Reactions to irony in discourse: evidence for the least disruption principle

Jodi Eisterhold*, Salvatore Attardo, Diana Boxer

Department of Applied Linguistics; ESL, Georgia State University, P.O. Box 4099, Atlanta, GA 30202 4099, USA

Received 28 August 2003; received in revised form 22 November 2004; accepted 4 December 2004

Abstract

This article examines the use of irony/sarcasm against a corpus of spontaneous spoken data. Unlike previous studies on the subject, our analysis takes into account the entire ironical exchange. We focus particularly on responses to an initial ironical turn, taking into consideration the issue of multi-turn ironical exchanges and unacknowledged ironical utterances. We also consider the effect of sociolinguistic variables. The naturally occurring data of our corpus broadly support the view that speakers tend to limit the extent of the violations of the cooperative principle, thus producing relatively few multi-turn ironical/sarcastic utterances.

© 2004 Elsevier B.V. All rights reserved.

Keywords: Irony; Sarcasm; Non-Cooperative Principle (NCP); Abductive inference; Indirectness; Bona-Fide (BF) mode; Least Disruption Principle (LDP); Ambiguity; Laughter; ‘Bulge’ theory; Sociolinguistic variables

1. Introduction

In this article¹ we examine the validity of what we are calling the “Non-Cooperative Principle” (NCP), to be described below, against a corpus of naturally occurring ironical/sarcastic utterances. The NCP, as put forth by Attardo (1999), is a principle that regulates the violations of Grice’s Cooperative Principle and its maxims. Specifically, it enjoins speakers to minimize said violations.

¹ The authors would like to thank Kristy Fägersten for serving as the outside rater.
In the process of testing the NCP, we characterize the data in our corpus in terms of sociolinguistic variables, such as gender, age, relationship between speakers, setting and conversational role, in the hope of shedding light on the ill-explored, and even less understood area of ironical interaction, as opposed to the traditional analyses of irony, which focus almost exclusively on the ironical utterance itself. Our approach differs from the traditional one in that we focus on the ironical exchange, i.e., we consider the reactions to the ironical utterance. To do so, we borrow from ethnomethodology and conversation analysis the concept of organization in turns. In particular, we are interested in responses to an ironical turn, which take the form of a further ironical turn; this we have called “ironical mode adoption” (Attardo, 2001). In a nutshell, the hearer reacts to irony with irony, and we are faced with a multi- (two-, in a few cases, three-) turn irony. Contrary to what has been claimed in the existing literature on conversational humor in general and ironical exchanges in particular (Norrick, 1993; Gibbs, 2000), we found that multi-turn ironical exchanges were relatively rare and that the majority of ironical utterances go unacknowledged.

We begin by discussing our general theoretical background for describing irony and sarcasm and the pragmatic theory underlying the NCP. Next, we present our data and the analysis; as will become clear, they broadly support the NCP.

2. Theoretical background of the study

We assume (backed by current research; Attardo, 2000, 2002) that it is impossible to differentiate, on theoretical grounds, between irony and sarcasm; accordingly, we use the terms interchangeably. Irony is traditionally described as a sextuple \(< S, H, C, u, p, p' >\), where a Speaker S utters \(u\) in context C, meaning proposition \(p\) but intending the Hearer H to understand that \(p'\). Now, \(u\) is inappropriate in context C, i.e., there is a mismatch between the presuppositions embodied in the representation of C that S and H share as common ground and the presuppositions of \(u\) (see Attardo (2000) for discussion of inappropriateness), and H detects this inappropriateness. Furthermore, H does not attribute this to random noise or to an incapacity of S (e.g., if S is a child or impaired in his/her speech behavior, etc.). In order to explain and make sense of S’s inappropriateness in \(u\), H initiates a largely abductive\(^2\) process whereby he/she “guesses” what S is implicating \(p'\), by taking into account \(u, p, C\), as well as Grice’s Cooperative Principle (see below).

The significant fact, for our present discussion of this ‘abductive inferencing’, is that (unlike what is the case in deductive logic) it is non-monotonic, i.e., essentially probabilistic, being based on the best available evidence and subject to revision (see Levesque, 1992). Furthermore, since no restriction is put on the nature of the explanatory hypothesis postulated in the second step of the abductive process, there is no way to

\(^2\) Abduction is a kind of inference (Eco and Sebeok, 1983) that follows the form:

- \(D\) is a collection of data (facts, observations, givens);
- \(H\) explains \(D\) (would, if true, explain \(D\));
- No other hypothesis can explain \(D\) as well as \(H\) does;
- Therefore, \(H\) is probably true (Josephson and Josephson, 1984: 5).
constrain such an abduction, as abductive process are essentially open to an infinite number of possible explanations, from which one or a few are selected on the basis of contextual relevance and appropriateness.

