Sarcasm and the Space Structuring Model

Seana Coulson University of California, San Diego

Correspondence to: Seana Coulson Cognitive Science, 0515 9500 Gilman Drive La Jolla, CA 92093-0515 (USA) To appear in:

Coulson, S. (2005). Sarcasm and the Space Structuring Model. *The Literal and the Nonliteral in Language and Thought*. Seana Coulson & Barbara Lewandowska-Tomasczyk (Eds.). Berlin: Lang.

## Sarcasm and the Standard Pragmatic Model

Traditionally, sarcasm has been defined as figurative language use that means the opposite of what is said (Grice, 1975). On such models, discourse irony is recognized when Gricean maxims of quality and relation are violated. For example, if a speaker says, "What lovely weather," during a rainstorm, listeners are invited to reject the literal meaning and infer that the speaker means the opposite of what was said. The standard model is intuitively appealing, and certainly describes prototypical instances of discourse irony.

However, there are many instances of sarcasm that are not captured by the traditional account. Gibbs (Gibbs, 1986), for example, points to the case of the driver who has just been cut off in traffic, and utters (1).

(1) I love people who signal.

In this case, the speaker does not mean the opposite of what he's said. Rather, he means exactly what he's said. If, as posited in the standard model, recognizing sarcasm requires a violation of a communicative maxim, (1) would not be recognized as sarcasm. Moreover, if it were recognized as sarcasm, computing the opposite of (1) would not yield the intended meaning.

In (1), the sarcasm seems to derive from the tension between the expected insult and the apparent compliment that is expressed. Indeed, a number of researchers have commented on the fact that ironic utterances are often ironic in virtue of their characterization as speech acts. Kumon-Nakamura and colleagues (Kumon-Nakamura, Glucksberg, & Brown, 1995) describe a scenario where one person walks through and door and lets it slam behind him, much to the chagrin of the speaker who is holding a heavy box. When she says (2), she's clearly made an ironic utterance.

(2) Thanks for holding the door.

Technically, the notion of opposites applies only to assertions, leaving ironic speech acts such as (2) entirely unexplained.

Similarly, we might imagine the case of the mother who stands in her son's messy room and says (3).

(3) I just love children who keep their rooms clean!

(3) presents a problem for the definition of the nonliteral meaning as the "opposite" of

the literal one, as there are a number of propositions that might be negated. (4)-(6) present themselves as candidates for being the "opposite" of (3).

- (4) I don't love children who keep their rooms clean.
- (5) I love children who don't keep their rooms clean.
- (6) I don't love children who don't keep their rooms clean.

Although the proper scope of negation is probably that in (6), we might surmise that the woman loves her children regardless of whether they clean their rooms. Moreover, the correct interpretation of (3) is ultimately not (6), but as a request that the boy clean his room.

In sum, there are a number of problems associated with the Gricean account. The first is that many cases of irony involve true assertions, and so don't violate the maxim of quality, and don't require the listener to compute the opposite of what was said. The second problem is that ironic utterances often do not involve assertions that can be judged true or false, but speech acts, thus presenting a problem for the recognition of these utterances as being ironic. Further, in such cases where the sarcastic utterance does not mean the 'opposite' of the literal meaning, the standard model provides no explanation of how listeners derive the particular meanings that they do.

### **Echoic Mention**

An early alternative to the Gricean account was proposed by Sperber & Wilson (Sperber, 1984; Sperber & Wilson, 1981), and was based on the use/mention distinction. In the normal course of events, we *use* utterances in order to convey their meaning. However, occasionally, a speaker will *mention* an utterance, with no particular commitment to the meaning of that utterance. Known as the theory of echoic mention, Sperber & Wilson propose that in sarcastic utterances, a speaker merely mentions the utterance in order to remind her listeners of an earlier statement, and to convey her attitude towards it. Echoic mention can be seen as following from more general properties of relevance theory, in which interpretation is the product of a search for the relevance of an utterance to its context (Sperber & Wilson, 1995). Sarcastic utterances are relevant because they remind the listener of an earlier statement, or shared norm that governs expectations. Moreover, echoic mention theory holds that the communicative function of a sarcastic utterance is to convey the speaker's attitude towards the statement or norm that is being echoed.

