemous, “heavy” will inevitably be understood as “difficult” or “demanding” instead of “weighing a lot,” since the make-sense frame makes this sense highly relevant, suitable in this context and little demanding in terms of mental effort. The speaker then invalidates this interpretation and replaces it with a more unlikely (but eventually correct) sense of the word.

Humour is based on predictions of accessibility to certain interpretations and of the retrieval of frames. Speakers may act upon the inferential steps leading to a correct interpretation of the text of the joke for the sake of generating humorous effects, and this strategy may focus on different aspects of interpretation. The main hypothesis in this chapter is that the humorous effects of jokes depend on the speaker’s control of (a) how the text of the joke is inferred, (b) how the situation of the joke is conceptualized (make-sense frame), and (c) how stereotypical collective representations are depicted and identified (cultural frames). Combinations of these three aspects will lead to the seven types of jokes predicted in the so-called Intersecting Circles Model for humorous communication through jokes (see below).

6. Utterance interpretation and humorous effects

In previous research (Yus 2003, 2008, 2009, 2010), I showed how every stage of the interpretation of the utterance can be manipulated for the sake of humour, from the initial decoding of the logical form of the joke, to its inferential enrichment and choice of explicit and/or implicated interpretations (explicatures vs. implicatures). Consider jokes (12-16) below:

(12) A lady went into a clothing store and asked, “May I try on that dress in the shop window?” “Well,” replied the sales clerk doubtfully, “don’t you think it would be better to use the dressing room?”
   Initial syntax inevitably selected: “[try on] [that dress in the shop window].”
   Eventually correct (but unlikely) syntax: “[try on] [that dress] [in the shop window].”
(13) Eleven-year-old Lucy was walking down the village street leading a cow by a rope. She met the vicar who said, “Little girl, what are you doing with that cow?” “It is my father’s cow and I am taking her to the bull,” said Lucy. “Disgusting,” said the parson, “can’t your father do that?” “No,” said Lucy, “it has to be the bull.”
(14) Doctor: “Nurse! Did you take this patient’s temperature?”
   Nurse: “Why, doctor? Is it missing?”
(15) A woman in bed with a man. The phone rings and she answers it. “Yes darling... No problem... OK... See you later.” The man: “Who was it?” The woman: “It was my husband. He said he’s going to come home very late today because he is in an important meeting with you.”
(16) Two women were chatting and one asked the other, “Mary, do you talk to your husband while you’re having passionate intercourse?” Mary answered, “Heavens No! Why would you want to make a phone call at a time like that?”

For joke (12), speakers will use their mind-reading ability to predict that the interlocutor will identify the words and the syntax of the joke in a certain way, and can invalidate this decoding in a second part of the joke. In (13), the most likely referent for “that” will be “taking the cow to the bull,” which is then invalidated. In (14), one of the senses of “take” is more likely to be selected (aided by the make-sense frame of hospital care). Finally, (15) and (16) are similar in the sense that in both the interlocutor will retrieve implicated premises on couples and sex and derive specific implicatures on the specific relationship between the man and the woman. Among others, (17a-e) for joke (15) and (18a-c) for joke (16) will be derived by the hearer:
Ritchie (2005: 290) explains this strategy as follows: “the dominant frame is usually activated by the first part of the story, and the punchline activates an alternative frame that is often subversive regarding the initial frame as well as regarding conventional social expectations. Ideally the second, subversive frame is activated in a way that is clever and surprising, and achieves multiple cognitive effects at once.”

7. Make-sense frames and cultural frames in joke interpretation

Some jokes base the generation of humorous effects only on the manipulation of the stages that lead to a relevant interpretation (as described in the previous heading), whereas others focus on make-sense frames and cultural frames, as will be illustrated below.

When we interpret utterances, we also contextualize the words used, the situations depicted, and the underlying cultural context. In this sense, make-sense frames (stored as “I conceptualize X as p” or “I believe that p”) and cultural frames (stored as “in culture X p is conceptualized as p” or “in culture X it is believed that p”) are good options for the generation of humorous effects. The former are normally exploited by saturating the situation with information fitting the frame, so that the frame is easily identifiable, only to invalidate it at the end of the joke. In example (19), the reader activates the “loving wife with husband on a death bed” make-sense frame while interpreting the joke, only to find a surprising change of scenario at the end:

(19) Jake was on his deathbed. His wife Susan, was maintaining a vigil by his side. She held his fragile hand, tears ran down her face. Her praying awoke him. He looked up and his pale lips began to move slightly. “My darling Susan,” he whispered. “Hush, my love,” she said. “Rest. Shhh. Don’t talk.” He was insistent. “Susan,” he said in his tired voice. “I have something I must confess to you.” “There’s nothing to confess,” replied the weeping Susan. “Everything’s all right, go to sleep.” “No, no. I must die in peace, Susan. I slept with your sister, your best friend and your mother.” “I know,” she replied. “That’s why I poisoned you.”