The significance of this observation is that the abductive processes of implicature generate an infinite number of more or less plausible, interesting, significant, etc., implicatures in a given situation for a given quintuple $<S, H, C, u, p>$. From this it follows that the ironical meaning ($p'$) has an indeterminate character: All indirect, non-literal discourse is based largely or in part on abductive, hence open-ended inferential processes. Therefore, all these modes derive their indeterminacy from the indeterminacy of abduction (i.e., we can never be sure that a given meaning is exactly what was implicated; ours always is a best guess).

Furthermore, we can make another significant step and note that since the meaning of $p'$ is undetermined, significant leeway is given to its interpretation and eventual classification by H.

Consider the following example, from our corpus:

(1) A is the 80-year-old grandmother of B, a 30-year-old female.  
B had just run up over a curb, driving out of a store.  
$A$: They just built that while you were in the store.  
$B$: I know.

It seems clear that A is being ironical, as $p$ ("They [= the builders] just built that while you were in the store.") is patently false. But is A being funny? Is A teasing B? Is A exaggerating? Is A being metaphorical? The answer is probably a little of all of the above, as A may be humorously teasing B about her lack of attention (or of driving skills) by wildly exaggerating the speed with which a curb could have been built and by metonymically having "running over a curb" stand for being "distracted/driving poorly." Any attempt at disentangling this cluster of implicatures would be quixotic, as the completely non-committal answer of B seems to imply (although there is no way to know what B actually meant; we only can infer that B is playing along with A, i.e., she is mode-adopting, see below).

Irony is just one of the many expressive goals that can be achieved by the speakers through indirectness in context. We are in complete agreement with Kreuz (2000: 104)

Let us provide an example of the abductive process, which has been unduly neglected in the literature on implicature. Consider the following example:

$S$ and $H$ are sitting in a room. The phone rings.  
$S$: "I am not here."

$S$’s utterance is clearly inappropriate, as it violates the maxim of quality (it is obviously false). Since $S$ is assumed to be competent, $H$ reasons as follows: if I make the hypothesis that $S$ is violating the CP to implicate that $S$ wants me to behave as if $S$ were not in the room, and more specifically, since the ringing phone is now extremely salient in our common ground, that $S$ does not want to talk to people over the phone at this time, then $S$’s behavior is explained, and since I have no better hypothesis to explain this behavior, I conclude that my hypothesis must be correct and that is what $S$ meant.
“the job of the listener is to recover the discourse goals of the speaker and not to identify some rhetorical label like ‘irony or understatement.’” It is probably both the existence of folk-taxonomies that distinguish between, say, irony and exaggeration, and the fragmented way in which the domain of indirect speech has been examined that has led to a loss of perspective, whereby phenomena such as irony, understatement, teasing, etc., have been seen as existing outside of the intentions of the speakers and outside the contexts in which their utterances take place. Significantly, recent studies have started investigating modes of irony that are less clear-cut than its plain variety (see, e.g., Gibbs, 2000).

Recapitulating, irony is a situation that involves six factors: S, H, C, u, p, p’. The path from u to p and from there to p’ is abductive and necessarily indetermined. It depends crucially on the recognition of the inappropriateness of u in C and on the search for relevance (again in C). In this respect, irony is no different than any other form of indirect speech. What may lead one to classify an utterance as ironical as opposed to say, an exaggeration, is a post hoc recognition that between p and p’ there is an antonymic relation (cf. Giora, 1995). A further conclusion of our discussion is that, following Hay’s (2001) hierarchy of reactions to humor we can distinguish four levels to irony reaction, each of which presupposes the one preceding it: recognition of the inappropriateness of u in C, understanding of S’s intention to imply p’ (and of course of what p’ is about), appreciation of the humor/irony of p’ in relation to the situation, and finally agreement, i.e., the recognition that S feels the same way as S does about p’.

Hay’s point about humor naturally carries over to irony: One cannot understand S’s intention to imply p’ unless one is aware of the inappropriateness of u in C. Similarly, one cannot appreciate the irony of p’ if one does not understand that S intended to imply that p’, etc.

Hay’s scale of reactions is at the basis of the theory of irony reception (cf. Kotthoff, 2003: 1393–1407). H may or may not recognize the inappropriateness of u in C; if H does so, he/she may or may not catch on to S’s saying p while meaning p’. If H realizes the existence of p’, then he/she may attend to the meaning of p’ (however, indeterminate), while obviously, if H does not realize that there exists a second proposition implied by S, he/she obviously cannot attend to it. H’s options are as follows:

- react to p (the said)
- react to p’ (the implied)
- laugh, smile
- not react (e.g., change the topic, be silent, etc.).

