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by

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It has often been observed that many jokes rely on the audience reinterpreting the initial part of the joke once the punchline is encountered. In order to elaborate on this account, we outline how these reinterpretations may happen in various ways. The examples we consider suggest that the generalisation is best stated not in terms of syntactic or even semantic forms, since the same mechanism seems to occur in jokes presented visually or partly verbally, partly visually. We sketch an analysis using separate but related viewpoints (expressible in terms of mental spaces), concluding that the revised interpretation may occur in any nested viewpoint, and need not be adopted by the audience as a factually correct interpretation.

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Reinterpretation and viewpoints

GRAEME RITCHIE

Abstract

It has often been observed that many jokes rely on the audience reinterpreting the initial part of the joke once the punchline is encountered. In order to elaborate on this account, we outline how these reinterpretations may happen in various ways. The examples we consider suggest that the generalisation is best stated not in terms of syntactic or even semantic forms, since the same mechanism seems to occur in jokes presented visually or partly verbally, partly visually. We sketch an analysis using separate but related viewpoints (expressible in terms of mental spaces), concluding that the revised interpretation may occur in any nested viewpoint, and need not be adopted by the audience as a factually correct interpretation.

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Introduction

Many authors have observed that a common structure for a joke is an initial portion (the *set-up*) which appears to have one interpretation, followed by a final part (the *punchline*) which forces the audience (reader or hearer) to perceive a different interpretation of the set-up. Further elaboration of this sketch would assist in the development of a more detailed theory of joke mechanisms. In particular, it would be useful to be more precise about how different interpretations are related in this joke device.

Certain aspects of these jokes can be clarified using an abstract notion of nested viewpoints. The emphasis in this analysis is on *the perspective(s) from which the reinterpretation occurs*, since some jokes involve a misunderstanding by the audience, whereas others depend upon a mistake by a character within a story.

We shall start by outlining the types of joke involved, and then summarise what appear to be the regularities within this data. After setting out our theoretical assumptions, we shall show how several different variants of this joke-type can be represented, and draw some conclusions.

Incongruity-resolution and forced reinterpretation

The incongruity-resolution account of humour (Suls 1983) postulates a two-stage process for the perception, comprehension and appreciation of humour. In the first stage, the audience (reader/hearer/viewer) perceives some incongruity; in the second stage this incongruity is resolved. This has been, and still is, an enormously influential idea. Shultz (1976) claims that this analysis is of “immense heuristic value in accounting for vast samples of humour”. Ruch says, citing a number of writers, that “there is general agreement about the existence of this two-stage structure in the process of perceiving and understanding humour” (Ruch 1992: 31). Despite this, there is little agreement about what constitutes “incongruity” or “resolution” ((Forabosco 1992), (Latta 1999: Ch. 7), (Ritchie 2003: Ch. 4)).

One common analysis of humour, particularly of verbally expressed humour, can be seen as a particular instance of the incongruity-resolution approach. It is summarised in these (typical) quotations:

The comic effect arises when an alternative, non-favored and therefore non-expected interpretation is revealed, at the punchline, as the correct one.

(Dascal 1985: 95)

The humorous effect comes from the listener’s realization and acceptance that s/he has been led down the garden path. . .

In humour, listeners are lured into accepting presuppositions that are later disclosed as unfounded.

(Dolitsky 1992: 35)

...the punch semantically reverses the sense we would expect from the build-up, and forces an unexpected sense to our attention.
(Norrick 2001: 258)

That is, the proposal is that humour is caused by the stimulus (e.g. a text) having more than one interpretation in its initial stages (the set-up), but only one interpretation being perceived by the audience. The final part of the stimulus (the punchline) then forces the audience to notice an alternative, hitherto less obvious, interpretation. The factors which may lead to one interpretation being more obvious than another (Giora (1991), De Palma and Weiner (1992), Giora (1997), Giora and Fein (1999)) are not germane to our analysis.

The authors quoted above (Dascal, Norrick, Dolitsky), and others (notably Raskin (1985)), present this as a general form for all humour (or all verbally expressed humour), not just as a subtype of joke. We have argued (Ritchie 1999, 2003) that not all jokes take this form, even within the set of jokes that could be said to be based on incongruity-resolution. For the purposes of the present paper, the issue of universality is not relevant. We shall discuss jokes which seem to have this form (what we have called *forced reinterpretation* jokes (Ritchie 2002, 2003)), and leave it open whether this discussion covers all jokes, or (as we believe) only a subclass, albeit a large and interesting subclass.

An informal analysis of the patterns

Before characterising in a relatively formal manner the operation of differing world views or perspectives within jokes, we will first discuss the regularities and generalisations informally. Firstly, we shall set out the joke examples which will be used to demonstrate the main points of our analysis. Secondly, we shall consider the question of whether reinterpretation involves a shift towards a more “correct” interpretation. Thirdly, we shall look at the ways in which humorous items conveyed in different media display similar patterns of reinterpretation.

Some reinterpretation examples

In this subsection, we shall present a small set of example jokes which we shall use in later subsections to illustrate particular points in our argument. These examples are chosen simply because it seems intuitively clear that they do involve reinterpretation, and because they differ in certain ways which are central to our analysis. (As noted above, forced reinterpretation jokes are a very significant class, so these few examples can be seen as typical of a commonly occurring and widely discussed type of humour.)

