Punctuation in Quoted Speech

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Quoted speech is often set off by punctuation marks, in particular quotation marks. Thus, it might seem that the quotation marks would be extremely useful in identifying these structures in texts. Unfortunately, the situation is not quite so clear. In this work, I will argue that quotation marks are not adequate for either identifying or constraining the syntax of quoted speech. More useful information comes from the presence of a quoting verb, which is either a verb of saying or a punctual verb, and the presence of other punctuation marks, usually commas. Using a lexicalized grammar, we can license most quoting clauses as text adjuncts. A distinction will be made not between direct and indirect quoted speech, but rather between parenthetical and non-parenthetical quoting clauses.

1 Motivation

In looking at the ways punctuation can be used to help identify particular structures in text, it might seem as if quotation marks would be extremely useful. In particular, they might be useful in distinguishing direct and indirect speech, which appear to have radically different forms and functions. This would facilitate text processing of such constructions, whether via full syntactic parsing or some more superficial analysis, such as regular expression matching. Unfortunately, the situation is not quite so clear. In particular, the distinction between direct and indirect quoted speech is very blurry.

The goal of the work described here is to untangle the syntax of direct and indirect speech. The framework within which the present work is couched is Lexicalized Tree Adjoining Grammar, which will be briefly described in section 3. I will argue that the direct/indirect split is not the correct one, and that the choice of the verb and the other punctuation marks involved are more informative than the quotation marks.

2 What are the kinds of quoted speech?

The first problem is to identify a class of constructions identifiable as Quoted Speech. Punctuation-wise, we canonically expect a comma after the quoting verb and quotation marks around the speech for direct speech, and neither of these for indirect speech.[1] And indeed, there are clear cases of direct speech, like (1), and indirect speech (2).

(1) A Lorillard spokeswoman said, “This is an old story. We’re talking about years ago before anyone heard of asbestos having any questionable properties. There is no asbestos in our products now.” [wsj0003]

(2) However, Mr. Dillow said he believes that a reduction in raw material stockbuilding by industry could lead to a sharp drop in imports. [wsj1500]

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[1] I am leaving aside a possible third category, “Free Indirect Speech” which is argued to be an intermediary type, reflecting the sequence of tense effects of indirect speech and the deictic use of direct speech. For the features I am considering, it appears to pattern with direct speech.

However, there are also cases which blur the distinction, such as (3) and (4):

(3) Some bulk shipping rates have increased “3% to 4% in the past few months,” said Salomon’s Mr. Lloyd. [wsj1500]

(4) And, they warn, any further drop in the government’s popularity could swiftly make this promise sound hollow. [wsj1500]

(5) Republican Sen. William Cohen of Maine, the panel ’s vice chairman, said of the disclosure that “a text torn out of context is a pretext, and it is unfair for those in the White House who are leaking to present the evidence in a selective fashion.” [wsj1500]

Example (3) is partly a direct quote (the object of the verb) and partly indirect. Example (4) has the usual subject-verb-complement order (SVO), but has the subject and the verb of saying separated from the speech by a comma. Example (5) has the syntax of an indirect quote, but uses quotation marks.

Furthermore, how are we to distinguish quoted material in the running text from quoted speech proper? Examples (6)-(10) show several such variants. Text in scare quotes, terminology and other quoted material included in running text are often only identifiable by their enclosure in quotation marks, and they are not distinguished syntactically from the surrounding material.

