

Portland State University

**PDXScholar**

---

Communication Faculty Publications and  
Presentations

Communication

---

10-1-2005

## Frame-Shifting in Humor and Irony

L. David Ritchie

*Portland State University, cgrd@pdx.edu*

Follow this and additional works at: [https://pdxscholar.library.pdx.edu/comm\\_fac](https://pdxscholar.library.pdx.edu/comm_fac)



Part of the [Communication Commons](#)

**Let us know how access to this document benefits you.**

---

### Citation Details

Published as: Ritchie, D. (2005). Frame-shifting in humor and irony. *Metaphor and Symbol*, 20(4), 275-294.

This Post-Print is brought to you for free and open access. It has been accepted for inclusion in Communication Faculty Publications and Presentations by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: [pdxscholar@pdx.edu](mailto:pdxscholar@pdx.edu).

## **Frame-Shifting in Humor and Irony**

David Ritchie

Portland State University

Author's Address

Department of Communication

Portland State University

Portland, OR 97214 USA

E-mail: [cgrd@pdx.edu](mailto:cgrd@pdx.edu)

Running Head: Frame-Shifting in Humor and Irony

[\*Metaphor and Symbol\*, 20, 275-294.](#) (2005).

### **Abstract**

Coulson's (2001) analysis of humor as "*frame-shifting*" is extended to irony and compared to other current theories of humor and irony, including Giora's (2003) *graded salience* model. It is argued that the effects of humor and irony often depend on a *subversive* relationship between the initial and alternative frames, which adds to both cognitive and social meaning; understanding these effects requires consideration of the expansion of common ground (Clark, 1996) and relevance effects (Sperber & Wilson, 1986) triggered by the shift from a culturally licensed to a subversive frame. Reanalysis of several examples from recent studies in the light of these approaches shows that humor and irony, like other forms of figurative language, can serve complex communicative, social, and cognitive objectives that justify according them a central place in communication-oriented theories of language use.

### Frame-Shifting in Humor and Irony

Lakoff and Johnson (1980; 1999) effectively “normalized” figurative language, moving theories of metaphor and metonymy from the periphery to the center of theories of mind and communication. In this essay, I review some recent work on humor and irony and conclude that, like metaphor, they can generate extensive changes to cognitive environments for relatively little processing effort, leading to unexpected increments to relevance (Sperber & Wilson, 1986). Humor and irony often serve core communicative purposes in subtle and multifaceted ways that place them, alongside metaphor and metonymy, at or near the center of our theoretical attention.

Reddy (1993) sensitized us to the importance of the “*conduit*” and “*container*” meta-theoretical metaphors of communication; it is useful to extend the sense of his analysis to other meta-theoretical metaphors as well. For example, conceptual meta-metaphors such as “*computation*,” “*inputs*,” “*storage*,” “*outputs*,” and “*mapping*” perceptions and concepts from one “*domain*” to another, convey an implicit assumption that cognitive processes, including language, are “rational” in a sense akin to that of formal logic or the operations of a digital computer. It can be argued that the conventional treatment of forms such as humor and irony as exceptional and peripheral to “bona-fide” referential and propositional language uses (e.g., Raskin, 1985; Attardo, 2001; Raskin & Attardo, 1994) follow directly from these implicit rationalist assumptions.

It is virtually impossible to avoid metaphorical language in theorizing about a process such as language use, but the entailments of a particular set of metaphors can sometimes be brought to the surface and neutralized through use of alternative metaphors with different

entailments (Reddy, 1993; Schön, 1993). The “*framing*” and “*frame-shifting*” metaphor (Coulson, 2001) usefully avoids many of the limiting assumptions of metaphors based on formal logic and computer modeling; it also connects with familiar concepts such as *schemata* and *scripts*, and thus with a large body of previous research in humor, irony, metonymy, and metaphor.

Coulson presents the “*frame-shifting*” model in the context of *Conceptual Blending Theory* (Fauconnier & Turner, 1998; 2002), but the “*frame-shifting*” approach is to be preferred on several grounds. First, as a meta-theoretical metaphor, “*frame-shifting*” is potentially less constraining than the metaphors of “*conceptual space*” and “*blending*,” and avoids the multiplication of “*spaces*” implied by entailments of the “*space*” and “*blending*” metaphors (Ritchie, 2004). “*Frame-shifting*” supports conceptual links to humor, metonymy, and other forms of figurative language, and affords a ready path for connecting the cognitive and neural levels of language to the social and cultural levels – assumed but never satisfactorily developed by Fauconnier and Turner. And finally, the “*frame-shifting*” approach helps to normalize humor and irony as routine forms of language use, just as Lakoff and Johnson’s (1980) *conceptual metaphor* approach normalized metaphor.

### **Frame-Shifting and Humor.**

Some of the most promising features of the “*frame shifting*” model are apparent in Coulson’s discussion of the quip, “By the time Mary had her fourteenth child, she’d finally run out of names to call her husband” (2001, p. 49). Coulson points out that the reader initially interprets “names” as a reference to baby names, an interpretation based on world knowledge about the procedures (including naming) typically associated with childbirth. Moreover, since world knowledge also includes the fact that fourteen is an atypically large

number of children, the idea that a mother might have a more difficult time thinking of a name for the fourteenth child than for the first or second child is also consistent with the standard child-bearing schema. However, the insertion of “husband” where “baby” would be expected introduces an inconsistent element that prompts lexical reinterpretation of “names” as “epithets.” This shift in interpretation activates extensive (and previously suppressed) knowledge of events surrounding childbirth, including the pain and discomfort associated with giving birth, the subsequent hard work associated with caring for an additional child, and the husband’s role in the pregnancy.

The “fourteenth child” quip usefully illustrates basic processes in humor and irony. More importantly for the present purposes, it also illustrates how humor, irony, and other figurative communication forms can serve both social and cognitive purposes in communication.

**Humor Theories.** Most extant theories of jokes, and of humor in general, rely on one or more of three explanatory mechanisms: aggression, incongruity, and arousal-safety. Each of these approaches explains some important aspects of humor, but none seems complete on its own.