Echoic mention theory is widely acknowledged as a favorable alternative to the standard model of sarcasm. Comparing the two approaches, Jorgensen and colleagues (Jorgensen, Miller, & Sperber, 1984) note that in both cases, to understand an ironic utterance the listener notes an incongruency between the literal meaning of the utterance and what might be expected based on contextual and background knowledge. On the standard model, the listener then computes the figurative meaning by deriving its opposite. By contrast, on mention theory, the speaker is understood as mentioning the utterance and the listener is invited to identify the source of the mentioned proposition and to derive the speaker's attitude towards it.

Importantly, Sperber and Wilson have relaxed the criteria on the definition of mention so that it includes attributed thoughts and common sentiments, as well as actual utterances. Mention theory thus predicts speakers will perceive utterances as ironic when they echo a previous utterance, thought, intention, expectation, or norm. Similarly, Kreuz and Glucksberg (Kreuz & Glucksberg, 1989) extend echoic mention theory, arguing that irony is used to remind listeners of antecedant events, social norms, shared expectations, and so forth, in order to highlight a discrepancy between what is and what should have been.

Echoic mention is supported by a number of findings in psycholinguistics. Gibbs (1986), for example, has shown that sarcastic utterances are understood more quickly when they echo a previously expressed idea than when they do not. Because manipulations that make the 'mentioned' proposition more accessible should facilitate the perception of irony, such data support the echoic mention thesis. Echoic mention is also supported by the finding that positive utterances are more readily considered sarcastic than negative utterances (Kreuz & Glucksberg, 1989). That is, for a negative utterance to be understood as a sarcastic compliment, it is crucial that there be an explicit echo. By contrast, there is less of a need for an explicit echo in a sarcastic insult because norms are positive, and can be echoed implicitly.

However, there are a number of examples of sarcasm that aren't handled very naturally by echoic mention theory. For instance, consider a case where the speaker asks (7) of a teenaged Goth fan dressed in black from head to toe.

## (7) I don't suppose you like the color black?

In this case, it's highly unlikely that the addressee would have said something like "I like the color black," to be echoed. In fact, presumably the reason for wearing black is as much for its metaphorical significance as for its aesthetic appeal. It would seem that the irony in (7) does not really concern the aesthetic appeal of black to the teenaged Goth fan, but its lack of appeal to the speaker. Although there is a relationship between a straightforward interpretation of (7) and its meaning in the context described above, it would seem to be more complex than that of conveying the speaker's negative attitude towards this teenager's supposed love for black.

Besides insincere questions such as (7), echoic mention theory does not provide a very good account of other sorts of insincere speech acts either. For example, consider a case where the speaker witnesses her friend eat a huge pepperoni pizza all by himself, and asks him (8) as he finishes his last bite.

(8) Are you sure you don't want another slice of pizza?

Because there was presumably no original offer of pizza, there is no remark for the speaker to echo. Further, the object of ridicule in (8) is the pizza eater, and not the (nonexistent) person who offered the friend pizza. Though echoic mention theory has sufficiently broadened the notion of mention so as to encompass the mere convention of offering food, the theory provides no obvious explanation as to why the victim is the

addressee of the request rather than the speaker.

Similarly, the victim of the over-polite request in (9) is not the person making the request, but the person the request is directed at.

(9) Would you mind too terribly if I asked you to keep it down just a little bit while I take this call from South Africa?

In examples like (9) the words used in the ironic utterance are unlikely to be used in any non-ironic context whatsoever, making it difficult to argue that they echo some previous remark or convention.

Echoic mention theory is commendable for the way that it explains the interpretation of discourse irony as an outcome of more general processes directed at the search for relevance. Further, in acknowledging the evaluative nature of these utterances, echoic mention theory provides an account of discourse irony that goes beyond that in the standard model. However, while echoic mention accounts well for the irony in counterfactual assertions, it fails to provide a natural account of insincere questions, insincere offers, and overpolite requests.