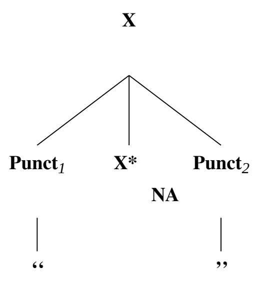
(6) ...noted that the term “teacher-employee” (as opposed to, e.g., “maintenance employee”) was a not inapt description. [wsj1500]

(7) Unable to persuade the manager to change his decision, he went to a “company court” for a hearing. [wsj1500]

(8) Mr. Nagrin has described four “places”, each with its scenery and people, added two “diversions”... [Brown:cc09]

(9) Types of loans SBA business loans are of two types: “participation” and “direct” [Brown:ch01]

From this data it seems clear that the quotation marks are not a useful indicator of any particular construction. While text in quotation marks is always a quotation of some sort, not all quotations are enclosed in quotation marks. Direct speech is simply a subset of the more general class of (ostensibly) verbatim text. Semantically, the material enclosed in quotation marks is a uniform class. The quotation marks always have essentially the same semantics: they mark what someone other than the author says/said/thinks/thought. As with scare quotes, the Other need not be identified explicitly. However, the quotation marks themselves are not an indicator of the larger syntactic context. Syntactically, we simply need a tree or a rule like those in Figure 1 to handle quotation marks.



$$X \rightarrow \text{‘}\ X\ \text{’}$$

$$X \rightarrow \text{“}\ X\ \text{”}$$

Figure 1: The schematic LTAG tree and phrase-structure rule for handling quotation marks, where X can be any node label. The tree is lexicalized on both the opening and closing quotation marks, so we are guaranteed to always get matching pairs of quotes.

But all is not lost — I believe that the comma (or, less commonly, the dash or colon) which appears in direct speech is actually the important cue, along with the particular verb used in the quoting clause. In the remainder of the paper, I will argue that the relevant distinction is between indirect quoted speech in the normal SVO order and all other quoted speech, rather than between direct and indirect speech.

3 Lexicalized Tree Adjoining Grammar

Lexicalized Tree Adjoining Grammar is a grammar formalism which has evolved from Tree Adjunct Languages, introduced in (Joshi et al., 1975). The basic units of any TAG grammar are *elementary trees*, of which there are two types: *initial* and *auxiliary*. Two combining operations are used: *substitution* and *adjunction*. Initial trees contain only argument positions, marked with $\downarrow$, where other initial trees must be substituted. Trees 2(a) and (b) are both initial trees, and (d) shows (a) substituted as the subject of (b). Auxiliary trees can also have argument positions, but they differ in having a distinguished leaf called the *foot* (marked with $*$) which has the same label as the root. These trees adjoin, or are spliced, into other trees. Tree 2(c) is an auxiliary adverb tree, and in (d) it has adjoined at the VP node.

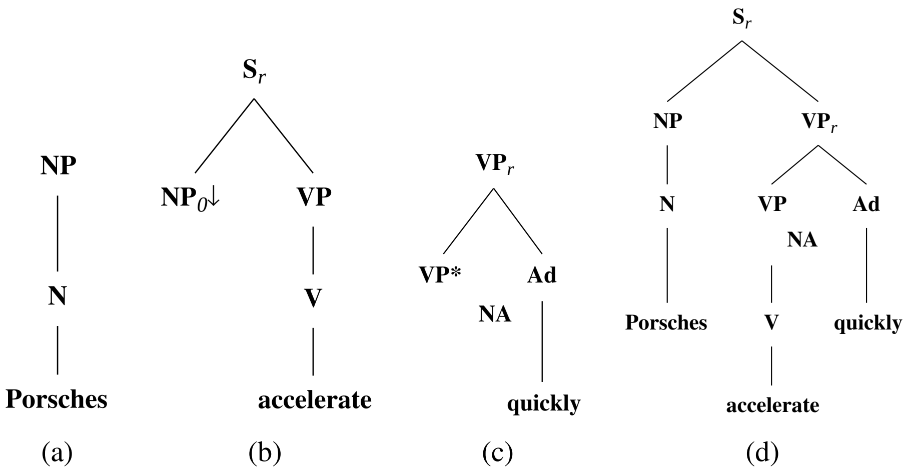


Figure 2: Basic LTAG trees: (a) initial NP tree, (b) initial S tree, (c) auxiliary adverb tree, and (d) S with NP substituted and adverb adjoined.