Several theories of humour stress the importance of frames in humorous communication (see Martin 2006: 87-88). One of the most influential ones has been the General Theory of Verbal Humour (Attardo & Raskin 1991), in which part of the successful outcome of humorous communication entails the activation of mental scripts to make sense of the situation and events that are described in the initial part of the joke. But a subsequent stretch of text in the joke (i.e. the punchline) introduces information which is not compatible with that initial script, triggering a switch from one script to another. The listener is forced to backtracking and realizing that “a different interpretation (i.e. an alternative script) was possible from the beginning. In order for the text to be viewed as humorous, this second, overlapping script must be opposite to the first” (Martin 2006: 90). In other words, some asymmetry between scripts is needed to generate

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4. “Asymmetry results as one of the scripts comes to the foreground in the interpretation process, as far as it closes the joke or the humorous situation. For distributional reasons that will be shown later, we may call this script a Foreground Script, as opposed to a previous, basic, Background Script” (Viana ibid.: 506).
humour (Viana 2010). An example is the clash between the frames of “children within marriage” and “children outside marriage” in joke (20) and the clash between the frames of “caring wife” versus “indifferent wife” in (21):

(20) A man at work looks very sad and his boss approaches him. “What’s up, John?” “Well... I am going to become a father,” says the employee. “Good!, congratulations! But... why the sad face?,” asks the boss. “Imagine when my wife finds out...”

(21) A woman accompanied her husband to the doctor’s. Afterwards, the doctor took the wife aside and said, “Unless you do the following things, your husband will surely die.” The doctor then went on to say, “Here’s what you need to do. Every morning make sure you serve him a good healthy breakfast. Serve him a well balanced meal. Make sure you feed him a good, hot meal each evening and don’t overburden him with any stressful conversation, nor ask him to perform any household chores. Also, keep the house spotless and clean so he doesn’t get exposed to any threatening germs.” On the way home, the husband asked his wife what the doctor said. She replied, “You’re going to die.”

This script opposition may also operate at word level (word-associated frames), when some of the encyclopaedic features attached to the referents of some words in the joke acquire prominence in the context of a previously activated situation-associated frame. For instance, in joke (22) two senses of “fine” are activated, one them biased by the initial part of the joke:

(22) You know, somebody actually complimented me on my driving today. They left a little note on the windscreen. It said, ‘Parking Fine.’ So that was nice.

Cultural frames, on the other hand, are typically stereotypical, regarded to belong to and to be rooted in the collectivity, although some degree of overlapping is possible between the individual’s private beliefs and his/her metarepresented cultural beliefs (for example, when jokes stress the inferior quality of some ethnic group and the person actually believes the same).

In the context of humorous effects, cultural frames normally play a role either of strengthening the stereotype, as in (23) below, or by contradicting an existing stereotype, as in (24) (a joke in which there is also a clash with previously strengthened stereotype of sex roles):

(23) Recently scientists revealed that beer contains small traces of female hormones. To prove their theory, the scientists fed 100 men 12 pints of beer and observed that 100% of them gained weight, talked excessively without making sense, became emotional, couldn’t drive, and refused to apologize when wrong. No further testing is planned.

(24) Walking into the bar, Harvey said to the bartender, “Pour me a stiff one, Eddie. I just had another fight with my wife.” “Oh yeah,” said Eddie. “And how did this one end?” “When it was over,” Harvey replied, “she came to me on her hands and knees.” “Really? Now she knows who’s in charge! What did she say?” She said, “Come out from under that bed, you gutless weasel!”

Cultural frames are easy to access (even if not supported personally) since they are rooted in the collectivity and constantly stressed by the media. Brubaker (2004: 39) is right in pointing out that stereotypes obey the principle of cognitive economy, generating inferences and expectations that go ‘beyond the information given’ with minimal cognitive processing.
Like other categories, stereotypes work largely automatically. They can be primed or cued subliminally, and can influence subjects’ judgments without their awareness. This does not mean that stereotypes are wholly beyond conscious control, but it does mean that stereotyping is deeply rooted in ordinary cognitive processes.

