

The Scope and Limits of Quotation¹

Ernie Lepore
Rutgers University

A standard view about the quotation is that ‘the result of enclosing *any* expression...in quotation marks is a constant singular term’ [Wallace 1972, p.237]. There is little sense in treating the entire complex of an expression flanked by a right and left quotation mark, a *quotation term* for short, as a ‘constant singular term’ of a language L *if* that complex is not, in some sense, itself a constituent of L. So, just as (1) contains twenty-seven tokened symbols (including twenty-three roman letters, three spaces and a period), so too, on the standard view about quotation terms, (2) contains twenty-nine tokened symbols (including twenty-two roman letters, four spaces, a left and right quotation mark, and a period).

1. That president runs slowly.
2. ‘lobster’ is an English word.

In this paper, I will defend the intriguing thesis (IT) that whatever is tokened between quotation marks within quotation sentences (QS) like (2) is in no sense a constituent of that QS.² Tipping my cards just a bit, I will argue that whatever (e.g., letters, symbols, shapes) is tokened within quotation marks in (2) is no more *in* (2) than whoever is indicated by a true utterance of (1) is in that sentence.

Once (IT) is established, I will argue it has surprising consequences for the semantics of quotation; in particular, I will argue that if (IT) is correct, then something like Davidson’s demonstrative account [1979; Cappelen and Lepore 1997] for the logical form of QS must be correct.

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²There are various devices for indicating quotation in written English in addition to inverted commas: e.g., some uses of italicized, bold or underlined print; other languages differ. There are no particular conventions for spoken quotation except what we can cull from context. Also, quotation works its way into all sorts of contexts: direct speech reports, scare quotes, and mixed quotation, as in:

John said that he had a ‘very good time’.

I intend my comments to extend to all forms of quotation, but won’t argue for that here [Cappelen and Lepore 1997].

I. Problems with Syntax

Sentences like (3) clarify that we do *not* always want to countenance what appears within quotation marks as a meaningful or grammatical component of the sentence.

3. 'klfgh' is not an expression of any natural language.

But even if what is tokened within quotation marks in (3) is no significant part of (3), mustn't it *in some sense* still be some sort of component of (3)? How else could (3) be a grammatical sentence of English?

In a relatively recent paper, Richard [1986] attempts to develop a view of grammar consistent with the intuition that sentences like (3) are grammatical English sentences. A grammar for a language should list basic components (e.g., letters, digits, the space, punctuation marks, and concatenates of such components) of lexical items and operations on those components to generate lexical items. Richard emphasizes that,

...some constraints concerning *finitude* are appropriate as constraints on the form of a grammar for a natural language...A lexical construction which generates vocabulary from an initial set must either operate on a *finite initial set* or, at least, *there must be an effective procedure for determining membership in the initial set*. None of these restraints, of course, require that the output of lexical constructions be finite [1986, p.402, fn.12, my emphasis].

So, given a set of building blocks, say, letters of an alphabet and some finite list of punctuation symbols, what Richard is noting is that quotation permits the construction of quotation terms of unlimited complexity. (4)-(6) show how one such infinite series of increasing complexity can get started.

4. 'aa' isn't an English word.
5. 'aaa' isn't an English word.
6. 'aaaa' isn't an English word.

In order to account for *this* source of unboundedness, assume that 'for each concatenate *e* of letters of the Roman alphabet, lq followed by *e* followed by rq is a singular term' [1986, p.389, where 'lq' and 'rq' stand for the left quote and the right quote respectively]. A specification of the lexicon of English can then build upon an inductive definition of the quotable items of English, where a quotation term of English is what issues from concatenating a left quotation mark together with a quotable item of English together with a right quotation mark. More formally, suppose that 'Alphabet(1)', 'Alphabet(2)', ..., 'Alphabet(n)' is a finite list of primitive quotable items of English

(corresponding, e.g., to the letters ‘a’, ‘b’,...,’z’, together perhaps with other symbols for the digits, the space and punctuation marks), then an inductive definition of a quotable item in English is:

(Base₁) Alphabet(1) is an English quotable item.

(Base₂) Alphabet(2) is an English quotable item.

.....

(Base_n) Alphabet(n) is an English quotable item.

(Ind) $(\forall x)(\forall y)$ (if x and y are English quotable items, then Concat(x,y) is an English quotable item.

With this inductive definition, we can characterize the quotation terms of English as follows:

(Quoterm) $(\forall x)$ (if x is an English quotable item, then Concat(lq,x,rq) is a quotation term of English)

This sort of inductive definition (together with ordinary apparatus for other expressions) licenses the well-formedness of sentences like (3) and (7):

3. ‘klfgh’ is not a word of any natural language.

7. ‘carne’ is an Italian word; not an English one.

On this strategy ‘‘carne’’ and ‘‘klfgh’’ are English expressions (and therefore can be legitimate subjects, e.g., of English sentences), while ‘carne’ and ‘klfgh’ are not.

So far so good, but there still is a serious problem facing the Richard strategy for inductively defining the class of quotable items of English. The problem arises because there is another source of unboundedness that Richard ignores, and thus he errs when he writes:

It is *easy enough* to come up with a *finite* list of elements (the letters, punctuation symbols, the digits, the space, etc.) and an operation (concatenation) with which one can generate all of the concatenates...If we are formalizing a grammar for a language with quotation names, we would include, as part of the specification of the lexicon, a proviso to the effect that, for each concatenate *e*, the left quote (lq), followed by *e*, followed by the right quote (rq) is a singular term [1986, pp.386-89, my emphasis].

What Richard surprisingly neglects, as does just about everyone else who writes on quotation, is just how liberal our quotation practice is. In (8), quotation is used to mention

a sign that may be new to us, but nonetheless is already in an extant notation, the Greek alphabet. Similarly, sentences like (9)-(10) are pretty ordinary.³

8. ‘φ’ is a letter of Greek, not English.
9. ‘@’ is used in every email address.
10. ‘↔’ is a sign for the material bi-conditional in propositional logic.