Aggression-based theories (e.g. Freud, 1960; Zillmann & Cantor, 1976) start with the premise that jokes constitute an attack by the joke teller upon the target of the joke, sometimes an individual but often a group. The aggression approach gains credibility from the persistent popularity of jokes that play on stereotypes about particular ethnic and religious groups, women, and other social categories, often focusing on lower-status and powerless groups. For example, consider the typical “light bulb” joke, analyzed in detail by Attardo (2001): “How many Polacks does it take to screw in a light bulb? Five, one to hold

the bulb and four to turn the chair.” This joke is readily interpreted as an insinuation that members of the target group, Polacks, are stupid and prone to doing things in the most difficult way possible, and consequently as an attack on members of that group. Many other racial, ethnic, and gender-based jokes have the same quality of aggressively insulting and disparaging innuendo. Jokes of this nature often serve the dual purpose of excluding the target group and enhancing the social solidarity of the joke teller and audience (Attardo, 2001; Norrick, 2003). In Zillmann and Cantor’s (1976) model, the appreciation of a joke of this nature depends crucially on the degree of the hearer’s animosity toward the target.

However, extension of the aggression analysis to absurdist jokes such as “knock-knock” and “elephant” jokes requires considerable theoretical contortion. Consider, “How can you tell if there is an elephant in your bathtub? By the smell of peanuts on its breath.” One might argue that these jokes somehow constitute an “aggression” against the hearer, but the word “*aggression*” would have to be understood in a metaphorical sense. Similarly, in the “fourteenth child” joke, calling the husband names (epithets) may be considered a form of symbolic aggression on Mary’s part, but that happens within the fictional layer of the joke, and it is less obvious how the joke qualifies as aggression on the part of a person who tells or appreciates the joke, unless the aggression is against the *institution* of maternity, taken as an “ideological target” (Attardo, 2001). But again, it is hard to interpret an action directed at an “ideological target” as “*aggression*’ except metaphorically.

Even when an aggressive element is clearly present, the social “meaning” of the joke is often to be found at a deeper level. Consider the joke with which Giora (2003, p. 175) closes her chapter on humor:

“A bus stops and two Italian men get on. They sit down and engage in an animated conversation. The lady sitting behind them ignores them at first, but her attention is galvanized when she hears one of the men say the following:

“Emma come first. Den I come. Den two asses come together. I come once-a-more. Two asses, they come together again. I come again and pee twice. Den I come one lasta time.”

“You foul-mouthed swine,” retorted the lady indignantly. “In this country we don’t talk about our sex lives in public.”

“Hey, coola down lady,” said the man. “Who talkin’ about a sexa? I’m a justa tellin’ my frienda how to spella ‘Mississippi’.”

In the beginning, the “Mississippi” joke seems to turn on a familiar kind of symbolic “aggression” against Italian-Americans (or immigrants in general) as the butt of the joke, but the punch-line turns the tables, so the accusatory lady becomes the butt of the joke. On a surface level, since she is made to look foolish and “dirty-minded,” the joke does seem to qualify as aggression. But the deeper criticism is against anti-immigrant stereotypes, and people who react on the basis of incomplete information. Criticizing bigoted attitudes hardly seems *aggressive*, except, again, in a metaphorical sense. Consistent with the *arousal-safety* approach (Yus, 2003), the humor in the joke seems to flow more from *defusing* or even *negating* the implicit anti-immigrant aggression than from the aggression itself.

The “Mississippi” joke invokes a *double* frame shift. It begins by playing on a familiar joke script (Attardo, 2001), in which the polite fictions by which people are expected to ignore sexuality and other bodily functions are undermined by children, immigrants, or other supposedly “under-socialized” persons. Then the punch-line reverses the field and

undermines this conventional frame with a more fundamentally *subversive* frame that carries a deeper message that undermines and opposes the apparent bigotry of the original joke script. The “elephant” joke also involve a kind of subversive double frame shift. The opening question itself (“How do you know if there is an elephant in your bathtub?”) juxtaposes a realistic frame, in which an elephant could not possibly be found anywhere near my bathtub, with a fantasy frame in which an elephant might be a reasonable item to find in my bathtub, in a way that playfully subverts physical rather than social reality. Then the punchline reinforces the fantasy frame, even as it undermines it with a logically subversive frame, in which none of the obvious attributes of elephants (e.g., size and color) is deemed relevant, and the salience of a totally secondary association with eating peanuts is increased.

The “lightbulb” and “Mississippi” jokes can be explained by an *incongruity* approach. In each case, the text of the joke is compatible with two distinct frames, which are in some sense opposite (Raskin, 1985). These jokes also seem to satisfy Raskin’s requirement of “a certain degree of playfulness,” although it is easy to imagine a non-playful communicative context in which either joke might appear; for example jokes of the “lightbulb” type often appear in conversational contexts critical of immigrants or other minorities. Conversely, the “Mississippi” anecdote might be offered as a pointed rejoinder to a series of tasteless anti-immigrant jokes.

Incongruity theory also works for the “elephant joke,” but it does not explain the humor in the “fourteenth child” quip. (The image of a harried mother muttering invectives at the man who got her pregnant fourteen times does not, by itself, seem *incongruous*.) Moreover, not all amusing incongruities are necessarily aggressive toward any individual, group, or even institution, and not all incongruities are humorous or even amusing. Some

incongruities, such as Kevin Carter's 1994 photograph of the starving child being stalked by a vulture, are tragic and heart-rending. Raskin, Attardo, and other incongruity theorists acknowledge these disparities, but their attempts to resolve them are not convincing (for an insightful critique see Brône & Feyaerts, 2004).

Giora's (2003) *graded salience hypothesis* provides a more detailed account of humorous incongruity, which is also consistent with the frame-shifting approach. According to Giora we invariably access the most salient meaning first. Humor exploits this tendency by providing an initial account consistent with a highly salient interpretation; the punch line forces us to revisit initially activated, but contextually suppressed concepts. A crucial feature of Giora's account is the prediction that jokes involve not merely a surprise ending, but active suppression of the original interpretation: "Whereas understanding irony and metaphor involves retention of salient, though contextually incompatible meanings..., joke interpretation does not" (p. 175).

In support of Giora's account, Vaid et al. (2003) cite two semantic priming experiments, in which the initially primed sense remained activated only at a low level during the final, resolution phase of the joke. On the other hand, the "Mississippi" and "elephant" jokes seem to contradict this assertion: the "Mississippi" joke, for example, is pointless without the originally primed "anti-immigrant" and "sexually-charged conversation" schemata. The eavesdropping lady's comeuppance is funny in large part because the reader (hearer) was also drawn into the sexual interpretation of the conversation and, even if the reader rejected the casual bigotry of the originally salient script, acceptance of the sexual interpretation of the reported (overheard) conversation increases the humor of the punch line, consistent with the "arousal-safety" approach. Indeed, it is hard to see how

one could make sense of the joke except by contrasting the originally salient frames with each other and with the subversive frame. It is unfortunate that Giora does not provide her own analysis.