## **Pretense Theory**

Pretense theory is motivated by the belief that the sarcasm in insincere speech acts doesn't "echo" normative conventions as much as it alludes to them (Kumon-Nakamura, et al., 1989). An alternative approach to discourse irony, pretense theory involves an explicit appeal to the way in which sarcasm involves shared pretense. On this approach, sarcastic utterances involve two layers of interpretation, with participants A and B at layer 1, and their pretend counterparts Ai and Bi in layer 2. Clark (Clark, 1996) outlines it as follows:

A and B are at layer 1, and their implied counterparts Ai and Bi are at layer 2.

Layer 2 Ai is performing a serious communicative act for Bi. Layer 1 A and B jointly pretend that the event in layer 2 is taking place.

A and B play the roles of Ai and Bi at layer 2, so the correspondence function C(2) specifies (among other things): A=Ai; B=Bi. They take delight in their recognition of the contrast between the two layers.

Consequently, at layer 2, when Ai tells Bi that he (Bi) is a "good friend" for sleeping with his (Ai's) wife, Ai really means it. But in layer 2, A and B both know that A doesn't *really* think B is a good friend, and that that's just a pretense. It's as if to say, "I don't think you're a good friend, and it would be insane if I did." Like echoic mention, then, pretense theory can account for the evaluative aspect of sarcastic utterances. However, pretense theory suggests that the negative evaluation is directed at the entire pretend scenario rather than the echoed utterance in particular.

Pretense theory represents an advance over echoic mention in its ability to account for ironic texts that are patently absurd. For example in *A Modest Proposal* Jonathan Swift proposes that poor Irish families support themselves by selling their babies to the rich for food. Taken literally by some, Swift was criticized for his barbaric suggestion that Irish children that were a burden to their parents might be enjoyed as a delicacy by the rich. Those of a less pedantic nature, however, interpreted Swift's essay as an indictment of the ruling class for their insensitivity to the plight of the lower classes. While echoic mention suggests that Swift's text has meaning in the way that it echoes received wisdom, opinion, and norms, pretense theory views the entire text as an elaborate ruse. It is difficult to argue that Swift's text is echoic when no participant in serious discourse would assent to the norms and opinions expressed therein (Clark & Gerrig, 1984; Giora, 2003). Discourse irony that involves strange (perhaps even bizarre) scenarios with no counterpart in normal interaction are thus better accounted for by pretense theory.

#### **Space Structuring Model**

The space structuring model (Coulson, 2000) accounts for discourse irony as involving conceptual blending, and can be seen as a variant on pretense theory (Clark & Gerrig, 1984; Kumon-Nakamura et al., 1995). However, besides containing partial representations of the 'real' world and a 'pretend' one, the space structuring model allows for intermediate possibilities as well. In fact the *layers* of pretense theory (Clark, 1996) are very similar in concept to *mental spaces* (Fauconnier, 1994) a central component of the space structuring model. A mental space is a partition of working memory that contains a very simple, dynamic cognitive model of some aspect of the discourse event.

On the space structuring model, comprehension of a single event frequently requires speakers to set up multiple models of the same object in different mental spaces, in order to capture the differences between the object's properties in different contexts. In a case of shared pretense, we might use one mental space to represent the way things really are (analogous to Clark's Layer 1), and another to represent the way A and B pretend things are (analogous to Clark's Layer 2). Elements and relations in the Reality space and the Pretense space are listed in the chart below.

| Reality          | Pretense                              |
|------------------|---------------------------------------|
| А                | Ai                                    |
| В                | Bi                                    |
| W                | Wi                                    |
| Wife-of(W,A)     | Wife-of(Wi,Ai)                        |
| Affair-with(B,W) | Affair-with(Bi,Wi)                    |
|                  | Tells(Ai,Bi, "You're a good friend.") |

Mappings, or correspondences, between counterparts are signified by occurring on the same horizontal line in the chart. Because A does not really tell B that he's a good friend, the last relation in the Pretense space has no counterpart in the Reality space.

On the space structuring model, one of the main demands on comprehension involves keeping track of counterparts in different spaces. Also, connections between elements in different spaces can be based on all sorts of relationships, including identity, analogy, and other pragmatic functions. Although mental space theory was originally motivated with the goal of keeping incompatible information about a single object in discrete representations, conceptual blending theory posits a particular kind of mental space, the blended space, in which speakers explicitly bring incompatible information together in order to generate inferences that can be projected to other spaces.