8. Towards a new typology of jokes: the *Intersecting Circles Model*

Utterance interpretation, make-sense frames and cultural frames may be exploited, together or separately, for the production of humorous effects. The combination of these elements provides a more realistic picture of what strategies are really performed by speakers when they intend to amuse their interlocutors, and also makes us go beyond the “black-or-white” duality of utterance-centred versus culture-connoted jokes that was proposed in previous research (Yus 2008, 2090, 2010, forthcoming). Indeed, *insofar as they play a part* in the generation of humorous effects, speakers will use their mind-reading ability to predict the interlocutor’s steps towards a relevant interpretation, the retrieval of make-sense frames and the accessibility to stereotypical cultural frames and will combine any of them if that aids in achieving the humorous goal.

These three possible humorous strategies constitute my proposal of the *Intersecting Circles Model* for the production of humorous effects through jokes (figure 2). Depending on whether one or several strategies play a role in the humorous outcome, seven types of jokes can be identified. These will be described and exemplified below.

![Intersecting Circles Model](image)

**Figure 2.** The *Intersecting Circles Model*. 
Type 1: Make-sense frame + cultural frame + utterance interpretation
In this joke type, the speaker’s humorous strategies involve the hearer’s utterance interpretation, the activation of make-sense frames and the recognition of cultural frames. Consider joke (25):

(25) A young couple got married and left on their honeymoon. When they got back, the bride immediately called her mother. Her mother asked, “How was the honeymoon?” “Oh, mama,” she replied, “the honeymoon was wonderful! So romantic...” Suddenly she burst out crying. “But, mama, as soon as we returned Sam started using the most horrible language... things I’d never heard before! I mean, all these awful 4-letter words! You’ve got to come get me and take me home.... Please mama!” “Sarah, Sarah,” her mother said, “calm down! Tell me, what could be so awful? What 4-letter words? You must tell me what has you so upset... Tell your mother these horrible 4-letter words!” Still sobbing, the bride said, “Oh, mama... words like DUST, WASH, IRON, COOK...!”

In this joke, the hearer initially activates the make-sense frame for “honeymoon” (also partly cultural information, but surely supported by the interlocutor as part of his/her background storage of information about society), which is supposed to be a pleasant time for couples in love. Then the frame of asymmetrical sex roles and wicked husband is activated, making the hearer locate typical referents for abusive four-letter words. The utterance-related reference assignment turns out to be disconfirmed at the end of the joke, in which the cultural stereotype of woman-as-housewife is activated and strengthened as part of the speaker’s humorous intention.

Type 2: Make-sense frame + cultural frame
In this type of joke, make-sense frames and cultural frames are activated in the search for humorous effects. Two examples are provided in jokes (26) and (27):

(26) Late one night, a mugger wearing a mask jumped into the path of a well-dressed man and stuck a gun in his ribs. “Give me your money,” he demanded. Indignant, the affluent man replied, “You can’t do this. I’m a politician! “In that case,” replied the robber, “give me MY money!”

(27) Teacher: “Everything you do is wrong. How can you expect to get a job when you leave school?” Pupil: “Well, sir! I’m going to be a TV weatherman.”

In (26), the hearer makes sense of the situation depicted: mugging, which involves a frame with a script of default actions such as intimidating, asking for money, getting the money and running away. The politician refuses to give him the money, somehow surprising the hearer in this making sense of the situation. Then, the hearer is reminded of the cultural frame of politicians making (bad) use of people’s money.

