

The semantics of adverbs and Russellianism

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1 Two theories of adverbs

As we discussed in class there are two main going views about the logical role of adverbs.

On one view, they are a kind of functional expression which combines with an argument of a certain logical category to form another expression of that category. In the cases we were talking about in class, they would be predicate operators (or ‘predicate modifiers’), which would combine with predicates to form predicates.

On the other view, they are predicates in disguise. In the cases we were talking about in class, they would be predicates of events.

Consider ‘Bob jogged slowly.’ The intuitive idea behind the predicate operator view is that we’re predicating of Bob the property of walking slowly. If you were to symbolize it in ordinary intro. logic style, it’s hard to see how you’d do it other than just as ‘ Fa ’. This provides a motivation to extend that logical notation, since without doing so the view has a hard time capturing apparently valid logical inferences like

$$\frac{\text{Bob jogged slowly.}}{\text{Bob jogged.}}$$

Such an extension is given in Thomason and Stalnaker, ‘A Semantic Theory for Adverbs’.

The predicate view is defended in Davidson, ‘The Logical Form of Action Sentences’. On this view, ‘jogged’ is contrary to appearances a two-place predicate which holds of agents and events. ‘Bob jogged slowly’ could be analyzed as

$$\exists x (\text{Bob jogged } x \ \& \ x \text{ was slow})$$

This readily explains the above inference, but threatens to license invalid inferences. Suppose (to use an example based on one from Higginbotham), that Bob ran eight consecutive 4 minute miles to get home from work, which takes only 6 minutes by car. Then both of the following seem true:

Bob ran quickly.

Bob commuted home slowly.

These would then be analyzed as

$\exists x$ (Bob ran x & x was quick)

$\exists x$ (Bob commuted x & x was slow)

The worry is that Bob's running home was the same event as his commuting home. So, it seems to follow that

$\exists x$ (Bob ran x & x was quick & Bob commuted x & x was slow)

from which it follows that

$\exists x$ (Bob ran x & x was slow)

i.e.,

Bob ran slowly.

which is false.

It's also important to note that cases of the above sort ('adverbs of manner') are not the only sorts of expressions which appear to function like adverbs. Sometimes, e.g., words which appear to be adverbs, like 'seldom' in

Caesar seldom awoke before dawn.

are really functioning as quantifiers. See Lewis, 'Adverbs of Quantification'.

2 A connection to Russellian semantics

Russellians needn't, per se, take any stand on these issues. The connection with Russellianism that I wanted to bring out was based on our discussion of the Russellian content of adverbs. (On the above options, it would be, respectively, a function from properties to properties and a property of events.) What I'm interested in is the following argument against the view that adverbs have as their content second-order properties. In class we argued roughly as follows:

Adverbs can't express properties of properties since, if they did, 'walked slowly' would be indistinguishable from the proposition expressed by 'Walking is slow', which attributes the property of being slow to the property of walking. But 'walked slowly' doesn't express a proposition by itself.

The conclusion of this argument is correct — adverbs don't express properties of properties — but it is important to see that the form of argument is not one which can be accepted by the Russellian. The argument relies on some principle like the following:

If you have a series of expressions $\lceil e_1 \dots e_n \rceil$ which express some proposition, and replace one of the expressions in the string with another expression with the same content, the resulting string of expressions should also express a proposition.

This will not, in general, hold, as Russell recognized in the *Principles of Mathematics*§52:

“It is plain, to begin with, that the concept which occurs in the verbal noun is the very same as that which occurs as verb. . . . The question is: What logical difference is expressed by the difference of grammatical form? . . . in regard to verbs, there is a further point. By transforming the verb, as it occurs in a proposition, into a verbal noun, the whole proposition can be turned into a single logical subject, no longer asserted, and no longer containing in itself truth or falsehood. But here too, there seems to be no possibility of maintaining that the logical subject which results is a different entity from the proposition. ‘Caesar died’ and ‘the death of Caesar’ will illustrate this point. If we ask: What is asserted in the proposition ‘Caesar died’? the answer must be ‘the death of Caesar is asserted.’ In that case, it would seem, it is the death of Caesar which is true or false; and yet neither truth nor falsity belongs to a mere logical subject. There appears to be an ultimate notion of assertion, given by the verb, which is lost as soon as we substitute a verbal noun, and is lost when the proposition in question is made the subject of some other proposition. This does not depend upon grammatical form; for if I say ‘*Caesar died* is a proposition’, I do not assert that Caesar did die, and an element which is present in ‘Caesar died’ has disappeared. Thus the contradiction which was to have been avoided, of an entity which cannot be made a logical subject, appears to have here become inevitable. This difficulty, which seems to be inherent in the very nature of truth and falsehood, is one with which I do not know how to deal satisfactorily.”

Russell's last example is not the best one to make the point. The more general worry is that if, as seems otherwise plausible, we take verbs and verbal nouns to have the

same content, we can get a pair of strings of words which differ only in substitution of expressions which have the same content, one of which is true or false and the other of which does not even express a proposition, e.g.:

Brutus kills Caesar

Brutus killing Caesar.

Two ways around this problem (which is a version of the problem of the unity of the proposition):

- Say, with Russell, that there is some difference in content between these sentences — some ‘element’ of the first which is not an element of the second, and which somehow systematically evades being made the subject of a proposition.
- Say that the difference between the two is a syntactic one. (This may be what Russell denies when he says that it is ‘not a matter of grammatical form.’ But this seems to make syntax independent of semantics in a disturbing way.

References

- Davidson, Donald, ‘The Logical Form of Action Sentences’, in: Rescher, Nicholas, editor, *The Logic of Action and Decision*, (Pittsburgh, PA: University of Pittsburgh Press, 1967).
- Lewis, David, ‘Adverbs of Quantification’, in: *Papers in Philosophical Logic*, (New York: Cambridge University Press, 1975/1998), pp. 5–21.
- Thomason, Richmond and Stalnaker, Robert, ‘A Semantic Theory for Adverbs’, *Linguistic Inquiry* 4 (1973):195-220.