Obvious instances of conceptual blending can be found in jokes such as (10) which describes a car with some of the properties of a computer running Microsoft.

(10) If General Motors developed technology like Microsoft, your car would occasionally stall on the freeway for no reason and you would have to close all the windows, turn it off, and restart the engine before you could proceed.

In the realistic domain of cars, closing the windows will not affect the functioning of the car. Similarly, if the car stalls on the freeway, it is unlikely you would be able to restart the engine. The import of these events in the joke derives from their analogical counterparts in the realistic domain of Microsoft computers, as it is well known that many computer problems are resolved by closing open windows and restarting the computer.

The meaning construction in (10) involves a *conceptual integration network*, an array of mental spaces in which the processes of conceptual blending unfold (Fauconnier & Turner, 1998, 2002). Conceptual integration networks typically include 2 or more *input spaces*, a *generic space* that represents abstract commonalities shared by the input concepts, and the *blended space* where selected aspects of the input concepts are integrated. The inputs for the blend in (10) are General Motors and Microsoft. General Motors is a company that manufactures cars, while Microsoft is a company that manufactures care projected from the blended space. The elements in the blended space are projected from the General Motors input, while the relational structure (i.e. the predicates) is projected from the Microsoft input.

| <u>GM Input</u> | Blend          | Microsoft Input  |
|-----------------|----------------|------------------|
| Car             | Car            | Computer         |
| Windows         | Windows        | Windows          |
|                 | Stall(Car)     | Crash(Computer)  |
|                 | Close(Windows) | Close(Windows)   |
|                 | Restart(Car)   | Reboot(Computer) |

In the blended space, causal schemas from the Microsoft Input are used to animate the elements from the GM Input. The humor results, in part, because of the disanalogy between real cars and the blended car-computer that works better when it's restarted. In addition, inferences and emotional reactions evoked by the model in the blended space can be projected to other spaces in the network. In this case, the absurdity of a car that stalls for no reason can be projected to reinforce the undesirability of the analogous situation in the Microsoft Input.

## Sarcasm and the Space Structuring Model

With sarcastic language, the listener is confronted with a blend that she must unpack

into two input spaces: an *expected reaction space* and a *counterfactual trigger space*. In the expected reaction space, the speaker reacts to the situation in a typical fashion. Because sarcasm is usually elicited in bad situations, the expected reaction is to get upset, and, in many cases this is the ultimate messaged conveyed by a sarcastic utterance. The other input is a counterfactual trigger for the utterance that the speaker has made, and it typically applies to the way we wish the world had been. With sarcasm, we make an utterance consistent with the counterfactual trigger space, in a case where our listener would have predicted an utterance appropriate for the expected reaction space.

In (1), for example, the scenario in which a driver says "I love people who signal," after being cut off in traffic involves a blend between the scenario in the expected reaction space and the speech act in the counterfactual trigger space. Each of these spaces is outlined below. Italics and bold print indicate the structure in the blended space that corresponds to the *Expected Reaction* space and the **Counterfactual Trigger** space, respectively.

| Expected Reaction | Blended Space             | Counterfactual Trigger |
|-------------------|---------------------------|------------------------|
| Cuts-off(A,B)     | Cuts-off(A',B')           | Switches-lanes(A",B")  |
| C: ~Signal(A,B)   | <i>C': ~Signal(A',B')</i> | C": Signals(A",B")     |
| Chastises(B,A,C)  | Compliments(B',A',C)      | Compliments(B",A",C")  |

Note that merely by being in the context – in which another driver has just unexpectedly cut into a speaker's lane in traffic – will enable the listener to understand that the speaker is annoyed, and help to structure the expected reaction space that represents how the speaker would be *expected* to respond to the situation. In this case, contextual knowledge enables us to predict that the speaker would chastise the driver who has cut him off. However, contextual knowledge will not necessarily enable the listener to infer the speaker's precise normative expectations about behavior in traffic. Consequently, the speaker's explicit mention of turn signals in (1) enables the listener to infer the specific nature of his normative expectations, and serves to structure the counterfactual trigger space, thus making (1) an informative utterance about the speaker's expectations as well as his attitudes.

