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Finding conversational facts: a role for linguistics in court

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ABSTRACT Expert witnesses in semantics are controversial, since juries are the ultimate authorities on meaning. However, this article presents evidence that a semantics expert witness may be able to facilitate the accurate interpretation of linguistic evidence by helping jurors tap their own natural, intuitive judgements about what sentences in evidence would actually have meant in the context in which they were produced. Through controlled studies, I show that almost all speakers choose interpretations predicted by Grice's conversational maxims if they are allowed to hear evidence from conversations in real conversations. In contrast, most speakers endorse a different interpretation, one predicted by logical semantic rules that coincide with their ideas of how language ought to work, when the same linguistic evidence is presented for careful examination. Instruction in linguistics reduces this difference significantly, but does not erase it. For jurors to interpret linguistic material from conversations accurately, then, they need both the relevant linguistic principles and the results of empirical studies of subjects who heard the material from the case at hand in the conversational medium in which it occurred.

KEYWORDS semantics, pragmatics, expert witness, conversation, written language, Grice

INTRODUCTION

Even linguists, such as Solan (1998) and Tiersma and Solan (2002), generally acknowledge that expert testimony from semanticists that aims to explain to jury members what a passage means is not and should not be admissible in court, especially in libel suits. Libel requires writing something that would be considered defamatory by an ordinary reader, so members of a jury are in the perfect position to determine the facts about what an allegedly libellous passage means. Consequently, many legal experts insist that it is inadvisable for language experts to attempt 'to substitute a complex, scientific analysis for intuitive judgements about the meaning of ordinary language' (Hart 1996) and 'courts often reject the expert testimony of linguists offered to prove the meanings of ... allegedly libellous statements' (Solan 1998: 90). Linguists similarly believe that ordinary native speakers are the real experts in language; our scientific analyses merely attempt to explain how native speakers' judgements come about.

However, while serving as an expert witness in semantics for defendants in a libel suit, I discovered that, in an artificial environment like a courtroom, members of juries may replace their own intuitive judgements about a crucial conversational passage with those dictated by prescriptive teachings about how language should work. They will thus fail to identify

correctly how ordinary speakers would have understood the passage in its actual context. The particular case involved two sentences of the form, 'I don't think X, but the effect is that of X.' This kind of near-contradiction is fairly common in everyday speech in the USA, and is normally taken to communicate X, though listeners typically perceive that the speaker is being coy or funny. For instance, in jokes of the format, 'Now, I don't think he's stupid or anything, but his IQ can't keep up with his neck size', almost no one has any trouble seeing that the speaker is saying that the subject is stupid. Indeed, in a study described below in the main study (under 'Question 1'), I found that 94 per cent of subjects interpret sentences of the form 'I don't think X, but the effect is that of X' as saying X, when they hear such sentences in the natural context of a conversation. In contrast, when ordinary speakers of English are asked to consider such a sentence consciously and carefully – in writing or even orally – as one would, for instance, in evidence in a libel suit, most of them (about 70 per cent) will make the opposite judgement, that the speaker *could not* be saying X, as he has explicitly denied doing so in the first clause.

This finding suggests that many jurors, given a written or formal oral version of a sentence and asked to consider its meaning carefully enough to make important decisions about culpability, are likely to assign it a meaning different from the one that those same jurors would have assigned it had they heard it in conversation. The very formality of the court situation, as well as the opportunity to read and reread the passage in question, apparently encourages speakers to bring to bear conscious opinions about how they think language *should* work if the meaning of each word were taken literally, rather than accessing the intuitions they would have had if they had encountered the sentence as it actually first occurred, when they would have used their normal systems of conversational rules, which can produce meanings quite different from those calculated logically from the literal semantics of the lexical items and composition of the sentence. This phenomenon is important, then, to those attempting to follow the law regarding semantic interpretation by ordinary speakers, which bars 'transforming a common-sense issue into a technical one' (*World Boxing Council v. Cosell*, 715 F. Supp.1259, 1264 S.D.N.Y. 1989, cited in Hart 1996), something many judges feel that expert witnesses in semantics are prone to do. The studies described in this article show that, on the contrary, often it is the ordinary jury member, not the expert witness, who substitutes complicated conscious rules for the relevant intuitive judgements. Expert linguist witnesses, in contrast, have been trained to ignore artificial prescriptive rules about what linguistic examples should mean and even to override normal literal semantic interpretation in order to take into account the rules that would have operated in the original conversational context. They should be able to help jurors access their own natural conversational intuitions, or at least to appreciate

how others who encounter the sentence in natural conversation would interpret it.

Indeed, I found that even half a semester's training in linguistics significantly reduced the chance of a subject's ignoring the intuitive conversational judgement that a 'I don't think X, but the effect is that of X' sentence means that the speaker is saying X and unrealistically interpreting such a sentence as denying X. A professional linguist expert witness, then, may be able to help with the accurate interpretation of linguistic evidence by helping jurors tap their own natural, intuitive judgements about what conversations in evidence would actually have meant, as linguists clearly are trained from the very beginning of their studies to find their own natural judgements about sentences and to teach others to do so as well. They can also help jurors overcome the natural tendency of all speakers to interpret material presented for careful study in very literal and prescriptively 'correct' ways by running and reporting on studies that allow ordinary speakers of English to encounter the linguistic examples in question in natural conversational contexts that mimic those in which the linguistic evidence originally occurred. At the very least, they can explain the strategies that linguists expect, on the basis of such empirical data, to be used by an idealized ordinary speaker in natural conversational circumstances.

This article is structured as follows: in the first section I describe the libel case that first brought to my attention the possibility of juries' making semantic judgements at odds with their own natural conversational intuitions and discuss the linguistic issues involved. Then follows a very brief discussion of the disposition of the original libel case, and the next section describes a small pilot study indicating that people interpret sentences differently when they encounter them formally in a courtroom-like setting, as opposed to hearing them in natural conversation, and measuring whether training in linguistics has any effect on these divergent interpretive strategies. The penultimate section describes a much larger study I performed in order to answer three questions about the causes of this phenomenon and how to deal with its effects in the courtroom. The final section is a brief conclusion.