Lexicalization (Schabes et al., 1988) requires that each elementary tree in the grammar be associated with at least one lexical *anchor* (possibly more than one, for instance in handling idioms). This has the effect of consolidating the lexicon and the grammar. The grammar used here is fully lexicalized, and uses feature structures (Vijay-Shanker and Joshi, 1991).

Lexicalized TAG has been shown to have many linguistically appealing properties, including an extended domain of locality — all of the arguments of an anchor are localized within a single elementary tree. Thus, both syntactic and semantic dependencies are expressed locally. For discussion of some linguistic issues, see (Kroch and Joshi, 1985; Frank, 1992). This provides a elegant framework for handling clausal level information, since each simple clause (usually a verb and its arguments) is a single tree. In contrast, a context-free grammar will not have both the subject and the complements of a verb in the same rule, making it harder to specify local constraints.

This work is included in a large English LTAG which has been developed as part of the XTAG project. XTAG is a wide-coverage grammar which includes a morphological analyzer, a part-of-speech tagger, a large syntactic lexicon, and a parser. For more details, see (XTAG-Group, 1995).

4 Untangling quoted speech

Direct and indirect quoted speech may or may not be enclosed in quotation marks, but they are syntactically distinguished. Typically, indirect speech is shown as the complement to a verb of propositional attitude, like *say* or *believe*, as in (10). Direct speech may also use the same syntax, as shown in (11). Although it is typically restricted to occuring with verbs of saying (12), this appears to be a pragmatic rather than a syntactic/lexical constraint. In a context where it is possible to know what the speaker is thinking, in particular in text with an omniscient narrator, this construction is fine (13). There are also differences in the point of view (i.e. choice of first or third person pronouns, other deictics) and in sequence of tense effects.

(10) After a few minutes he said (that) he couldn't use her if she danced like that.

(11) After a few minutes he said, “I can’t use you if you dance like that.” [cf09]

(12) #After a few minutes he believed/thought, “I can’t use you if you dance like that.”

(13) Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it had no pictures or conversations in it, ‘and what is the use of a book,’ thought Alice, ‘without pictures or conversation?’ [First line of Alice’s Adventures in Wonderland]

However, direct speech has further options unavailable to indirect speech. Direct speech may be introduced by punctual verbs like *begin* and *continue*, as in (14); these typically take infinitival complements, so they cannot be used with indirect speech (15).

(14) A Birmingham newspaper printed in a column for children an article entitled “The Story of Guy Fawkes”, which began:“When you pile your “guy” on the bonfire tomorrow night... [cd03]

(15) *A Birmingham newspaper printed an article which began that when you pile your “guy” on the bonfire tomorrow night...

Corpus data shows that direct speech is far less likely to occur with a complementizer (although it can), and is more likely to have a comma (dash, colon) before the complement clause. Direct speech usually has quotation marks around the speech, but they are not required (e.g. dialogues in works of fiction). Both indirect and direct speech allow for multiple locations of the quoting clause (the subject and the main verb) relative to the quoted material: sentence initially, sentence finally and sentence internally. This is the first issue upon which I will focus, as we must first decide whether these variants are derivationally related to the SVO order.

Finally, both types of speech can occur with intransitive or transitive clausal complement verbs, as in examples (16) and (17):

(16) Because of deteriorating hearing, she told colleagues she feared she might not be able to teach much longer. [wsj0044]

(17) Richard Driscoll, vice chairman of Bank of New England, told the Dow Jones Professional Investor Report, “Certainly, there are those outside the region who think of us prospectively as a good partner. [wsj0067]

4.1 Position of the quoting clause

In addition to preceding the speech, the subject and verb may follow (18) or be embedded in the speech (19). The verbs which are possible are the same for all orders of indirect and direct speech. The subject and verb may be inverted in all of these positions with the intransitive clausal complement verbs, as in (20), although one rarely finds inversion in the sentence initial position in modern texts. Inversion of pronouns is also rare in modern texts — example (21) is from Jane Austen’s Persuasion. No complementizers are permitted with the embedded and sentence-final orders. Finally, a preposition/subordinating conjunction is possible before a quoting clause, as in (22). *As* is the most commonly used.