- (1) There are these two goldfish in a tank. One says to the other, ‘How do you drive this thing?’ (Joke heard in conversation)

This joke fits into the forced reinterpretation mould fairly naturally. The lexical ambiguity of *tank* leads to the set-up (first sentence) having two (or more) readings, only one of which seems obvious, as a result of the semantic and/or real-world properties of *goldfish*. The punchline (final sentence) does not make sense with respect to this interpretation, forcing a reinterpretation of *tank*.¹

Similar remarks can be made about the (practical) joke (2).

- (2) What’s the difference between an elephant and a watermelon?
(I don’t know.)

You’d be a fine one to send to the store for a watermelon. (Dienhart 1999)

Here, the ambiguity is at a pragmatic level, as what has to be reinterpreted is the *illocutionary force* (Levinson 1983) of the initial question.

In (1) and in (2), both the linguistic event which has to be reinterpreted and the linguistic event which occasions the reinterpretation (i.e. the punchline) are directly encountered by the audience, without any mediating fictitious characters.

In (3) and (4), on the other hand, the joke narrates a sequence of events which the audience does not directly experience. Moreover, the reinterpretation is forced by a story character apparently misinterpreting the set-up.

(3) A lady went into a clothing store and asked ‘May I try on that dress in the window?’

‘Well,’ replied the sales clerk doubtfully, ‘don’t you think it would be better to use the dressing room?’ (Clark (1968) cited by Oaks (1994: p. 379))

(4) Do you believe in clubs for young people?

Only when kindness fails. (Attardo 1994: 97)

Jokes (3) and (4) rely on some form of linguistic ambiguity (as does (1)). Examples (5) and (6) do not.²

(5) ‘Is the doctor at home?’ the patient asked in his bronchial whisper. ‘No,’ the doctor’s young and pretty wife whispered in reply. ‘Come right in.’ (Raskin 1985: 32)

(6) Russian officers in an Eastern European country go to a tavern. They order beer. The waiter places coasters on the table and serves the beer. Later they order another round. The waiter returning with the beer finds no coasters. “OK,” he tells himself, “these are collectors,” and puts down another set of coasters. When the third round is ordered and brought out, there are again no coasters. Angry, the waiter puts the beer down on the table, but places no more coasters. One of the Russian officers protests: “What’s this? No more crackers?” (Hetzron 1991: 62)

In these examples, there is no linguistic ambiguity, but once again reinterpretation occurs, triggered (as in (3) and (4)) by a story-character misinterpreting some events. (In the earlier examples, the misinterpreted events were linguistic utterances, but here what is misinterpreted – the placing of the coasters by the waiter – are not linguistic events, a point we shall return to later.)

Correct and incorrect interpretations

The quotations earlier from Dascal and from Dolitsky suggest that the reinterpretation is always a move from an “incorrect” to a “correct” interpretation, and this is a plausible account of a joke like (7).

(7) Peter decided to go skiing with his buddy, Bob. They loaded up Peter's station wagon and headed north. After driving for a few hours, they got caught in a terrible blizzard. They pulled in to a nearby farm house and asked the attractive lady of the house if they could spend the night. 'I'm recently widowed,' she explained, 'and I'm afraid the neighbors will talk if I let you stay in my house.' 'Not to worry,' Peter said, 'we'll be happy to sleep in the barn.' Nine months later, Peter got a letter from the widow's attorney. He then went up to visit his friend Bob and said, 'Bob, do you remember that good-looking widow at the farm we stayed at?' 'Yes, I do.' 'Did you happen to get up in the middle of the night, go up to the house and have sex with her?' 'Yes, I have to admit that I did.' 'Did you happen to use my name instead of telling her your name?' Bob's face turned red and he said, 'Yeah, I'm afraid I did.' 'Well, thanks! She just died and left me everything!' (from www.jokes2000.com, January 2002)

However, the generality of this observation depends on what we mean by "correct". This term could mean "being an accurate account of what has happened in the story world" (call this *veracious*), or it could mean "allowing the audience to make sense of what is going on in the text" (call this *coherent*). In (5), it is not clear that the revised interpretation (a surreptitious visit for adulterous purposes) is a "veracious" view of what is going on in the story world – perhaps the patient-character is merely suffering from a hoarse throat. The wife-character in (5) may have adopted an "incorrect" (non-veracious) view of the patient-character's actions. Nevertheless, understanding of the wife-character's view is necessary for coherence. (A similar account could be given for (3) and (4).)

In (6), the change of interpretation could be postulated as being from "the coasters are being stolen by the soldiers" to "the coasters are being eaten by the soldiers", so that an inaccurate view of story events switches to an accurate (veracious) view. Alternatively, we might analyse the first interpretation as being "the soldiers believe these objects are coasters", in which a factually *accurate* opinion is *erroneously* imputed to a story character. The revised interpretation would then be "the soldiers believe these objects are crackers", so that a more *accurate*

imputation of belief is made, but of an *inaccurate* (non-veracious) opinion. It is not clear that anything of substance depends on the distinction between these two candidates for shift of interpretation. However, whichever of these analyses we choose, the reinterpretation, if made by the audience, improves, or achieves, some notion of coherence.

In cases where the analysis assigns a non-veracious belief to a story-character, it is not essential that the audience adopt this opinion as true. Although it is plausible to suggest that in (1) or (2) the audience does accept the new interpretation, it is harder to argue in examples such as (5) (or the second of our analyses of (6)) that the audience must accept the character's view as factually accurate (within the story world). In these, the audience becomes aware of the possibility of the other interpretation for the story-character, but does not have to adopt it as their own view of the story world (cf. the quotation from Norrick, earlier).