In (27), on the other hand, the hearer activates the make-sense frame of school and education and, consequently, doing things wrong is understood as negative and criticisable. Then, in the next stretch of the joke, we are surprisingly made aware that the interpretation brought to bear in the previous part is not correct, since making things wrong can actually be one’s source of living. This conclusion is derived by activating the cultural frame (stereotype) of weathermen as useless at getting the weather forecast right.
Type 3: Make-sense frame + utterance interpretation
In this kind of joke, the inferential steps leading to an interpretation are manipulated by the speaker, who resorts to mind-reading in order to predict the construction of a make-sense frame. This frame plays a central role in the choice of an interpretation, since it relieves mental effort in the hearer’s search for a relevant interpretation. Consider jokes (28-32):

(28) On the night of their honeymoon, a newlywed couple had an unfortunate accident, resulting in the amputation of the groom’s left foot. Unable to control her grief, the bride called her mother from the hospital. “Mother,” she sobbed, “My husband has only one foot.” The mother, trying to console her daughter said, “That’s alright dear, your father has only six inches.”
(29) So I was getting into my car, and this bloke says to me “Can you give me a lift?” I said “Sure, you look great, the world’s your oyster, go for it.”
(30) I was in a restaurant and on the menu it said “goose.” I haven’t tried goose for many years, so I said to the waiter: “How’s the goose?” He said: “I don’t know, I didn’t ask him.” “No!” I said, “what’s it like?” He said: “Like a white duck, only bigger.”
(31) A doctor thoroughly examined his patient, and said, “Look, I really can’t find any reason for this mysterious affliction. It’s probably due to drinking.” The patient sighed, and snapped, “In that case, I’ll come back when you’re damn well sober!”
(32) A customer enters a sports shop and asks the man in charge: “Excuse me, but do you have the balls to play tennis?” “Yes, of course!,” replies the man. The customer says: “Then, tomorrow at 10.”

In joke (28), the initial “hospital frame” makes one of the senses of “foot” highly accessible, and the speaker knows that upon engaging in disambiguation, the hearer will inevitably choose this sense (demands very little mental effort). Then, this choice is invalidated in the next part of the joke, changing the “hospital frame” into a “sexual frame” (penis size). In joke (29) the hearer constructs a make-sense frame of driving and taking a person in the car, which makes the interpretation of “give a lift” as “take a person in the car” highly prominent and bound to be chosen as the intended one. The last part of the joke, on the contrary, reminds the hearer of the latent polysemy of “give a lift” as a metaphor for cheering up. In joke (30) the “restaurant frame” makes the question “how is the goose” be easily understood as “what is the taste of the goose?,” but the waiter (and the humorist) insists on forcing the hearer into a parallel interpretation of this and the subsequent question. In joke (31), again, the make-sense frame of going to the doctor makes the hearer interpret the referent for “it” as “the origin of the affliction is alcohol (that the patient drinks),” but the end of the joke foregrounds an alternative referent which the hearer could not have selected (for being irrelevant), namely “the doctor’s inability to tell the patient the origin of the affliction is due to alcohol (that the doctor drinks).” Finally, in joke (32) the make-sense frame of sports shop makes the literal meaning of the question highly accessible and relevant (little mental effort), but the last part of the joke foregrounds an idiomatic meaning that the hearer could not have taken into account.

Summarizing, in all of these jokes (28-32), we can see of how predicted make-sense frames and utterance interpretations are effectively combined in the generation of humorous effects, the former creating a scenario that biases the latter in the search for a relevant interpretation of the joke.

Type 4: Make-sense frame
Some jokes resort to make-sense frames as the main or only source of humorous effects, often without needing the aid of a manipulation of utterance interpretation or cultural frames. This is the case of joke (19) above and also joke (33) below:

(19) I went to the supermarket and bought a pound of bananas. No, they’re not bananas, they’re the supermarket’s bananas.

In joke (19), the make-sense frame of shopping makes the initial interpretation “pound of bananas” highly accessible, and the speaker knows that upon engaging in disambiguation, the hearer will inevitably choose this sense (demands very little mental effort). Then, this choice is invalidated by the next part of the joke, changing the “shopping frame” into a “food frame” (food description).
A man was drinking in a bar when he noticed this beautiful young lady sitting next to him. “Hello there,” says the man, “and what is your name?” “Hello,” giggles the woman, “I’m Stacey. What’s yours?” “I’m Jim.” “Jim, do you want to come over to my house tonight? I mean, right now??” “Sure!” replies Jim, “Let’s go!” So Stacey takes Jim to her house and takes him to her room. Jim sits down on the bed and notices a picture of a man on Stacey’s desk. “Stacey, I noticed the picture of a man on your desk,” Jim says. “Yes? And what about it?” asks Stacey. “Is it your brother?” “No, it isn’t, Jim!” Stacey giggles. Jim’s eyes widen, suspecting that it might be Stacey’s husband. When he finally asks, “Is it your husband?” Stacey giggles even more, “No, silly!” Jim was relieved. “Then, it must be your boyfriend!” Stacey giggles even more while nibbling on Jim’s ear. She says, “No, silly!!” “Then, who is it?” Jim asks. Stacey replies, “That’s me before my operation!!”