(18) “You can’t do this to us”, Diane screamed. “We are Americans”. [Brown:cf09]

(19) “Today ’s action,” Transportation Secretary Samuel Skinner said, “represents another milestone in the ongoing program to promote vehicle occupant safety in light trucks and minivans through its extension of passenger car standards.” [wsj0064]

(20) “The morbidity rate is a striking finding among those of us who study asbestos-related diseases,” said Dr. Talcott. [wsj0003]

(21) “That is the woman I want”, said he. “Something a little inferior I shall of course put up with, but it must not be much. If I am a fool, I shall be a fool indeed, for I have thought on the subject more than most men.”

(22) But he, as I can now retort, was the man who could see so short a distance ahead... [Brown:cg70]

The inversion is unusual in that it involves a main verb, and English does not generally allow main verbs to invert. The syntactic details are not crucial for the current purposes, but for a detailed Minimalist account of quotative inversion, see Collins and Branigan (1995). Their basic argument is that there is a null operator in Spec/CP. The operator raises from the complement position of the verb, where it leaves a co-indexed trace. (They claim that it can occasionally be lexicalized as *so* — "So Mary said.") The operator is bound by the quoted clause at a discourse level (similar to PRO_{arb}). Given the syntactic free choice between inverted and non-inverted quoting verbs, there is clearly more to say about why one form or the other is used. There appear to be interesting pragmatic constraints on the inverted form, but I will not be discussing this issue further here.

This positional variation raises interesting syntactic questions: are the various orders derived from the sentence-initial order, with the quoted clause always being an argument of the quoting verb? or are the quoting clauses text adjuncts, like parentheticals, adjoining into clauses at will? If the latter, do all of the orders behave alike? (Emonds, 1976) argues that both the sentence-initial and sentence-final orders are basic, and that the sentence-medial order is derived from the latter. In that case, do the sentence-initial orders of both direct and indirect speech have the same syntax, or do they diverge? Let us consider each of the positions for the quoting clause in turn, and see what they have to tell us about the larger syntactic picture.

4.1.1 Sentence-internal order

A movement analysis, where the speech is the complement of the quoting verb, is impossible because it would require some sort of "intraposition" wherein the matrix clause moves into the quoting clause. An alternative movement analysis which treats the subject as topicalized is also impossible, since the quoting clause occurs at any constituent boundary (modulo heaviness effects). Examples (23) and (24) show a quoting clauses coming between the verb and its complement. This is not typical of a topicalization structure.

(23) "I rather resent", she said, "you speaking to those groups in Portland as though just the move accomplished this." [Brown:ca23]

(24) Suppose, says Dr. Lyttleton, the proton has a slightly greater charge than the electron so slight it is presently immeasurable. [Brown:cc13]

Thus, we are led to an adjunct analysis of the quoting clause. LTAG is very well-suited to such an analysis, because, as noted above, the clause into which the quoting clause adjoins is in itself a complete matrix sentence. Thus, there are no concerns about passing agreement or other clausally local information "across" the parenthetical quoting clause. Sample LTAG trees for pre-VP and post-V quoting clauses are shown in Figure 3.