THE CASE

In the case which brought this problem to my attention, a newspaper reporter had written about a dispute between a local politician and an official of a historically black university (Nolan). This reporter's article included the passage in (1):

- (1) [the Nolan official] ... accused him [the politician] of election-eering – 'the Ralph Cooper of Salem County running for office by attacking Nolan'.
(Names have been changed.)

The politician brought a libel suit against the newspaper and the reporter. Such a comparison with Ralph Cooper, a white supremacist who won elective office in the South, would surely be read as defamatory by most people in the surrounding Mid-Atlantic area, but the suit was filed against the paper and the reporter, not against the Nolan official who was reported to have made the remark. The complaint alleged that the published report in (1) was false, that the Nolan official had not in fact made the reported accusation. Examination of the reporter's notebook showed that the report in (1) was based on the comments in (2)–(5) below, which the Nolan official had made during a long conversation with the reporter.

On the topic of the politician's alleged electioneering:

- (2) ... puzzling to me why (illegible) would use that letter to air issue publicly unless it's on eve of election
- (3) ... not saying he's doing it for political reasons but it escapes me what other reason he would do that
- (4) A politician has a responsibility to shut up and do his job and not air this in the press

On the topic of the politician's allegedly acting like Ralph Cooper:

- (5) I don't think he's trying to be the Ralph Cooper of Salem County by what he's saying running for election by attacking Nolan University, but it has that effect.

In my report for the defendants, I was able to explain how (1) comes to be a reasonable summary of (2)–(5). Let us consider electioneering first. The remarks labelled (2) (3) and (4) above all refer to a letter critical of Nolan University written by the politician and published in the local press. The Nolan official never asserts directly that he considers the politician's publishing that letter to be electioneering, so no strict semantic account will explain the reporter's interpretation. However, the Nolan official does *conversationally implicate* an accusation of electioneering, so we must turn to pragmatic theories of speech acts and conversational context for explanation. According to Grice's (1967, 1975) theory of conversational meaning, a normal, co-operative listener can be expected to combine the literal meaning of the sentences with the universal Maxims of Conversation (Quality, Quantity and Relation) to produce the accusation of electioneering. The relevant maxims are reviewed below:

QUALITY:

- 1 Do not say what you believe to be false.
- 2 Do not say that for which you lack adequate evidence. (Grice 1967, 1975: 46)

QUANTITY:

- 1 Make your contribution as informative as is required (for the current purposes of the exchange).
- 2 Do not make your contribution more informative than is required. (Grice 1967, 1975: 45)

RELATION or RELEVANCE:

- 1 Be relevant. (Grice 1967, 1975: 46)

In both (2) and (3), the official tells his listeners literally only that he is puzzled; he cannot figure out any reason for the politician's publishing the letter other than the approach of an election in which he is running. However, theories of pragmatics can explain additional conversational implicatures that co-operative English speakers will glean from (2) and (3). Since people have reasons for what they do and speakers are constrained by Grice's Maxims of Quality and Relevance not to bring up false or wildly irrelevant points, a co-operative listener can be depended upon to reason from (2) and (3) that the official believes that what he has depicted as the only logical reason for the letter – a hope for political gain in the election – was the politician's motivation for writing and publishing it. Moreover, remark (4) states that in general politicians have a responsibility NOT to write and publish such letters. Again, because of the Maxims (Why make such a remark if you don't believe it to be true, informative and relevant to the politician under discussion?), listeners assume that (4) applies to this politician, and that the official means that he believes that the politician has violated his responsibilities by airing his problems with Nolan University in the press in hopes of gaining politically.

(2), (3) and (4) alone, then, already implicate the accusation of electioneering reported in (1), but there is one more such implicature. In (5), the Nolan official places the entire electioneering accusation – that the politician is attacking Nolan for political gain in an election – within a factive construction, a headless relative. To confirm that clauses headed by *what* are factive (that is, that their contents are presupposed to be true), consider examples (6) and (7) below:

- (6) I don't believe what he's singing.
- (7) I don't believe that he's singing.

In (6) both speaker and hearer are assumed to take for granted the truth of the *what*-clause – that he is singing. In (7), we experience no such commitment from the speaker or the hearer. Since the university official embedded his discussion of alleged electioneering activities under the factive *what* in (5), the utterance expresses not only his own commitment to the truth of the content of the *what* clause, but, in addition, his belief that his listeners have also presupposed that the content of that clause is true, that the politician is ‘running for election by attacking Nolan University’, that is, electioneering.

We still need to consider one more issue involved in the electioneering accusation: the role played by the clause in (3) which reads ‘I’m not saying he’s doing it for political reasons.’ In isolation, this might sound like a denial of accusing the politician of electioneering. However, that clause is followed by ‘it escapes me what other reason he would do that’, which invites the opposite conclusion. Furthermore, if we look carefully at ‘I’m not saying he’s doing it for political reasons’, we see that it denies chiefly the speaker’s *saying* the accusation, not his belief in it. Because of the Gricean conversational Maxim of Relevance, speakers can often introduce controversial opinions safely with such expressions:

- (8) I’m not saying you’re stupid or anything, but you roasted the chicken without a pan!
- (9) I’m not saying the boss is fat, but I could hardly breathe after he sat down next to me on the plane.

(8) and (9) work to introduce the speaker’s true opinion (you’re stupid, the boss is fat) as a conversational implicature because listeners know, via the Maxim of Relevance, that speakers do not utter clauses entirely irrelevant to their points. Co-operative speakers would not mention stupidity in (8) or fat in (9) if they had nothing to do with their message. Moreover, the Gricean Maxim of Quality predicts that speakers will say only what they believe to be true. Contradictions cannot be true, and the introductory clauses in these sentences would certainly contradict the second clauses if they were meant to deny the accusations of stupidity, fat, or electioneering. Consequently, co-operative listeners will interpret the *not* in sentences like those in (8), (9) and (3) as having scope over only *saying*, not over the entire accusation, conveying that the speaker actually believes the accusation that he is ‘not saying’ and denies only his willingness to say it: ‘I’m not comfortable *saying* A, but I want to convey to you that it’s true nevertheless.’