Anyone who thinks that (8)-(10) are grammatical sentences of English and who insists upon pursuing Richard’s strategy for inductively defining the set of quotable items of English has his work cut out for him. In quotation, we have indefinitely many possible signs to draw from. If this is right, then there is no reason to believe that an inductive definition exists for specifying the quotable items in English. This is particularly clear if one considers the wide variety of sign systems in *actual* use (other alphabets, sundry icons like the heart-sign, the hatch-sign, and the at-sign, coined mathematical notation, all of the zapf-dingbats, and lots lots more). And, of course, natural language is not only written but voiced, signed, and even felt for those who use Braille.

In English (and every other natural language), we can employ quotation to mention items of these various sign systems. Surprising results issue from such ordinary facts. On the one hand, if there is no reason to believe that the set of basic (or primitive) items from which the set of concatenates can be inductively generated is recursively definable, then if quotation terms are constant singular terms, it follows that the class of quotation terms is not recursively definable, and therefore that English syntax *is not recursively definable*. On the other hand, the more one peruses the troublesome sorts of data the more one begins to wonder how wise it was in the first to consider the esoteric quotable items as a part of English in any sense. Consider an English sentence like (11):

11. ‘☞’ is not a symbol of English; nor indeed of any other language.

³ Richard shows some sensitivity to my concern when he writes, ‘some constraints concerning finitude are appropriate as constraints on the form of a grammar for a natural language. “Mere lists” must be finite; the set of lexical and grammatical constructions must be finite. A lexical construction which generates vocabulary from an initial set must either operate on a *finite initial set*, or, at the least, there must be an *effective procedure for determining membership in the initial set*’ [1986, p.402, my emphasis]. What I have to assume is that Richard, for reasons he never articulates, either rejects the sort of data I’m advancing against his account, or simply never thought about it. Bennett, however, explicitly rejects much of the data I’m advancing, without offering any reason to do so [1988, p.400, p.405]. Throughout his paper, Bennett seems to be legislating how quotation should go, rather than attempting to account for actual practice.

(11) seems grammatical; yet it also seems to insist upon not being fed into any inductive base for generating the set of quotable items of *English*, on the assumption that the distinct parts of a singular term of English are themselves a part of English.

II. How not to accommodate the unboundedness of quotation

i. It would be desperate, in the face of such considerations, to deny that quotation marks are really a part of English or of natural language in general. Partee expresses doubt about whether ‘quotation is part of natural language’ [1973, p.410]. It’s true, as Partee notes, that quotation indicators are not always phonetically realized (say, with devices such as ‘quote-unquote’ or finger dancing); and it’s also true, as Washington [1992] notes, that even in writing indicators of quotation are sometimes dropped. But it does not follow from such considerations that quotation is not part of natural language. There is a difference between saying that the president of the United States has five words and ‘the president of the United States’ has five words. The former is usually never true, whereas the latter is obviously true. If one can effect the latter without invoking devices to indicate where quotation occurs, that must be because audiences can figure out where quotation is intended to occur, not because quotation doesn’t exist. I’m not even sure I know what it means to suggest otherwise.

ii. Alternatively, one might grant that there are indefinitely many primitive quotable items, but then deny that at any point in time there is an indefinite set of such items *in English*. Otherwise, we seem to be requiring that every quotable item is a constituent of every language that shares our quotation resources. No matter how sanguine one might be about universal grammar, surely no one thinks that natural languages share all their primitive constituents. On this alternative way of thinking about things, with the introduction of each new primitive symbol, the language expands (right before one’s eyes, so to speak). This would permit the set of primitives in an expanded language to remain recursively specifiable. When and only when a novel sign is tokened does it thereby enter the language, and the inductive base expands accordingly.

Here there is no breach of finiteness. So, either we can do what Richard proposes – for times slices of the language – or we must give up the program of a recursively specifiable grammar.

In response, first of all, I'm not sure how this strategy helps us with sentences like (11), whose truth seem to refuse incorporation into the language *a la* Richard. Secondly, it's a brute fact that when we encounter a QS for the first time, provided we understand the materials outside the quotation marks, we understand that sentence immediately. This would be quite odd, indeed, bordering on the mystical, if (a) the quotable items must be a (specifiable) part of the language in order for the sentence to be true, but (b) they are not part of the language until actually tokened.

(Someone who does think that quotation terms are part of the language might think we have internalized a semantic rule which enables us to interpret quotation terms with novel constituents when we encounter them. I believe this rejoinder is confused, and I'll return to it when we take up the semantic rule DQR for interpreting quotation terms below.)

iii. A third strategy would be to try to live with the fact that the syntax for a language with quotation terms cannot be recursively defined.⁴ Of course, this is not an option for a syntactician who seeks to recursively define the set of well-formed strings of English. But, also, if quotable items alone forced this result on us, it would certainly seem wiser to find an alternative strategy for dealing with their unboundedness, especially given sentences like (11).

Before considering a fourth option, I want to consider complications the data we have been examining about quotation provoke for the semantics of quotation. Looking ahead, I will be arguing that these complications cry out for (IT).

IV. What about the Semantics?

How does one reconcile the issues (and various interpretations about the role of quotation in our language) we have been discussing about the syntax of quotation with its semantics? Richard, *inter alii*,⁵ endorses a disquotational rule (DQR) of semantic interpretation:

⁴ On the non-recursiveness of English syntax, see Postal and Landgendon [1984].

⁵ See also, for example, Wallace, 'the denotation of the result of enclosing any thing in quotes is the thing itself' [1972, p.237]; Salmon, '[t]he result of enclosing any expression within quotation marks refers...to the enclosed expression itself' [1986, p.6]; and Smullyan [1957]. Washington writes, 'The lexicon of the language above [i.e., a very simple fragment of English] would contain 'Otto', 'big', 'very' and a rule of interpretation would be added: Quote (ϕ) mentions ϕ , for all ϕ ' [1992, p.602]. I will ignore this formulation in what follows because there is not

For any expression e , the left quote (lq) followed by e followed by the right quote (rq) denotes e [1986, p.397].

How does (DQR) apply to ordinary quotation terms? Conventional recommendations like the following are common-place:

...one of the most convenient ways of forming a name of a given linguistic expression is that of placing the expression within quotation marks. For example,

‘The Iliad’

denotes the title

The Iliad,

which in turn denotes the great epic poem..... [Mates 1972, p.21].