Similarly, with the “elephant” joke it is precisely the contrast with the logical and “expected” schema-driven answer (“because it is so *huge*”) that renders the joke ending (“by the smell of peanuts on its breath”) absurd in a humorous way. Yus makes a similar point with respect to puns, e.g., “Why did the cookie cry? Because its mother had been a wafer so long.” As Yus points out, “Having decided that the text is intended as a joke, the hearer concludes that the two senses are supposed to co-exist humorously” (2003, p. 1299). Yus suggests that humor relies in part on the pleasure of discovering the congruous elements, “a hypothesis which underlies so-called *arousal-safety theories*: the tension involved in searching for a solution may be released when the ‘meaning’ of a joke is discovered” (2003, p. 1314).

By itself, *arousal-safety* does not explain why the resolution of ambiguity in a joke is funny while the resolution of ambiguity at the culmination of a good detective story, or the solution of a mathematical puzzle, is not. But Yus’s analysis does suggest an explanation of how humor and irony contribute to the expansion of meaning in a situation. According to relevance theory (Sperber & Wilson, 1986), the search for a relevant context ceases with the *first* interpretation that provides an adequate balance of effects for efforts. Then the punch-line invalidates this initial interpretation and activates a new interpretation, based on an entirely different (and, often, initially rejected) context (cf. Giora, 2003). Yus suggests that the realization that one has been fooled by the joke-teller, coupled with “a positive

interaction of the joke with the addressee's cognitive environment" helps explain the humorous effect (p. 1313).

The relevance-theoretic explanation also draws attention to the importance of *cleverness* in the way ambiguity is resolved and the shift in frame accomplished. Just as we appreciate "elegance" in a mathematical proof or chess move, we appreciate a resolution to a joke (or a detective story) that unexpectedly *fits*. (Contrast the groans that greet a bad pun or an inelegant punch-line.) The more dimensions of ambiguity that are resolved with a single move, the better. Thus, consistent with relevance theory, inasmuch as a good punch-line will activate or raise the salience of a context that is relevant in multiple ways, it contributes to an unexpected increase in cognitive effects, an unexpected boost in relevance. Moreover, a really *good* joke expresses some deeper and at least partially suppressed social truth, so that the increase in relevance implicates changes to social and cultural as well as cognitive and emotional contexts. These multi-level contextual effects supply the *meaning* of a good joke. (This observation applies to bigoted jokes and many other instances of aggressive humor as well.) If this analysis is valid, it should be possible to show that the frame shift in humor re-organizes cognitive environments and thus creates new meaning, and that evaluations of humor are influenced by the complexity of underlying meanings and the potential for multiple cognitive effects.

**The Subversion of Polite Realities.** The deeper social truth expressed by a joke is likely to be subversive, at least in the sense that it contradicts the polite fictions or "stipulated" realities by which we ordinarily conduct our everyday social interactions. In U.S. culture, these "stipulated" realities include the constraints of physical reality (subverted by the "elephant" and "cookie" jokes), as well as a pretense that political, religious, and

social leaders always behave in a role-appropriate manner and that bodily functions are always under control (thus the enduring popularity of scatological humor, going back at least to Chaucer). As pointed out before, this “subversion” is not necessarily *aggressive* except in a metaphorical sense, although in a particular conversational context it could be used defensively, against a person or group that has vigorously asserted conventional mores. If persons or groups are perceived as having hypocritically asserted standards that they themselves violate, subversive humor might *then* have an actual aggressive quality against those persons or groups.

At least some of the humorous effects that have been ascribed to aggression may represent a combination of the “flash of recognition,” when a punch line elevates a suppressed but well-known reality to full awareness, with the relief that comes from being allowed, if only for a moment, to relax the pretense. Even when a joke does involve aggression against either a low-status person or group or an ideological target (Attardo, 2001), the aggressive element of the joke is often a manifestation of a broader process of social and cultural meaning-generation common to humor, irony, metonym, and metaphor.

**The “Fourteenth Child” Joke as Subversive.** In spite of the current low level of *average* fertility in the United States, there still exists in U.S. culture a strong pro-natalist sentiment, as demonstrated by the continued currency of metaphorical expressions such as “*bundle of joy*.” In the most acceptable, culturally licensed scenario, childbirth is a “*blessed event*,” and the associated inconveniences are minimized and treated as a source of sentimental humor. Thus, in the expected, culturally licensed ending, the mother running out of names would be an occasion for sharing a moment of affectionate mirth, entirely

consistent with the culturally-licensed view that a new infant is *always* a “bundle of joy” and a large family is desirable and enviable.

Parallel to the culturally licensed scenario is a scenario in which the pain and discomfort of pregnancy and childbirth and the inconvenience and expense of child-rearing figure much more prominently. In this alternative scenario, a newborn brings hard work and sacrifice, a large family is not necessarily desirable, and conflict between spouses about the number and timing of pregnancies and the distribution of child-rearing effort, suppressed in the culturally licensed, pro-natalist scenario, figures prominently. These two scenarios are known and accessible to most members of contemporary U.S. culture, and provide alternative frames for interpreting any statement about childbirth or child-rearing.

The effect of the punch-line is to contradict the culturally-licensed frame, activate or authorize the subversive frame, and contrast the culturally-licensed frame with the subversive frame. It is this contrast that creates the social meaning of the quip, by illuminating and raising the salience of frequently disregarded implications of the culturally-licensed frame. The switch from the dominant, culturally licensed frame to the subversive frame and the implicit criticism of the dominant frame contributes to both the meaning and the humor of the quip. Indeed, for people who are uncomfortable with the unrestricted pro-natalism of the culturally-licensed frame, it seems likely that the abrupt authorization of the subversive frame by the punch-line produces a sense of relief and relaxation that greatly enhances the humor (Norrick, 2003 makes a similar point).

### **Irony.**

Both *frame-shifting* and *graded salience* seem applicable to the ironic aspects of these and other jokes, as well as to non-humorous irony. When an ironic phrase is encountered,

the salient interpretation is accessed first (Giora, 2003). Thus, in the “Mississippi” joke, the “under-socialized immigrant” and “sexually prurient conversation” frames are activated immediately, and only when the context is radically shifted by the punch-line is the new, ironic frame activated.