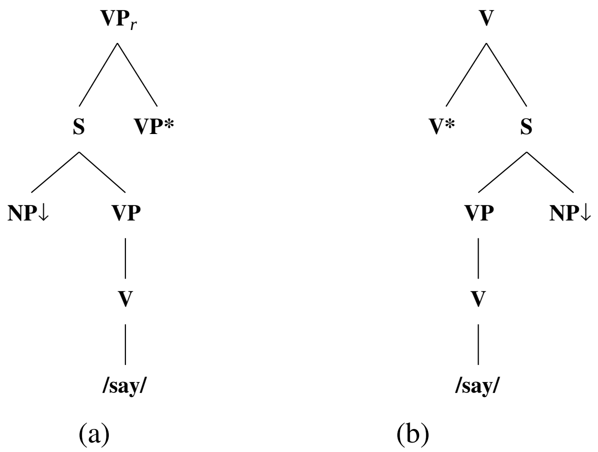


Figure 3: The trees used for a non-inverted quoting clause: (a) pre-VP e.g. *"Today's action," Transportation Secretary Samuel Skinner said, "represents another...* and (b) post-V, e.g. *"I rather resent", she said, "you speaking..."*

Because the grammar is lexicalized, we can elegantly capture the generalization that only verbs taking clausal complements can select this structure. The LTAG lexicon groups clausal trees into *Tree Families*, which contain all of the constructions allowed for a single subcategorization frame (active, passive, wh- question, relative clauses, etc.). These adjunct trees would simply be members of the clausal complement tree families.[2] Furthermore, as I mentioned earlier, the LTAG trees have a larger domain of locality than context-free grammars. In this tree, the relationship between the quoting verb and the clause it adjoins into is expressed in a single rule, allowing us to state constraints imposed by the verb directly.

On this analysis, the quoted clause is not overtly a complement of the quoting verb. However, each tree in a tree family is associated with a type, which gives the number and type of arguments the verb requires. The transitive family would have the type *NP x NP* and the intransitive clausal complement family, the type *NP x S*. When an argument is not overtly realized, as in an agentless passive, this information is available to the semantic and discourse modules. For the passive, we can look for the agent in the discourse context, while for the quoting clause, the semantic component could associate the matrix clause with the missing complement. If one wanted a more explicit connection, a null operator as in (Collins and Branigan, 1995) could be built into the adjunct tree.

There are a number of reasons to believe that this is the correct analysis. In this construction, verbs appear to lose many of their selectional restrictions. As noted above, punctual verbs usually select for infinitival complements, yet they can be embedded in tensed quoted clauses. Verbs also lose their selectional restrictions as to *wh* features, with verbs like *insist* embedding in questions as in (25).

(25) Who, Mary insisted, has ever seen a purple elephant?

Furthermore, the embedded quoting clauses are frequently synonymous with other kinds of parentheticals: *John, I presume/presumably/it appears, bought a new car*. Like other parentheticals, quoting clauses are also set off with "comma intonation" in speech. (Schmidt, 1995) finds that there is a significant pitch range restriction across parenthetical types, but he does not give any examples of direct quotation. While we should be cautious about drawing analogies between prosody and punctuation, if quoted clauses were shown to have a similarly restricted pitch range, this would be further evidence for the similarity of the constructions.

In his discussion of parentheticals as discontinuous constituents, McCawley (1982) argues that the parenthetical does not behave as part of the constituent that contains it. The ellipsis tests he use to support his argument suggest that the quoting clauses behave similarly.

(26) John, Mary said, bought a house, and Sue did too = Sue bought a house OR Sue said John bought a house ≠ Mary said Sue bought a house

In (26), the antecedent for the ellipsis is *said* or *bought*, but not *said..bought*. This is what would be predicted if the complete sentence is not a constituent available as an antecedent.

4.1.2 Sentence-final position

In this order, it is certainly more plausible that the complement clause is fronted. However, Emonds gives some compelling examples against a derivational relation.

(27) John hasn't completed his book, I don't think. [Emonds' II.91]

(28) John hasn't completed his book, I think.

(29) I don't think John hasn't completed his book.

(30) I think John hasn't completed his book.

Sentences (27) and (28) are synonymous for speakers who accept both variants, i.e. the negation in the quoting clause has no effect. However, in the sentences these would have to be derived from, (29) or (30), the presence or absence of the matrix or negation does change the meaning of the sentence.