Because the quoted expression (the title) in this passage is tokened on a separate line, one might be tempted to reason that variable-tokens in DQR are replaceable with expressions themselves in its instantiations. Following this temptation results in ill-formedness:

*12. lq followed by happy followed by rq denotes happy.

*13. lq followed by carrot followed by rq denotes carrot.

*14. lq followed by happy people followed by rq denotes happy carrot.⁶

(12)-(14) are *illegitimate* instantiations of DQR; legitimate instantiations require singular terms as substituends for variables, singular terms that denote expressions.

A more plausible application, one that DQR proponents’ illustrations recommend, is to restrict the substituends of DQR’s variables to quotation terms themselves. Substituends for variables in DQR include ‘happy’, ‘carrot’, and ‘happy people’. Instantiations of DQR so constrained are well-formed and true, as in (15)-(17).

15. lq followed by ‘happy’ followed by rq denotes ‘happy’.

16. lq followed by ‘carrot’ followed by rq denotes ‘carrot’.

17. lq followed by ‘happy carrot’ followed by rq denotes ‘happy carrot’.

Now, of course, as these examples make plain, the statements of these instantiations use quotation on the right as well as on the left (doubled). One might think that whatever such a maneuver gains in well formedness it loses in informativeness. If a sentence like (15), in which quotation marks are both mentioned and used, is an intended instance of DQR, in what sense does the rule help us to understand, or provide an analysis of, quotation?

enough to go on in Washington’s discussion to say for certain how he is using the expression ‘Quote’. See also Ludwig and Ray [1998, forthcoming].

⁶ Of course, someone Plato friendly might find the deviance of (12)-(14) provocative. Consider ‘tall’ denotes tall. We frequently see such sentences from those who think predicates denote. Better to say, perhaps that ‘tall’ denotes tallness, or to play with some other device, to say that ‘tall’ denotes *tall*. The former forces one into Platonism; the

Disquotational theories want to disclaim there's anything to analyze or inform about. But, if not an analysis of quotation, what then is the aim of a semantic rule like DQR? For proponents of DQR an adequate semantic rule for quotation is one that can be implemented in interpreting QS [Richard 1986, p.397; Wallace 1972, p.224; Ludwig and Ray 1998]: what might speakers know that enables them to understand QS when confronted with their tokens? What might they know that enables them when confronted with a token of (2) infer that the speaker asserted that 'lobster' is a word, or know which word (2) is about?

Suppose, just for the purposes of discussion, we adopt a Davidsonian approach to specifying linguistic competence. Then an adequate treatment of quotation minimally requires of an adequate semantic theory for English that it entail for each (indicative) QS sentence ϕ of English, an interpretive T-sentence of the form:

ϕ is true in English iff p.

In order to prove an interpretive T-sentence for any of indefinitely many QS, say, from English, we need an axiom or a theorem from which, for each QS like (2), a T-sentence like (18) is provable:

18. The sentence beginning with lq followed by 'lobster' followed by rq followed by the space followed by the ninth letter of the roman alphabet followed by...followed by the fourth letter of the roman alphabet is true in English iff 'lobster' is a word.

A sequence s satisfies the left hand side of (18) iff the denotation of the singular term beginning with lq followed by 'lobster' followed by rq satisfies the predicate 'is a word', i.e., just in case 'lobster' is a word.

So, inasmuch as a semantic rule like DQR enables us to prove (18), and if knowing what's expressed by (18) suffices for understanding (2), it would seem that DQR has earned its keep.

IV. Is there a Problem about Semantic Primitives?

DQR has other benefits as well, for example, it shows how it's possible for quotation terms to be constant singular terms without requiring, contrary to what Davidson argued against Tarski and Quine, infinitely many semantic primitives.

latter needs explication. The use of italics is probably a sneaky form of quotation (see footnote 1), but the claim that

An expression is a semantic primitive ‘provided that the rules which give the meaning for sentences in which it does not appear do not suffice to determine the meaning of the sentences in which it does appear...’ [Davidson 1967, p.9]. Davidson argued that any semantic theory with infinitely many *semantical primitives* is inadequate. Richard and Wallace concur with Davidson that any such theory would be unlearnable or unteachable [Wallace 1972, p.224; Richard 1986, p.397]. Davidson, however, goes further, arguing that if quotation terms were treated as constant singular terms, it would follow that every quotation term ends up being a semantic primitive.

So, consider (19)-(20), with their distinct quotation terms; and also consider, we’ll assume, two provable T-sentences (21)-(22), corresponding to (19)-(20) respectively:

- 19. ‘happy’ is an English expression.
- 20. ‘carrot’ is an English expression.

21. The sentence beginning with lq followed by ‘happy’ followed by rq followed by the space followed by the ninth letter of the roman alphabet...followed by the nineteenth letter of the roman alphabet is true iff ‘happy’ is an English expression.

22. The sentence beginning with lq followed by ‘carrot’ followed by rq followed by the space followed by the ninth letter of the roman alphabet...followed by the nineteenth letter of the roman alphabet is true iff ‘carrot’ is an English expression.

Now consider (23), in which a quotation term distinct from those in (19)-(20) occurs.

- 23. ‘happy carrot’ is an English expression.

The denotations determined by DQR of quotation terms in (19)-(20) do not *by themselves* determine the denotation of the quotation term in (23). The fact is that one might have denotation clauses for “‘happy’” (and “‘carrot’” and the quotation of the space) without having one for “‘happy carrot’”. On this basis, Davidson concludes that if quotation terms are constant singular terms, then all quotation terms are *semantically* primitive.

Richard recognizes that treating quotation terms as singular terms does not all by itself suffice to establish that English has infinitely many semantic primitives. A language might have finitely many semantical primitives, even though the semantic values of indefinitely many expressions are not determined by the semantic values of any others. This is because all that Davidson’s definition of *semantic primitiveness* requires is that:

As long as there is an effective procedure for determining, for each member of the lexicon what its interpretation is to be, there is no need that...the semantics

‘tall’ denotes ‘tall’, though grammatical, isn’t what we were trying to get at.

for the grammar work off of the interpretations of productively occurring expressions in specifying the interpretation of the grammatically complex expressions of the language [Richard 1986, p.392].

