An Implicature-based Model of Meanings in Narrative-joke Discourse

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0. Introduction

Contributions of modern linguistic theory to the field of humor research have been minimal. The semantic script theory proposed by Raskin (1985) is perhaps the most widely-known linguistic account of humor competence. A semantic script is a formal representation of the various relations among meanings contained in a humorous text and the extralinguistic concepts associated with these meanings. The theory attempts to account for the native speaker's ability to judge a text's flummery based on the recognition of certain types of oppositions between scripts contained within the text. However, by subsuming both linguistic and extralinguistic aspects of utterance meaning under one single formal representation, the script-based approach offers few insights into the distinct roles that each aspect plays as the act of joke-telling unfolds over time.

In this paper, I propose an alternate approach that captures the respective roles of asserted, conventional, conversational and syntactically-determined aspects of meaning in narrative-joke discourse. According to the proposed model, narrative-joke discourse consists of both a textual and extra-textual level, each of which corresponds to a distinct set of participants in the joke event. My goal is to show that linguistic ambiguity at the textual level may involve, in principle, any of the four aspects of meaning, while the extra-textual level involves two temporally ordered sets of conversational implicatures. Finally, I will argue that meanings in narrative-joke discourse are generated and perceived in accordance with
certain principles and constraints operating on different levels and at different moments during the joke event.

1. Meanings and maxims in normal conversation
The full interpretation of the meaning of a given utterance involves at least three components: semantic assertion, conventional implicature and conversational implicature. There are two tests used to determine the aspect of meaning of a given proposition, based on the entailment relations between the proposition and the utterance with which it is associated. These are the test of non-cancelability and the test of negated, questioned and conditional forms (see Frege (1892) for a discussion of semantic assertion, conventional implicature and negation; Katz (1972) for the role of questions; Grice (1975) for conversational implicature and non-cancelability; and Karttunen and Peters (1979) for the role of conditionals). First, the semantic assertion of utterance P is entailed by the affirmative statement of P, but not by negated, questioned or conditional forms of P.

(1) P = John has stopped taking semantics courses.
Q = John is not taking semantics courses.

The test of non-cancelability demonstrates that utterance P entails proposition Q because Q cannot be canceled. That is, any attempt to cancel proposition Q via some modification of P yields an ungrammatical result, as shown by the sentence in (2):

(2) *John has stopped taking semantics courses, but he is taking semantics courses.

When utterance P appears in negated, questioned and conditional forms, as in (3), the entailment relation between P and Q no longer holds.

(3) a. It is not the case that John has stopped taking semantics courses.
b. Has John stopped taking semantics courses?
c. If John has stopped taking semantics courses, then all is well.

When a speaker produces the forms of P in (3), there is no longer any claim made as to the truth of proposition Q. The application of these two tests demonstrates that Q is the semantic asserted meaning of P. In other words, proposition Q is what is "said" as the result of utterance P.

Like semantic assertion, conventional implicature involves the entailment of a proposition by the affirmative statement of a given utterance. However, conventional implicature is different in that the entailment relation still holds in negated, questioned and conditional forms.

(4) P = John has stopped taking semantics courses.
R = John has taken semantics courses in the past.

That proposition R cannot be canceled is shown by the ungrammaticality of the sentence in (5):

(5) *John has stopped taking semantics courses, but he has never taken semantics courses.

Negated, questioned and conditional forms of P do not remove the entailment of R. When a speaker produces any of the sentences in (3), he or she still makes a claim as to the truth of
proposition R. For example, when a speaker asks whether John has stopped taking semantics courses, it is presupposed that John has taken semantics in the past. Proposition R, then, is a presupposition associated with utterance P.

The third aspect of utterance meaning, conversational implicature, is characterized by the lack of entailment between an utterance and a given proposition. Conversationally implied meaning cannot withstand the test of non-cancelability.

(6) P = John has stopped taking semantics courses.
S = John hates taking semantics courses.

The grammaticality of the sentence in (7) shows that it is possible to modify utterance P such that proposition S is canceled:

(7) John has stopped taking semantics courses, but he does not hate taking semantics courses.

This sentence is well-formed because it is imaginable that John has stopped taking semantics for some reason other than his hating the subject. Whereas semantic assertion and conventional implicature are closely related to the actual linguistic content of utterances, conversational implicature is more often dependent upon extralinguistic factors, such as context of utterance or discourse setting. That is, propositions Q in (1) and R in (4) will be present regardless of the context of utterance of P. Proposition S, however, will appear only when brought about by the appropriate discourse setting. For example, if the topic of conversation prior to the utterance of P is John’s general dislike of linguistics, then P will most likely give rise to the conversational implicature S. Conversely, if the topic refers to the fact that John has completed most of his required coursework in linguistics, then the utterance of P will most likely generate a different implicature, such as ‘John has already taken all the semantics courses that are offered’.