If we turn now to the second topic addressed in the complaint, the comparison of the politician with Ralph Cooper in (5), we will see many of the same pragmatic principles at work. First, the Maxim of Quality explains

why listeners will know immediately that the intended accusation, if there is one, is that the politician has been acting *like* ‘the Ralph Cooper of Salem County’, not that he literally *is* a Ralph Cooper. It can’t, of course, be true that one person could *be* another, so (5) would violate the Maxim of Quality if taken literally. As with any other metaphor, then, it is up to the co-operative listener to figure out a reasonable meaning for the expression ‘be the Ralph Cooper of Salem County.’ Those who hear (5) will figure that the politician is being said to be similar to Ralph Cooper in salient ways left up to them to determine.

Like (3), (5) introduces the apparent denial of a claim, ‘I don’t think he’s trying to be the Ralph Cooper of Salem County’, and then concludes with an almost contradictory affirmation of what it seemed to be denying: ‘but it has that effect’. Once again, listeners are likely to get the message that the speaker *is* accusing the politician of being like Ralph Cooper because of the Maxim of Relevance: Why introduce such a vivid comparison if it is not relevant? Like (3), (5) will operate much like the examples in (8) and (9); it allows the speaker to use predictable conversational patterns to convey very clearly a controversial opinion without taking responsibility for it.

(5) is a little different from (3), however, in that it can also be taken as expressing a direct accusation, along with the conversationally implicated one. (5) starts: ‘I don’t think he’s trying to be the Ralph Cooper of Salem County.’ Since *think* is a neg-raising verb, many listeners will take the beginning of (5) to mean ‘I think he isn’t trying to be the Ralph Cooper of Salem County ...’. This could be read as ‘he isn’t TRYING to be the Ralph Cooper of Salem County, but he may well be doing it anyway, without trying.’ Certainly, when a listener encounters the final clause ‘but it has that effect’, she would be very likely to feel that this interpretation, the only non-contradictory one in accord with the Maxim of Quality, is the correct one; the Nolan official would be understood as saying that the politician was behaving like the Ralph Cooper of Salem County, although perhaps not purposely. This still amounts to an accusation, since any suggestion that someone has behaved like Ralph Cooper, even unwittingly, charges that person with a fault or offence. Thus, the Nolan official expresses the accusations of electioneering and of acting like Ralph Cooper in his interview by use of both the literal semantic and the pragmatic conversational rules of English.

THE DISPOSITION OF THE CASE

Unfortunately, the above explanations did not benefit the defendants. The case was settled before it reached court. We couldn’t help worrying that a jury might not believe that when an official has said explicitly ‘I don’t think the politician’s trying to be the Ralph Cooper of Salem County’ that that official really is saying that he *does* think that the politician *is* like

Ralph Cooper. While my linguistics training told me that, on the contrary, jurors would perceive the accusation, in accord with the predictions of pragmatic theory, I had no hard evidence for the correctness of this prediction. I could not perform empirical studies on ordinary speakers while I worked on the case, as the results of such studies, whatever they were, could be brought out in court. Also, the jury is the finder of fact, including semantic and pragmatic facts, so running a study of other speakers might be inappropriate.

A PRELIMINARY STUDY

Subsequent to the settlement, however, I remained curious about how jurors would have interpreted examples like (5), so I ran a small study on two classes of Temple University undergraduates, one an introductory linguistics class composed of 18 College of Liberal Arts and Education students with several weeks' training in making natural judgements about linguistic data, and one a core course in race and racism composed of 15 students from across the university who had no such experience. Temple is a large, diverse, public, urban university. Except for their relative youth, Temple students come as close as I could get to representatives of the jury pool in the Mid-Atlantic area. The students in the linguistics class had not yet studied pragmatics, speech acts or others of the mechanisms responsible for producing the effect of accusation in (5), but they had had some practice in making intuitive judgements about how an example sentence which they were viewing written formally and in isolation would function naturally when spoken in context. The students were all given a written copy of the Nolan official's remark (5) (with the name 'Lance' inserted), told it was spoken in conversation, and asked three questions:

(10) Questionnaire

Please read the following sentence and answer the questions below:

I don't think Lance is trying to be the Ralph Cooper of Salem County by what he is saying running for election, but it has that effect.

1. Would you say that the speaker is accusing Lance of being the Ralph Cooper of Salem County? Please circle your response below:

YES PROBABLY PROBABLY NOT NO

2. Please explain your response briefly. Why did you answer as you did?
3. Why do you think the speaker phrased his remarks as he did?

Even though the linguistics students viewed the example sentence in intonationally neutral writing, rather than hearing it spoken in context as the reporter had, and even though they were told to consider the sentence very carefully, as it was part of a court case, half of the linguistics students (9 out of 18) answered Question 1 with YES or PROBABLY, agreeing with my judgement and the reporter's that (5) amounted to accusing Lance of being like Ralph Cooper. Many of their explanations seemed to touch on mechanisms described in my report. Seven of the nine linguistics students who answered YES or PROBABLY, as well as two who gave negative answers, wrote explicitly that they could tell that the real message of the sentence was an indirect one, as the linguistic account of the conversational implicatures arising in the sentence suggests. As one student wrote, 'The speaker's words – the way in which he phrased his statement – have a sort of "I wish I could say outright that I think he's trying to be the Ralph Cooper of Salem County, but I'm not brave enough" feel.' Three students remarked on the likelihood of the negation's having scope over only 'trying', suggesting that although Lance wasn't trying to be like Ralph Cooper, he was doing so anyway: 'although the speaker said Lance is coming across as Cooper, the speaker also says that Lance isn't trying to come across that way'. One student in the linguistics class even reacted (unconsciously) to the effect of the Maxim of Relevance: 'Why would he even mention the name Ralph Cooper of Salem County if he wasn't accusing him?'