Additionally the sentence-final order for quoting clauses shares the features of embedded quoting clauses discussed in the previous section, and we again are led to decide against a movement analysis and for an adjunct analysis. Figure 4 shows the relevant tree.

4.1.3 Sentence-initial position

Finally, we come to the most difficult case — the quoting clause in sentence initial position. As in the other cases, direct and indirect speech are identical in the left to right order of constituents. In the

[2] As text-adjuncts, they would naturally have a different semantic interpretation from other adjunction structures.

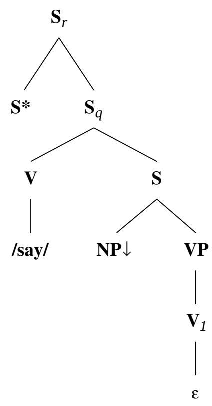


Figure 4: The tree used for an inverted, post-S quoting clause, e.g. *'Come, let's try the first figure!' said the Mock Turtle to the Gryphon.* [Carroll:AAIW]

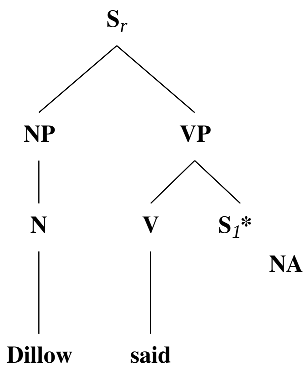


Figure 5: The basic LTAG tree for clausal complements.

previous two sections, direct and indirect speech patterned together, as parenthetical clauses. However, the question here is whether they will continue to pattern together. The LTAG analysis for normal clausal complement structures is shown in Figure 5. The tree adjoins at the root of the complement clause tree for indicative clausal complements and below the extracted element in extracted clause. This analysis gives an elegant treatment of long-distance extraction (see (Kroch and Joshi, 1985)).

We could simply allow the additional punctuation to adjoin to this tree for sentences like (31).

(31) Alice replied very readily: 'but that's because it stays the same year for such a long time together.' [Carroll:AAIW]

However, if we look more closely at the two kinds of speech, we find several differences. For one, direct speech requires that questions be inverted, (32) and (33), while normal clausal complements cannot be inverted, (34) and (35).

(32) Alice asked, 'Has anyone seen the Cheshire Cat?'

(33) *Alice asked (whether), 'Anyone had seen the Cheshire Cat?'

(34) *Alice asked (whether) has anyone seen the Cheshire Cat.

(35) Alice asked whether anyone had seen the Cheshire Cat.

Secondly, you cannot get embedding in the quoting clause of direct speech, whereas you can have (in principle) unbounded embedding in clausal complements:

(36) *The queen said the White Rabbit whispered Alice asked, 'Has anyone seen the Cheshire Cat?'

(37) The queen said the White Rabbit whispered...that Alice asked whether anyone had seen the Cheshire Cat.

These differences suggest that Emonds was correct in concluding that the quoted clause in the parenthetical type of quoted speech is a matrix sentence. Thus, there are two kinds of derivations possible for sentence initial quoting clauses. If there is no punctuation other than quotation marks after the quoting verb, we use the tree in Figure 5. If there is punctuation, the LTAG tree would be identical to Figure 4, but would have the foot node on the right. This will mean giving sentences like (38) the same analysis as indirect speech, i.e. the non-parenthetical analysis.

(38) Gemina said in a statement that "it reserves the right to take any action to protect its rights as a member of the syndicate." [wsj1371]

5 What about quote transposition?

As the alert reader will have noticed, the example trees given thus far do not contain any punctuation marks. The quotation marks would be handled as shown in Figure 1 above, simply adjoining onto the quoted constituent. Given that we have made the relevant distinction parenthetical quoting clauses vs. non-parenthetical quoting clauses, it is clear that the comma (dash, colon) separating the quoting clause from the quote is crucial to the construction.