In this joke, the hearer searches for a coherent make-sense frame for the joke, which initially fits the “man meets woman at a bar” frame, while the character is trying to make sense of the picture of a man in the woman’s bedroom. The hearer of the joke is probably surprised to hear that Jim “hits it off” so easily (a contradiction to the frame), but has no problem retrieving commonsense information from the frame. The main source of humour lies, in this case, in the explanation for the existence of a picture that the speaker provides at the end of the joke.

Type 5: Cultural frame + utterance interpretation
Sometimes cultural frames and utterance interpretation play a part in the humorous outcome of the interpretation of the joke. Thielemann (2011) provides some nice examples of how information on the Russian culture can be combined with more utterance-connoted strategies for generating humour. Another example is provided in (34):

A guy came into a bar one day and said to the barman “Give me six double vodkas.” The barman says “Wow! you must have had one hell of a day.” “Yes, I’ve just found out my older brother is gay.” The next day the same guy came into the bar and asked for the same drinks. When the bartender asked what the problem was today, the answer came back, “I’ve just found out that my younger brother is gay too!” On the third day the guy came into the bar and ordered another six double vodkas. The bartender said “Jesus! Doesn’t anybody in your family like women?” “Yeah, my wife...”

In this joke, the cultural stereotype of homosexuality as deviant and negatively connoted is strengthened in the first part of the joke, but the effectiveness of the joke also relies in the predicted interpretation of “anybody” in the final question. The stereotype makes the hearer try to find a referent for “anybody” of a similar quality to the strengthened stereotype so far, leading to the relevant interpretation “Doesn’t any male member in your family like women?” This predictable interpretation is then invalidated at the end of the joke.

Type 6: Cultural frame
In heading 4 above the role of cultural frames in the generation of humorous effects was stressed. Indeed, strengthening or contradicting cultural frames seems to be the only point of many jokes, which need no aid from either make-sense frames or manipulated steps of utterance interpretation. A typical example is stereotypical sex roles (dominant, superior male; submissive, inferior female). Joke (35) below corroborates the stereotype, whereas joke (36) invalidates it:
(35) A man lost both ears in an accident. No plastic surgeon could offer him a solution. He heard of a very good one in Sweden, and went to him. The new surgeon examined him, thought a while, and said, “yes, I can put you right.” After the operation, bandages off, stitches out, he goes to his hotel. The morning after, in a rage, he calls his surgeon, and yells, “You swine, you gave me a woman’s ears.” “Well, an ear is an ear. It makes no difference whether it is a man’s or a woman’s.” “You’re wrong! I hear everything, but I don’t understand a thing!”

(36) Matt’s dad picked him up from school to take him to a dental appointment. Knowing the parts for the school play were supposed to be posted today, he asked his son if he got one. Matt enthusiastically announced that he had. “I play a man who’s been married for twenty years.” “That’s great, son. Keep up the good work and before you know it they’ll be giving you a speaking part.”

Type 7: Utterance interpretation
Finally, as analyzed in previous research (Yus 2003, 2008, 2009, 2010, forthcoming), some manipulation of the interpretive strategies leading to a relevant interpretation of the joke seem to be the only source of humorous effects. Jokes which play with polysemy, ambiguity, punning, and the explicit/implicit likelihood of interpretations are clear examples of this kind of joke. For example, joke (37) plays with two of the inferential steps leading to a correct (i.e. relevant) interpretation of the final part of the joke:

(37) A man is driving down a country road when he spots a farmer standing in the middle of a huge field of grass. He pulls the car over to the side of the road and notices that the farmer is just standing there, doing nothing, looking at nothing. The man gets out of the car, walks all the way out to the farmer and asks him, “Ah excuse me mister, but what are you doing?” The farmer replies, “I’m trying to win a Nobel Prize.” “How?” asks the man, puzzled. “Well I heard they give the Nobel Prize to people who are outstanding in their field.”

On the one hand, the context-free decoding of the utterance should lead to a unique semantic representation or logical form of the utterance, but the speaker makes the hearer entertain two logical forms simultaneously (“people who are outstanding in their field” versus “people who are outstanding in their field”). Besides, the polysemous word “field” is initially biased towards “a piece of land with grass,” but at the end of the joke the hearer is forced into changing the referent and replacing it with “academic speciality.”