However, the results in the class of students with little or no linguistics training indicated that more jurors might not perceive the accusation. Only one third of the non-linguistics students answered YES or PROBABLY that the remark constituted an accusation (5 out of 15). Although almost half of them also commented that the sentence seemed indirect, in general, the reason for the 10 NO or PROBABLY NOT judgements seemed to be much as expected; having read the sentence carefully, the non-linguistics students were more likely than the linguistics students to take 'as definitive the initial assertion that the speaker did NOT think that Lance was trying to be the Ralph Cooper of Salem County. They were willing to disregard the contradictory implicatures subtly generated through the action of the conversational maxims later in the sentence to focus on what it seemed the beginning of sentence *should* mean if only it behaved 'properly', and all the meaning came through the words' usual meanings as dictated by the literal semantic rules. A total of ten students, five from each class, wrote explicitly in their explanations that they believed that the example didn't constitute an accusation of Lance's being like Ralph Cooper (in the words of one student), 'because it says in the beginning of the sentence that he does not think Lance is trying to be the Ralph Cooper of Salem County'.

THE MAIN STUDY

The pilot study was intriguing enough to lead me to undertake a larger series of studies involving Temple undergraduates in order to obtain statistically significant results and address three important questions:

- 1 What is the dominant natural interpretation in conversation of sentences such as (5) ('I don't think he's trying to be the Ralph Cooper of Salem County by what he's saying running for election by attacking Nolan University, but it has that effect.')
- 2 Why would subjects read examples presented formally in writing differently? Is the change in interpretation due primarily to the complexity of sentences like (5), the change in presentation medium from speech to writing, or the type of rule system that the subject brings to bear on the different media of presentation?
- 3 Is there a way to help jurors who must consider linguistic evidence taken from conversation to access the appropriate intuitions?

In order to answer these questions, I collected data by visiting 19 different individual Temple classes in linguistics, writing and literature. I also used one linguistics class of 29 from Haverford College, a small, highly selective private college in the Philadelphia suburbs, to find out whether more uniformly elite students might react differently from those at Temple. Finally, I polled 18 professional linguists trained in syntactic/semantic/pragmatic theory via email. However, except for the differences between linguists and non-linguists already indicated, the results were remarkably consistent. Since results did not differ statistically significantly among the groups, the data from the different classes, from faculty, and from Temple and Haverford students are combined in what follows when appropriate.

Question 1: What is the dominant natural interpretation of the sentences under study in conversation? How does this differ from the interpretation that subjects give the sentences when they can study or reread them and are instructed to consider them carefully?

In order to answer this question, I arranged to visit an assortment of classes in a way that allowed me to utter a sentence of a form identical to that of example (5) in natural conversation and then poll the students about its meaning.² I asked the instructors to tell the students to expect a guest speaker at the beginning of the period, but I actually arrived flus-

tered about ten minutes late and excused myself by telling the class (11):

- (11) I don't think the university is trying to make the classrooms hard to find by the way they number them, but it has that effect.

Then, after introducing myself and speaking in general terms about needing the students' help with a research project, I gave them this very short questionnaire:

Did Professor Siegel accuse the university of making the classrooms hard to find? Please circle your response below:

YES PROBABLY PROBABLY NOT NO

In contrast to the pilot project, in which I tried to simulate courtroom conditions by writing the sentences down and emphasizing that the outcome was very important, this time I instructed the students to answer the question quickly with their 'first impression' and emphasized that the question was trivial. They followed my instructions happily, immediately marking their responses and handing the questionnaires back to me confidently and quickly. The results appear in Table 1.

A very large majority of both non-linguistics and linguistics students agreed that in casual conversation, (11) does convey an accusation that the university is trying to make the classrooms hard to find. The differences between the responses of the non-linguistics students and the linguistics students are not significant. Moreover, the students were quite sure about their responses. In Table 1 and subsequent tables, I have grouped all YES and PROBABLY answers together under YES and all NO and PROBABLY NOT answers together under NO. However, only three students availed themselves of any kind of 'PROBABLY' answer under the oral conditions reported in Table 1. Other conditions consistently elicited the less definite answers from one-quarter to one-half of the subjects.

We now have an answer to the first part of Question 1: the dominant natural interpretation of sentences such as (5) and (11) in casual conversation is as an assertion of the proposition in the first clause, even though the speaker seems to say that she does 'not think' that proposition is true. But does this interpretation really differ from the one subjects give the same sentences when they have been written down and the subjects are

Table 1 Percentage of students without and with linguistics training judging that (11) constitutes an accusation in natural conversation

	YES (%)	NO (%)	No. of subjects
No linguistics	94	6	32
Some linguistics	88	12	24

instructed to consider them carefully, as in a courtroom? Of course, I had to conduct the tests in classrooms, whose language environments may differ from those of courtrooms. There is usually less at stake in a classroom than in a jury trial, and juries must listen to lawyers' suggestions and judges' instructions. I did my best to create such a high-stakes atmosphere when I visited more classes and gave the students written versions of sentences of the form in question. This time the students were told that their answers were very important – a great deal of money could be at stake – and that they should think about their responses very carefully. I used three different sets of lexical items to instantiate the sort of sentence under investigation. Some students saw example (5), some saw (11) and some saw the third version in (12) below:

- (12) I don't think Prince Bata is trying to be the Adolf Hitler of Africa by what he is doing writing in the newspapers, but it has that effect.

Data for all three sets of lexical items were analysed together, as there were no significant differences among students' responses to the written versions of (5), (11), and (12). In Table 2, we can see that students' responses to careful readings of the written sentences do in fact differ significantly from the casual conversational interpretations (chi-square = 32.03, $df = 1$, $p < .001$).

As in the pilot study, most students considering written sentences with care mentioned that the sentences seemed indirect, containing what appeared to be a disavowal of the accusation at the beginning, followed by an observation which suggested that very disavowed accusation. Subjects came to different conclusions about whether or not the sentences constituted accusations according to which ingredient of the meaning they took to be dominant. Compare, for instance, the comments of two students who read the written version of (11) and came up with opposite answers:

SUBJECT 1 (answered YES, (11) was an accusation)

Even though the speaker says 'I don't think the university is trying to make the classroom hard to find', which doesn't imply any accusations, the second half of the statement contradicts the first. It's like the speaker wants to make an accusation, but does it in a roundabout way.

SUBJECT 2 (answered NO, (11) was not an accusation)

Because they are not saying that the university does this on purpose but the way they number them is confusing. They state that they don't think the university is trying to make it hard. This way they don't put blame on the school but just on the way the school numbered the classrooms.