This may seem as if we have found a generalisation: the reinterpretation is from a reading in which the text is not coherent to one in which it is coherent.³ Unfortunately, this does not say very much. It does not go much further than the uncontroversial observation that reinterpretation is not arbitrary but tends to be driven by a need to make sense of the whole text. Writers on forced reinterpretation jokes (e.g. Suls (1972)) have made this point in one way or another before now. Moreover, this is equally true of changes of interpretation of non-joke texts, or normal (non-changing) interpretation of texts.

Reinterpretation in various media

Although some jokes (such as (3) and (4)) rely on linguistic ambiguity (lexical or syntactic), it would be misleading to accord too central a role to language devices as the source of multiple interpretations. In its contribution to the humour, reinterpretation within textual jokes is not radically different from changes of interpretation that may happen in other media. It is easy to find examples which suggest that similar mechanisms are at work in humorous artefacts in various media (words, cartoons, actions).

To remain with textual humour for the moment, there is even a contrast between

jokes like (5), (6), (7), in which a story is narrated, and a joke like (2) which relies on an interaction between teller and audience, depending on knowledge of the “riddle” format. In the story-telling jokes, the (re)interpretations happen in a story world; in the fake riddle, the reinterpretation is of the actual (linguistic) actions by the joke-teller. It would be desirable if we could devise a formal analysis which shows the similarities between these different varieties of reinterpretation.

We can widen the scope of the forced reinterpretation account by considering humour conveyed visually. Dolitsky (1983) presents a comic-strip of several frames in which a story is told. The early frames have the obvious interpretation that the participants are in a small boat at sea. Only in the final frame, as a wider view is given, do we realise that they are in fact in a static boat on dry land at a nautical exhibition. This fits directly into the forced reinterpretation pattern, but this time using visual rather than verbal stimuli.

The Marx Brothers’ films contain examples where a straightforward forced reinterpretation joke is presented partly verbally, partly visually.⁴

- (8) Groucho (sitting at his desk with an official document): ‘Give me a seal.’
(Harpo enters carrying a large aquatic mammal.)
(*Horse Feathers*, 1932, Norman McLeod)

- (9) President of Sylvania: ‘But I asked you to dig up something I could use against Firefly. Did you bring his record?’
(Harpo produces a gramophone record.)
(*Duck Soup*, 1933, Leo McCarey)

Both (8) and (9) display exactly the same pattern of mis- or re-interpretation shown in earlier jokes such as (3), even though the punchline is delivered wholly as an action which is perceived visually by the audience. The set-up is still conveyed verbally.

These examples suggest that there is a broader generalisation which cuts across classification of the medium (words, pictures, etc.) used to convey the joke.

It is worth noting that the examples used so far would not be classed together in some taxonomies. A very widely accepted distinction is between *verbal* jokes

and *referential* jokes (Attardo 1994).⁵ The former are crucially dependent on some device in the language in which they are conveyed, and could not be directly translated into any other arbitrarily chosen language while preserving the humour. Examples (1), (3) and (4) would all be verbal. A referential joke depends for its effect only on the meaning expressed by the text, not the exact details of how that meaning is conveyed. Hence, a referential joke can be translated into another language without significant difficulty. Examples (2), (5), (6) and (7) would be referential jokes. This major dichotomy misses the generalisation that all these jokes involve a sequence of events, one of which has multiple possible interpretations. The linguistic ambiguity in (3) and (4) is merely the means of creating an event which is open to alternative interpretations. Indeed, it could be claimed that, within the traditional taxonomy, the two Marx Brothers examples are *verbal* jokes, since they rely on specific lexical ambiguities in English. On the other hand, some might class them as *visual* jokes, since the punchline is conveyed in that medium. Hence, any classification of jokes which introduces the verbal/referential distinction (or visual/non-visual) as a major division risks missing some generalisations about the central mechanisms of the jokes. The regularities about reinterpretation jokes are at some more abstract level at which the interpretations of the information are manipulated, not at the level of the particular medium used. This is not to say that the verbal/referential distinction is of no interest, only that it should not be given disproportionate importance.

The descriptive framework

Choosing a formal model

In order to be more precise about the regularities discussed in the previous section, it would be desirable to be able to state them in a formal representational scheme, such as a symbolic logic. The main concept needed to express these patterns is some arrangement of separate sets of beliefs (e.g. of joke teller, of joke audience, of story character) and some systematic way of connecting belief sets, particularly allowing for an audience's beliefs about a story character's beliefs.

In the general area of semantics and knowledge representation, there are many formal notations for tackling such subjects. These include mental spaces (Fauconnier 1994), the ViewGen model (Wilks and Hartley 1989), or some variant of belief logic (e.g. Konolige (1983, 1986), Cohen and Levesque (1985)). It is quite likely that our observations could be framed in any one of these formalisms, although the exact technical details might vary. We have argued (Ritchie 2003: Ch. 3) that humour research should be cautious about building particular theories of language or knowledge representation (or any other related area) into the heart of its analyses, since that tends to make the humour analyses dependent upon those particular theories, and the essential claims about humour may be obscured amongst the technicalities demanded by the formalism. We have advocated *data abstraction between theories* (in the spirit of data abstraction as normally understood within computer science (Abelson and Sussman 1985: Ch. 2)), in which one theory (humour) postulates just those constructs it seems to need from the other theory or discipline (e.g. knowledge representation), without stipulating how those constructs are to be defined or implemented in detail; the details are delegated to whatever discipline is appropriate.