In addition to the three aspects of meaning discussed so far, there are instances in which the specific meaning of an utterance is dependent upon its syntactic structure. In discussing sentential ambiguity, Pinker (1994) cites the example VP 'discuss sex with Dick Cavett', which may be interpreted as having either the structure in (8a) or that in (8b):

(8) a. VP
   / \   \
  V NP PP
 / | / \ \
discuss N P NP
   |   |  \
   sex with Dick Cavett

b. VP
   / \   \
  V NP PP
 / | / \ \
discuss N P NP
   |   |  \
   sex P NP
       with Dick Cavett

According to the structure in (8a), in which the PP appears outside the NP, the meaning is such that sex is the topic of discussion, and this topic is to be discussed with Dick Cavett.
When the PP appears as part of the NP, as in (8b), an altogether different meaning results: sex with Dick Cavett is the topic of discussion. Utterances containing structural ambiguities, therefore, constitute a fourth aspect of meaning in which syntax determines the resulting interpretation.

According to Grice (1975:26), individuals engaged in conversation follow the Cooperative Principle. They assume, unless one of them indicates otherwise, that each is attempting to make his or her conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose of direction of the talk exchange in which he or she is engaged. In following the Cooperative Principle, individuals observe the four Maxims of conversation given in (9):

(9) Quantity: Give exactly as much information as required.
Quality: Say only what you believe to be true.
Relation: Be relevant.
Manner: Be brief and orderly, avoid ambiguity.

Any failure in adhering to these Maxims will give rise to a conversational implicature. Provided that a speaker does not opt out of the Cooperative Principle (i.e., by stating that he or she cannot say anything more), there are three ways in which individuals may fail to fulfill a Maxim. The speaker may quietly and unostentatiously violate a Maxim; the speaker may be faced with a Maxim clash and must choose to follow one Maxim over another; or the speaker may flout a Maxim by blatantly failing to fulfill it.

To illustrate how Maxim violations can generate conversationally implied meaning, imagine that a speaker makes the simple statement, 'Mary got married and had a baby', although the speaker knows that Mary actually had the baby before she got married. The listener will assume that the speaker is being cooperative by observing the Maxim of Manner (i.e., be orderly). That is, the listener will understand that first Mary got married and then had the baby. But since the two events really occurred in the opposite order, the speaker has quietly violated the Maxim of Quality (i.e., say only what you believe to be true). This violation gives rise to a conversational implicature, as shown in (10):

(10) P = Mary got married and had a baby.
   Q = Mary got married before she had the baby.

The fact that proposition Q can be canceled, as in (11), identifies it as an instance of conversationally implied meaning:

(11) Mary got married and had a baby, but not in that order.

The role of Maxim clash is demonstrated by a situation in which a speaker has been asked the question, 'Where does Pierre live?', to which the speaker responds 'Somewhere in France'. Here, the speaker has faced a clash between the Maxims of Quantity and Quality. He or she does not know exactly where Pierre lives in France. Instead of violating Quality by saying that Pierre lives somewhere he does not, the speaker instead chooses to violate Quantity by not giving enough information to answer the question adequately. The clash between Quality and Quantity generates a conversational implicature, as in (12):

(12) P = (Pierre lives) somewhere in France.
   Q = I don't know exactly where Pierre lives.
The sentence in (13) demonstrates the cancelability of proposition Q, which is therefore an instance of conversationally implied meaning:

(13) Pierre lives) somewhere in France, and I know exactly where.

The use of irony is an instance in which a Maxim is flouted. Suppose that a speaker’s friend has betrayed his or her trust by telling a secret, to which the speaker reacts by saying, ‘Thanks a lot, you’ve been a real friend!’. The speaker has flouted the Maxim of Quality in saying something that is obviously not true. A flout is different from a quiet violation in that both speakers are aware of the violation. The flout generates a conversational implicature, as in (14):

(14) P = You’ve been a real friend!
Q = You are no longer my friend.

That proposition Q is a conversational implicature is demonstrated by its cancelability, as in (15):

(15) You’ve been a real friend, and you continue to be my friend.

2. Discourse structures and verbal humor
Humor researchers typically distinguish between canned (i.e., narrative) and conversational jokes (Fry 1963, Raskin 1985, Long and Graesser 1988, Attardo and Raskin 1991, Attardo and Chabanne 1992). A canned joke is one which has been used before the time of utterance in a form similar to that used by the speaker, such as those which are found in books, collections of jokes, etc. The most prototypical case of a canned joke is a short text taken from a joke book. Canned jokes often require an introduction before the telling itself. Expressions such as, “Did you hear the one about the . . .” or “There was this guy who . . .” are often used by speakers to explicitly declare that the following narrative is a joke. A conversational joke, on the other hand, is improvised during a conversation and is usually non-narrative. Whereas canned jokes may be defined as “reused jokes,” conversational jokes are “original” jokes. One may reuse a conversational joke, or may skip the introductory part of a canned joke sequence, and thereby blur the distinction between the two classes.

Since conversational jokes involve the occurrence of verbal humor between a speaker and listener engaged in conversation, the functioning of such jokes is closely related to the operation of Grice’s Maxims of conversation. Attardo (1994) cites the examples of conversational jokes in (16), each of which violates one of Grice’s Maxims:

(16) a. Quality
“Why did the Vice-President fly to Panama?”
“Because the fighting is over.”

b. Quantity
“Excuse me, do you know what time it is?”
“Yes.”

c. Relation
“How many surrealists does it take to screw in a light bulb?”
“Fish!”
d. Manner
"Do you believe in clubs for young people?"
"Only when kindness fails."