Under conditions which call for careful consideration of a written text, far more subjects came to the same conclusion as subject 2 than agreed with subject 1. These studies establish, then, that the interpretations by ordinary English speakers of sentences such as the one that the original libel case hinged on do vary significantly depending upon whether the sentence is encountered in the kind of natural conversational setting in which it was originally uttered or in a formal, high-stakes setting that more closely resembles a courtroom. It was probably to the defendants' advantage to settle the original libel case, then, even though Table 1 indicates that the vast majority of ordinary speakers of English in the Mid-Atlantic area would have interpreted the sentence in question as the reporter did, as an accusation of being a Ralph Cooper, *had they been present at the original interview*. Settlement was a good outcome because Table 2 allows us to predict that, at trial, most of the ordinary English speakers of the jury would not have accessed their natural conversational interpretations, but substituted a different, more strictly logical and prescriptive one, namely that people who say that they 'don't think that X' can't be asserting that X. Linguistic evidence gleaned from natural conversation, then, may be misinterpreted by jurors in courtroom situations, even relative to the judgements that those same jurors would have made about the material had they encountered it when it was first uttered.

Question 2: Why would subjects read examples presented formally in writing differently?

Are the examples just so complicated that subjects are confused? Does merely translating examples from speech to writing cause the changes? Or, finally, is it that subjects are shifting the type of interpretation system they're using?

To investigate the confusion hypothesis, I replicated the studies shown in Table 2 with (13), a simpler version of example (11).

Table 2 Percent of students judging that (5), (11) or (12) constitutes an accusation in casual conversation versus carefully considered writing

	YES (%)	NO (%)	No. of subjects
Casual conversation (no linguistics)	94	6	32
Careful writing (no linguistics)	30	70	50

(13) I'm not saying that this classroom is hard to find, but I did go to every other room in the building before I got here.

(13) is simpler than earlier examples like (5) for several reasons. It eliminates the verb 'trying' and substitutes the non-neg-raising verb 'say' for the neg-raising 'think'. It also omits the 'by' constructions (e.g. 'by the way they number them') and the vague 'but it has that effect', both of which are unnecessary to the basic construction of the sentence, but may have contributed to the overall confusion that some subjects experienced when they studied such sentences. As in the pilot study, about 12 per cent of respondents remarked that sentences like (5), (11) and (12) were badly constructed. Some sample answers to 'Why do you think the speaker phrased his remarks as he did?' included 'Because he is bad at putting words together', 'I dunno - to be confusing', and 'I don't think this person knew a lot of grammar.'

However, even with the new, simplified example (13), there remained a significant difference in the interpretations given when it was heard in natural conversation (90 per cent still felt that it was an accusation) as opposed to a formal courtroom-like context (chi-square = 8.53, $df = 1$, $p < .005$). This is shown in Table 3.

The simplification did, however, move subjects towards recognizing the intuitive conversational meaning of such sentences when they evaluated them carefully in writing. Only 36 per cent of the subjects who encountered (13) in formal writing maintained that the speaker of (13) did not mean to say that the classroom was hard to find, in contrast to the 70 per cent who maintained that written versions of (5), (11) and (12) were not accusations. This is an interesting and, in some ways, surprising result, as we might have expected that the elimination of the neg-raising verb 'think' would have had the opposite effect. When commenting on the written versions of (5), for instance, some subjects who considered it an accusation pointed out that they came to that conclusion because the speaker might mean 'I think he's not TRYING to be Ralph Cooper, but he's doing it anyway.' Since (13) lacks the neg-raising property of 'think' and the extra verb 'try', there is no possibility of construing it as a claim that although

the classroom isn't trying to be hard to find, it's doing it anyway. (13) says quite transparently that the speaker is not saying that the classroom is hard to find. Consequently, we would expect that *fewer* subjects who read (13), as compared with those who read (5), would conclude that (13) serves as a claim that the classroom, in fact, *is* hard to find. But the results were quite the opposite: More students interpreted (13) as an accusation of being hard to find than interpreted the more complicated, neg-raising versions like (5), (11) and (12) as such.

Why did this happen? Perhaps the relative simplicity of (13) just allowed subjects to process it more naturally than they could the previous, more complicated examples, so more of them were able to imagine it as part of a conversation and tap into their conversational rule systems. Also, while none of the subjects who read sentences (5), (11), or (12) wrote that they thought the speaker of those sentences was trying to be funny, slightly more than half (18 out of 35) of those who read example (13) remarked that the speaker may have been trying to be funny, sarcastic or sardonic. As one student wrote of the written version of (13): 'I think the speaker is trying to get his/her point over in a humorous manner so everyone can relate.' But what exactly is funny about (13) that is not shared by (11), for instance? Written comments from the subjects suggest that many of them recognized as a familiar oral genre jokes of the form of 'I'm not saying X, but X', illustrated in (8) and (9): 'This is a common way of speaking', wrote one student, and another explained, 'Today, whenever someone opens a statement with "I'm not saying", they usually *are* saying.' Hence, the simpler form of the example sentences evoked in the written form more judgements that matched conversational interpretations not just because they were simpler, but also because they were recognized as examples of an oral genre and accordingly interpreted complete with conversational implicatures. Unfortunately, there is little we can do in a courtroom to take advantage of any such simplicity and genre effects, as we cannot limit actual evidence to relatively simple or recognizable sentence types.