Here, we shall propose a range of abstract constructs which intuitively capture the semantic/pragmatic distinctions between examples such as those given above, without nominating a complete formal theory that supports these constructs, nor giving fully detailed definitions of them; we are not setting out to be innovative in the area of knowledge representation. The central ideas are very closely based on mental spaces (Fauconnier 1994), although they are also very similar to the ViewGen model (Wilks and Hartley 1989).⁶

Basic concepts

Our first primitive concept is that of the *viewpoint*, which represents a particular perspective on some objects, events or situations. This is intuitively similar to the *possible world* of a logician (Hughes and Cresswell 1968, Dowty, Wall, and Peters 1981), although the way in which we shall use them makes them slightly different formally. Our viewpoints are much more like (perhaps identical to) Fauconnier's

mental spaces, or the identically-named *viewpoints* of the ViewGen model.⁷ Our type of viewpoint will have an associated set of *contents*, consisting of objects, properties of those objects, and relations between objects. Objects can be of different *types*, representing different sorts of things in the world (events, concrete objects, etc.). The contents of a viewpoint are the details of that perspective on the world, indicating what items are known about in that viewpoint, and what links between objects hold in the viewpoint. The contents of different viewpoints are disjoint: an object can be in the contents of only one viewpoint. (This is why the counterpart relation – see below – is used.)

Viewpoints are interlinked by an *accessibility* relationship (cf. mental spaces (Fauconnier 1994: p. xxi), or possible worlds (Dowty et al. 1981)), which can be thought of as indicating that one viewpoint is subordinate to another. This relationship is transitive, asymmetric, and reflexive. For example, if viewpoint V_H represents the world view of a particular person H , and H hears a story, then a viewpoint V_N representing H 's view of the story-world will be accessible (subordinate) to viewpoint V_H . The set of beliefs of a character C in the story can be represented by a viewpoint V_C accessible to V_N (cf. Sanders and Redeker (1996)). Since accessibility is transitive, viewpoint V_C will be accessible to viewpoint V_H , thereby representing H 's view of what the character C thinks/believes/etc.

The other crucial relationship is the *counterpart* relation. An object in a viewpoint V_A may have a counterpart in a viewpoint V_B . This linkage is intended to reflect the idea that the separate objects in some sense denote or represent the same item, setting up some form of morphism between the contents of the two viewpoints (cf. *cross-domain functions* (Fauconnier 1994: p. xxxvii)). There is also a *default principle*: the contents of one viewpoint are deemed to have direct counterparts in a subordinate (accessible) viewpoint unless there is evidence to the contrary. For example, when we hear a story, we assume that most of the facts and objects from the real world are available in the story (as counterparts) unless there is good reason for them not to be.⁸

Beyond this, we need certain types of object. These are the *event-sequence* (representing one or more events happening in temporal order), the *individual* (repre-

senting a real or fictitious person), and the *interpretation* (a collection of propositions). There will be a relation M which can hold between an event-sequence and an interpretation (indicating that these events are interpreted in this way). There is a relation *contributes* which links two interpretations, indicating that the first interpretation provides information for the second one, perhaps by being a sub-part of it. The main use for this relation in our analysis is that the interpretations associated with set-up and with punchline will both be linked by *contributes* to the overall interpretation of the whole text.

Also, we require a function *viewof* between individuals and viewpoints, such that each individual I has exactly one viewpoint V_I associated with it. This represents the idea that every person, even a character in a story, has a perspective on whatever information is available, so that different individuals may know of the existence of different objects, or may believe different propositions.

Notice that we are not suggesting that this repertoire of object types and relations is sufficient to describe every linguistically interesting detail of the texts, nor even to describe every aspect relevant to humour. These abstract building blocks are chosen as the minimum needed to state relatively clearly the variations in reinterpretation jokes discussed earlier. That is, we are abstracting away from those details which are not the focus of discussion here, such as factors contributing to misinterpretation (the description of which would need further object types and relations).

We will not formalise these definitions any further, but (following the mental space tradition) will rely on diagrams to convey our intuitive accounts of what various jokes convey.

Describing the patterns

In our diagrams, we shall depict viewpoints by ovals, with the accessibility relationship being represented by the nesting of these ovals: if viewpoint V_2 is inside viewpoint V_1 , then V_2 is accessible from V_1 . Objects within viewpoints are indicated by large dots (labelled for ease of reference), and relations between objects are shown by lines; Figure 1 shows what the types of connector mean.

In all of these analyses, we require to set out *two* configurations of viewpoints and their contents: one describing the situation after the set-up but before the punchline (“BEFORE”), and one corresponding to the state after the punchline (“AFTER”).