9. Humorous effects as mutual parallel adjustment
At the beginning of this chapter, I stressed that comprehension entails a mutual parallel adjustment of the search for an explicit interpretation (explicature), the derivation of implicated conclusions (implicatures) and context accessibility, and all that is performed while the utterance is being identified (i.e. decoded) by the language module in a step-by-step procedure yielding schematic words and syntactic arrangements (which have to be enriched to meet the expectations of relevance).

The same applies to the comprehension of jokes and the derivation of humorous effects. Hearers will engage in a mutual parallel adjustment of (a) the interpretation of the text of the joke (logical form, access to context for pragmatic enrichment and derivation of explicit and/or implicated interpretations), (b) the retrieval of make-sense frames for the comprehension of the situations depicted in the joke, and (c) cultural frames in stereotypical information about the
collectivity (strengthened, refuted or used as just another premise for the derivation of relevant conclusions). Joke (38) is described in table 2 from this approach of mutual parallel adjustment:

(38) A chicken and an egg are lying in bed. The chicken is leaning against the headboard smoking a cigarette with a satisfied smile on its face. The egg, looking decidedly unhappy, grabs the sheet and rolls over and says, “Well, I guess we finally know the answer to THAT question!”

<table>
<thead>
<tr>
<th>A chicken and an egg are lying in bed</th>
<th><strong>Mutual parallel adjustment</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The language module apprehends the sequence of words. The joke is a canned one, the hearer accepts that the joke portrays unusual characters in a probably absolutely absurd situation for the sake of humour. The beginning of the joke makes it clear to the hearer that the next stretch of discourse will not be related to the current topic of the conversation and that the point of the joke will probably be illogic and/or absurd.</td>
<td></td>
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<tr>
<td>The language module apprehends the sequence of words. The make-sense frame allows the hearer to picture the chicken as a human being in bed and against the headboard.</td>
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<tr>
<td>The language module apprehends the sequence of words. The personification of the characters in the absurd scenario depicted by the joke is strengthened. Make-sense frame on human sexuality allows the hearer to infer that the chicken has a smile because he had satisfactory sexual intercourse with the egg. The link between smoking and good sex also made accessible form background knowledge and strengthened by the media (i.e. films).</td>
<td></td>
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<tr>
<td>The language module apprehends the sequence of words. The egg, looking decidedly unhappy, grabs the sheet and rolls over</td>
<td></td>
</tr>
<tr>
<td>The language module apprehends the sequence of words. Typical human reaction to sexual frustration, again part of the make-sense frame of human sexuality, is replicated in the egg’s behaviour.</td>
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and says, “Well, I guess we finally know the answer to THAT question!” The language module apprehends the sequence of words. The hearer has to enrich the utterance by finding a referent for “that question.” From context (encyclopaedic knowledge), the hearer manages to find the referent aided by the presence of “egg” and “chicken” in the joke, namely “What came first, the chicken or the egg?” This referent is not relevant enough to generate humorous effects, and the hearer has to disambiguate the word “came” in the referent itself, a sort of second-order pragmatic enrichment not applied to the utterance but to the referent, and connote this verb sexually thanks to the amount of information already inferred and still vivid in the hearer’s short-term memory store.

Table 2. Mutual parallel adjustment for the interpretation of joke (38).

10. Concluding remarks

The humorous effects of jokes are not generated only through the manipulation of the inferential steps leading to an interpretation of the joke or only through the strengthening (or contradiction) of cultural information. On the contrary, interpreting jokes entails a mutual parallel adjustment of three main areas of inferential activity. Firstly, the actual interpretation of the joke. Interpreting the utterance is, in itself, also a mutual parallel adjustment of the explicit content, implicated conclusions and contextual information. Secondly, what in this chapter has been labelled “make-sense frames,” information that we retrieve from background knowledge to fit a new situation. And thirdly, mental representations that are regarded as belonging to the culture or collectivity in a broad sense, often in the shape of stereotypes (sex roles, ethnic origins, professions...).

The combination of these three areas yields a model, the *Intersecting Circles Model* of communication through jokes, which comprises seven types of jokes depending on the presence of any of these aforementioned areas insofar as these areas play a part, as predicted by the speaker in the eventual humorous effects achieved by the interlocutor.

References