Could another part of the change in interpretation from natural conversation to formal written examples stem merely from the translation from speech to writing? Many scholars, including, for instance, Hindle (1983), Kroch (1983), Chafe and Tannen (1987), Tiersma (1999) and Brown-Blake (2004), have argued convincingly that writing and speech require different types of discourse organization. Tiersma (1999: 177-9) provides an interesting discussion of how legally significant conversations can be interpreted inappropriately when they are presented in the form of written transcripts, as a result of the loss of the effects of the Gricean conversational maxims: 'Thus the trial transcript, like a contract, statute, or will, tends to be interpreted very literally ... the Court [in *Bronston v. United States* 409 U.S. 352 (1973)] interpreted the testimony more like

Table 3 Percentage of students judging that (13) constitutes an accusation in casual conversation versus carefully considered writing

	YES (%)	NO (%)	No. of subjects
Casual conversation (no linguistics)	90	10	40
Careful writing (no linguistics)	64	36	55

authoritative written text than as speech.' If it is the case that much of the change in interpretation that occurs when conversations figure as evidence in court are the result of the change in medium from speech to writing, jurors could be helped to recover their natural intuitions about an utterance in evidence by having it spoken aloud for them in the courtroom. To explore this possibility, I prepared the short piece shown in (14), which can be presented in a conversational style. It includes sentences which parallel in structure examples (2), (3) and (4) from the interview involved in the libel case (in italics) followed by (12) (in bold below), which parallels (5) from the case:

- (14) With all the other things going on in the world, you may not be aware of what's happening on a tiny Island off of Central Africa. It's called Bioko. The place is still ruled by a hereditary Prince named Prince Bata, and recently Prince Bata has been writing and publishing in the newspapers vicious attacks on the Gabri, one of the ethnic minorities on the island. He is saying that all the island's problems are their fault. *It is puzzling to me why Prince Bata would use the newspapers to air his grievances against this group, unless we are about to see the beginning of some sort of crackdown. I am not saying that he is doing it to turn the rest of the population against the Gabri, but it escapes me what other reason he would do that. The Prince has a responsibility to shut up and do his job and not air this in the press. I don't think Prince Bata is trying to be the Adolf Hitler of Africa by what he is doing writing in the newspapers attacking this group, but it has that effect.* Distracted as we are with the Middle East, we Americans would be wise to pay attention to the evils perpetrated by Prince Bata's regime in Bioko. Otherwise, we may find ourselves having to deal with yet another humanitarian crisis in the near future.

I presented the material orally, with instructions meant to approximate oral delivery of important evidence in court. I instructed the subjects to listen carefully to the 'story' that I was going to tell them because I would ask them questions afterwards. I then presented (14) in as natural an oral style as possible and handed out the usual kind of questionnaire, which asked whether or not my speech had included the accusation that Prince Bata was the Adolf Hitler of Africa. Remarkably, students reacted just as if they had read the passage. As Table 4 shows, their answers did not differ significantly from responses to written versions.

Clearly, simply moving the material to the oral channel does not enable subjects to process it as they would if they had heard it in casual conversation. The instructions to pay conscious attention to a prepared passage and to consider their answers carefully, instructions inherent in a

Table 4 Percentage of students judging that (12) constitutes an accusation in carefully considered speech versus (5), (11) and (12) in carefully considered writing

	YES (%)	NO (%)	No. of subjects
Careful speech (no linguistics)	34	66	35
Careful writing (no linguistics)	30	70	50

courtroom situation, seem to be more important in shaping interpretation than the channel of presentation. To test this last explanation further, I reversed the conditions of the previous experiment: I attempted to present a set of subjects with a *written* version of an example sentence, which they were asked to consider *casually*. I handed out written copies of (14) labelled 'editorial', and asked the students to pretend they were reading a newspaper quickly over coffee. I assured them that there would be no questions about details and that their answers didn't matter. I even tried to encourage them to race to see who could finish reading fastest by asking them to slap their papers face down on their desks when they had finished. However, the students could not or would not obey the instructions to take written matter handed out in a classroom casually. They read the paragraph with apparent care, some taking as long as five minutes before they would relinquish it. When they received the questionnaires asking whether or not the editorial had included an accusation that Prince Bata was the Adolf Hitler of Africa, they also ignored directions to answer quickly with their first impressions, quite unlike the students who heard a similar sentence in conversation. They seemed to think about the question carefully and puzzle out an answer. Three of the twenty-one students even changed their answers from YES to NO, although their instructor and I stood over them asking them to turn in their first responses quickly. The results, in this 'casual writing' condition shown in Table 5, turned out almost identical to the careful writing results shown in Table 2.

Apparently, in a high-stakes environment, most people cannot or will not use on writing the kind of interpretive approaches that they use on casual conversation. About two thirds of subjects in a high-stakes situation rely on 'only literal ideas of what, logically, they feel sentences *should* mean. Consequently, if a speaker/writer says 'I'm not saying X', these subjects believe that he does not believe that X. Only one-third of high-stakes subjects react just as almost all subjects do when they have no special preparation before hearing the utterance in question and merely encounter it in natural conversation. That is, since they view the data as regular conversation, they unconsciously make use of Grice's conversa-

Table 5 Percentage of students judging that (14) includes an accusation in carefully considered writing versus attempted casually considered writing

	YES (%)	NO (%)	No. of subjects
Careful writing (no linguistics)	30	70	50
Casual writing (no linguistics)	29	71	21

tional Maxims of Relevance and Quantity, concluding that the denials (I'm not saying X or I don't think that X) would be uninformative and irrelevant if they were not meant to suggest that the speaker does believe X. When utterances that were originally uttered during spontaneous conversation wind up as evidence in court, then, it is important, in the interest of accuracy, that jurors be able to interpret those utterances as they would have had they been present during the conversation, that is, with (unconscious) reference to applicable pragmatic rules such as the conversational maxims.

Question 3: Is there a way to help jurors who must consider linguistic evidence taken from conversation to access the intuitions they would have had if they had encountered the linguistic evidence as it occurred in natural conversation?

How *can* ordinary English speakers access their own conversational competence, rather than substituting more conscious rules of logical parsing? We know that merely telling them that the material came from spoken conversation does not bring their responses into line with responses to actual spontaneous conversation; all my subjects were given that information. We also know that merely presenting the data orally, rather than in writing, does not cause subjects to be more accurate in their conversational interpretations (Table 4). Nor does it help to instruct subjects to treat data casually 'as if' they were not paying special attention (Table 5). As summarized in Table 6, only casual oral conversation reliably provokes most listeners to make use of the Gricean conversational maxims to produce the implicated meanings we routinely glean in conversations.³

My studies suggest, then, that only exposing jurors to a convincing oral re-enactment of the conversation at issue would lead almost all of them to their natural judgements about conversational meanings; however, I would hypothesize that this would work only if the jurors did not know during the re-enactment that crucial evidence was being presented, as such knowledge is likely to provoke the more literal interpretation strategies represented in the FORMAL column in Table 6. Unfortunately, such re-

Table 6 Circumstances in which Gricean maxims are likely to be used

	Casual	Formal
Oral	Yes	No
Written	No	No

enactments would be very difficult to stage, and jurors would be likely to think about their judgements later and want to modify them, so that they could get them 'right', that is, in line with what their literal semantic interpretive system tells them.