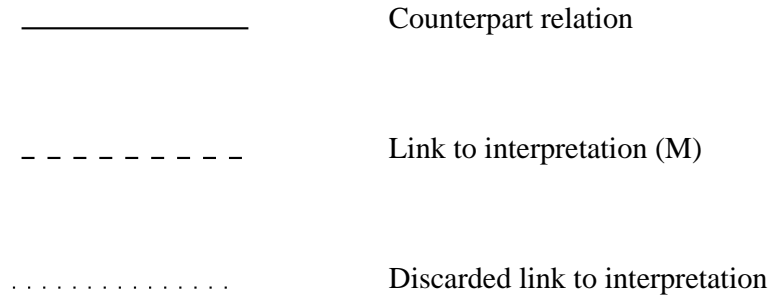


Figure 1: Notation used in figures for relation links

We start by considering joke (2). We need a basic viewpoint V_H for the joke-hearer’s view of the world. Within this world there occurs an event, the uttering (by the joke-teller) of the opening line (the set-up); this we will represent as an event-sequence P_{SU} (“ P ” for “presentation”). In the BEFORE configuration, there is an interpretation I_{SU}^1 , and a relation link M from P_{SU} to I_{SU}^1 ; see Figure 2. In the AFTER configuration, there is also an event-sequence P_{PL} representing the utterance of the punchline, an interpretation I_{PL} representing the interpretation of the punchline, a M link between these, an interpretation I_{SU}^2 (the revised interpretation of the set-up), and an M link from P_{SU} to I_{SU}^2 . We omit from the diagram the *contributes* relations involving I_{SU}^2 and I_{PL} which lead to an overall interpretation I_{ALL} .

Example joke (1) requires a viewpoint V_N for the narrative, which we depict (Figure 3) as within the hearer’s viewpoint V_H to indicate that it is subordinate (accessible) to V_H . In the BEFORE configuration, the (narration of the) set-up occurs as event-sequence P_{SU} , in V_H (i.e. experienced by the hearer) but outside V_N . There is an interpretation of these narrating events as events E_{SU}^1 occurring in the story-world, i.e. in V_N . (Strictly speaking, there is an interpretation of P_{SU} as I_{SU}^1

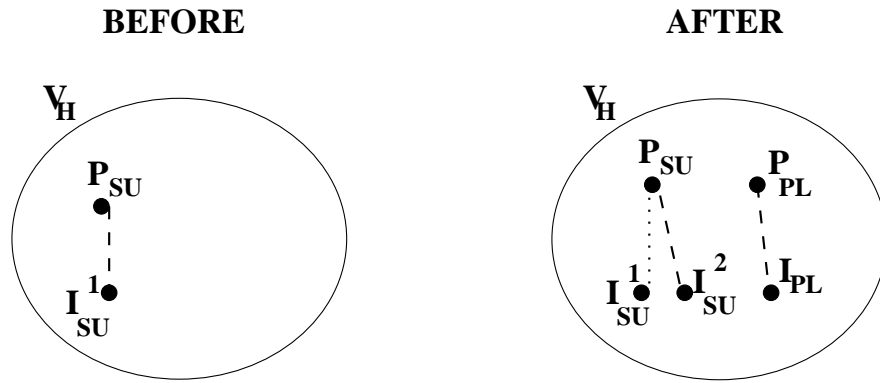


Figure 2: Viewpoints for example (2)

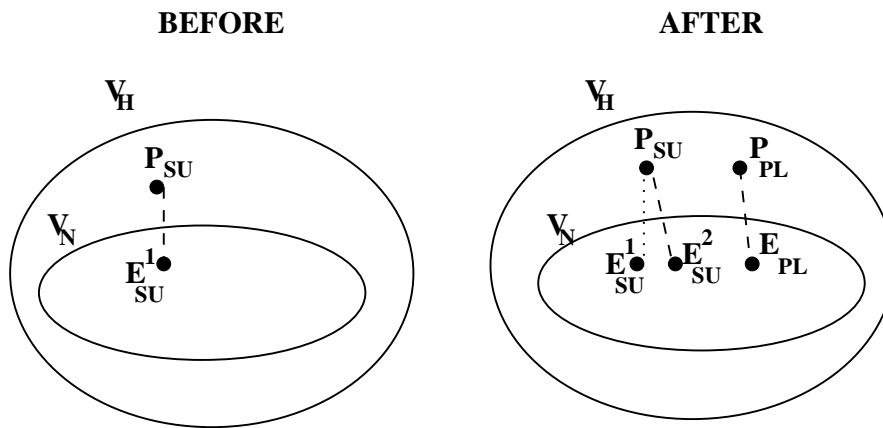


Figure 3: Viewpoints for example (1)

– outside V_N – which asserts the existence of events E_{SU}^1 ; we have glossed over this level of indirection to simplify the figure.) The AFTER arrangement includes, as in the analysis of (2), a punchline narration event P_{PL} and an interpretation E_{PL} of this, in V_N . Also, there is a new interpretation of the narration P_{SU} as different events in V_N , i.e. E_{SU}^2 , with the link between P_{SU} and E_{SU}^1 replaced by a link between P_{SU} and E_{SU}^2 . Again, strictly this is mediated by an interpretation I_{SU}^2 , which describes the existence of events E_{SU}^2 , a detail omitted in the diagram.⁹

There would be various *contributes* relations, not shown in the figure, linking items into an overall interpretation I_{ALL} .