Since DQR is intended to assign denotations to every quotation term, once we master DQR we can understand (interpret, identify the denotation of) novel quotation terms. So, given the sort of inductive definition of a quotation term sketched above and DQR (and whatever standard Tarskian apparatus is needed for the semantics of unquoted expressions), a T-sentence for each English QS is derivable. DQR doesn't *require* that the semantic value of an arbitrarily long quote term is determined by the semantic values of its parts since the grammar need not assign a grammatical category to any part of a part of a quote term.⁷

V. What then is wrong with DQR?

Inasmuch as DQR seems to tell us just what we need to know about quotation in order to interpret QS, and inasmuch as it seems to show how we can continue to innocently treat quotation terms like constant singular terms, what then is wrong, if anything, with DQR? It would seem that it has done all that we could expect from a semantic rule.

Unfortunately, one rather large problem naggingly persists.

We begin with a simple question: what are legitimate instantiations of DQR? The answer is obvious: since the quantifier in DQR ranges over expressions, the legitimate substituends of its variables must be singular terms of English that pick out only expressions. But since DQR presupposes that quotation terms are constant singular terms, unless the class of quotable items which are their constituents were recursively definable, it would be impossible to recursively specify a semantic theory, e.g., a Tarski-like truth theory, for English QS.

⁷ DQR is still compatible with giving a compositional semantics for quotation terms.

(Base) $(\forall x)(\text{if } x \text{ is a simple quotable item, then } \text{Ref}(\text{Concat}(lq,x,rq)) = x)$

(Rec) $(\forall x)(\forall y)(\text{if } x \text{ and } y \text{ are quotable items, then } \text{Ref}(\text{Concat}(lq,x,y,rq)) =$

$\text{Concat}(\text{Ref}(\text{Concat}(lq,x,rq)),\text{Ref}(\text{Concat}(lq,y,rq))))$

The reference function is a homomorphism from a syntactic/morphological algebra to a semantic algebra. In this case, those algebras are virtually the same, as it should be, since we are dealing with quotation. The semantic value of a quotation term is a function of the semantic values of its parts, and the parts are subterms which themselves are quotation terms. Furthermore, with (base) and (rec) one can trivially prove by induction that:

(Gen) $(\forall x)(\text{if } x \text{ is an quotable item, then } \text{Ref}(\text{Concat}(lq,x,rq)) = x),$

which corresponds to DQR. To the extent that we can give an inductive specification of all quotable material, DQR reduces to (Gen). Moreover, given (Gen), the validity of (Base) and (Rec) are also provable. Therefore, DQR, as restricted to an inductive domain, is equivalent to the possibility of a compositional semantics for quotation terms.

Suppose, e.g., DQR were a semantic axiom in a *finitely axiomatizable* Tarski-like truth theory for English QS. Since the substituends for its variables are quotable items, the class of its substituends would have to be recursively definable; otherwise, for any truth theory of English it could not be proven *of* every sentence ϕ a corresponding T-sentence since the set of T-sentences could not be recursively specified.⁸ So, we must be able to provide a complete list of base clauses in order to guarantee that the theory licenses each legitimate substitution DQR warrants. Richard and Wallace agree that one goal for a semantic theorist is to devise a finitely axiomatizable truth theory for (at least) the English QS fragment [Wallace 1972, p.225; Richard 1986, p.397]. So, we know beforehand this goal is unobtainable *if what occurs within the quotation marks are constituents of the QS*.

This problem is independent of reservations one might have about the formalizability of English or any other natural language. Begin with the set of English QS. So restrict this set as to exclude *any* features of natural language (short of single non-iterable quotation marks) that prevents English from being formalizable. My point is that there is no reason to believe that this restricted fragment is recursively definable.

VI. A Semantic Theory *without* Quotation for a Language with Quotation

Of course, the criticism of this last section seems pretty parochial insofar as it assumes that the semantics for a language *with* quotation must itself have quotation. Denying this assumption won't help to solve the problem of recursively defining the syntax of English, but it might solve the semanticist's worry.

The semanticist wants a theory that assigns truth conditions to each English QS sentence. For convenience, we have been allowing that whatever meta-language we use to describe that language contains the same sort of quotation device. (Indeed, we are allowing that meta-language to be that object language.) I don't see this as a problem, however, anymore than there's a problem with a rule that issues in statements like,

⁸It might, however, be possible to prove:
 $(\forall s)(\text{if } s \text{ is T-sentence in T, then } s \text{ is true})$
 without being able to prove, for *each* T-sentence s in T:
 s is true.

If we cannot recursively specify the syntax of an object language, then we cannot specify each sentence of this object language, and so we cannot do the second kind of proof for each T-sentence, and so, the truth theory isn't finitely axiomatizable. But it doesn't follow that we can't do the first kind of proof. We may, with the help of DQR, be able to prove *that* every T-sentence is true, since there are common properties of quotation terms and hence of QS that we

‘Socrates’ names Socrates.

which uses on the right the very word being mentioned on the left. But this is accidental. We could imagine the meta-language being different, and having a different sort of device to refer to expressions in the object language, or even having no way to refer to such expressions, but only to describe them. The point being that from the fact that a language L has QS doesn’t require that its meta-language L' (in which a semantic theory for L is to be devised) also have QS. Why not exclude from L' the troublesome quotation marks *of L* by merely describing in L' whatever L uses quotation marks to mention. Suppose that ‘ ϕ ’ denotes the twenty-first letter of the Greek alphabet. Then, e.g., a true T-sentence for (8) is (24), and a true T-sentence for (9) would be (25):

24. The sentence beginning with lq followed by the twenty-first letter of the Greek alphabet followed by rq followed by the space followed by the ninth letter of the Roman alphabet followed by...followed by the twentieth letter of the Roman alphabet is true in English iff the twenty-first letter of the Greek alphabet is a letter of Greek, not English.

25. The sentence beginning with lq followed by the at-sign followed by rq followed by the space followed by the ninth letter of the Roman alphabet followed by...followed by nineteenth letter of the Roman alphabet is true in English iff the at-sign is used in every email address.