More to the immediate point is Giora’s claim that the salient literal interpretation of irony precipitates an implicit assessment and criticism of the topic. “Indeed, what is said often alludes to the desired situation / opinion / thought that the criticized state of affairs fails to comply with” (2003, p. 94). This would seem to apply to the ironic undertones of the “Mississippi” joke, although the “ideal” state of affairs that is to be contrasted with the intolerance of the lady in the joke and with the anti-immigrant bigotry and sexual prurience of a hypothetical hearer is only *implied* by the punch-line. (Here, Clark’s (1996) concept of conversational “layering” provides a very useful analytical tool.)

Shelley (2001) takes a somewhat different approach to irony, based on the assumption that human cognition is organized for maximal conceptual coherence. Shelley refers to the simultaneous activation of elements that “resist fitting together” as “bicoherence,” a concept that seems to permit a lesser degree of opposition between the contextually-appropriate and ironic interpretations. Shelley argues that “situational irony is simply part of the way in which humans evaluate and deal with situations, particularly those that do not fit with their normal expectations” (2001, p. 814). He also distinguishes between verbal and situational irony, claiming that an utterance counts as ironic only to the extent that it draws attention to *situational* irony. Although Shelley’s typology of bicoherence and the connections he draws with attribution theory seem useful, for the most part his discussion is targeted at a much broader phenomenon, and does not seem as useful as either graded

salience or frame shifting for understanding humorous and explicitly communicative uses of irony in particular contexts. Moreover, the assumption that human cognition is organized for maximal conceptual coherence seems inconsistent with the progressively evolved and environmentally dependent nature of the human brain (Clark, 1997).

Gibbs and Izett (2005, p. 136; Gibbs, 2000) provide a real-life example of an ironic exchange in which the ideal or desired state of affairs is only implied and not explicitly stated. This is also an excellent example of the use of irony to accomplish a complex array of contextual effects and relational objectives:

Melissa and a friend are in the kitchen of Melissa's apartment talking about the previous night. As they were talking, Melissa's housemate, Jeanette, who was in her own bedroom, heard her name being mentioned:

Jeanette: (yelling from her room) Are you talking about me again?

Melissa I have no life, Jeannette. All I do is talk about you. All the time.

Jeannette: (laughing) Get a life!

Here, at least three frames are activated, in quick succession. Jeannette's initial question activates a culturally authorized frame, in which talking about a friend in her absence is defined as "gossip" and considered to be rude. Melissa's response accepts the initial frame but attaches it to a subversive frame, in which a person who talks about other people all the time obviously has nothing better to do, and locates herself within that frame. At the same time, Melissa implicitly introduces an ambiguous frame that is culturally authorized, but simultaneously subversive with respect to Jeannette's initial frame. In Melissa's ambiguous frame, it is egotistical for Jeannette to assume that Melissa has nothing better to do with her time than talk about her. Jeannette's response accepts Melissa's ambiguous frame and

substitutes it for her own initial frame. By doing so, she defuses both her own implicit criticism of Melissa and Melissa's implicit criticism of herself.

Neither Shelley's (2001) bicoherence model nor Giora's (2003) graded salience hypothesis fully captures the nuances of the exchange between Melissa and Jeannette. This is clearly an instance of ironic teasing, but, contrary to Shelley (2001), there is no *situational* irony, beyond, perhaps, the bicoherence implied by Melissa's initial failure to realize that Jeannette is in the other room where she can overhear the conversation. The substance of the irony is entirely fictional, a fantasy cooperatively constructed by the two women for the sake of their interchange. Consistent with Giora (2003), the irony is certainly intended to criticize one state of affairs from the reference point of another – but the ironically criticized state of affairs is a fictional one, constructed only to affirm the true state of affairs as an ideal state.

Gibbs and Izett (2005) suggest that irony divides its audience in two ways, distinguishing between those who recognize the irony (“wolves”) and those who do not (“sheep”) and between those who agree with the intended meaning (“confederates”) and those who do not (“victims”). According to Gibbs and Izett, the ironist always has the objective of increasing the number of wolves / confederates and decreasing the number of sheep / confederates (people who are intended to but fail to understand the ironic intent). When irony is used aggressively, as in some of the political examples cited by Gibbs and Izett, it is usually important that the victims also be “wolves” (realize that they are being criticized), but sometimes ironists deliberately seek to create a class of sheep / victims, people who do not understand the intended criticism, and who provide a malicious contrast with the wolf / confederates. The “Mississippi” joke starts out this way, activating (raising the salience of) the “sheep / victim” frame common to many bigoted jokes only to criticize it

through a second layer of irony, introduced by the punch-line, in which the erstwhile “confederate” is revealed to be the actual “victim.”

Melissa’s statement in response to Jeannette’s initial query *simultaneously* activates a dominant meaning (“I talk about you all the time because I have no life of my own”) and a subversive meaning (“If you think I talk about you all the time you are egotistical, because in fact I have better things to talk about”). The subversive meaning sets up a frame in which Jeannette can either define herself as sheep or wolf, as confederate or victim. But in order to identify herself as wolf / confederate (one who recognizes and agrees with the subversive meaning) without accepting the implied criticism as valid, Jeannette must invoke yet another level of meaning, in effect affirming her own initial query as ironic in intent and including it as well as Jeannette’s response within the intentional category of playful teasing.

This example illustrates the complexity of frame shifting that is often involved in ironical exchanges; it also illustrates some of the risks associated with irony. The playfully ironic intent in Jeannette’s original (seemingly accusatory) question could easily be rejected by Melissa, or the playfully ironic intent in Melissa’s response could be rejected by Jeannette; in either case, the result would be a serious social breach. Similarly, people who hold racial or ethnic stereotypes tend not to get the point of ironical humor intended to criticize these stereotypes (Vidmar & Rokeach, 1974), a fact that undermines the good intentions of much social satire.

**Irony, Humor and Social Structure.** As Gibbs and Izett (2005) observe, irony often increases social solidarity among the “wolves”. The playful interchange between Jeannette and Melissa is typical of a kind of teasing that is often used by friends. Sometimes the implied criticism is intended, but the shared humor of the ironic phrasing helps to soften the

impact of it. In the case of Jeannette and Melissa, however, it seems more likely that the intent is to raise the possibility of criticism only to deny it: The ironic banter informs Melissa that Jeannette overheard part of the conversation. It assures Melissa that Jeannette does not intend to accuse her of gossip, even as it also implicitly warns her *not* to engage in gossip. Melissa's ironic response reassures Jeannette that Jeannette is not the target of gossip, and is not regarded as egotistical. Both the softened criticism and the ironic denial of criticism help to defuse the tensions of living in close proximity, render the incongruities of multiple possible frames less threatening, and thus help to maintain social solidarity. A second and equally important outcome of the exchange is to shift Jeannette from role of "overhearer" to role of "hearer" (Clark, 1993), thus including her in the social group and independently increasing social solidarity.