Conversational jokes such as those in (16a-d) involve the generation of a conversational implicature within a single set of participants. This set consists of minimally two interlocutors, one of which violates a Maxim, thereby generating a humorous implicature to be drawn by the other. The discourse structure characterizing conversational jokes is represented in (17):

(17) Discourse structure of conversational jokes

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PARTICIPANT A ➔ PARTICIPANT B
conversational implicature
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In contrast, canned jokes possess a structure that is more complex than that of conversational jokes. Specifically, the narrative structure of canned jokes introduces an additional set of participants, such that the joke event now involves both a set at the textual level, the joke's characters, and a set at the extra-textual level, the joke-teller and listener. The structure of canned jokes is given in (18):

(18) Discourse structure of canned (narrative) jokes

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Extra-textual

JOKE-TELLER ➔ JOKE-LISTENER

Textual

joke text

narration

conversational implicatures

CHARACTER A ➔ CHARACTER B
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This increased structural complexity presents a wider range of possibilities for the transmission of conversationally implied meaning between interlocutors. This transmission no longer occurs directly between the speaker and listener, as in (17), but indirectly through the set of participants at the textual level. Depending on the length and complexity of the joke text, the joke-listener, in principle, may draw conversational implicatures from the utterances of different characters at different moments throughout the narration of the text by the joke-teller.

The conception of narrative—joke discourse in terms of two distinct levels is motivated by the special nature of humorous verbal interaction as compared to normal conversation. As I will attempt to demonstrate in section 5, the single set of participants in (17) corresponds to the set at the textual level of (18) in that verbal interaction between interlocutors is governed by Grice's Maxims of conversation. Interaction at the extra-textual level of (18), i.e., the narration of the joke text by the joke-teller and its reception by the joke-listener, is subject to a different type of Maxims than those assumed to be operative both at the textual level of (18) and in conversational jokes with the structure of (17). As Attardo (1994) points out, the claim that the tellee of a joke violates Grice's Maxims implies that the narrative joke text constitutes
joke's humor is dependent upon the listener's recognition and resolution of the incongruity between these two interpretations.

3. An implicature-based model of meanings in narrative joke discourse

In the following sections, I will argue that the model of narrative joke discourse given in (20) adequately captures the uniquely determined meanings in the building, recognition and resolution of ambiguous interpretations.

(20) An implicature-based model of meanings in narrative joke discourse

[Diagram of implicature-based model]

CULTURAL CONSTRAINTS

EXTRA-TEXTUAL CONTEXT

TEXTUAL CONTENT

R = R_1 \ldots R_n \rightarrow \text{HUMOR}

PROCESSING

1. Recognition of incongruity
2. Resolution of incongruity

FORMS 1, 2, 3 \ldots \rightarrow \text{PUNCTURING
This model reflects the discourse structure given in (18) by preserving the distinction between textual and extra-textual levels. In addition, the model encodes the temporal aspect of joke-telling via rightward movement on a horizontal axis. That is, the chronological progression from JOKEME 1 through the PUNCH LINE is the driving force behind the remaining components of the model.

My main goal is to explain how meanings are generated and perceived at both the textual and extra-textual levels. Specifically, the following points are claimed to characterize the textual level of the model in (20):

(i) The creation of ambiguity between a common and uncommon reading ($R^{cmm}$ and $R^{umcm}$, respectively) may involve, in principle, any of the four aspects of meaning.

(ii) The distribution of these readings among the participants of the joke event obeys the Principle of $R^{cmm}$ Selection.

(iii) The characters of the joke adhere to the *bona-fide* Maxims of conversation, given in (9).

In contrast, the extra-textual level exhibits the following characteristics:

(iv) Prior to the delivery of the punch line, the joke-listener draws a variable sequence of conversational implicatures ($I_1\cdot I_2\cdot I_3$) based on the common reading, $R^{cmm}$.

(v) The delivery of the punch line initiates an invariable sequence of three conversational implicatures that represents the reasoning process whereby the joke-listener perceives the humor of the narrative text: the recognition ($E_1$) and resolution ($E_2$) of incongruity between readings, and the influence of certain cultural constraints ($E_3$).

(vi) The joke-teller and listener adhere to the *bona-fide* Maxims of conversation, given in (19).

The model given in (20) is "implicature-based" in the sense that conversationally-implied meaning is accorded a central role at the extra-textual level throughout the joke event, both during and after the performance of the narrative text by the joke-teller.

4. Linguistic ambiguity at the textual level

As discussed in section 2, the progression of a narrative-joke text involves the simultaneous development of two possible readings, one of which remains concealed to the joke-listener until the delivery of the punch line. In examining the implicit meanings of jokes, Pocheptsov (1981) states that the implied idea is usually the one least or little expected: "... if all possible causes, etc. for a particular situation could be placed on the scale of commonsness, the implied idea would be somewhere on the opposite side of the scale as compared to the usual or common" (24). In making this observation, Pocheptsov was referring to conversational jokes that possess the structure in (17), such as the joke in (21):

(21) Speaker A: Got a match?
Speaker B: No, but I got a lighter.
Speaker A: How am I going to pick my teeth with a lighter?