As Nunberg (1990) discusses at some length, American English and British English differ in how they treat closing punctuation next to a closing quote. In American English, commas and periods are transposed with closing quotation marks (e.g. **.”**), while in British English the comma or period remains outside of the quote (e.g. **”.**). The Brown corpus (exclusively American texts) shows this distinction to be unhelpful: there are only 39 commas and 28 periods inside of quotation marks (both single and double), but 1823 commas and 1023 periods outside. The so-called British system is massively predominant. This may be the result of post-processing on the corpus, since analysis of 2.5 million words of Wall Street Journal data turns up only 15 commas and 15 periods in the British system. Sampson (1993) also cites an example from the LOB corpus of British English which uses the American system. In any event, it is clear that if one is dealing with naturally occurring data, one is likely to encounter both systems in varying proportions.

So, how is one to (a) require the punctuation mark to be present and (b) allow it to appear in either of two locations?

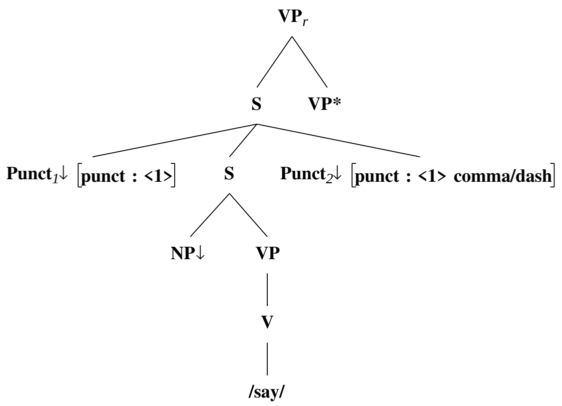


Figure 6: Tree for embedded quoting clause, with punctuation argument positions.

Assuming that the quoting clause is like a parenthetical, the commas around it are Nunberg's “delimiting” punctuation marks. However, I will follow Briscoe (1994) in allowing for both balanced and unbalanced variants. This is easily captured in the LTAG treatment, since each position for the quoting clause has its own tree. This also allows us to license a colon in the sentence initial order, but not in either of the other orders, but let us leave aside the colon for the moment. The tree for post-subject quoting clauses is shown in Figure 6; the trees for pre-S and post-S clauses would be similar, but would have only one PUNCT node. If the quoted constituent is an S, we can get the two orders of quotation marks and commas by allowing the quotes to adjoin either above or below the comma. Unfortunately, the quoted constituent may be of any type. Using tree 6(b), the first pair of quotation marks is around the subject NP. With this tree, we will only get the British order, Figure (7).

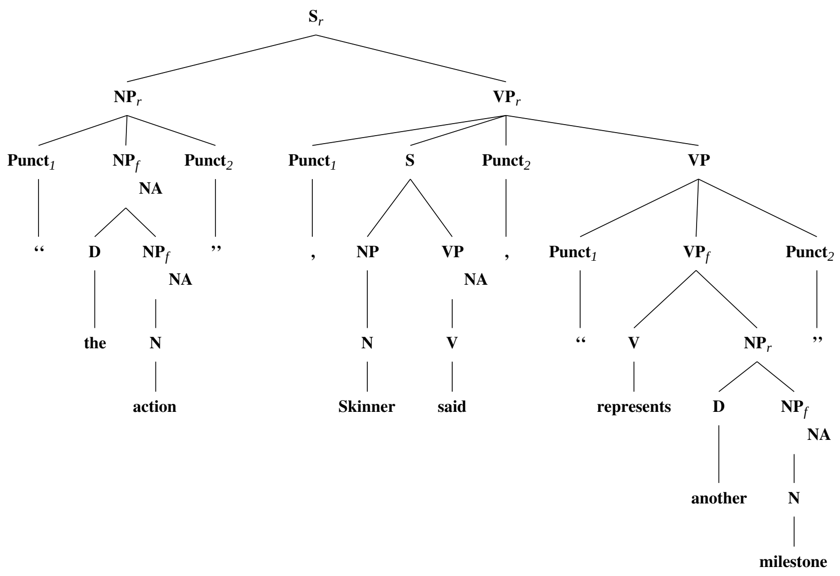


Figure 7: Parsed sentence with embedded quoting clause and quotation marks, British order.