Irony and humor can also help to create and maintain social solidarity in a third way: In order to get the joke and understand the irony, the hearer must have access to the same or similar background knowledge and assumptions as the speaker. By using irony or humor, the speaker affirms a belief that common ground exists and includes the necessary knowledge, attitudes, and assumptions; by understanding and accepting the irony, the hearer also affirms the existence of the necessary common ground. When irony is executed in the presence of uncomprehending "sheep," the contrast only emphasizes the solidarity of those "in the know" (Gibbs, 1999). Finally, as Norrick (2003) points out, the risk associated with flouting the normal conventions of politeness can itself contribute to the increase in social solidarity by asserting, in effect, "We're such good friends that we can take risks like this without fear."

**The Name-calling Joke and Social Solidarity.**

The joke about the mother of fourteen children works in a similar way, except that the subversive frame in the “name-calling” joke is latent, and probably suppressed, until it is authorized (released) by the punch line. If the “burdens of child-care” portion of the complex childbirth schema is not already connected to the anger and resentment schema in the mind of the listener, the joke will not work, because the “name-calling” implications are unlikely to become salient. Imagine a member of a fundamentalist religious community, for whom a woman’s sole purpose and duty is to bear as many children as possible. Such a person would, presumably, regard another child as an unqualified blessing, and not as a burden. Hence, she might not even make the connection to “name-calling,” and would not understand the humor. If she did make the connection, it might just as likely evoke guilt or even outrage (because of the implied challenge to the sincerity of her beliefs about the value of child-birth and child-rearing) rather than the wry humor it evokes from most of us (Raskin, 1985 and Yus, 2003 make similar points).

The first part of the quip, “By the time Mary had her fourteenth child,” activates the hearer’s ideas about childbirth and motherhood; those that seem most likely to fit the elements already in common ground remain activated but the others are suppressed (Giora, 2003; see also Norrick, 2003). For most members of contemporary American culture, common ground includes the culturally licensed frame, with its conventional ideas about the sanctity of motherhood, the benefits of having children, and the romanticized ideal of a large family, as well as the subversive frame, with its ideas about the burdens associated with raising a large family, and perhaps the societal and environmental problems associated with over-population. Since most of us also realize that the elements of the subversive frame are contrary to socially-accepted beliefs about child-birth and child-rearing, in an ambiguous

communicative setting politeness norms would dictate suppression of the subversive frame, with its negative implications about childbirth and large families.

The next phrase, “she’d finally run out of names,” is consistent with the romanticized ideal of a large family, so the socially licensed, pro-natalist frame will become even more salient. Since the socially licensed frame includes the difficulty parents sometimes have in deciding on a name for a newborn, the hearer becomes prepared to enjoy the mild irony of a mother trying to think of an original name for her child. (Note that Mary’s ironic quandary implies a *mild* criticism not only of her limited imagination, but also of the pro-natalist frame itself, by suggesting that, beyond a certain point, repeated pregnancies can lead to modest difficulties such as the challenge of finding a sufficient number of unique names.)

The final phrase, “to call her husband,” does not connect with any element of the “motherhood” schema active in working memory, but does connect, by way of a secondary link from “naming,” to “name-calling,” and hence to epithets, anger, and resentment, which abruptly increases the salience of the “burdens of large families” schema that may have been considered but suppressed at the outset (Giora, 2003). The humor comes in part from the contradiction between the “burdens” schema that is abruptly raised in salience and the “motherhood” schema that has been activated by what went before, in part from the ratification of the previously rejected “burdens” schema itself, and in part from escalating the *mild* criticism of large families (based on the difficulty of finding multiple unique names) to a much stronger criticism (based on the burdens of motherhood).

Here, yet another aspect of the motherhood quip becomes apparent. If the hearer’s immediate response to the idea of a family of fourteen children is one of dismay rather than adulation, this response is likely to be suppressed in the interest of politeness. The closing

phrase, “to call her husband,” along with the abrupt shift of frames it provokes, affirms that the speaker shares this dismay, and leads to an abrupt expansion of common ground. The surprise and relief of discovering a new set or reaffirming a pre-existing set of shared knowledge and attitudes is an important part of the humor. Conversely, if the hearer is delighted rather than dismayed by the idea of such a large family, the result may be a *contraction* of presumed common ground, not an expansion. Rather than laughter and social solidarity, the quip will then create anger and social alienation. Thus, a quip of this type may serve a social *sorting* function. Although the end result of this common ground-based social sorting is similar to that which results from the increased solidarity of “wolves” and increased social distance between “wolves” and “sheep” in bigoted jokes and other forms of aggressive humor and irony, the hypothesized process is distinct, relying on cognitive processes of common ground rather than primarily emotional effects of social identity and affiliation.

Research on sexist jokes has produced results consistent with the cognitive explanation based on common ground. For example, both men and women who hold nontraditional views of women are significantly less likely than those with traditional views of women to report enjoyment of sexist cartoons (Moore, Griffiths, & Payne, 1987). Male college students who score low on sexism find “dumb blond” jokes less amusing and more offensive than all other males (Greenwood and Isbell, 2002). Men high on a “Hostile Sexism” scale (believe that sexy women have the power to manipulate men) find the sexist jokes least offensive of any of the groups, and also find the speakers more likeable than any of the other men in the sample. However, Ford (2000) also reports that sexist jokes are judged significantly less offensive than non-humorous sexist statements, even by subjects

who score low on sexism scales. This suggests that subjects may implicitly recognize a unique communicative role for humor, including off-color humor.

### **The Role of Humor and Irony in Meaning Creation.**

Figurative language, and especially joking and humor in general, has often been treated as a kind of “poor relation” of “serious” language use, a phenomenon that is to be taken seriously, if at all, only in a form such as aggression (e.g., Freud, 1960; Zillmann & Cantor, 1976). Raskin (1985; Raskin & Attardo, 1994) describes humor as “non-bona-fide communication,” thus implying something like a suspension of ordinary communicative intent. It is true that jokes, quips, and other forms of humor can sometimes disrupt a conversation, just as a simile or metaphor may fail to express anything useful about the topic. However, as the preceding examples illustrate, humor and irony can contribute to meaning creation at cognitive and social as well as emotional levels, and may do so in a unique way, distinct from other communicative conventions.