In this joke, speaker B interprets speaker A's request by thinking that speaker A wants to use the match for lighting purposes. This is the expected, or common, idea. As evidenced by the
final clarification, the real motivation for the request is so that speaker A can pick his teeth. According to Pocheptsov’s scale of commonness, this is the implied, or uncommon, idea.

Although Pocheptsov discussed the scale of commonness with respect to conversational jokes, the notion of common/uncommon readings is equally applicable to narrative jokes. The implicature-based model in (20) formally captures this notion in terms of a binary reading opposition, denoted by the two R variables at the textual level. Given JOKEME, that contains a linguistically ambiguous utterance made by one of the joke’s characters, two different readings may be drawn from that utterance. The variable R\text{com} denotes the reading that ranks high on Pocheptsov’s scale of commonness, while the variable R\text{uncom} denotes the opposite, uncommon reading. The opposed readings of narrative jokes are not limited to implied meanings, i.e., conversational implicatures, as Pocheptsov suggests in his treatment of conversational jokes. In fact, the R variables are deliberately vague with respect to the types of meaning that are fed into them. We may expect to find, in principle, narrative jokes based on binary reading oppositions involving semantic assertions, conversational implicatures, conversational implicatures or syntactically-determined meanings.

Once the R variables are filled by a given pair of meaning types, their respective [com] markings are then determined by the context in which the ambiguous utterance was produced by the joke character. That is, given a pair of opposed readings, the context of utterance dictates that one of these be the common, reasonable and expected reading, thereby leaving the other as uncommon, unreasonable and unexpected. Here, I argue for a fundamental mechanism of narrative-joke discourse that determines which participants in the joke event will select each of these readings. Specifically, I propose that the opposed readings are distributed among participants according to the Principle of R\text{com} Selection, given in (22):

(22) Principle of R\text{com} Selection

For JOKEME resulting in a binary reading opposition R\text{com} and R\text{uncom},

- a. the speaking character selects [s=com] or [s-uncom]
- b. the listening character selects the opposite
- c. the joke-listener always selects [s=com]

This principle makes three specific predictions with respect to the distribution of opposed readings. First, it predicts that the joke-internal participants will never select the same reading, thereby ensuring the existence of a binary reading opposition at the textual level. Second, it insures that the joke-listener always select the common, expected reading. The uncommon reading, as discussed previously, is revealed later when the punch line is reached, at which point the incongruity recognition and resolution takes place. Finally, the principle accounts for the fact that the joke-listener’s selection, i.e., R\text{uncom}, will always coincide with the selection made by one of the joke’s characters. Thus, in a given narrative joke, we may expect to find one of the distributions given in (23):

(23) Distributions predicted by the Principle of R\text{com} Selection

<table>
<thead>
<tr>
<th>joke-listener</th>
<th>speaking character</th>
<th>listening character</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. R\text{com}</td>
<td>R\text{com}</td>
<td>R\text{uncom}</td>
</tr>
<tr>
<td>b. R\text{com}</td>
<td>R\text{uncom}</td>
<td>R\text{com}</td>
</tr>
</tbody>
</table>
A partial examination of sample narrative jokes at this point should serve to illustrate the functioning of the textual level components of the model in (20). The French narrative-joke text in (24) hinges on a binary reading opposition involving semantic assertion (note that the jokemes and the punch line are abbreviated as J and PL, respectively, and that the words and expressions relevant to the binary reading opposition are underlined):

(24) J, C'est un Belge qui va voir le docteur Jacquot et qui lui dit:
'A Belgian goes to see Dr. Jacquot and tells him:'
J, -Je ne me sens pas bien. J'ai le ventre ballonné et je dors mal.
'I don't feel well. My stomach's all swollen and I'm not sleeping well.'
J, -Ecoutez, je vais vous examiner. Ça n'est rien de grave, juste un peu de fatigue.
'Listen, I'm going to examine you. It's nothing serious, just a little fatigue.'
J, Vous prendrez tous les jours un verre de lait chaud et un bain chaud. C'est très simple comme traitement.
'You 'shall drink/take' a glass of warm milk and a warm bath everyday. It's a simple treatment.'
J, Le Belge revient quinze jours après. Dans un état!
'The Belgian comes back two weeks later in a terrible condition.'

J, -Ça va pas du tout, docteur. 'I'm not doing well at all, doctor.'
J, -Vous n'avez pas fait ce que je vous ai dit? 'Didn't you do what I told you?'
PL-Si! Le verre de lait, ça va, j'arrive, mais le bain, j'ai jamais pu le boire entièrement!' 'Yes! The glass of milk, no problem, but the bath. I could never drink the whole thing!'