Example (5) is more complicated (see Figure 4). As with (1), we start with a

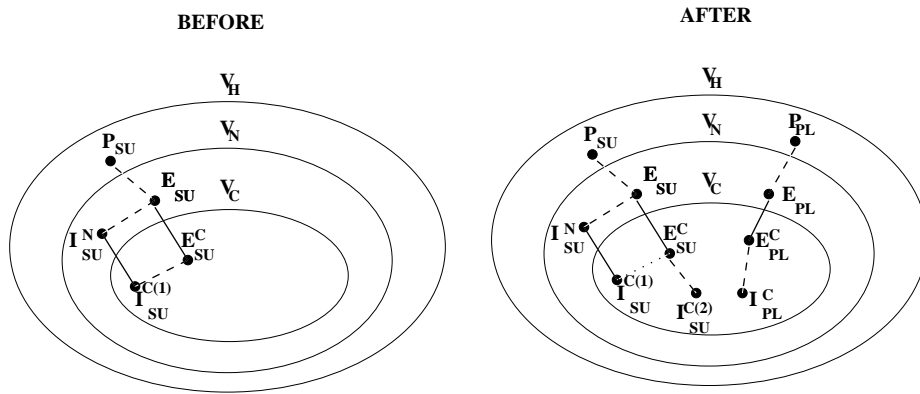


Figure 4: Viewpoints for example (5)

hearer’s viewpoint V_H , a narrative viewpoint V_N , presentation (narration) events P_{SU} and P_{PL} in V_H , and interpretations of these narrative portions as events E_{SU} and E_{PL} inside V_N (once again, a level of intermediate interpretation is omitted). The events E_{SU} are the patient-character coming to the doctor’s door and asking for the doctor. These have an interpretation I_{SU}^N in V_N , representing the hearer’s idea of what is happening in the story (that the patient-character wishes to consult the doctor about a throat complaint). There is also a further viewpoint V_C , accessible to V_N , and thence to V_H . This represents the perspective of the wife-character, or more accurately the hearer’s view of the wife-character’s perspective (since

the accessibility links indicate subordination). In V_C there will be a counterpart E_{SU}^C of E_{SU} , representing the (hearer’s view of the) wife-character’s view of the events happening in the initial part of the story, since there is a default assumption that the events are available to the character. The wife-character’s viewpoint will, in the BEFORE configuration, include an interpretation $I_{SU}^{C(1)}$, again provided by the default principle (see earlier) as a counterpart to the hearer’s own interpretation I_{SU}^N . This is based on the intuition that, in narrative jokes such as these, the hearer will automatically assume that characters in the story adopt the most obvious interpretation of events within the story, until the punchline contradicts this. In the AFTER configuration, not only will similar structures have appeared for the punchline, the link between E_{SU}^C and $I_{SU}^{C(1)}$ will have disappeared, and a revised interpretation $I_{SU}^{C(2)}$ will now be present as the interpretation of events (more exactly, the hearer’s view of the wife-character’s interpretation).

Examples (3), (4), and (6) are broadly similar to (5) in viewpoint terms. As noted earlier, for (6) there is a choice to be made between two possible reinterpretations, but either of these can be expressed in our terminology. Where the change is between beliefs of the soldiers, the arrangement is comparable to that for (5); for the switch between different beliefs by the hearer about the events, we would posit a revised interpretation $I_{SU}^{N(2)}$ in V_N (but not in V_C) which would – in the AFTER situation – take the place of I_{SU}^N , linked to E_{SU} ; there would be no reinterpretation of E_{SU}^C within V_C .

Having made various assumptions, we now have three viewpoint-based accounts of what happens as jokes such as these are understood. In all of these, prior to the punchline, an “interpretation” link from an event-sequence to an interpretation was present, but after the punchline this was replaced by a link to a distinct interpretation. It can be seen that the “change of interpretation” which is central to this way of structuring a joke may occur either directly in the hearer’s own viewpoint (as in (2)), in a narrative viewpoint (as in (1)), or in the viewpoint of a character in the narrative (as in the other four examples considered). What the viewpoint analysis makes more explicit is that it is sufficient for this (apparently) to occur in *any viewpoint which is accessible (transitively) to the hearer’s*

viewpoint.

This arrangement is roughly depicted in Figure 5: there as many nested view-points as are needed, and there is a switch of interpretation of the set-up within one which is accessible to the audience.

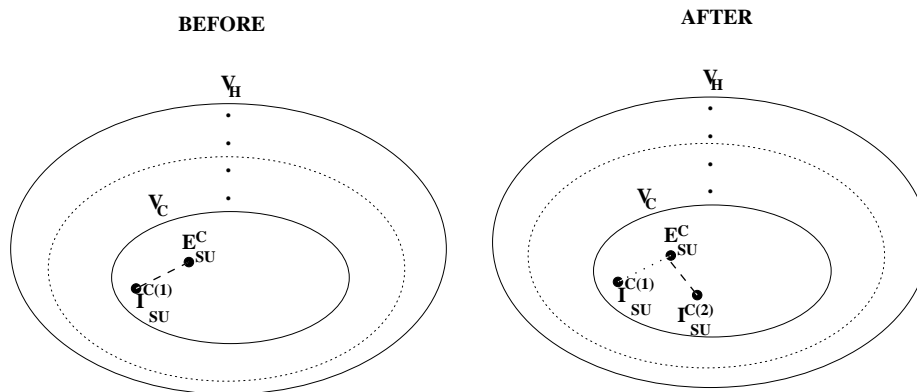


Figure 5: The general arrangement of viewpoints in FR jokes

This is the (semi-)formal account of the points made earlier, that the reinterpretation need not be from a false to a correct one, nor need it involve the hearer becoming committed to the revision: it just needs to be indicated as a possibility within some (accessible) world view. This is reminiscent of an observation in Ritchie (2003: Ch. 8), that certain jokes seem to operate by merely mentioning some incongruous perspective in a very oblique way, adopted neither by the audience nor by any story-character.