Cognitively, the abrupt shift from one frame to another, as in a joke or quip, or the juxtaposition of apparently contradictory frames, as in irony, has the effect of raising the salience of conceptual connections and can lead to the creation of new connections in much the same way as metaphor does. Socially, as the “fourteenth child” joke illustrates, quips and jokes may create, reaffirm, or challenge social structure. The “fourteenth child” joke can have the effect of sorting people out by their attitudes toward large families, and can also raise the salience of doubts about the desirability of large families.

Bigoted jokes seem to operate on the basis of both emotional reinforcement and common ground. Jokes of this sort typically begin with a phrase or story that activates one or another of the dominant frames – often explicitly a dominant frame of tolerance and

brotherhood. Then the punch line activates a subversive frame, by increasing the salience of racial or sexual stereotypes. If the hearers share these stereotypes, the abrupt change in their salience will expand – or reaffirm - common ground and hence increase solidarity. If the hearer is unfamiliar with the stereotype, the joke may not make sense, and if the hearer is familiar with but rejects the stereotype, it may be seen as offensive rather than humorous, in which case the effect will be a contraction of assumed common ground and a decrease of social connectedness (Greenwood & Isbell, 2002; Moore, Griffiths, & Payne, 1987).

By reinforcing similarities among in-group members and differences between in-group and outsiders, humor and irony often serve social solidarity purposes, consistent with the aggression approach (Zillmann & Cantor, 1976), but both humor and irony can also achieve even subtler effects on group identity *within* a social group, and in reorganizing cognitive elements within a particular frame. “Off-color” humor (scatological, sexual, and bigoted jokes, for example) may also increase commitment to a group through a process akin to the “initiation” effect (Aronson & Mills, 1959). To be experienced as humorous, the subversive frame must be non-threatening or at most mildly threatening to the hearer’s core sense of identity and values: incongruities that contradict or undermine core values will be experienced as alienating, even hostile or outrageous, but not as humorous. In borderline cases, once a person has decided to laugh at a subversive joke, it is likely that identification with the criticized values, and resistance to the subversive frame, will both be decreased (Freedman & Fraser, 1966).

As Norrick (2003) points out, an off-color joke not only tests for understanding, but also creates “a kind of guilty complicity” which, if accepted, increases rapport but, if rejected, decreases rapport (cf. Aronson & Mills, 1956; Petty & Cacioppo, 1981). Moreover,

off-color jokes serve “as a control on what sorts of talk and behavior are acceptable to participants in the interaction” (Norrick, 2003, p. 1343). Norrick was specifically discussing sexual and scatological jokes, but his comments seem pertinent to religious, ethnic, racial, and gender jokes as well.

Thus, it seems likely that “off-color” jokes of various kinds, including blatantly bigoted jokes, can increase solidarity among members of the in-group not only by confirming that the expressed attitudes are held in common, but also by reaffirming the extent of common ground within the group, contrasting it with the relatively smaller common ground shared with out-group members, and asserting and reaffirming the group’s norms governing what qualifies as polite speech. In this way, the function of in-group / out-group jokes extend the function of irony in maintaining social solidarity (Gibbs, 1999). These secondary effects of conceptual integration and “*frame-shifting*” on common ground make an important contribution to meaning at the social and cultural level.

An even more complex example of the use of humor to create and maintain social structure is provided by Bing and Heller’s (2003) analysis of lesbian humor, beginning with a variation on the familiar “lightbulb” joke, “How many lesbians does it take to screw in a lightbulb?” Bing and Heller relate and analyze several different punch-lines, many of which play in one way or another on the sexual innuendo that non-lesbians would typically expect. However, the most interesting for the present purpose is the *non*-sexual punchline, “Seven. One to change it, three to organize the potluck, and three to film an empowering documentary” (p. 157).

This in-group punch-line serves to help define and increase social solidarity within the lesbian community in several ways. First, because the humor often escapes “outsiders,”

especially heterosexuals, it establishes and affirms common ground with other group members while underscoring the inaccessibility of core cultural knowledge to non-group members. Second, Bing and Heller point out that *non*-lesbians tend to associate sexuality as a primary defining feature of lesbian sub-culture, but among lesbians sexuality is much less salient than other traits such as patterns of sociability and identity. The *non*-sexual version of the “lightbulb” joke activates the conventional association of sexuality with lesbianism, only to force an ironic shift of frame from sexuality to other features of lesbian sub-culture that are more central to lesbians’ images of themselves, and thus implicitly criticize the conventional (heterosexual) view. “Some of the humor derives from the fact that the joke takes a mainstream format and uses it to acknowledge, ignore, and ultimately undermine attempts by the mainstream culture to define lesbians” (Bing & Heller, 2003, p. 158).

This kind of in-group vs. out-group consolidation could perhaps be described as a form of aggression (Zillmann & Cantor, 1976), but it seems more accurate to describe it in more positive terms of group definition and affiliation behavior. The lesbian version of the light-bulb joke illustrates a common identity-affirming function of *self-deprecating* humor. Self-deprecating humor is frequently discussed in the context of humorists such as Woody Allen, whose jokes can typically be interpreted as a kind of self-directed aggression. But the response, “Seven. One to change it, three to organize the potluck, and three to film an empowering documentary,” *celebrates* rather than criticizes the highlighted features of lesbian sub-culture, e.g., sociability, affirmation, and mutual support. Similarly, the affectionate humor of Brian Crane’s (2005) comic strip, *Pickles*, while it is subversive of the dominant view of retirement as an untroubled “golden age,” celebrates rather than criticizes the elderly couple’s responses to their situation, and the self-deprecatory teasing of the

exchange between Jeannette and Melissa celebrates the easy-going trust in their relationship. In each of these instances, the ironic self-deprecation serves to defuse the social and emotional tensions that result from inescapable contradictions in the social situation, while celebrating group members' ability to overcome these contradictions.