Similarly, in (2), where the speaker thanks an absent person for holding the door for her, we can see the insincere thanks as a blend between the expected reaction space, where the speaker A swears at the thoughtless cretin B, and the counterfactual trigger in which the cretin's counterpart B' holds the door open and is subsequently thanked by the speaker A'. As in (1), the sarcastic utterance in (2) is used to structure the blended space that must be unpacked to an expected reaction space and a counterfactual trigger. Although the ironic tension derives from the absurdity of the structure evoked in the blended space, the meaning of the utterance does not lie "in" any of the spaces. Rather, the meaning inheres in the multiple possible construals afforded by the network as a whole. Expected Reaction Carrying-Box(A) ~Hold-Door-for(B,A) Swears-at(A,B)

Blended Space Carrying-Box(A') ~Hold-Door-for(B',A') Thanks(A',B') <u>Counterfactual Trigger</u> Carrying-Box(A") Hold-Door-for(B",A") **Thanks(A",B")** 

In (3) we get an actual situation that would seem to merit a request to clean the room, and an utterance that might function as an expression of praise for a child who had just cleaned his room. In this case the messy room is enough to prompt construction of the expected reaction space in which the mother M complains about the messy room and requests that the boy B clean it. Moreover, the allusion to clean rooms and children who keep their rooms clean is apparently enough to evoke the counterfactual trigger space in which the boy's actual messy room R' is linked to a clean room R", in a space that represents the way his mother would like the world to be.

| Expected Reaction | <b>Blended Space</b> | Counterfactual Trigger |
|-------------------|----------------------|------------------------|
| (boy) B           | B'                   | B"                     |
| (mother) M        | Μ'                   | M''                    |
| (room) R          | R'                   | R"                     |
| Belongs-to(R,B)   | Belongs-to(R',B')    | Belongs-to(R",B")      |
| Messy(R,B)        | Messy(R',B')         | Clean(R',B')           |
| Complains(M,B,R)  | Praises(M',B',R')    | Praises(M",B",R")      |
| Request(M,B,Q)    | Compliments(M',B'    | ) Compliments(M",B")   |
| Q:Clean(Room)     |                      |                        |

Given the understanding that the room is messy, and that the mother does not want it to be messy, we can construct the expected reaction space in which the boy is explicitly told to clean his room. The mapping between the compliment in the counterfactual trigger space and the request in the normative reaction space is presumably what allows the sarcastic utterance to be understood as a request.

## Space Structuring and Sarcasm: Features of the Account

One feature of the space structuring account of sarcasm is that the general notion of counterpart mapping can capture the importance of *opposite* as outlined by the standard model, as well as the many other sorts of *opposition* that underlie sarcastic speech acts. For instance, in the case of the facetious offer of pizza in (8), the expected reaction space has the speaker insulting E for being a pig. The counterfactual trigger space, or the space in which the offer is appropriate, involves the normal case where a host offers the guest something to eat because he thinks he's hungry. The irony is generated in the blended space where an utterance that is appropriate for the counterfactual trigger has been used in a situation where the expected response is to insult the guest.

On the space structuring model, sarcasm involves a discrepancy between the

contextual scenario in which an utterance occurs and the verbiage of the sarcastic utterance. The emphasis on the existence of multiple models of the same scenario is what allows mental space theory to go beyond the idea of a simple opposition between what is said and what is meant, and to capture the extent to which sarcastic utterances draw on our ability to understand mappings between normative and non-normative scenarios. Moreover, because understanding a sarcastic utterance requires the construction of two counterfactual spaces (the Expected Reaction and the Counterfactual Trigger spaces), the space structuring model predicts that experimental manipulations that serve to increase the salience of these spaces will facilitate the perception of discourse irony.

Consequently, empirical evidence that explicitly echoing an earlier statement facilitates the perception of sarcasm (Gibbs, 1986; Kreuz & Glucksberg, 1989) supports the space structuring model, as well as echoic mention theory. On the space structuring model, an explicit echo serves to structure the counterfactual triggering space, and thus facilitates the perception of irony. The space structuring model can also potentially explain discrepancies in results of research addressing whether processing sarcastic utterances takes longer than the literal expression of the same idea (see (Giora, 2003) for review). The space structuring model suggests that processing difficulty of discourse irony depends on the nature and extent of support for the construction of spaces in the conceptual integration network – particularly for the expected reaction space.