It is important to note that this impulse to change an answer informed by conversational rules to one that follows only literal semantics rules and call it a correction is mistaken. The NO conclusions that subjects may reach after careful study of my examples is *not* the 'correct' understanding of such sentences when they have occurred in conversation, and the initial YES interpretations reached via the conversational maxims are not careless or sloppy, but the result of the unconscious application of appropriate rules. Tables 2 and 3 show that a large majority of English speakers do interpret the sorts of sentences we have been looking at as accusations in actual conversations; this is the real interpretation, then, the one that those involved in a court case hinging on such a sentence from conversation should be able to expect, since it is the one given by ordinary people engaged in casual conversation outside court. Interestingly, if one manages to question speakers when they have just uttered an 'I'm not saying X' sentence; they agree rather quickly that they did intend the accusation predicted by conversational rules. Consider the following dialogue recorded in a university dining hall.⁴

(15) B: Yes, I was just having a conversation about a person at this table. Ha ha. I'm not saying it was de- de- um ... degrading? No. Defiling? Um ...

M: Derogatory?

B: Yes. Derogatory. That's the word I was looking for. Right. I'm not saying it was derogatory, but it was - fun.

M: So, when you said that sentence, were you really trying to tell me that it was derogatory?

B: No! No, no. It was just - I mean, no. Well, ha. Yeah. Wow. I guess so. That's weird. Yeah, pretty much. That is what I actually meant.

Speakers who use this kind of 'I'm not saying X, but X' locution, then, are aware at some level that they *are* saying X. Note how hard B works to find 'derogatory', exactly the right word for what she claims she is 'not saying'.

This concern for precision would certainly be peculiar if she did not mean to say that her conversation had been derogatory. And while she responds at first that her 'I'm not saying X' locution means that she wasn't saying X, she soon realizes that X was what she 'actually ... meant' by conversational implicature.

Since the linguistic facts to be found by jury members should be what the speaker actually meant and what most reasonable listeners would take her to mean, it is important to do anything we can to help jurors discover the facts about linguistic evidence according to the appropriate conversational intuitions. Yet the careful, critical and leisurely evaluation built into the process of examining evidence in court seems to cause speakers to ignore their knowledge of conversational rules. How can jurors be helped to discover the facts about what the speaker of a conversational sentence would most likely have intended and what the hearer would most likely have understood? My study suggests one promising direct approach to this problem, and that arises from the observation made during my pilot study (see 'A preliminary study', above) that students who had had some training in linguistics were significantly more likely to perceive the intended conversational accusation than those with no training in linguistics. The linguistics students had been trained to imagine examples in real contexts of use in order to make judgements about them, and that seemed to allow more of them to perceive the ordinary meaning of the sentences, which includes an accusation. In my larger study, I gave the written versions of sentences like (5), (10) and (11) to more linguists. I moved from introductory classes at Temple to more advanced classes at Haverford College to colleagues with PhDs in linguistics or rhetoric and got the same results (about a 50/50 split) at every level. Consequently, I combined the result for all the linguists below in Table 7.

Table 7 shows that significantly more people with linguistics training than those without read the sentences as expressing accusations, as they would have, had they heard those sentences in casual conversation (chi-square = 3.52, $df = 1$, $p < .05$). However, this by itself does little to solve our courtroom problem, for two reasons. First, it is not practical to give jurors complete courses in linguistics to improve their abilities to hear, as if

Table 7 Percentage of subjects with and without linguistics training agreeing that (5) constitutes an accusation

	YES (%)	NO (%)	No. of subjects
Careful writing (linguistics)	48	52	61
Careful writing (no linguistics)	30	70	50

it were casual conversation, written material which they are asked to examine carefully. Second, even many linguists are moved to apply only careful logical parsing in courtroom-like contexts, even when they know the example occurred in casual conversation. The linguists' 48 per cent rate of YES or PROBABLY answers is significantly higher than that of the non-linguists (30 per cent) in evaluating the written versions of the sentences, but it is not close to the approximately 90 per cent rate of positive answers obtained from all groups in the natural conversation condition. One linguistics PhD even remarked on the difficulty of choosing which set of rules to invoke:

- (17) I'd say speech act-wise (which is all that matters in politics), it represents an accusation of him trying to be the Ralph Cooper of Salem County, albeit indirectly. From a semantic point of view, though, I'd say clearly not.

This leads to the only intervention that I have found effective in raising the rate of YES/PROBABLY answers to approach that of the natural conversation condition: a complete discussion of the particular linguistic issues involved, in this case the Gricean maxims. Once subjects have learned about the operation of the Maxims of Relevance and Quantity and had them illustrated with real conversational examples, they often come to judge that the speaker probably did mean to issue an accusation. This suggests that expert witnesses in semantics/pragmatics could serve an important function in teaching jurors how to tap into their conversational rule systems to interpret linguistic evidence from conversations, rather than using just their literal semantic interpretation systems to tell them what sentences 'should' mean. Such an idea is consistent with Solan's concept of the linguist as 'tour guide': 'the linguist is being called to assist the trier of fact by explaining how their shared intuitions about possible meanings has a basis in the structure of our language faculty [and to] point out possible interpretations that may have gone unnoticed, but which a juror will recognize as legitimate upon reflection' (Solan 1998: 95). However, Solan's argument emphasizes that linguistic expert testimony should be admitted to guide juries in their interpretation of linguistic corpora that are 'too large or too complicated for jurors to grasp as a whole without assistance'. My study shows that juries may benefit from linguists' guided tours of even short, apparently simple conversations, since even these involve complex choices among interpretive rule systems.