The progression from J, to J, sets the context that will determine the [+com] markings of the joke's binary reading opposition, which is created in J, The expression prendre un bain chaud 'to take/drink a warm bath' is potentially ambiguous because the verb prendre 'to take/drink' has multiple lexical entries, only two of which are needed to feed the R variables. We may distinguish between these two entries by referring to a semantic feature such as [+consumption], in which case the [+consumption] entry means 'to drink', and the [-consumption] entry means 'to take'. The semantic relation between these two is one of polysemy, i.e., they have the same orthographic and phonetic form, and they share a significant number of semantic features settings as to be recognized as having similar meanings. Now, given the context created in J, through J, in which a doctor is prescribing treatment for his patient, we would expect the expression prendre un verre de lait chaud 'to drink a glass of warm milk' to contain the [+consumption] meaning, while prendre un bain chaud 'to take a warm bath' should be based on the feature [-consumption]. That is, we expect the doctor's prescribed treatment to be reasonable, and clearly, it is not reasonable to have his patient drink an entire bath of water. Therefore, the context of utterance for J, dictates that R
contain the [-consumption] sense of prendre un bain chaud ‘to take a warm bath’ and that R\textsuperscript{[+beer]} contain the [+consumption] sense. Once these values are specified for the R variables, the Principle of R\textsuperscript{[+beer]} Selection in (22) determines which participants in the joke event select each reading. Specifically, this joke exhibits the distribution of (23a), in which both the joke-listener and the speaking character in J\textsubscript{1} select R\textsuperscript{[+beer]} while the listening character selects R\textsuperscript{[+beer]}.

An application of the test of non-cancelability and the test of negated, questioned and conditional forms demonstrates that the binary reading opposition of the joke in (24) is based on semantic assertion. The crucial expression in J\textsubscript{1} is repeated as utterance X in (25):

(25) X=Vous prendrez un bain chaud.
   ‘You shall drink/take a warm bath.’

   Y=Vous vous baignerez.
   ‘You shall bathe yourself.’

   Z=Vous boirez le bain.
   ‘You shall drink the bath.’

Since prendre ‘to take/drink’ is potentially ambiguous with respect to the feature [+consumption], two propositions may be associated with utterance X. Proposition Y corresponds to prendre [-consumption] ‘to take’, whereas proposition Z corresponds to prendre [+consumption] ‘to drink’. The test of non-cancelability shows that X entails both Y and Z because neither proposition can be canceled:

(26) *Vous prendrez un bain chaud, mais sans vous baigner
    et sans le boire.
    ‘You shall drink/take a warm bath, but without bathing
    yourself and without drinking it.’

When utterance X appears in negated, questioned and conditional forms, as in (27), the entailment relation between X and the propositions Y and Z no longer holds:

(27) a. Vous ne prendrez pas un bain chaud.
    ‘You shall not drink/take a warm bath.’

b. Est-ce que vous prendrez un bain chaud?
   ‘Shall you drink/take a warm bath?’

c. Si vous prendrez un bain chaud, ça va.
   ‘If you shall drink/take a warm bath, all is well.’

When a speaker produces the forms of X in (27), there is no longer any claim made as to the truth of propositions Y and Z. These propositions are semantic asserted meanings of X, and the binary reading opposition is, therefore, based on semantic assertion.

In contrast to the joke in (24), the narrative joke in (28) hinges on the opposition of conversationally-implied meanings and exhibits the distribution of (23b):

(28) J\textsubscript{1} -Mon père, j’ai commis le péché de chair.
    ‘Father, I have committed the sin of the flesh.’

J\textsubscript{1} -Avec qui, mon fils?
    ‘With whom my son?’
J₁ - Je ne peux pas vous le dire. 
'I cannot tell you.'

J₁ - Je vais vous aider mon fils. Avec la bouchère? 
Avec l'épicier ou la soubrette du notaire? 
'The butcher? Or the grocer? Or the notary's maid?'

J₁ - Je ne peux rien vous dire, mon père. Je pars. 
'I can tell you nothing. Father, I'm leaving.'

J₁ - En sortant, il rencontre son copain qui lui demande: 
- D'où viens-tu? 
'On his way out, he runs into his buddy who asks him, "Where have you been?"'

PL - De me confesser. Je n'ai pas eu l'absolution, mais 
- j'ai trois bonnes adresses! 
'In confession. I didn't get forgiven, but I got three good addresses!'

The expression in J₁ and J₂ gives rise to two ambiguous readings, 
roughly that (i) the confessor is too ashamed to confess his sins 
fully, and (ii) the confessor seeks the names of some potential 
sexual partners. The context created in J₁ and J₂, determines that 
the former reading be marked as [+com], while the latter be 
marked as [-com]. This follows from the plausibility that a 
sincere attempt at seeking spiritual forgiveness might involve 
ought shame or guilt as to inhibit the confessor's efforts to 
communicate. We recognize the confessor's hesitation as a 
reasonable and expected behavior in such circumstances. What 
we do not expect to occur in this context is precisely the other 
reading, whereby the confessor has a hidden motivation: to get 
the priest to indicate those women with whom he might later 
engage in sinful activity. Once the context yields the common 
and uncommon readings, the Principle of Rstr. Selection 
determines their distribution among the joke participants. 
Whereas the opposed readings of the joke in (24) are distributed 
in the manner of (23a), the joke in (28) is characterized by the 
distribution in (23b). That is, the joke-listener and the listening 
character both select R_{str}, while the speaking character selects R_{com}.

When the appropriate meaning tests are applied, the 
opposed readings of the joke in (28) are both shown to be 
conversational implicatures resulting from the expression in J₁ 
and J₂.

(29) X=Je ne peux pas vous le dire. 
'-'I cannot tell you.'

Y=J'ai honte d'avoir péché. 
'I am ashamed of having sinned.'

Z=Je cherche des partenaires sexuelles. 
'I am looking for sexual partners.'