Another virtue of this account of discourse irony is that it stems largely from independently motivated principles of mental space theory and the treatment of counterfactuals in the theory of conceptual blending. For example, the import of hyperbole for the perception of sarcasm (Kreuz & Roberts, 1995) can be related to the role of hyperbole in the use of counterfactuals more generally. For example, Coulson (Coulson, 2000) discusses the role of hyperbole in (11) where hyperbole is used in a counterfactual space to license scalar implicature based on a pragmatic scale.

(11) I wouldn't go out with you if you were the last man on earth.

A scalar implicature is an inference that listeners draw based on the assumption that the speaker is being as informative as possible. The pragmatic scale in (11) involves a range of scenarios in which the speaker might consider dating the addressee. Presumably, the case where the addressee is the only man on earth is a scenario in which romantic involvement is highly likely, and the actual context of the utterance involves a scenario that falls lower on the dating likelihood scale. By denying the possibility of involvement in a counterfactual situation where romantic involvement is likely, the speaker in (11) implicates that romantic involvement in the reality space is not possible either. In fact, the speaker in (11) implicates that romantic involvement is not possible in any scenario that falls below the "last man on earth" scenario on the pragmatic scale of dating scenarios. Because of this scale, the denial in (11) is more informative than if the speaker were simply to refuse to go out with her addressee.

Turner (Turner, 1996) has also noted that hyperbole is common in counterfactual blends, such as that in (12).

(12) If Bosnian Muslims were bottle-nosed dolphins, the West Europeans and Americans would never have allowed the slaughter of innocents to go on as long as they

| <u>Tuna Fishing</u> |         | Blended Space | Bosnian Civil War   |
|---------------------|---------|---------------|---------------------|
| (fishermen)         | F       | A'            | (Serbian Army) A    |
| (dolphins)          | D       | D'            | (Bosnian Muslims) M |
| (westerners)        | W       | W'            | W"                  |
| Inadvertent-Ki      | ll(F,D) | Murder(A',D') | Murder(A,M)         |
| Outraged(W)         |         | Outraged(W')  | Apathetic(W")       |

(12) relies upon the reader's background knowledge of public reaction to tuna fishermen whose nets inadvertently killed many dolphins. A tuna boycott in the 1990s forced the tuna industry to sell only fish caught in areas where there were no dolphins (hence the phrase "dolphin-safe tuna"). Besides the tuna fishing input, the blend in (12) also recruits knowledge of the Bosnian Civil War, in which the Serbian Army indiscriminately killed Bosnian Muslims. The blend recruits the army from the Bosnian Civil War input and the dolphins from the Tuna Fishing input. In the blended space, the army's murder of the dolphins leads to moral outrage from the westerners. As in (11), the blend in (12) is interpreted against the backdrop of a pragmatic scale – in this case of the repugnance of killing different kinds of organisms. Plants and insects rank low on this scale, dogs and dolphins rank quite high, but humans are at the top. Agreeing that moral outrage is licensed by the murder of dolphins implicates that moral outrage is appropriate for the murder of Bosnian Muslims. Besides this implicature, (12) highlights the disanalogy between the westerners' response to the imaginary scenario in the blended space and their counterparts' response to events in the Bosnian Civil War space.

Like hyperbole, over-politeness also seems to be a cue to unpack the incongruously juxtaposed elements into the expected reaction and the counterfactual trigger space. Consider the case where the speaker is trying to talk on the phone long distance while her roommate is watching TV at an extremely loud volume. A sincere request would certainly not involve as many politeness terms as are included in (9). Indeed, the excess of politeness terms can help the listener to recognize the sarcastic intent and to cue the listener to use information in the extant spaces to set up structure in the counterfactual trigger space, as well as the expected reaction space.