Note how laughter and lack of reaction are ambiguous, in that H does not have to have understood p’ (or even p, for that matter) in order for these responses to arise. Likewise, when it comes to reacting to p, H may have understood p’ but decided to attend to p anyway (i.e., to take the irony literally). However, if H has not understood p’, then obviously that option is not available.

Thus, we can come to a first conclusion: Observing H’s reactions (or those of the audience) tells us very little, since the only non-ambiguous observable behavior of H is her/his reaction to p’. None of the other behaviors tells us whether he/she is even aware of the existence of p’. In general, this is going to be one of the main problems of a theory of
audience’s reaction to linguistic behavior, namely the fact that vastly different psychological states may result in exactly the same observable behavior.

Let us note in passing that the reactions to \( p \) and \( p' \) may be verbal or non-verbal (so one can react to either \( p \) or \( p' \) by rolling one’s eyes, for example). Needless to say, verbal reactions are often more explicit, and hence easier to interpret than are non-verbal ones.

3. The NCP

The Non-Cooperative Principle (NCP) is the somewhat facetious name for the negative counterpart to Grice’s Cooperative Principle (CP), which was postulated in Attardo (1997, 1999) in an initial effort to explore the domain of non-cooperative interactions. We define non-cooperation simply as the opposite of cooperation, i.e., a situation in which two or more agents act in such a way as to achieve goals which they do not share and that are mutually exclusive (on non-cooperation, see also Thomas (1995), Lindblom (2001), and Mooney (2004)). The NCP is predicated on the claim that violations of the CP are not random, but obey principled patterns.

In this connection, a Least Disruption Principle (LDP) has emerged; the LDP seems to be subordinate to the NCP. It is unclear at this time if there are aspects of the NCP that the LDP does not cover; if this should turn out not to be the case, the two would be indistinguishable. The LDP’s wording is as follows:

Super-maxim: Minimize your violation of the CP

Maxims:

1. limit your violation of the CP to the smallest possible conversational unit (one utterance, one conversational turn, one speech exchange);
2. try to link the entire CP-violating unit to the rest of the interaction, for example by finding a certain appropriateness to the CP-violating unit;
3. limit your violation of the CP to smallest possible distance from its requirements;
4. if you must violate a maxim, do so in the direction that is expected by your audience (i.e., say what your audience wants to hear) (see Fig. 1).

While the first two maxims of the LDP are probably universally valid, within the hierarchical constraints of Optimal Pragmatics (see Attardo, 1999 for a brief outline of this model\(^3\)), the third one is clearly not always applicable. It seems to be very important in flattery, a partially non-cooperative mode, where straying too far from the truth will undermine one’s chances of success. Conversely, it seems to play little or no role in irony and sarcasm, where the CP violation is often signaled by exaggeration or understatement, which are rhetorical figures that violate precisely the third LDP maxim. Similarly, it is operational in lying. The operational difference is that flattery and lies are covert modes (i.e., modes in which the speaker wants to prevent his/her intention to violate the CP from being recognized), whereas the point of irony precisely is to have one’s violation of the CP being recognized (i.e., irony is overt). It is possible that this observation gives us the first

\(^3\) The model postulates a hierarchy of principles, as reproduced in Fig. 1, which take precedence over one another depending on the context of the utterance.
clue as to how to differentiate between the NCP and the LDP. The NCP may consist of the LDP’s first two maxims and the LDP would then consist of the third and fourth maxims and would inherit the first two from the NCP.

While all the maxims in the NCP present interesting traits, we will focus our attention on the first, which is the most significant in this context. It is essentially formulated as a contribution to Conversation Analysis in the Sacks/Schegloff tradition. The basic idea is that if the speaker decides, for whatever reason, to abandon the CP (e.g., to lie or to joke), he/she will attempt to reenter the bona-fide mode as soon as conversationally possible. A good example are jokes, which can be singled out from the rest of the bona-fide text (see Raskin, 1985) via all we know about this text type in conversation (e.g., reactions, such as

---

4 The second maxim was central to Attardo’s (2000) treatment of irony, in that it motivates the search for relevance to the residual violation of the CP in irony. Under this treatment, irony is seen as an implicature and hence a redeemed violation, but it nonetheless remains a violation of the maxim of manner: The speaker could have said whatever he/she has implicated more clearly by saying it literally. Maxims three and four will be treated in Attardo (in preparation).
laughter, introductory sequences, etc.; for a review see Attardo, 1994) and therefore, make it easy for the speakers to revert to *bona-fide* mode.

Consider this situation: A comedian ends his act as follows:

(2) Thank you, thank you. You are a wonderful audience.
    My name is Nancy Reagan.