It should be clear that the analysis above is equally applicable to texts (or films, cartoons, etc.) which are *not* humorous, providing that some form of misunderstanding is involved. Hence this analysis does not directly explain why these jokes are funny: all that it does is elucidate the structure (of the text, film, etc.) which is used to convey the joke (what Ritchie (2003) calls a *delivery mechanism*). However, this is still a step forward, as we should try to tease apart the various factors (humorous, humour-supporting, and non-humorous) within jokes and similar artefacts, if we are to build a complete account of how these humorous stimuli work.

Summary

It is a central tenet of cognitive linguistics that generalisations about the use of language can often be found at levels which involve general reasoning mechanisms. The analyses given here tend to support that stance. We have argued that the (frequently discussed) “forced reinterpretation” form of humour is most generally described in terms of knowledge-level interpretations, and that this allows humour in various media to be characterised in similar terms.

Discussions of this type of humour have sometimes been imprecise about the way in which “reinterpretation” or “correction” occurs. We have suggested that the shift in interpretation is not always from factually incorrect to factually correct, and that it need not take place in the audience’s own view of the world. Rather, the change of interpretation should happen in some viewpoint which is accessible to the audience; that is sufficient for it to count as reinterpretation (although not sufficient in itself to create humour). This pattern can be stated relatively elegantly using mental spaces or similar multiple-belief knowledge representation schemes.

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Notes

1. Ritchie (2003: p. 92) suggests that any linguistic ambiguity which is crucial in the set-up of this type of reinterpretation joke will never appear directly in the narrative but will always be embedded in some way. That is, the ambiguous material will be in an utterance by a story character, or in a piece of text (e.g. a road sign) cited by the narrator, but will not be in the basic assertions made by the narrator about what happens in the story. Example (1) refutes that conjecture.
2. Raskin (1985) gives a detailed description of (5) in terms of his script-based theory of humour. Nothing about the analysis here either conflicts with or corroborates Raskin's account, as we are exploring a separate aspect of the semantics of these examples, namely the division of knowledge into viewpoints.
3. This point is developed more fully in Ritchie (2003: Ch. 8), where a number of notions of what we have called here "coherence" are considered.
4. I am grateful to Delia Chiaro for these examples.
5. Freud (1966) uses the term *conceptual* rather than *referential*.
6. Attardo (2001: p. 57-58) suggests that the meanings of texts (including jokes) can be represented by a *text world representation*, and remarks that these TWRs are similar to, amongst other things, mental spaces. He does not draw out this comparison in detail, so it is unclear which aspects of Fauconnier's mechanisms he is adopting, particularly as he also likens TWRs to the *mental models* of Johnson-Laird (1983), which are somewhat different from mental spaces, and to proposals by Eco (1979) and Emmott (1997).
7. It is natural to wonder whether our "viewpoints" are identical to Fauconnier's mental spaces, or merely very similar. The answer is not entirely clear. Most of the assumptions we have made about "viewpoints" are valid for mental spaces, and it should be possible to rewrite our account with more direct use of mental space terminology. However, we have refrained from claiming that the analyses here are dependent uniquely on mental spaces. This is partly for the methodological reason stated earlier – we do not wish to be side-tracked into the minutiae of non-humour theories – and partly because we are unsure whether we have been completely faithful to Fauconnier's framework. In particular, we have allowed

viewpoints (spaces) to be updated non-monotonically (between our BEFORE and AFTER states) rather than merely inserting additional information in viewpoints, which may not be permitted in mental spaces; see also Note 8. (We are also unsure whether we have exactly mirrored the ViewGen model.)

8. This may not accord directly with mental space doctrine, but see principle SP_2 in Fauconnier (1994: 87), or belief ascription in the ViewGen model (Wilks and Hartley 1989).

9. We have linked event-sequences to interpretations by treating these both as objects within viewpoints. It might be more in the spirit of mental space work to treat this “interpreting” as creating a viewpoint (i.e. acting as a space-builder (Fauconnier 1994: p.17)), so that revising the interpretation of an event-sequence causes a totally new viewpoint/space to be created. That approach would be quite plausible in a text like (1), where the revised interpretation creates, in a sense, “a different story” for the audience. It would then be necessary to ensure that the new viewpoint/space functioned in the same role as the previous one (e.g. as “the sales clerk’s view of what is going on” in (3)).

References

Abelson, Harold, and Gerald Jay Sussman with Julie Sussman

1985 *Structure and Interpretation of Computer Programs*. MIT Electrical Engineering and Computer Science Series. Cambridge, Mass: MIT Press.

Attardo, Salvatore

1994 *Linguistic Theories of Humour*. No. 1 in Humor Research. Berlin: Mouton de Gruyter.

Attardo, Salvatore

- 2001 *Humorous Texts: A Semantic and Pragmatic Analysis*. No. 6 in Humor Research. Berlin: Mouton de Gruyter.
- Clark, David Allen
- 1968 *Jokes, Puns and Riddles*. New York: Doubleday.
- Cohen, Philip R., and Hector J. Levesque
- 1985 Speech acts and rationality. In *Proceedings of 23rd Annual Meeting of the Association for Computational Linguistics*, pp. 49–59.
- Dascal, Marcelo
- 1985 Language use in jokes and dreams: sociopragmatics vs. psychopragmatics. *Language and Communication*, 5(2), 95–106.
- De Palma, Paul, and E. Judith Weiner
- 1992 Riddles: Accessibility and knowledge representation. In *Proceedings of COLING-92 (15th International Conference on Computational Linguistics)*, pp. 1121–1125, Nantes.
- Dienhart, John M.
- 1999 A linguistic look at riddles. *Journal of Pragmatics*, 31(1), 95–125.
- Dolitsky, Marlene
- 1983 Humor and the unsaid. *Journal of Pragmatics*, 7, 39–48.
- Dolitsky, Marlene
- 1992 Aspects of the unsaid in humor. *Humor: International Journal of Humor Research*, 5(1/2), 33–43.
- Dowty, D.R., R.E. Wall, and S. Peters

1981 *Introduction to Montague Semantics*. Dordrecht, Holland: D.Reidel Publishing Company.