In sum, the space structuring model can capture the insights of both echoic mention and pretense theory, while locating sarcasm comprehension in a larger theory of meaning construction. Discourse irony frequently arises due to the contrast between an actual course of events (modeled in the Expected Reaction space) and that prescribed by received wisdom and norms (modeled in the Counterfactual Trigger space). Indeed, when the actual course of events differs from a speaker's enunciated prediction, an utterance that alludes to or echoes that prediction will certainly be sarcastic. The echoes and the norms that are the focus of echoic mention thus play an important role in structuring key spaces in the integration networks evoked by discourse irony.

Similarly, the space structuring model incorporates the insights of the indirect negation view of irony (Giora, 1995, 2003). On this view, irony does not simply mark dissociation on the speaker's part from the norm expressed by the utterance (as posited by

did.

echoic mention). Rather, as in pretense theory, irony marks the contrast between the normative situation evoked by a literal reading of the utterance and the ironicized situation. Moreover, because our capacity to perceive mappings between elements in different mental spaces can be based on many different sorts of relationships (analogy, identity, and so forth), the cognitive models in the blended space structured by the ironic text can be quite different from the structure in the other spaces in the network. Like pretense theory, this allows the space structuring model to account for the role of hyperbole in sarcasm, and to extend to cases such as Swift's *A Modest Proposal* that involve scenarios with no counterpart in normal interaction.

# Literal and Nonliteral Meaning

On the space structuring model, the relationship between the cognitive models evoked by an utterance and its linguistic meaning is both less determinate and more complex than that posited in conventional models of meaning construction. On this model, language comprehension is a process in which speakers integrate abstract grammatical constructions with more specific frames evoked by lexical items, perceptual input, and knowledge of the social context of interaction. In normal conversation, utterances are made with interactive goals in mind and occur in an interactive context where speakers have a level of awareness of each other's goals. Just as utterances prompt the construction of cognitive models that represent indicative content, they simultaneously prompt the construction of speech act and other sorts of interactional frames such as joking and teasing. The account of sarcastic speech acts on the space structuring model is thus an extension of its application to sincere speech acts.

One interesting aspect of the space structuring model is the extent to which structuring depends to a certain extent on social collusion. This phenomenon is particularly evident in examples of sarcastic humor, as in the insincere question in the following example from Drew (Drew, 1987). In the following excerpt Gerald has recently bought a new sports car, and also happens to be late for a meeting. As he walks in, his coworker says, "Well, you are late as usual." Luckily for Gerald, another participant in the conversation comes to his rescue with the sarcastic, "What's the matter couldn't you get your car started?"

Gerald: Hi how are you Martha: Well, you are late as usual Gerald: eheh eheh eheh Lee: What's the matter couldn't you get your car started? Gerald: hehh That's right. I had to get it pushed, eheh eheh

In this example, Martha explicitly develops the expected reaction space, where Gerald has no valid excuse and should be chastised for his lateness. By laughing in response, Gerald attempts to reframe her chastisement in a play frame. In collusion with Gerald, Lee alludes to a counterfactual trigger space in which Gerald *would* have a valid excuse, and presumably be forgiven for his lateness. Interestingly, Lee's suggestion relies on the use of a somewhat absurd blended space in which Gerald's brand new sports car won't start, making him late. Shared knowledge about Gerald's car (i.e. that it is new, and

therefore unlikely to break down) makes it clear to participants that Lee is structuring a counterfactual space.

Unlike pretense theory, the space structuring model explains how the speaker can be understood as simultaneously being in the pretense and as making a rhetorical point outside of the pretense. That is, in Gerald's case, we can see that Lee both pretends that Gerald has a valid reason for being late, and makes the point that he has no valid reason for being late. The pretense is in the blended space, while chastisement is in the expected reaction space. Gerald's choice to engage in the pretense here is very wise, because in doing so he adds structure to the blended space in which his brand new sports car doesn't start, and he has a valid excuse for his lateness. To add structure to the expected reaction space opened by Martha would be to capitulate, and accept responsibility for his behavior.

The simultaneous use of humor and sarcasm here highlights the many commonalities between these two phenomena. Both humor and sarcasm are indirect forms of communication that involve the simultaneous construction of multiple mental spaces. Indeed, in discourse irony and in humor, speakers frequently construct blended models that foreground some disanalogy between the models in each of the input spaces. In humor the disanalogy might be between an expected and an unexpected perspective on a particular situation. In sarcasm, the disanalogy tends to highlight a normative and a nonnormative situation.