The assumption in play here is that whatever a quotation term designates is *describable*. Does this suffice to avoid what I claim is a major stumbling block for finitely axiomatizing a truth theory for L , namely, that the set of quotation terms is not recursively definable? Even if the set of English QS is not recursively definable, can’t we still devise a finitely axiomatizable truth theory for this fragment in metalanguage without quotation marks? I believe the answer is no; at least two substantial problems remain.

Suppose, as seems natural, the set of quotation mark free descriptions is recursive. It doesn’t follow that there is a recursively definable predicate which denotes the proper subset of descriptions of quotable items. Indeed, if the set of descriptions that denote quotable items were recursive, and if the reference function from descriptions to their referents were also recursive, then the set of referents, i.e., quotable items, would be, contrary to assumption, recursively enumerable.⁹

There is another problem with the description strategy; understanding what it is enables us to present an elegant dilemma for anyone who *rejects* (IT).

can exploit in giving a proof. Why being able to provide this sort of proof is still insufficient for semantic adequacy I’ll take up below.

Both Davidson's and Wallace's interest in Tarski-like truth theories is to inquire into what *would* suffice for an interpreter to know in order to understand a speaker [Davidson 1967; 1973; Wallace 1972]. Suppose the set of descriptions denoting quotable items were recursive. If the rest of the truth theory is as it should be, then it would be finitely axiomatizable. But this theory need not be an adequate tool for *interpretation*, because it may require further *empirical* non-linguistic knowledge for an interpreter to determine which quotable item a particular description denotes. Why?

It's obvious that no such theory can be *homophonic*. The sentence used on the right-hand side of a T-sentence cannot be identical to the QS mentioned on the left-hand side because the sentence on the right doesn't use quotation marks. Still, if the sentence used on the right (semantically) *interprets* the QS mentioned on the left, non-homophony poses no problem. But how *could* it interpret the QS mentioned on the left? If, as Richard and Wallace presume, quotation terms are constant singular terms, it follows that they must be rigid singular terms. That seems right, inasmuch as "a" can't mention anything other than 'a'. But the descriptions used in the metalanguage need not be rigid. 'the twenty-first letter of the Greek alphabet' might not have denoted 'φ'. For example, the Greek letters might have been alphabetized differently. It follows immediately that truth theories which utilize these particular descriptions can't be interpretive.

An analogy might help. Any truth theory that issues in T-sentence (26) for the English sentence (27) is *not* interpretive.

26. Bill Clinton is from Arkansas.

27. 'Bill Clinton is tall' is true in English iff the president of the United States in 1998 is from Arkansas.

One need not know that Bill Clinton is the president of the United States in 1998 in order to understand (26). Analogously, one need not know that 'φ' is the twenty-first letter of the Greek alphabet in order to understand (8). A lot more empirical information seems to be required to identify 'φ' as the twenty-first letter of the Greek alphabet than is required to recognize what 'φ' denotes.

⁹But not necessarily recursive. The difference doesn't matter much here. The conclusion that the set is recursively enumerable is still inconsistent with the claim that there is no finite specification of the elements of that infinite set.

One way out might be to assume that every quotable item has a distinct shape rigidly describable by equations [Wallace 1972, p.225]. Suppose we artificially restrict ourselves to graphemic marks. There are fine differences between curves and between patterns which the human eye cannot detect and which we cannot detect even with good instruments. But, given a fixed space, there seems to be a limit to how many quotable items there can be in that space. It might seem plausible that most of what we by ordinary standards consider as graphemically quotable item can be represented on a black and white 640 by 480 pixels computer screen.¹⁰ There are only finitely many such symbols. Add millions of colors; still only finitely many symbols. Moreover, we can generate a list of them, in the shape of sequences of zeros and ones. If you think there is some figure that cannot be represented on the screen, pick a larger screen. In fact, think of an unbounded sequence of screens, with more pixels and more colors. If we give, for each, a list of all possible sequences of zeros and ones, then whatever is two dimensional and visual must be representable somewhere in this sequence. If this is right, then we can assign a description to each two-dimensional quotable item. This syntax is recursively specifiable. Now imagine a metalanguage for written English QS in which all quotation terms are replaced by descriptions utilizing these sequences of zeros and ones. We can generate, using this strategy, true T-sentences corresponding to indefinitely many QS English sentences. The relationship between the descriptions and the quoted graphemic shapes is, unlike the relationship between ‘ ϕ ’ and ‘the twenty-first letter of the Greek alphabet’, not contingent. Presumably any shape denoted by a description using equations is necessarily denoted by that description.¹¹ But will it issue in correct interpretations?

This depends on whether understanding a sentence like (8) *requires* knowing that this sentence is true just in case the shape of such and such dimensions is a letter of the Greek alphabet. So, even if an interpreter knew a correct truth theory for the speaker's language, and knew that the theory was correct, his knowledge might not suffice for interpreting the speaker. If all that is required of the truth theory is that it denotes the syntactic objects of

¹⁰ I say ‘presumably’ since it is quite unlikely that each and every linguistic symbol can be specified using a pixel matrix. There remains a problem about multiple realizability: the same letter, e.g., can exhibit vastly different shapes. I’ll return to this worry below.

the speaker's language and ascribes the appropriate semantic properties to them, then one can denote those expressions without *displaying* them. If a theory doesn't display them, then the interpreter might not be able to identify those expressions in the speaker's mouth as the very denotations of the theory's descriptions for his expressions.

We seem to have backed ourselves into a dilemma, namely:

If the quoted string is part of the quotation term, then we must choose between *axiomatizability without the interpretation property* (i.e., take the description alternative) or the *interpretation property without axiomatizability* (i.e., go for the displays).¹²

Neither alternative is acceptable for anyone who accepts as a goal for a semantic theory for a language L the finite specification of information sufficient for understanding L.

Confronted with this dilemma, must one give up that goal, or deny that quotation is a part of natural language (options (iii) and (i) above)? No. Instead, I want the reader to consider *seriously* (IT), the proposal that symbols within quotation marks in a QS are in no sense a constituent of that sentence.

What occurs inside quotation marks in 'klfgh', 'carne', 'φ', '@', and '↔' are, of course, no part of the English *lexicon*; how else could we make sense of true English QS like (3), (7)-(10)?