Propositions Y and Z are shown to be conversational 
implicatures of utterance X in that each may be canceled:

(30) Je ne peux pas vous le dire, mais je n'ai pas honte 
d'avoir péché, et je ne cherche pas de partenaires 
sexuelles. 
'I cannot tell you, but I am not ashamed of having 
sinned, and I am not looking for sexual partners.'
depends on the number of jokes that contain the opposed readings of the joke. I refer to the total set of these implicatures as the I-SEQUENCE. In the analysis of the Belgian joke in (24) thus far, we have seen that the doctor's utterance in \( i \), gives rise to two opposed readings of the expression prendre un bain chaud 'to take/drink a warm bath' based on opposite values for the feature [consumption] of the verb. Context of utterance determines that the common reading takes the [−consumption] sense and the uncommon reading takes [+consumption]. Finally, the Principle of R\textsuperscript{select} \text{Selection} predicts a distribution of the type in (23a), in which both the joke-listener and the doctor select the common reading, while the Belgian patient selects the uncommon reading. On the assumption that verbal interaction between joke participants at the textual level is governed by Grice's bona-fide Maxims, I propose that the doctor's utterance in \( i \), constitutes an unintentional violation of Manner. Given the context of utterance, it would be reasonable in Gricean terms to expect the Belgian to select the common reading. Since the Belgian erroneously selects the opposite, the doctor has been, in a sense, unintentionally ambiguous. At the point in the joke-teller's narration where \( j \) occurs, the joke-listener draws the conversational implicature \( I \), in (31), which is based on R\textsuperscript{select}.

(31) \( i \)=Le docteur veut que le Belge se baigne. The doctor wants the Belgian to bathe himself.

This implicature is equivalent to saying that the doctor has implied that prendre [−consumption] 'to take' is the intended meaning in \( j \). The sentence in (32) demonstrates that \( i \) is conversationally implied since it can be canceled:

5. Conversational implicature at the extra- textual level: the I-SEQUENCE.

The textual-level components of the model in (20) have been shown to yield both a common and uncommon reading involving, in principle, any of the four aspects of meaning. According to the Principle of R\textsuperscript{select} \text{Selection} in (22), the joke-listener always selects R\textsuperscript{select}, while the speaking and listening characters must select opposite readings. I will now argue that the joke-listener's selection of R\textsuperscript{select} from a given joke text further generates a conversational implicature that encodes his or her perception of the speaking character's intended meaning.

This implicature coincides with a violation of the bona-fide Maxim of Manner (i.e., avoid ambiguity) by the speaking character. The nature of this violation will be shown to correlate with the distribution of opposed readings as predicted by the principle in (22). Specifically, a distribution of the type in (23b), whereby the speaking character selects R\textsuperscript{extra}, corresponds to what Grice (1975) refers to as a "quiet and unostentatious" (i.e., intentional) violation of Manner by the speaking character. Conversely, the distribution in (23a), whereby the speaking character selects R\textsuperscript{extra}, corresponds to a type of violation that Grice did not discuss, namely an unintentional violation. The exact number of these extra-textual conversational implicatures depends on the number of jokes that contain the opposed readings of the joke. I refer to the total set of these implicatures as the I-SEQUENCE.
(32) Vous prendrez un bain chaud, mais je ne veux pas que vous vous baigniez.

"You shall drink/take a warm bath, but I do not want you to bathe yourself."

If the doctor were to utter the sentence in (32), then I, would be canceled because it is possible (although reasonably unlikely given the context) that he really intends for the Belgian to drink the bath. In other words, there is nothing in the lexical semantic content of prendre "to take" that entails the notion of volition or true intention on the part of the doctor. Because the binary reading opposition of this joke is only present in one joke, J, the resulting I-SEQUENCE consists of the single implicature I.

The confession joke in (28) presents a different scenario for the generation of the I-SEQUENCE. In the analysis presented so far, we have seen that J, and J, give rise to two opposed conversational implicatures, namely that (i) the confessor is too ashamed to confess his sins fully and (ii) the confessor seeks the names of some potential sexual partners. Context of utterance dictates that (i) be the common reading and (ii) be the uncommon one. Finally, the Principle of R\textsuperscript{Ind} Selection predicts a distribution of the type in (23b), in which both the joke-listener and the priest select the common reading, while the confessor selects the uncommon reading. Whereas the Belgian joke in (24) involves an unintentional violation of Manner by the speaking character, the relevant jokes in (28) constitute violations in traditional Gricean terms. By saying that he cannot tell the priest what he wants to know, the confessor quietly and unostentatiously violates Manner. In other words, he intentionally misleads the priest, who interprets the confessor's utterance in its reasonable and expected sense. Upon the occurrence of J, and J, in the joke-teller's narration, the joke-listener draws the conversational implicatures I, and I, respectively, in (33), both of which are based on R\textsuperscript{Ind}:

(33) I, = Le confesseur veut dire qu'il a honte d'avoir péché.

"The confessor means to say that he is ashamed of having sinned."

According to these implicatures, the confessor is implying that R\textsuperscript{Ind} is the intended meaning in J, and J, The sentence in (34) shows that I, are conversationally implied since they can be canceled:

(34) Je ne peux pas vous le dire/je ne peux rien vous dire, mais je ne veux pas dire que j'ai honte d'avoir péché.