The example is mildly funny precisely because the audience expects the comedian to have reverted to a *bona-fide* CP-observing mode at the end of his act (a sequence of jokes).

Consider Johnny Carson’s and Jay Leno’s news story jokes. These popular comedians have a genre of jokes in which they refer to some news item and then they follow up with a funny observation or a take-off. The jokes would fall flat if the news clippings were made up, and in any case the audience can easily verify that these are real news items. In some cases, especially when the news is unusual or comes from a source that is not widely known, the comedian will actually show the paper or the clipping from the paper. At least as far as the allegiance to the * bona-fide* (BF) and non-* bona-fide* (NBF) modes is concerned, the structure of the comedian’s monologue is as follows (in reality it is much more complex; for discussion, see Rutter, 1997; Attardo, 2001):

<table>
<thead>
<tr>
<th>News item</th>
<th>BF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gag</td>
<td>NBF</td>
</tr>
<tr>
<td>News item</td>
<td>BF</td>
</tr>
<tr>
<td>Gag</td>
<td>NBF</td>
</tr>
<tr>
<td>Conclusion</td>
<td>BF</td>
</tr>
</tbody>
</table>

Note that the audience reverts to BF mode as soon as the comedian is done delivering the joke. But how does the audience know when the comedian is being serious and when he is not? The audience knows this because it is assumed that people (including comedians) are always serious, unless they are joking, even in the context of a humorous show.

The above should not be interpreted as claiming that all NBF-involving interactions follow the alternating format shown above. In fact, the opposite is the case. In ‘serious’ conversation, only about 10% of the turns are humorous (Tannen, 1984). Other situations, such as joke-capping sessions (cf. Chiaro, 1992), performance-type exchanges (e.g., “doing the dozens”), or various forms of literary performance (such as story-telling), have long stretches of text in which most of the principles that normally govern communication and behavior are suspended in favor of other types of principles or situation-specific goals (e.g., internal coherence in literature, performance of excellence in joke-capping or doing the dozens). Modes of this type are ruled by a “willful suspension of disbelief” and can be said to constitute “licensed violations” (Raskin, 1992) and cases of “mode adoption” (cf. Attardo, 2001, 2002). Thus, in literary settings, once we accept that there exists a possible world/mental space in which Sherlock Holmes lives in Baker Street at the beginning of a story, we stick to that assumption for the rest of the text. When we reply ironically to an ironical statement by playing along with the original irony, we “mode adopt” i.e., we playfully accept as operational the possible
world/mental space set up by the ironist. Suspension of disbelief and mode adoption make it possible for extended rounds of NBF interactions to take place. However, these interactions do not undermine the validity of the LDP, as they crucially require either the continued existence of the text that has required the suspension of disbelief (in other words, as soon as the Sherlock Holmes novel is over, the reader is returned to the “real” world/mental space), or the persistence of signals to the effect that the ironical mode is still being used. It follows that a covert suspension of disbelief or a covert mode adoption cannot take place (although, one could covertly lie to somebody one has found out to be lying; that, however, is different from mode adoption, which happens overtly).

4. Methodology

The present study is based on a corpus of data consisting of 395 ironical or sarcastic utterances collected during a 2-year-period and recorded in the form of field notes immediately following the observation.\(^5\) Data collection by recording and transcribing data, as it is practiced in conversation analysis would, of course, have been preferable, but as Tannen (1984) points out, few instances of irony occur in conversations among friends. Collecting material as extensive as ours through recording only would thus have been impractical. It should be noted that we do not claim to be doing discourse/conversation analysis. Our method is closer to anthropological data collection (along the lines of Spradley, 1979).

Nearly half of the data (170 utterances) were collected by the same individual (the first author). The remaining utterances were supplied by students enrolled in an undergraduate linguistics course at a US university during the spring of 1999. In each case, the data collector was either a participant observer or an observer of the conversation. The data were collected in various settings, such as personal face-to-face interactions, classrooms, and service encounters (see Table 1; as to the settings, they will be discussed later in this paper). When possible, follow-up interviews were conducted with the participants in each conversation immediately after the ironical remarks were uttered. In these cases, the data collector waited for an appropriate pause in the conversation to probe further regarding the irony remark. The purpose of these interviews was to determine the speaker’s intent and whether the hearer’s uptake\(^6\) was indeed the same as the speaker’s.

An outside rater also confirmed our analysis as far as the presence of the irony/sarcasm and the number of turns was concerned. The rater first read through the entire corpus and determined which sequences were ironical/sarcastic, based on a folk definition of irony/sarcasm; no training was provided. The rater then determined how many turns were present in each sequence. The rater had a background in linguistics, but was unaware of the NCP.