3. 'klfgh' is not a word of any natural language.
7. 'carne' is an Italian word; not an English one.
8. 'φ' is a letter of Greek, not English.
9. '@' is in every email address.
10. '↔' is a sign for the material bi-conditional in propositional logic.

Richard agrees if by 'part of English' we mean 'must be a member of a *grammatical* category', as every lexical item must be. But this doesn't imply that what's in between quotation marks isn't part of a productive class of symbols from which English is constructable; it follows only that not every member of this class will be a member of some *grammatical* category. But why think this productive class has a finite or recursively definable basis? If it does not, and only one's own limited imagination could make one

¹¹ There are other even less obviously remediable problems. If the range of quotation really isn't *a priori* constrainable, then there is no reason to believe that every quotable sign can be uniquely described by a sequence of zeros and ones. To think otherwise is to place *a priori* constraints on, e.g., which medium we can quote in.

¹²This dilemma would stand up even if the set of quotable items is effectively specifiable in one sense, in the sense of being recursively enumerable.

think otherwise, then there is no good reason to demand that what's within quotation marks in QS sentences like (3), (7)-(10) are *any part of* these English QS.

But how can one both devise an adequate semantics for English and simultaneously endorse (IT)? Though I have remained relatively silent about what sort of referring expression a quotation term is, there are a good number of choices available in the literature: e.g., proper names [e.g., Quine 1961 p.140 and Tarski 1956, p.159], descriptions [e.g., Quine 1960 p.202, Tarski 1956, p.160, Geach 1957, p.79, and 1970], self-referring expressions (minus the quotation marks) [Frege 1970, pp.58-59; Washington 1992]. The real moral to draw from my discussion is that none of these alternatives *can* be right since each is incompatible with (IT). However, so I will argue, a demonstrative theory of quotation [Davidson 1979], suitably modified [Cappellen and Lepore 1097], can respect (IT). Let me remind the reader of Davidson's version of a demonstrative theory, introduce some refinements, and then summon what I take to be the chief virtues of a demonstrative theory, which, *inter alia*, includes its capacity to respect (IT).

VII. The Demonstrative Theory of Quotation

According to Davidson, the result of flanking a token of a sign by quotation marks is neither a name nor a description of that sign. Instead, the quotation marks in QS function like a displaced demonstrative-like expression, and, on an ordinary occasion of use, they can be used to demonstrate the token of the expression within the quotation marks, a token which might well have been placed elsewhere. In this sense, what's between quotation marks is tagged on merely to be displayed as a demonstrated object. So, on Davidson's semantic account, 'we have to give up the notion that quoted material is part of the *semantically significant syntax* of a sentence' [1979, p.90, my emphasis].¹³

From a logico-semantical perspective, Davidson construes (2) as (28),

2. 'lobster' is an English word.

28. lobster. The pattern (shape) of which this is a token is an English word.

where an utterance of the sentence in (28) is accompanied by a demonstration of an utterance of the expression that precedes it. In effect, what Davidson is recommending

¹³ Note how cautious Davidson's wording is vis-à-vis (IT). He also writes, 'for the demonstrative theory, the quoted material [is] not part, *semantically*, of the quoting sentence' [1979, p.91, my emphasis]. Presumably, the contrast Davidson intends to draw is between a linguistic item being a *syntactically* significant part of a sentence from its being a *semantically* significant part. I now believe this contrast is bogus; I'll return to it below.

(though these are not his words) is that we replace a quotation term, in logical form, with a restricted quantifier, namely, ‘The shape of which this is a token’. So, what might be called standard English QS would map on to canonical forms, e.g., (2) would map on to (29):

29. [The x: x is a pattern (shape) of which this is a token](x is an English word)

Indeed, fixing the predicate in (2), regardless of what we enclose within the quotation marks, every such QS would have (29) as its logico-semantical form. On any particular occasion of use, for any such QS, inasmuch as (29) is its logical form, the token within the quotation marks would be demonstrated, and the definite description would denote whatever pattern is instantiated by that demonstrated token.

Of the various ways to avoid the problem of English syntax being recursively non-specifiable, (ii) above concedes that there are infinitely many primitive *quotable* items, and therefore there exist, as types,¹⁴ infinitely many abstract entities consisting of the quotable item enclosed with quotation marks, but denies that all of them are already part of English. A quotable item becomes a constituent of an English quotation term only if it is either part of an extant inductive domain or else is actually used or actually mentioned.

Part of the motivation behind this move was that merely drawing a figure on a page and enclosing it within quotation marks is *insufficient* to token an already extant type. There is no type until it’s determined what counts as another token of that type. Until we decide what the intended relevant equivalence relation between such tokens is, it’s unsettled whether we have a quotation term, as opposed to mere marks on paper. So, on this view, quotation terms do not already exist, only the possibility of defining them, and that amounts to *extending* English syntax. Behind these claims is an assumption shared both by Davidson and proponents of DQR, an assumption I wish to reject, namely, that in quotation an abstract expression (shape) is denoted (whether by a quotation term or descriptively *a la* Davidson).

Consider (2₁)-(2₃), graphemic variants of (2):

2₁. ‘lobster’ is an English word.

¹⁴This may not be exactly right. My concern is over matters of type and token. We might, at the very least, have to limit the class of quotable objects to objects of which there can be multiple tokens of the same type. In this sense, even the *quotable* doesn’t behave like Kaplan’s pointy brackets [Kaplan 1986, pp.272ff].

- 2₂. 'LOBSTER' is an English word.
 2₃. 'lobster' is an English word.

According to Davidson, from a semantical point of view, each of (2)-(2₃) has the logical form of (29). Which of these particular inscriptions is true on Davidson's account is contingent upon whether the demonstrated object in each tokens a certain *shape* that is an English word. Since English speakers would evaluate all four as true, the differences among these four distinct inscriptions are apparently semantically (or linguistically) irrelevant. Indeed, *phonetically realized* tokens of (2)-(2₃), where the demonstrated object in each would be phonetically indistinguishable from every other, are also obviously true. But, in what sense, does any such utterance token the same shape as the above inscriptions of (2)-(2₃)? Such considerations raise doubts about the plausibility of there being shapes denoted in inscribed QS like (2)-(2₃); and they also challenge the plausibility of the pixel strategy considered above.