"I cannot tell you/I can tell you nothing, but I do not mean to say that I am ashamed of having sinned."

If the confessor were to utter the sentence in (34), then I, would be canceled because one can imagine other possible reasons for his inability to communicate. Again, as was the case with prendre "to take" of the Belgian joke, there is nothing in the total lexical semantic content of the expression ne pas pouvoir dire "not to be able to tell" that entails the notion of true intention on the part of the confessor.

To summarize, in this section I have attempted to show that jokes in which the speaking character selects R\textsuperscript{Ind} involve an intentional violation of Manner, while jokes in which the speaking character selects R\textsuperscript{Ind} involve unintentional violations of Manner. The assumption that Grice's bona-fide Maxims are operative at the textual level allow us to account for the generation and perception of conversational implicatures comprising the I-SEQUENCE at the extra-textual level. This sequence, in effect, constitutes the joke-listener's ongoing
perception that $R^{edge}$ is the intended meaning of the jokeemes in question. I now turn to the final component of the model in (20), the E-SEQUENCE.

6. Conversational implicature at the extra-textual level: the E-SEQUENCE

Whereas the I-SEQUENCE depends on the variable developmental structure of different narrative joke texts, the E-SEQUENCE is always a fixed and invariable string of three conversational implicatures. Taken in its entirety, this string represents the reasoning process by which the joke-listener perceives the humor of the joke. As noted in section 2, narrative joke texts culminate in a punch line where a previously concealed interpretation is revealed by the joke-teller. At this point, the joke-listener recognizes the incongruity between the two interpretations and must rework the narrative text to resolve this incongruity. I propose that this recognition and resolution may be captured as instances of conversationally-implied meaning. Finally, certain cultural factors are shown to constrain the range of possible implicatures that give the joke its final, humorous "meaning."

The first implicature of the E-SEQUENCE is drawn upon the convergence of two components, as indicated by the model in (20): the I-SEQUENCE and the PUNCH LINE. In other words, the joke-listener recognizes that based on the material in the punch line, the implicature(s) comprising the I-SEQUENCE must not have been the intended meaning(s) throughout the progression of jokeemes. For example, the I-SEQUENCE of the Belgian joke in (24), repeated in (35a), is incongruous with the joke's punch line, repeated in (35b), thereby causing the joke-listener to draw $E_i$ in (35c):

(35) a. $I_1$=Le docteur veut que le Belge se baigne.
   'The doctor wants the Belgian to bathe himself.'

b. PL -Sil! Le verre de lait, ça va, j'arrive, mais le bain, j'ai jamais pu le boire entièrement!
   'Yea! The glass of milk, no problem, the bath, I could never drink the whole thing!'

c. $E_i$=Le Belge n'a pas compris, "Vous vous baignerez."
   'The Belgian did not understand, "You shall bathe yourself."

Similarly, the I-SEQUENCE of the confession joke in (28), repeated in (36a), is incongruous with joke's punch line, repeated in (36b), thereby causing the joke-listener to draw $E_i$ in (36c):

(36) a. $I_3$=Le confesseur veut dire qu'il a honte d'avoir péché.
   'The confessor means to say that he is ashamed of having sinned.'

b. PL De me confesser. Je n'ai pas eu l'absolution, mais j'ai eu trois bonnes adresses.
   'In confession. I didn't get forgiven, but I got three good addresses.'

c. $E_i$=Le confesseur n'avait pas honte d'avoir péché.
   'The confessor was not ashamed of having sinned.'
essentially universal topics, while at the same time recognizing

most same jokes, for example, possess a dual-mind

underlying who is the target of a whole class of derogatory jokes

that possibly allow their recipients to equally

express feelings of superiority. This underlying varia
tions across different cultures, from the Indian to the Negro, of

ways jokes are told may appear in a variety of forms depending

y, many jokes from one culture are capable of being

undertaken in other cultures. Chao points out, however, that

other culture-specific jokes may be told by people from

male prowess and penis size, seduction, adultery and cuckold

because there are instances of a common humor

universal. Many jokes from one culture are told in

many cultures across many cultures. Because they

are not well across cultures because, however, they are

or culture-specific. The joke process of Indian knowledge

between the joke-teller and listener.

(39) At a party in a luxurious villa, the host says to his

playboy guest: “See the woman lying there with all

the men. I told her not to lie with the men.” The

initially plodding voice: “Well then, that means that,

between the pair of us, we've been to

bed with them all.”

To the non-Indian, the joke's reference might appear to be

some sort of political or social implication. This impression

hinges on the underlying implicit cultural implications of sissies and "punk" sexuality. In order to

understand the humor of the joke completely, the listener must

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The implicature in (40) is licensed by French cultural constraints, because, like the speaker in (40), the listener is often expected to understand and respond to the clearly expressed general cultural interlocutor, and to respond to the implicit cultural implication. This implicature is also reasonable, because of the cultural context and the participants' knowledge about the general cultural interlocutor. The French cultural constraint is similar to the implicature in the English joke.

(41) *E.g.,* les confiseurs continuent à pecher, malgré les efforts de la police.

The implicature in (41) is also licensed by French cultural constraints, because the speaker is often expected to understand the general cultural interlocutor and to respond to the implicit cultural implication. The French cultural constraint is also reasonable, because of the cultural context and the participants' knowledge about the general cultural interlocutor.