---

5 Due to the nature of our data, only the significant turns were recorded at the time of the collection. While methodologically it would be interesting to have more extensive exchanges, as one anonymous reader points out, the nature of field notes prevents this from being possible.

6 On the differences between uptake, taking up, and mode adoption, see Attardo (2001).
5. Description of the data

5.1. Reactions to irony

In order to study second or third part turns in the ironical exchange, the principal focus of our investigation was on the reactions of hearers when faced with an ironical utterance. The most frequent reaction in our corpus was laughter (133 instances). At times, this laughter was followed by a literal or sarcastic remark (one instance each) or preceded by smiling (one instance). In three cases, the data collector defined the laughter as nervous or insincere. The addition of these six variations of laughter combine with the original 133 instances to create a new total of 139 cases of laughter, which account for 35.18% of the reactions. Smiling accounted for 8.6% of the responses in our data (34 instances). Overall, laughter and smiling accounted for 43.78% of the responses. These are both non-committal responses, as mentioned above, because they only require recognition of the inappropriateness of the speaker’s utterance, without actually demonstrating understanding of the implied (that is, the ironical) meaning. Consider the following examples (3–4):

(3) Two girlfriends in their early 20s at a restaurant after watching a movie.
   A: You liked the movie, didn’t you?
   B: No, I hated it.
   [simultaneous laughter]

Whereas in example (3), both participants take part in the irony of B’s utterance, in example (4), it is impossible to determine what B means by her smiling reaction:

(4) A and B are women in their early 30s. They are graduate students attending a weekly seminar. B has borrowed some videotapes from A and has taken several months to return them. B returns the tapes to A.
   A: Wow. That was fast.
   B: [smile]

Laughter was very common as a response in an ironical exchange in the classroom setting, where there is less pressure for a verbal response. 56.83% of laughter occurred in the classroom setting, while 38.85% occurred in face-to-face interaction. The remaining
4.32% cases occurred in service encounters and presentations (refer back to Table 1 for details related to the settings).

The second most frequent reaction was a ‘serious’ verbal response that addressed either the ‘literal’ meaning of the ironical utterance, or its implied meaning. One hundred and one responses were of this kind, accounting for 28.10% of the data. An example of reaction to the implied meaning is provided in (5).

(5) A: 45-year-old female, B: fiancé of A, same age. B was just returning home from work.
A: How was your day?
B: Peachy, just peachy. [Note: The day was horrible.]
A: Ooooh. Sorry to hear it.

It is clear from the example that speaker A is reacting to the implicature that the day was far from peachy. Ninety-six of the serious reactions (86.49%) were to the implied meaning. An example of reaction to the “literal” meaning of the ironical utterance is provided in (6).

(6) A is a male shuttle bus driver (in the Midwest) in his mid 40s. B is a 30-year-old female graduate student. They do not know each other and no communication between the two had taken place prior to this sequence. The exchange took place after the shuttle driver dropped off a passenger in a seemingly run down area; it was uttered out of earshot of the alighting passenger.
A: This is a nice area. [2.5 minute pause]
B: So, this is really a nice area?
A: I wouldn’t want to walk outside here alone. No way.
B: Uh huh. That kind of nice area.

Here B is clearly aware that something is odd about A’s statements, witness the fact that B is seeking confirmation for her interpretation. She addresses the ‘literal, non-ironical meaning of the sentence, only to repeat A’s irony after A has explained it, non-ironically, in turn three. Out of 111 serious reactions, fifteen were to the ‘literal’ meaning (13.51%).

The third most frequent reaction was in fact the absence of reaction. Under this heading, we include all the cases in which the Hs fail to acknowledge or do not show any pertinent reaction to the ironical turn. The following examples show Hs that either ignore entirely the ironical turn, as in (7):

(7) A and B are a married couple. A is a male in his early 30s. B is a female of the same age. A has just brought dinner to B who had been studying. B was tired and did not feel like eating. B was poking at the food.
A: Hmmm. Good to see that you liked what I fixed you, sweetie.
B: [no response, walked out of the room]
A: What’s wrong?
B: I’m just going to sleep; I’m OK.
or Hs react in a desultory way, or in a way not relevant way to the irony, as in (8):

(8)  A is a female professor in her early 40s. At a conference, she meets B, a male graduate student in his early 30s, a former classmate. B has arrived late at the conference and has a makeshift nametag.

A:  Good morning. Good to see you. Very official nametag, I see.
B:  [looks down at the name tag and fiddles with it]
A:  I’m kidding. I’m kidding. [“kidding” is drawn out]
B:  Well, [pause] what do you expect?
A:  So have you been busy lately?

In this example, B fails entirely to react to the irony while perhaps acknowledging its presence. His second utterance may be taken to be remonstrating against the implicit accusation of sloppiness.