Unfortunately, even the help of a professional linguist tour guide will not get enough jury members to make natural conversational judgements in the courtroom. The urge to use rule systems appropriate to the task at hand is very strong, even for professional linguists, and the rule systems naturally used by most speakers in processing formally presented linguistic

material are not the rule systems of casual conversation. Having the existence of these conversational rule systems pointed out to them by an expert seems to help some subjects access their own intuitive grasp of such rules. My studies show that Tiersma and Solan (2002) are correct when they suggest that linguistic expert witness tour guides can appropriately help in a courtroom when they 'inform jurors about the nature of Gricean implicature in appropriate cases. Once the jurors are aware of this information, they will be on the same footing as the expert (more or less), and be able to draw their own inferences based on their intuitions enhanced by the linguistic analysis that the expert has presented' (Tiersma and Solan 2002: 234). Indeed, in my studies, subjects with just a little linguistic training made judgements about linguistic evidence taken from casual conversation that matched those of professional linguists and that were more realistic than those of linguistically untrained subjects.

However, even judgements made on the same footing as those of professional linguists are not nearly accurate enough to represent fairly what sentences brought to the courtroom from casual conversation would actually have meant when uttered. After all, half of even the professional semanticists, who certainly knew about accepted theories of pragmatics, gave precedence to the literal semantic interpretation over the conversational maxims when they saw data from conversation in a formal questionnaire. It is likely, therefore, that linguistics expert witnesses could improve the accuracy of interpretation of linguistic evidence best by running empirical studies on the construction in question, like the ones I have done in this case, and reporting on them to the jury. This would not supplant the judgements of the jurors. Rather, it would give the jury scientific evidence of how ordinary speakers like themselves would react to the constructions in question in a context much more closely approximating the context in which they would have first occurred. The very nature of the careful presentation of evidence to thoughtful jurors, it turns out, renders them incapable of applying naturally the type of conversational rules which would have been in operation in the original conversation. So this kind of empirical study would give the jury information to which they could not have had access themselves, simply because they are capable speakers of English and therefore will use literal rules of semantic interpretation in formal circumstances, even if the material presented belongs to a conversation.

CONCLUSION

When ordinary speakers hear conversations, they do not rely only on literal semantic interpretations that match conscious notions of how sentences *should* operate. They heed also the unconscious rules that regulate conversation, so they interpret sentences such as (5) as conveying the accusation of being like Ralph Cooper. Thus, while some legal opinions have

termed interpretations brought forward by linguists 'strained, attenuated, tortured, or balderdash' (*Early v. The Toledo Blade*, No. 90-3434, ct. Common Pleas, Lucas County, Ohio, 1990, cited in Hart 1996), ordinary speakers predictably commit interpretive balderdash as well when they consider conversational evidence in terms of its literal or prescriptively 'correct' meaning. For example, 4 of the 33 subjects in my preliminary study remarked that they thought that the speakers of (5) did 'not know a lot of grammar', and one suggested that the speaker was not a native speaker of English. (In fact, the speaker was a native speaker of American English, a well-educated and highly articulate lawyer.) Such prescriptive judgements often do not represent linguistic reality. The truth is that English speakers frequently utter and understand as indirect accusations sentences like (5), and even stranger ones. If courts truly want to find the facts about meanings in ordinary English, they should avoid asking members of juries to judge on their own, through careful study, the meanings of isolated written versions of sentences which actually occurred in conversations. Such requests, especially made to those without linguistic training, invite unrealistically literal and prescriptive judgements, which they would not have made had they encountered the sentence in its natural context. The real facts about the meaning of a particular construction emerge better from studies of how large numbers of ordinary speakers who encounter the construction in natural contexts actually do interpret it, or, barring that, from the explanations of qualified linguists who are trained to produce natural judgements in formal settings.

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NOTES

- 1 There are many different views on how best to model such metaphorical interpretation. See, e.g., Weiner (1984), Lakoff (1987), or Glucksberg (2001).
- 2 It was necessary to change the lexical items in the example sentence for this study so that I could include the sentence naturally in a conversation addressed to the entire class. This made no difference, as extensive testing on written versions of this sentence with three different sets of lexical items showed that changes in lexical content did not significantly affect the aspects of interpretation being examined here.
- 3 I am grateful to an anonymous referee for suggesting Table 6.
- 4 Recorded on 5 April 2004 in the Morse College Dining Hall of Yale University. I thank Miriam Bowring for collecting this example.

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Conference Report: Annual Meeting of the International Association for Forensic Phonetics and Acoustics, Marrakesh, 3–6 August 2005

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In 2005 the IAFPA conference was hosted and organized by Mamo Alaoui and his team at the Gendarmerie Royale Morocco and took place in the pleasant environment of a Marrakesh conference centre. After the official opening of the conference by the chairman of the IAFPA, Pe French, and words of welcome from Alaoui and his colleagues, the conference proceeded with 16 papers organized into eight sessions. This conference report will provide brief summaries of the papers in the order in which they were presented. The report is based upon the information given by the authors in an abstracts booklet, by notes on the oral presentations made by the author, and in some cases by additional material provided by the authors either during the conference or subsequently. One of the 16 papers, presented by Javier Castaño Perea, contained an overview of the 'Batvox' commercial forensic automatic speaker-recognition system as well as other products from Agnitio, details of which can be found on the company website (www.agnitio.es).

In a paper by Gea de Jong, Jill House, Nicola Cook and Alexia Younis, the speaker-discrimination power of the final f_0 fall was investigated with special attention to spontaneous speech. As was shown by de Jong at the 2004 IAFPA conference, the final fall of the f_0 curve is assumed by many researchers to be particularly interesting for forensic phonetic purposes because it promises reduced intraspeaker and increased interspeaker variability compared to more global f_0 measures such as average f_0 . In the present talk de Jong *et al.* showed that the analysis of spontaneous speech with respect to the final fall hypothesis is confronted with some additional problems compared to the analysis of read speech. In particular, the spontaneous speech samples that they collected for this study contained many instances of creaky voice and of uptalk (final rises in statements), and it turned out that usually the final falls are not as salient auditorily and acoustically as in read speech. Nevertheless, intraspeaker and interspeaker variability of the final fall patterns were not much different in spontaneous speech and read speech; both types of variability were slightly higher