Again, the frequency of aggressive humor in French culture is high, and the speaker in (41) is likely to be understood as having a specific cultural implication. The speaker in (41) is likely to be understood as having a specific cultural implication, because of the cultural context and the participants' knowledge about the general cultural interlocutor.

(42) *E.g.,* les confiseurs continuent à pecher, malgré les efforts de la police.

The implicature in (42) is also licensed by French cultural constraints, because the speaker is often expected to understand the general cultural interlocutor and to respond to the implicit cultural implication. The French cultural constraint is also reasonable, because of the cultural context and the participants' knowledge about the general cultural interlocutor.

(43) *E.g.,* les confiseurs continuent à pecher, malgré les efforts de la police.

The implicature in (43) is also licensed by French cultural constraints, because the speaker is often expected to understand the general cultural interlocutor and to respond to the implicit cultural implication. The French cultural constraint is also reasonable, because of the cultural context and the participants' knowledge about the general cultural interlocutor.

(44) *E.g.,* les confiseurs continuent à pecher, malgré les efforts de la police.

The implicature in (44) is also licensed by French cultural constraints, because the speaker is often expected to understand the general cultural interlocutor and to respond to the implicit cultural implication. The French cultural constraint is also reasonable, because of the cultural context and the participants' knowledge about the general cultural interlocutor.

(45) *E.g.,* les confiseurs continuent à pecher, malgré les efforts de la police.

The implicature in (45) is also licensed by French cultural constraints, because the speaker is often expected to understand the general cultural interlocutor and to respond to the implicit cultural implication. The French cultural constraint is also reasonable, because of the cultural context and the participants' knowledge about the general cultural interlocutor.

(46) *E.g.,* les confiseurs continuent à pecher, malgré les efforts de la police.

The implicature in (46) is also licensed by French cultural constraints, because the speaker is often expected to understand the general cultural interlocutor and to respond to the implicit cultural implication. The French cultural constraint is also reasonable, because of the cultural context and the participants' knowledge about the general cultural interlocutor.

7. Conclusion
In this paper, I have attempted to sketch an account of how various aspects of humor remain in use in different cultures. The jokes specific to a culture often contain more complex than that of jokes specific to a culture. Culture-specific jokes, narrative joke structure, are governed by certain mechanisms that determine their functionality in a principled and predictable manner. To account for these mechanisms,
proposed the implicature-based model in (20). This model was shown to incorporate aspects of previous humor research that examined narrative jokes in terms of structural organization, build-up and resolution of incongruity, operation of conversational maxims and prerequisite cultural knowledge. According to the proposed model, narrative-joke discourse consists of both a textual and extra-textual level. While potentially any of the four aspects of meaning may be involved in textual-level ambiguity, conversationally-implied meaning plays a central role at the extra-textual level. The operation of bona-fide Maxims of conversation at the textual-level accounts for the first set of extra-textual implicatures as resulting from either intentional or unintentional violations of Manner. In contrast, the non-bona-fide Maxims operate at the extra-textual level to insure the joke-listener's perception of the second set of implicatures, which ultimately gives the joke text its humorous meaning.

Notes
I would like to thank Lisa Reed for many useful comments and suggestions on earlier drafts of this paper. I assume full responsibility, however, for any remaining errors.

1 Grice (1975:26) further distinguishes two types of conversational implicature. Particularized conversational implicatures arise because of a particular discourse setting and will vanish in a different context. Generalized conversational implicatures arise because of the semantic or conventional meaning of a word or expression. These implicatures will come about in any context unless the speaker cancels them. This distinction is irrelevant for the purposes of this paper. Suffice it to note that conversational implicatures, whether particularized or generalized, may be canceled by the speaker and are, therefore, distinct from asserted and conventional meaning.

2 The structures presented in (17) and (18) assume the minimal requirement for humorous verbal interaction, i.e., the presence of two interlocutors. However, it is possible to substitute PARTICIPANT B in (17) and JOKE-LISTENER in (18) with a potentially unlimited set of listeners. Such a move is congruent with the notion of the humor act, which Raskin (1985) defines as the individual occurrence of a funny stimulus between a speaker and one or more listeners. Also, Raskin's conception of the speaker-listener relation is flexible enough to allow face-to-face communication to be replaced by substitute speakers and listeners, i.e., written texts or radio and television broadcasts, and readers or radio and television audiences, respectively.

3 Due to the limitations of space, only two sample narrative jokes will be examined in this paper. The French narrative jokes in (24) and (28) contain binary reading oppositions based on semantic assertion and conversational implicature, respectively. Although a brief survey of commonly-told narrative jokes would seem to indicate that these two are the most frequent types of opposition, it should be possible, in theory, to find joke texts that contain opposed readings based on conventional implicature and syntactically-determined meanings as well.

4 The "I" in "I-SEQUENCE" is an abbreviation of "internal." The conversational implicatures that make up this sequence are "internal" in the sense that they closely follow the lead of certain jokes, which are taken to be narrative-internal entities. In contrast, the "E-SEQUENCE" discussed in section 6 consists of
conversational implicatures drawn by the joke-listener after the delivery of the punch line. Hence, these implicatures are "external" to the narrative joke text.

References