Ironical and sarcastic responses to an ironical turn (mode adoption) account only for 6.58% of our data, for a total of 26 occurrences.

(9)  A and B are married. A is the wife, and B is the husband. They are returning a rented movie that was so bad they did not finish watching it.

A:  Boy, that was a good movie last night.
B:  Yeah, wonderful.
A:  I’ll pick the next one, OK?

In (9), we see that B mode adopts in response to A’s irony. Note that A reverts immediately to a serious, “literal” mode in the next turn. Out of 28 mode adoptions, half (14 instances) consist of “yeah” (one “yes”) followed by agreement with S. Thus, essentially half of the cases of mode adoption are merely agreements with S.

The remaining categories account for little more than 8% of the reactions. They include:

1. non-verbal reactions (4.3%, 17 instances), comprising dirty looks, rolled eyes, head shakes, squinting, reddening of the face, sticking out the tongue, murmuring;
2. topic changes (3.04%, 12 instances);
3. and metalinguistic comments (0.76%, 3 instances).

While metalinguistic comments (essentially, requests for clarification) are truly non-committal, but require an acknowledgment of the inappropriateness of S’s utterance, topic changes do not even require such an acknowledgment. In this sense, topic changes can be collapsed with the zero response category (although, of course, they depart somewhat from zero response). Non-verbal reactions include acknowledgments of inappropriateness (e.g., dirty looks, shaking the head in disapproval) or even acknowledgments of the implied meaning (e.g., sticking out the tongue). However, in general, they are much less explicit than verbal reactions. Refer to Table 2 for a summary of all reactions to irony from our data.
5.2. Support for the NCP

Our most obvious finding concerns the number and placement of ironical turns. We found that the great majority of the ironical utterances came on the first turn of the speaker \( (n = 365) \), while only 28 ironical utterances followed another ironical utterance (second turn) and only two utterances occurred in the third ironical turn. Since the NCP, in the guise of the LDP, would require speakers to resume a serious, non-ironical mode of speech as soon as possible, (maxim: limit ironical utterances to one turn), we conclude that our data show very strong support for the NCP \( (\chi^2 = 106.86, 1 \text{ d.f.}, p < .001; \text{we aggregated second and third turns}) \). One may question the validity of our conclusions by arguing that our data collection took the form of field notes, which could have prevented longer stretches of exchange from being recorded. However, data collectors were made aware of this possibility and were instructed to record the presence of continued irony, even if they could not keep up with the verbatim recording of the exchange. No instance of this took place in the data collection.

5.3. Sociolinguistic features

We have found a number of sociolinguistic variables to be significant in the analysis of the data. We will address, in turn, age, social distance/power relationships, setting, and gender of S/H. Needless to say, these categories may interact in various ways.

6. Age

As can be seen in Table 3, the largest group of Ss were between 30 and 40 years old (123), the second largest between 20 and 30 years old (119); 79 were between 40 and 50; 52 were in their 50s and 16 were above the age of 60. Only two Ss were below the age of 20.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Age of speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;20</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
</tr>
<tr>
<td>Male</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 2
Reactions to irony

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Laughter</td>
<td>139</td>
</tr>
<tr>
<td>Literal</td>
<td>111</td>
</tr>
<tr>
<td>Zero response</td>
<td>53</td>
</tr>
<tr>
<td>Smile</td>
<td>34</td>
</tr>
<tr>
<td>Sarcasm</td>
<td>26</td>
</tr>
<tr>
<td>Nonverbal</td>
<td>17</td>
</tr>
<tr>
<td>Topic change</td>
<td>12</td>
</tr>
<tr>
<td>Meta</td>
<td>3</td>
</tr>
</tbody>
</table>


Table 4 shows that the largest group to whom ironical utterances were directed (Hs) were, as in the case of the Ss, individuals between the ages of 30 and 40 (109). The second largest group were Hs between the ages of 20 and 30 (85). Hs in their 40s accounted for only 25 instances in our data, while those in their 50s and 60s and higher accounted for ten instances each.

A peculiarity of our data, attributable to the circumstances of collection (a female investigator working with subjects that were prevalently female undergraduates), is that there is a large preponderance of female speakers in their 20s (22 men versus 97 females). Thus, within this age group, in our study only 18.4% of our Ss are men. We suspect that this fact is highly significant in explaining the difference between our data and some published results that found a significantly larger number of ironical responses to irony than those found here. For example, Gibbs (2000) reports that about 33% of responses to irony were also ironical. However, 64% of Gibbs’ Ss were male and mostly in their early 20s. It seems reasonable to assume that younger males may be more inclined to respond with irony to irony than the general population is. Clearly, further investigation of this gender/age variable is needed.