Since Davidson, however, only says 'we *may* take [an expression] to be an abstract shape' [1979, p.85, my emphasis], his theory is compatible with expressions being something else. We need only find something that can be instantiated by radically differently shaped objects. Whatever it is must be such that written tokens, spoken tokens, signed tokens, Braille tokens, Semaphore tokens, finger language tokens, and any other way in which words can be produced, can be instantiated by it. Moreover, since we can, and constantly do, develop new ways of producing words (we develop sign systems for blind people, for computer languages, etc.), this object must be instantiable by tokens not yet conceived.

Such entities might exist; if they do, they might ultimately play some role in the metaphysics of language. However, Davidson's account can be modified so as *not* to quantify over expressions. We could replace quotation terms in logical form with a restricted universal quantifier over tokens that stand in a certain relation, say, *the same-tokening relation*, to the demonstrated token. This suggests we construe the QS (2) in logical form not as (28) but as (29),

29. [Every x: x same tokens that](x is an English word)

where an utterance of (2) demonstrates the exhibited token. So, instead of replacing a quotation term (in logical form) with the restricted quantifier expression 'The shape of

which that is a token', we replace it with 'Everything which same-tokens that';¹⁵ and so rather than *demonstrating* a token in order to *denote* some abstract object it instantiates, when we assert a QS, we *quantify* over tokens that stand in a same-tokening relation to the demonstrated quoted token.¹⁶

Whether two entities stand in a same-tokening relation is *not* (and should not be) settled by the semantics, any more than whether two objects are similar in color or shape or size.¹⁷ Once we abandon the idea that quotations make reference to abstract shapes and embrace the idea of same-tokening, it's easy to respond to worries that on the basis of a single confrontation with a blot on a pad we are not yet ready to quote it in English, since we do not yet have identity conditions for what type it is.¹⁸ Recall, this move permitted proponents of DQR to reject (IT) (namely, (ii) above), since even if there are no *a priori* constraints on what a primitive *quotable* item is (barring the constraints of fn. 13), still

¹⁵ There is a rather trivial objection that arises sufficiently often it's probably best to respond to it. A number of commentators complain that since the 'that' in (29) is a bare demonstrative, it can demonstrate anything, so there can be no guarantee it will demonstrate the quoted item. After all, I might utter (2) with a demonstrative intention to demonstrate my uncle and not the token between the quotation marks. Let's amend (29) so that the restricted quantifier reads 'Everything which same tokens that *quoted item*'. ('quoted item' doesn't make reference to quotation marks; there are many ways to quote an item.) There is still a problem about multiple quotations in the same QS, as in: 'lobster' has more letters than 'table'. But this is a general problem about how best to accommodate multiple demonstratives, a topic I take up elsewhere. See Lepore and Ludwig, forthcoming.

¹⁶As quotation is represented as involving quantification, one cost might be the creation of scoped readings where there don't seem to be any. So, e.g., on the Davidson account, a sentence like,

'A' is not a word.

would, on a natural Russellian reading of definite descriptions, seem to be ambiguous between the two readings:

The shape of which this is a token is NOT a word.

NOT[The shape of which this is a token is a word].

and on the modified account it would seem to be ambiguous between,

Everything which same tokens that is NOT a word.

NOT[Everything which same tokens that is a word].

These pairs are not logically equivalent. However, unlike explicit quantification, quantification in quotation can be treated as lexically internal, and as always taking narrow scope with respect to explicit quantifiers and with respect to any other linguistic element that can take scope. See Lepore and Ludwig, 1998, for a related discussion about tense and lexically internal quantifiers.

¹⁷ For elaboration on same-tokening, see Cappellen and Lepore [1997] and [1998].

¹⁸Mark Richard thinks that on the modified Davidsonian account,

'lob' begins with 'l'.

will be false, because it's not true that everything which same tokens that *begins with* everything which same tokens that. I don't think this is a special problem for the modified account. In the original sentence, no one thinks 'begins with' is to be interpreted spatial-temporally. Indeed, it's not clear what it means. Think about a sentence like:

'Lolita' has two 'l'-s.

Suppose you think quotation terms are constant singular terms, and you don't think they refer to or quantify over tokens. What on earth then does this sentence mean? See Peter Simons [1982]. The point is that everyone worried about the semantics of quotation has their work cut out for them. How best to interpret ordinary predicates when attributed to whatever quotation terms are about is not a straightforward affair. Thanks to Herman Cappellen for getting me to see this.

these items do not exist as components of *actual* English quotation terms since to do so requires identity conditions for when two tokens of a quotable item are of the same type.

If this were correct, then, at any given moment, English syntax would be finitely specifiable, since, at any such moment, there would be no more than finitely many primitive quotable items.

This sort of *ad hoc* gerrymandering of natural language, and the concern that engenders it, is thwarted once same-tokening is brought into play. Every quotable item exemplifies countless features. Which determine whether one such item same-tokens another depends on all sorts of non-linguistic considerations; and therefore, it should not be part of a semantic program to legislate or ‘figure out’ *a priori* which ones can and which ones cannot be relevant. Unlike Bennett [1988, p.403], I doubt we can *a priori* delimit which of these countless features fix the extension of a same-tokening relation.

The displayed tokens in (2)-(2₃) differ with respect to all sorts of features. Whether such differences are relevant for adjudicating the truth of a given QS is surely contextually determined. In (2)-(2₃) differences in (size of) font and case are *irrelevant* to the extension of the same-tokening relation. But, because (30) is obviously well-formed and true (*contra* Bennett 1988, p.402), differences in case, e.g., can be relevant in fixing the extension of a same-tokening relation.

30. ‘L’ is in upper class; while ‘l’ is in lower case.

Here, again, I disagree with Bennett, who says quotation is sensitive *only* to ‘linguistically significant’ features, i.e., those concerning ‘syntax and semantics, excluding anything that bears only upon typographic manner and the like’ [Bennett 1988, p.404], where by ‘linguistically significant’ he means ‘language relative’; so, quotation (at least in English) is blind to differences in print, font, case, size, script, and so forth [Bennett 1988, p.403].¹⁹ This just isn’t right. In order to understand (31) one need not know whether the quoted item is nonsense, a single word, or an entire sentence:

31. ‘ηψαωσνηιπθ’ is Greek.