Humor often serves as a form of argument, inasmuch as it proposes or affirms a particular pattern of connections among ideas, both factual and attitudinal. The lesbian version of the "lightbulb" joke activates a non-lesbian schema for lesbianism, then shifts frames in a way that both refutes and criticizes the non-lesbian schema and exaggerates and celebrates the lesbian self-schema. It can also re-structure elements within the in-group (lesbian) schema. The "fourteenth child" joke activates a familiar maternity schema, proposes a mild irony, then abruptly shifts the frame in a way that simultaneously adds an assumption of resentment toward the father and implicitly juxtaposes the redefined maternity schema with a more ideal situation. It thereby makes a subtle but unmistakable point about the conventional "pro-natalist" schema. The "Mississippi" joke invokes a standard anti-immigrant schema, only to identify the self-righteous person responding to the stereotype as the one with a "dirty mind" and the anti-immigrant stereotype itself as hypocritical.

A well-timed joke can be a very effective form of argument, since it blocks rebuttal by leaving the target open to the charge of lacking a sense of humor. Attempting to refute a clever irony risks identifying oneself with the *victim* role. Moreover, even when a joke, quip, or ironic comment is motivated purely by the desire to entertain, it implicitly reinforces participants' expectations about common ground, including their understanding of the nature of the nature of the communicative interchange and of the social relationship within which it occurs.

### **Frames, Frame-shifting, and Metaphor.**

“*Frame*” is a structural metaphor, and suggests a patterned set of connections among ideas. “*Frame*,” as I have been using it, provides a metaphor for a particular set of neurological connections, and “*frame shifting*” provides a metaphor for the activation of a new set of connections and suppression of a previously activated set, when new information makes the new set relevant and the old set irrelevant. Humor and irony are usually based on activation of alternative frames, a socially-licensed, dominant frame that is consistent with conventional social norms and a “subversive” frame that questions or negates key features of the socially approved frame.

In jokes, the dominant frame is usually activated by the first part of the story, and the punch line activates an alternative frame that is often subversive with respect to the initial frame as well as with respect to 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. In irony and puns, both the culturally approved and subversive frame are often activated simultaneously. In irony, as in many varieties of humor, the subversive frame often presents a criticism of a target, the “victim” of the ironic frame or “butt” of a joke – but often the target of the joke or irony is a socially accepted way of thinking about the topic. In irony, as well as in many types of humor, the subversive frame may rely on shared “insider” knowledge accessible to those “in the know” (“wolves”) but not to outsiders (“sheep”).

Sometimes, the culturally approved frame is activated *after* the subversive frame. Consider for example a young mother who has been kept awake most of the night by a crying infant, and hands the baby to her husband with the request, “please take the little *bundle of*

joy for a few minutes while I fix a cup of coffee.” Here, “*bundle of joy*” activates the culturally approved frame both to comment ironically on it (and undermine it) and to comment on the current situation by contrasting it with the ideal (culturally approved) frame. Conversely, unless the mother has genuinely reached the “end of her rope,” it is likely that her accompanying expression and gesture will soften or even negate the ironic meaning, thereby creating another double frame shift, in which the frame created by the mother’s tenderness toward the infant subverts and criticizes the ironic frame, even as the ironic frame subverts and criticizes the socially-licensed frame created by the metaphor, “*bundle of joy*.”

In metaphors, the vehicle also activates a secondary frame, but the secondary frame often qualifies rather than subverts the primary frame. Thus, in expressions such as “*build a strong foundation for a marriage*,” based on “*LOVE IS CONSTRUCTION*,” the vehicle emphasizes building-like aspects of the experience, but that does not necessarily contradict or subvert other aspects of the experience. On the other hand, expressions associated with “*LOVE IS WAR*,” such as “*laid siege to her heart*,” have a more subversive, ironic quality that contradicts cooperative aspects of the love experience.

Similarly, in expressions such as “*my job is a prison*,” the vehicle activates a frame that may or may not have a subversive, ironic quality, depending on the context. If the speaker is a professional who has spent six or eight years preparing for the job, a situation normally associated with a concept of a job as expressive and fulfilling, then the “*prison*” frame subverts the “*vocation*” frame and contradicts the expectations of expressiveness and fulfillment. On the other hand, if the speaker is an assembly-line worker, the “*prison*” frame merely emphasizes particular and well-known aspects of the work experience: Thus, metaphorical framing does not necessarily involve frame *shifting*. Metaphors may be

inherently ironic, and ordinarily innocent metaphors may be used ironically, as in the example of the young mother who hands the child over to the father with the comment, “you take the little *bundle of joy* for a few minutes.”

Jokes often activate a socially preferred frame initially, then once the hearer is committed to the first frame, the punch line invalidates it and activates a subversive frame in its place. Irony often activates both the socially preferred and a subversive frame simultaneously, or in either order, but links them oppositionally, so that elements of the subversive frame implicitly comment on and criticize elements of the socially preferred frame. Metaphors activate a vehicle frame, elements of which are connected to elements of the topic frame, usually not oppositionally but rather in a way that enriches or expands the meaning of the topic frame in the current conversational context. The forms can be and often are mixed; metaphors frequently play a role in irony and jokes, jokes often begin with an ironic juxtaposition of frames that is itself subsequently subverted by the punch line, and metaphors often have an ironic edge to them (“*laid siege to her heart*”).

### **Concluding Remarks**

A complete account of humor or irony must incorporate elements from several approaches. It is apparent that humor often includes a blatantly aggressive element, but many genres of humor do not fit this model, and even overtly aggressive examples of humor can achieve cognitive and social effects over and beyond those that can be explained as aggression. Humor often involves a playful incongruity, but incongruity alone also fails to explain the increment to social and cognitive meaning that can be accomplished by an effective quip or joke. The “*frame-shifting*” metaphor (Coulson, 2001), with its underlying theoretical assumptions, is particularly useful for synthesizing these approaches with each

other and with interpretive theories such as relevance theory (Sperber & Wilson, 1986; Yus, 2003).

Both humor and irony involve either a contrast of frames or an abrupt shift from an initially salient, often socially preferred frame to an initially suppressed frame (Giora, 2003), that is either incongruous with or subversive of the initial frame. Like metaphor, humor and irony create meaning at both the social and cognitive level. Unlike metaphor, the contrast of a subversive frame with a dominant or socially-approved frame seems to be a central factor in the ability of humor and irony to restructure cognitive contexts and create meaning. Socially, both humor and irony serve to expand and confirm common ground, and often emphasize the contrast between the large extent of common ground among in-group members and the restricted common ground with out-group members. Cognitively, a good joke or quip may affect several contexts at once, linking them in previously unsuspected and unnoticed ways, thus producing an unexpectedly large increase in relevance.