7. Setting

The overwhelming majority of the data was collected in face-to-face interactions and classroom discourse (roughly 59 and 36% of our data, respectively). The preponderance of face-to-face and classroom interactions is due, again, to the way our data were collected (for a complete breakdown of the settings refer to Table 1). As to e-mail and phone communication and radio broadcasting, the modalities of communication here are very different from those in face-to-face interaction; as a result, the number of cues of ironic intent is significantly reduced, and therefore, engaging in ironic behavior is correspondingly a greater risk. Given the small incidence of these modes of communication in our data (1.5%), we do not expect that they constitute a significant bias. The relatively large number of classroom discourse utterances introduces an interesting factor in that the situation is clearly asymmetrical: one of the participants is in a position of unquestioned power. Predictably, we find that a much larger number of ironical utterances are directed by professors/teachers to students than vice versa.

8. Relationship: social distance/power

It has been suggested (Clift, 1999; Attardo, 2002; Kotthoff, 2003) that familiarity may be a significant issue in determining the incidence of ironical utterances. Roughly, the

<table>
<thead>
<tr>
<th>Age of hearers</th>
<th>&lt;20</th>
<th>20s</th>
<th>30s</th>
<th>40s</th>
<th>50s</th>
<th>60+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>0</td>
<td>75</td>
<td>76</td>
<td>17</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Male</td>
<td>3</td>
<td>10</td>
<td>33</td>
<td>8</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>
motivation behind this hypothesis is that one is less likely to be ironical to a stranger than to someone with whom one has familiarity. This is no doubt due to the fact that irony is typically construed as a face threatening act, FTA (Brown and Levinson, 1987), for which reason it is more ‘dangerous’ to engage in irony with a stranger, or to the fact that allusions are easier to process among people who are familiar with one another (Clift 1999; Kotthoff 2003).

Relationships among Ss and Hs were divided in three categories: intimates, acquaintances, and strangers. Clearly, social distance relationships run along a continuum, from close family members to total strangers, rather than being discrete categories. For the purposes of analysis here, the category of “intimate” included the following relationships: husband/wife, fiancé(e)s, girlfriend/boyfriend, family members, and close friends. The category “acquaintances” included teacher/student, employer/employee, colleagues, and peers (students). The category “strangers” included complete strangers and people engaged in service encounters.

Our data show clearly that there is support for the familiarity hypothesis, since only nineteen ironical utterances took place among strangers, while the greatest number of ironical utterances were directed toward acquaintances (229) or intimates (147). Hence, our data do not show a “bulge distribution” (as asserted in Wolfson, 1988): in fact, we have a preponderance of ironical utterances among acquaintances and intimates and very few among strangers. A true bulge distribution would have shown roughly the same quantity of the speech behavior among both intimates and strangers, with the bulk of ironical utterances found among those in the middle of the social distance continuum, that is, acquaintances and distant friends. Wolfson (1988) claimed that what intimates and strangers have in common is the relative certainty of their relationships. That is to say, she intuited from her own work on speech acts that interlocutors do relatively more work in a delicate “dance of negotiation” with those to whom they wish to get closer. In other words, it is with those interlocutors closest to us or most distant from us with whom we work less hard in face-to-face interaction.

The ‘bulge theory’ was criticized in Boxer (1993). That study plotted out the speech act of indirect complaining and responses on a scale of social distance, showing the bulge to be skewed towards either end of the social continuum, depending on the act and/or its response. For example, responses of commiseration were heavily skewed toward friends and strangers, with very little skewing occurring among intimates. The opposite appears to be true of ironical speech behavior and responses. That is to say, little ironical speech behavior was found in our data here among strangers, with more among intimates and friends. Thus, once again we find the ‘bulge’ to be skewed, but this time toward the other end of the social distance continuum.

9. Status

Social status figured into the ironical exchanges in our data in interesting ways. As to the classroom discourse data, it would be expected, given the typical IRF (‘Initiation, Response, Feedback’; Sinclair and Coulthard, 1975) pattern of classroom discourse and interaction, that students would most often be the hearers and teachers the speakers of the
ironical utterances. The majority of these, indeed, were uttered by the teachers/professors (140/144 classroom instances), with student responses either not expected or not forthcoming. Nelms (2001) reports similar findings, in which only two students used sarcasm in the classroom over a period of one academic semester, while professors in the same courses used sarcasm on 112 occasions. As we indicated above, this no doubt gives more weight, in the present study, to the LDP. That is to say, students in the speech event of classroom interaction are typically neither expected nor willing to provide a response to irony/sarcasm at all, let alone an ironical/sarcastic response. The same would be true of the employer/employee relationship, though this also would depend (perhaps even largely) on the social relationship between these interlocutors. Clearly, social distance as a sociolinguistic variable has the ability to override relationships based on social status.