¹⁹ Imagine someone being taught that ‘L’ is a capital letter by being presented with a token of (30). If (30) were not a legitimate use of quotation, how then would we explain why anyone can generalize from (30) to other tokens of the same capital letter.

Indeed, one may know so little about Greek he has no idea whether the quoted item in (31) should be read from left to right, or right to left; he needn't know how many symbols are quoted; nor whether the thickness of what appears to be individual items (nor any other dimension of size) is relevant in Greek. None of this matters for linguistic comprehension. As long as one understands the predicate 'is Greek' and is able to *see* what's on display in (31), one has grasped all that's relevant from a linguistic point of view. Grasping this basic (but apparently elusive, at least to philosophers) fact about quotation, highlights the sheer elegance of a demonstrative account.²⁰

Bennett backed himself into a position where he felt obliged to elaborate on which features of a quoted item can be relevant to the truth of a QS because he is struggling to locate identity conditions for whatever objects are denoted in quotation. Appeal to same-tokening not only sidesteps positing any such identity conditions; it pushes such questions outside of semantics, where they belong.²¹ As contexts shift, which features of a demonstrated token determine whether it participates in the same-tokening relationship shift as well. This isn't a philosophical invention. It emerges from closely attending to our actual practice of quotation.²²

VIII. Virtues of the Demonstrative Account

Understanding quotation is understanding the expression 'everything which same-tokens that'. There is no mystery about how to account for this capacity in a *finitely axiomatized* semantic theory. Obviously, there is no upper bound on what can be quoted on this account, since there is no upper bound on demonstrable tokens. Still, on this account, quotation is not *semantically* productive. Every QS ascribing a metalinguistic feature α to some quoted item β asserts the same thing, namely, that whatever same-tokens the demonstrated object [i.e., β] is α .

²⁰ It *may* be true that the more one knows about the language the quoted expression is from, the better positioned one will be to say which variations on the displayed item are compatible with a QS remaining true. But this has less to do with quotation, and more to do with familiarity with the language from which the quoted items are being drawn.

²¹ Despite its label, same-tokening is not an equivalence relationship. The label is inspired by Davidson's samesaying relationship, which also is not an equivalence relationship. See my and Cappellen's papers referenced in the bibliography, for arguments and data in support of these seemingly perverse claims.

²² The same sort of issue arises in indirect reports. What counts as a successful indirect report of another's words is contextually dependent. The idea that we fail to correctly indirectly report another unless we use words that express the exact same *proposition* as his words is hopelessly flawed. See Cappellen and Lepore [1998].

On this account, quotation is, contrary to a common view, not semantically iterative [*contra*, Boolos 1995]. What's within quotation marks is *exhibited* or *displayed* so that speakers can talk about properties of whatever same-tokens it. Since semantic properties of tokens need *not* be in active use (they may be semantically inert; see below), quotation marks within quotation marks are semantically inert. Re-applying Davidson's account to the referenced token in (32) results in gibberish like (33):

32. "oswerk" is not a quoted expression in some language.

*33. Everything that same-tokens that is not a quoted expression in some language:

Everything that same-tokens that: Oswerk

The displayed (bold) token in (33), what follows the first colon, is not at all what's quoted in (32).

An additional virtue is that the account preserves *semantic* innocence. An account T for a language L is semantically innocent just in case what an expression of L means according to T does not vary according to context [see Davidson 1968, p.106; 1975, p.166]. Semantic innocence is preserved because the account does not assume the well-formed expressions receive new semantic values when tokened within quotation marks. Semantic innocence so construed, however, is compatible with there being contexts in which what an expression means is *not in active use*. Even though 'the United States' denotes the United States, the expression is *semantically inert* in (34):

34. 'the United States' is a definite description.

Also, the demonstrative account provides an adequate explanation for why quotational contexts seem *opaque*, indeed, hyper-opaque. Sentences containing demonstratives need not preserve their truth-value when different objects are demonstrated. If you substitute a word-token of one type for another of a different type as a demonstrated object, since different objects are demonstrated, the truth-value of the (utterance of the) original sentence may change, even if the two word-tokens are synonymous.

Lastly, the demonstrative account explains why *quantifying into* quotes in QS produces gibberish. '($\exists y$)('apply' is a word)' cannot be inferred from "'apple' is a word' nor can '($\exists x$)('x' is a word)'. The account explains why these inferences fail; since it

makes no sense to quantify into a demonstrated object, it makes no sense to quantify within quotation marks on this account.²³

Conclusion

Why, with these virtues, has the demonstrative account not won anything like a sweeping endorsement? The main worry, often voiced in discussions of Davidson's accounts both of ordinary quotation and indirect quotation, is that the accounts are not *syntactically* innocent.²⁴ On our demonstrative account, 'lobster' is in no sense a component of (2):

2. 'lobster' is an English word.

For years I thought I was speaking intelligibly when I said, echoing Davidson [cf., fn. 12], that a demonstrative account is committed only to 'lobster' not being a *semantically* significant constituent of (2), thereby suggesting *syntactic* significance was not in jeopardy. But if (IT) is right, what occurs within quotation marks in (2) does not itself occur in (2), *appearances to the contrary*, semantically, syntactically, lexically or in any other sense. One of my reasons for holding a demonstrative account of quotation should by now be obvious. If, with me, you accept that the scope of our practice of quotation is not *a priori* delimitable, then unless you excise items inside quotation marks from the sentences in which they seem to occur, neither the syntax nor the semantics nor the lexicon of English is recursively specifiable. Moreover, you wind up positing that there is an intelligible sense in which all languages that share our quotation practices share their primitive vocabulary, in other words, every quotable item exists in every language which permits quotation. These are costs way too high to pay for what once passed as innocence.

²³ I'm not claiming it's illegitimate to introduce a quotation-like device into English that allows quantification in. The point is rather that 'ordinary' quotation doesn't allow such quantification. Here I agree with Quine [1961] and Davidson [1979].

²⁴ See both Segal and Washington, among many others.

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