Eco, Umberto

1979 *Lector in fabula*. Milan: Bompiani.

Emmott, Catherine

1997 *Narrative Comprehension: A discourse perspective*. Oxford: Clarendon.

Fauconnier, Gilles

1994 *Mental Spaces : Aspects of meaning construction in natural language*. Cambridge, UK: Cambridge University Press. First published by MIT Press, 1985.

Forabosco, Giovannantonio

1992 Cognitive aspects of the humor process: the concept of incongruity. *Humor: International Journal of Humor Research*, 5(1/2), 45–68.

Freud, Sigmund

1966 *Jokes and their relation to the unconscious*. London: Routledge & Kegan Paul. Translated by James Strachey. First published 1905.

Giora, Rachel

1991 On the cognitive aspects of the joke. *Journal of Pragmatics*, 16(5), 465–485.

Giora, Rachel

1997 Understanding figurative and literal language: the graded salience hypothesis. *Cognitive Linguistics*, 8(3), 183–206.

Giora, Rachel, and Ofer Fein

- 1999 Irony comprehension: the graded salience hypothesis. *Humor*, 12(4), 425–436.

Hetzron, Robert

- 1991 On the structure of punchlines. *Humor: International Journal of Humor Research*, 4(1), 61–108.

Hughes, G., and M.J. Cresswell

- 1968 *Introduction to Modal Logic*. London: Methuen.

Johnson-Laird, Philip N.

- 1983 *Mental Models*. Cambridge: Cambridge University Press.

Konolige, Kurt

- 1983 A deductive model of belief. In Bundy, Alan (Ed.), *Proceedings of the 8th International Joint Conference on Artificial Intelligence*, pp. 377–381, Los Altos, CA. William Kaufmann.

Konolige, Kurt

- 1986 *A Deduction Model of Belief*. Research notes in artificial intelligence. London: Pitman.

Latta, Robert L.

- 1999 *The Basic Humor Process: A Cognitive-Shift Theory and the Case against Incongruity*. No. 5 in *Humor Research*. Berlin: Mouton de Gruyter.

Levinson, Stephen

- 1983 *Pragmatics*. Cambridge, UK: Cambridge University Press.
- Norrick, Neal R.
- 2001 On the conversational performance of narrative jokes: toward an account of timing. *Humor: International Journal of Humor Research*, 14(3), 255–274.
- Oaks, Dallin D.
- 1994 Creating structural ambiguities in humor: getting English grammar to cooperate. *Humor: International Journal of Humor Research*, 7(4), 377–401.
- Raskin, Victor
- 1985 *Semantic Mechanisms of Humor*. Dordrecht: Reidel.
- Ritchie, Graeme
- 1999 Developing the incongruity-resolution theory. In *Proceedings of the AISB Symposium on Creative Language: Stories and Humour*, pp. 78–85, Edinburgh, Scotland.
- Ritchie, Graeme
- 2002 The structure of forced reinterpretation jokes. In Stock, Oliviero, Carlo Strapparava, and Anton Nijholt (Eds.), *Proceedings of the April Fools' Day Workshop on Computational Humor*, No. 20 in Twente Workshops on Language Technology, pp. 47–56, Enschede, Netherlands. University of Twente.
- Ritchie, Graeme
- 2003 *The Linguistic Analysis of Jokes*. London: Routledge.

Ruch, Willibald

- 1992 Assessment of appreciation of humor: Studies with the 3WD humor test. In Spielberger, Charles D., and James N. Butcher (Eds.), *Advances in personality assessment: Volume 9*, chap. 2. Hillsdale, NJ: Lawrence Erlbaum.

Sanders, José, and Gisela Redeker

- 1996 Perspective and the representation of speech and thought in narrative discourse. In *Spaces, Worlds, and Grammar*, chap. 10, pp. 290–317. Chicago: Chicago University Press.

Shultz, Thomas R.

- 1976 A Cognitive-Developmental Analysis of Humour. In Chapman, Anthony J., and Hugh C. Foot (Eds.), *Humour and Laughter : Theory, Research and Applications* (1st edition)., chap. 1, pp. 11–36. London: Transaction Publishers.

Suls, Jerry M.

- 1972 A two-stage model for the appreciation of jokes and cartoons: an information-processing analysis. In Goldstein, Jeffrey H., and Paul E. McGhee (Eds.), *The Psychology of Humor*, chap. 4, pp. 81–100. New York: Academic Press.

Suls, Jerry M.

- 1983 Cognitive processes in humor appreciation. In McGhee, Paul E., and Jeffrey H. Goldstein (Eds.), *Handbook of Humor Research*, chap. 3, pp. 39–57. New York: Springer-Verlag.

Wilks, Yorick, and Roger Hartley

1989 Belief ascription and model generative reasoning: joining two paradigms to a robust parser of messages. In *Proceedings of DARPA Workshop on Speech and Language*, pp. 219–240, Los Altos, CA. Morgan Kaufman.