An alternative would be to allow the comma to adjoin above the S for the British order, or above the leftmost quoted constituent for the American order. However, since we have determined that the punctuation mark is required in the tree, it is more elegant to have it as an argument.

A second alternative would be to treat quote inversion as something like clitic-climbing by the comma. This would allow us to use the same tree for both orders, but the American order would use a multi-component tree set. Briefly stated, a multi-component set allows one to force a set of trees to act as single tree — if one tree in the set is used in a derivation, all of the trees must be used. The two components of this set would be a tree anchored by the trace, which would substitute into the argument position, and a tree anchored by the comma, which would adjoin to the closing quote. The same multi-component set would be selected by both the comma and the period, but not by the dash, exclamation point or question mark, as they do not undergo quote inversion.[3]

The simplest solution is to do some “normalization” in tokenizing the data, in this case into the British form. This is the option which we are currently pursuing. It might also be possible to address some of the point absorption issues in the tokenization step.

5.1 How to treat the colon

With sentence-initial quoting clauses, a colon can sometimes follow the verb of saying. Given that the colon is not typically a delimiting punctuation mark, and that it does not participate in quote transposition, we might well want to group constructions like (39) with non-parenthetical quoted speech. Recall that the colon is possible only in the sentence-initial order. Also, complementizers are more freely permitted here. It remains to be seen whether this construction takes inverted complements — if it does not, then it clearly ought to be classed with the non-parenthetical quoting clauses.

(39) Indicating the way in which he has turned his back on his 1910 philosophy , Mr. Reama said: “A Socialist is a person who believes in dividing everything he does not own”. [Brown:ca05]

Instead of having the *colon+* feature on tree 6(a), we would have it on the foot S node of Tree 5.

6 Quote Alternation

American English requires that nested quotation marks alternate between single and double marks, with double-quotes on the outermost pair. (In British English, the outermost quotes are single.) This is handled in the TAG account by a CONTAINS feature, which is also used to block self-embedding of

[3]In fact, dashes quite rarely set off quotative clauses and I suspect may only do so in the clause internal position. It would be straightforward to capture this with the features in the quoting clause LTAG trees.

other text-adjuncts, such as appositives (cf. discussion in (Nunberg, 1990)). The feature has the value DQUOTE+ at the root of the tree anchored by double quotation marks (shown in Fig. 1), to indicate that the subtree contains double quotes, and the value DQUOTE– on the foot node, to block the tree from adjoining to any subtree which already contains double quotes. The same feature is used with the value SQUOTE+/– for single quotes. Note that since the grammar is lexicalized (here, on the punctuation marks themselves) the features come from different instantiations of a single tree (i.e. we do not need separate trees for each type of quotation mark). Other trees in the grammar are simply transparent to the CONTAINS feature, passing up its value in the relevant contexts. The quote trees themselves are opaque to all other values of CONTAINS, so that for instance, while colon-expansions cannot usually be embedded, they can be embedded if the inner expansion is inside of quotation marks.

7 Conclusion

I have shown that quotation marks are not adequate for either identifying or constraining the syntax of quoted speech. More useful information comes from the presence of a quoting verb, which is either a verb of saying or a punctual verb, and the presence of other punctuation marks, usually commas. Using a lexicalized grammar, we can license most quoting clauses as text adjuncts, anchored by the appropriate subset of verbs, and selecting the relevant punctuation marks as arguments. Quoting clauses which are sentence-initial and are not separated from the quote by a comma or dash are treated as normal clausal complement verbs, with the quoted material as the internal argument of the verb.

I have also shown that lexicalization and features as utilized by LTAGs allow us to elegantly capture the distribution of both the verbs and the punctuation marks in the relevant constructions.

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