10. Gender

In examining the data pertaining to the Ss and Hs of the ironical utterances, we found that the most significant figure was that of male Ss addressing a mixed audience (see Table 5); the figure accounts for 55.9% of the male Ss data (as opposed to 26.92% of the female Ss data). This fact is readily explained by the observation that 82 out of 90 instances (91.11%) occurred in a classroom setting, i.e., a male professor was using irony in front of a (mostly female) class. Similarly, 57 out of 63 instances (90.47%) of female speakers addressing a mixed audience occur in a classroom setting. This should not astonish us, given the obvious limitations of our data: the vast majority of ironical utterances directed toward a mixed gender audience occurred in classroom discourse.

If we exclude the cases of mixed gender audiences, i percentage-wise men addressed women ironically much more than they did other men (83.09% versus 16.90%), while women addressed other women ironically more readily than they did men (69.59% versus 30.40%). We speculate that the different gender dynamics account for these data: presumably, irony between men is face threatening, while irony between women is used to build solidarity.

An interesting detail is the relatively strong occurrence of ironical male Ss in their 40s and 50s, compared to the numbers of female Ss in the same age groups and the numbers of male and female Hs in the same age groups. This is explained by the observation that 81.81% of those instances are male professors in a classroom setting.

Table 5
Gender of speakers and hearers

| MS-FH  | 59  |
| MS-MH  | 12  |
| MS-MixH| 90  |
| FS-FH  | 119 |
| FS-MH  | 52  |
| FS-MixH| 63  |
In general, we do not find a major differentiation along gender lines in the use of irony. This is consonant with the findings in Nelms (2001), where gender roles in the classroom also turned out not to be particularly significant; thus, for example, female professors were equally sarcastic as were their male counterparts.

11. Conclusion

In conclusion, our analysis of a corpus of naturally occurring ironical/sarcastic utterances leads us to establish the following points:

- Our data show overwhelming support for the NCP, with only a small number of ironical mode adoptions (multi-turn ironies);
- Other variables, such as familiarity and status, also play a clear role in the ironical interaction. Our data strongly support an analysis in terms of a “skewed bulge” in which most irony occurs among intimates;
- Furthermore, our data show that such sociolinguistic variables as age and gender play a significant role in the ironical interaction; this role is in serious need of further analysis.

As we mentioned above, very little is known on the situation in which irony takes place. Most studies have focused on the semantic/pragmatic nature of the ironical/sarcastic utterance (but see, most recently, Shelley, 2001). Ultimately, it is obvious that in order to understand fully such a heavily context-dependent phenomenon as irony studies, we will have to focus on the situational context of the ironical/sarcastic utterance. We hope to have contributed a little step in that direction.

Acknowledgment

The authors would like to thank Kristy Fägersten for serving as the outside rater.

References

Attardo, Salvatore, in preparation. Theoretical Pragmatics.


**Jodi Eisterhold** is an assistant professor in the Applied Linguistics/ESL Department at Georgia State University. She received her PhD in Linguistics from the University of Florida. She is coauthor, with Steven Brown, of Topics in Language and Culture for Teachers (University of Michigan Press, 2004) and is currently co-editing a text titled Humor in Academia, with Salvatore Attardo. Her research focus is on cross-cultural pragmatics, oral discourse analysis, and humor.

**Salvatore Attardo** holds a PhD in English/Linguistics from Purdue University and is professor of Linguistics at Youngstown State University. He has authored two monographs (Linguistic Theories of Humor, 1994, and Humorous Texts, 2001, with Mouton De Gruyter) and a sociolinguistics textbook, coauthored with Steven Brown (Understanding Language Structure, Interaction and Variation, University of Michigan Press 2000) as well as numerous articles on semantics, pragmatics, and humor research. He is the editor-in-chief of HUMOR: International Journal of Humor Research. He is currently working on a book tentatively titled Theoretical Pragmatics.
Diana Boxer is Chair of the Linguistics Department at the University of Florida. She is the author of Applying Sociolinguistics: Domains and Face-to-Face Interaction (John Benjamins, 2002), Complaining and Commiserating: A Speech Act View of Solidarity in Spoken American English (Lang, 1993), and co-editor, with Andrew D. Cohen, of Studying Speaking to Inform Second Language Learning (Multilingual Matters, 2004). She has published in the areas of discourse and pragmatics, sociolinguistics, gender and language, and second language acquisition in such journals as The Annual Review of Applied Linguistics, Discourse and Society, ELT Journal, Journal of Pragmatics, TESOL Quarterly, Text, and Women and Language.