Like a good metaphor, a good joke or an effective use of irony suggests connections that may have previously gone unnoticed, or at the least raises the salience of previously ignored or suppressed aspects of a situation. Thus, humor or irony may lead to new understanding of a situation, or reinforce one set of meanings at the expense of other, competing meanings. Future investigation might usefully explore the potential of the frame contrast or frame shift in irony and humor to re-organize cognitive environments and thus create new meaning, as well as the degree to which evaluations of humor or irony are influenced by the complexity of underlying meanings and the potential for multiple cognitive effects.

It seems that the communicative repertoire of a competent language user includes an array of tools that involve deliberate violations of conventional rationality. Humor, irony, metaphor, metonym, hyperbole, and simple nonsense, to name but a few examples, achieve complex cognitive and social effects in ways that are difficult or impossible to paraphrase as propositions with identifiable truth conditions. Beyond the present task of explaining how people use and make sense of these linguistic forms lies the much more fundamental task of understanding their role in the peculiarly human forms of rationality and sociability that are organized around language, and their relationship to more conventionally theorized forms of language based on propositions and truth-conditions.

### References

Aronson, E., and Mills, J. (1959). The effects of severity of initiation on liking for a group. *Journal of Abnormal and Social Psychology*, 59, 177-181.

Attardo, S. (2001). *Humorous texts: A semantic and pragmatic analysis*. New York: Mouton de Gruyter.

Bing, J., and Heller, D. (2003). "How many lesbians does it take to screw in a light bulb?" *Humor*, 16, 157-182.

Brône, G., and Feyaerts, K. (2004). Assessing the SSTH and GTVH: A view from cognitive linguistics. *Humor - International Journal of Humor Research*, 17, 361-372.

Clark, A. (1997). *Being there: Putting brain, body, and world together again*. Cambridge, MA: MIT Press.

Clark, H. H. (1993). *Arenas of language use*. Chicago, IL: University of Chicago Press.

Clark, H. H. (1996). *Using language*. Cambridge, England: Cambridge University Press.

Coulson, S (2001). *Semantic leaps: Frame-shifting and conceptual blending in meaning construction*. Cambridge, England: Cambridge University Press.

Crane, B. (2005). *Pickles*. Syndicated by the Washington Post Writers Group.

Fauconnier, G., and Turner, M. (1998). Conceptual integration networks. *Cognitive Science*, 22(2), 133-187.

Fauconnier, G., and Turner, M. (2002). *The way we think: Conceptual blending and the mind's hidden complexities*. New York, NY: Basic Books.

Ford, T. E. (2000). Effects of sexist humor on tolerance of sexist events. *Personality and Social Psychology Bulletin*, 26, 1094-1107.

Freedman, J. L., and Fraser, S. C. (1966). Compliance without pressure: The foot-in-the-door technique. *Journal of Personality and Social Psychology*, 4, 195-202.

Freud, S. (1960). *Jokes and their relation to the unconscious*. New York: Norton. (Original German edition, 1905).

Gibbs, R. W. Jr. (1999). *Intentions in the Experience of Meaning*. Cambridge, England: Cambridge University Press.

Gibbs, R. W., Jr. (2000). Irony in talk among friends. *Metaphor and Symbol*, 15, 5-27.

Gibbs, R. W., Jr., and Izett, C. D. (2005). Irony as persuasive communication. Pp. 131-152 in Colston, H. L., and Katz, A. N. (Eds.), *Figurative language comprehension: Social and cultural influences*. Mahwah, NJ: Lawrence Erlbaum.

Giora, R. (2003). *On our mind: Salience, context, and figurative language*. Oxford, England: Oxford University Press.

Greenwood, D., and Isbell, L. M. (2002). Ambivalent sexism and the dumb blond: Men's and women's reactions to sexist jokes. *Psychology of Women Quarterly*, 26, 341-350.

Lakoff, G., and Johnson, M. (1980). *Metaphors we live by*. Chicago, IL: University of Chicago Press.

Lakoff, G., and Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to western thought*. New York NY: Basic Books.

Moore, T., Griffiths, K., & Payne, B (1987). Gender, attitudes toward women, and the appreciation of sexist humor. *Sex Roles*, 16, 521-531.

Norrick, N. R. (2003). Issues in conversational joking. *Journal of Pragmatics*, 35, 133-1359.

Petty, R. E., and Cacioppo, J. T. (1981). *Attitudes and persuasion: Classic and contemporary approaches*. Dubuque, Iowa: Wm. C. Brown.

Raskin, V. (1985). *Semantic mechanisms of humor*. Boston, MA: D. Reidel.

Raskin, V., and Attardo, S. (1994). Non-literalness and non-bona-fide in language: An approach to formal and computational treatments of humor. *Pragmatics & Cognition*, 2(1), 31-69.

Reddy, M. J. (1993). The conduit metaphor: A case of frame conflict in our language about language. In Ortony, A. (ed.), *Metaphor and Thought*, 2<sup>nd</sup> Ed, pp. 164-201. Cambridge, England: Cambridge University Press.

Ritchie, D. (2004) Lost in “*Conceptual Space*”: Metaphors of Conceptual Integration. *Metaphor and Symbol*, 19, 31-50.

Schön, D. A. (1993). Generative metaphor: A perspective on problem-setting in social policy. In Ortony, A. (ed.), *Metaphor and Thought*, 2<sup>nd</sup> Ed, pp. 137-163. Cambridge, England: Cambridge University Press.

Shelley, C. (2001). The bicoherence theory of situational irony. *Cognitive Science*, 25, 775-818.

Sperber, D., and Wilson, D. (1986). *Relevance: Communication and cognition*. Cambridge, MA: Harvard University Press.

Vaid, J., Hull, R., Heredia, R., Gerkens, D., Martinez, F. (2003). Getting a joke: the time course of meaning activation in verbal humor. *Journal of Pragmatics*, 35, 1431-1449.

Vidmar, N., and M. Rokeach (1974). Archie Bunker's bigotry: A study in selective perception and exposure. *Journal of Communication* 24(1), 36-47.

Yus, F. (2003). Humor and the search for relevance. *Journal of Pragmatics*, 35, 1295-1331.

Zillmann, D., and Cantor, J. R. (1976). A disposition theory of humor and mirth." Pp. 93-115 in Chapman, T., and Foot, H (eds.), *Humor and laughter: Theory, research, and applications*. London: Wiley.