Traditionally construed the literal/nonliteral distinction is related to the extent to which conventional linguistic knowledge can be seen to be responsible for meaning evoked by an utterance. However, the examples considered above suggest that this distinction is problematic both because examples like Lee's question appear to lack a clear nonliteral meaning, while examples like (12) lack a clear literal one. Afterall, what does "if Bosnian Muslims were bottle-nosed dolphins" literally mean? Any characterization of comprehension as including a single literal and a single nonliteral interpretation misses the extent to which our overall understanding arises out of the apprehension of the relationships between aspects of models in a number of spaces.

But perhaps most importantly, this example of a group of people cooperating and conflicting in the construction of a conceptual integration network points to the way in which language use is firmly rooted in human experience and social interaction. Linguists have long been puzzled by the fact that meaning is underspecified by linguistic information (Fauconnier, 1997). However, this puzzlement reflects the traditional assumption that the systematicity and productivity of language are the necessary result of a system that formally composes static symbols. On the space structuring model, the productivity of language arises from the situated character of online meaning, the constructive nature of comprehension, and the constitutive role of context. Communication does not proceed in spite of the underspecification of meaning, but because of it. Utterances, be they sarcastic or sincere, are understood because they function within a larger system of meaning construction and human action.

### REFERENCES

Clark, H. H. (1996). Using Language. Cambridge, UK: Cambridge University Press.

Clark, H. H., & Gerrig, R. (1984). On the pretense theory of irony. Journal of Experimental Psychology: General, 113, 121-126.

Coulson, S. (2000). Semantic Leaps: Frame-shifting and Conceptual Blending in Meaning Construction. Cambridge, UK: Cambridge University Press.

Drew, P. (1987). Po-faced receipts of teases. Linguistics, 25, 219-253.

Fauconnier, G. (1994). Mental Spaces: Aspects of Meaning Construction in Natural Language. Cambridge: Cambridge University Press.

Fauconnier, G. (1997). Mappings in Thought and Language. Cambridge, UK: Cambridge Unviersity Press.

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

Fauconnier, G., & Turner, M. (2002). The Way We Think. New York: Basic Books.

Gibbs, R. (1986). On the psycholinguistics of sarcasm. Journal of Experimental Psychology: General, 115, 3-15.

Giora, R. (1995). On irony and negation. Discourse Processes, 19, 239-264. Giora, R. (2003). On Our Mind: Salience, Context, and Figurative Language. New York: Oxford University Press.

Grice, H. (1975). Logic and conversation. In P. C. J. Morgan (Ed.), Syntax and Semantics: Vol. 3, Speech Acts. New York: Academic Press.

Jorgensen, J., Miller, G., & Sperber, D. (1984). Test of the mention theory of irony. Journal of Experimental Psychology: General, 113, 112-120.

Kreuz, R. J., & Glucksberg, S. (1989). How to be sarcastic: The echoic reminder theory of verbal irony. Journal of Experimental Psychology: General, 118, 374-386.

Kreuz, R. J., & Roberts, R. M. (1995). Two cues for verbal irony: Hyperbole and the ironic tone. Metaphor & Symbolic Activity, 10, 21-31.

Kumon-Nakamura, S., Glucksberg, S., & Brown, M. (1995). How about another piece of the pie: The allusional pretense theory of discourse irony. Journal of Experimental Psychology: General, 124, 3-21.

Sperber, D. (1984). Verbal irony: Pretense or echoic mention. Journal of Experimental Psychology: General, 113, 130-136.

Sperber, D., & Wilson, D. (1981). Irony and the use-mention distinction. In P. Cole (Ed.), Radical Pragmatics (pp. 295-318). New York: Academic Press.

Sperber, D., & Wilson, D. (1995). Relevance: Communication and Cognition (2nd Paperback ed.). Padstow, UK: T.J. Press.

Turner, M. (1996). Conceptual blending and counterfactual argument in the social and behavioral sciences. In P. Tetlock & A. Belkin (Eds.), Counterfactual Thought Experiments in World Politics (pp. 291-295). Princeton: Princeton University Press.