Doing it

Christopher Piñón
Hungarian Academy of Sciences
pinon@nytud.hu

BKL Lente-Taaldag/Journée linguistique CBL
Universiteit Antwerpen
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Abstract

Davidson (1980a) famously proposes that the *it* of *do it* refers to an *action*, where actions (as a species of events) are taken to be concrete particulars. I argue that Davidson's idea faces linguistic difficulties and offer an alternative analysis in which the *it* of *do it* refers to an *action type*. This alternative analysis has the advantage of naturally accounting for the problems that thwart Davidson's proposal.

1 Introduction

Davidson (1980a, p. 105) begins with his well-known example:

(1) Jones did it slowly, deliberately, in the bathroom, with a knife, at midnight.

The context is that Jones buttered a piece of toast. Davidson remarks that

> … the 'it' of 'Jones did it slowly, deliberately, …' seems to refer to some entity, presumably an action, that is then characterized in a number of ways. Asked for the logical form of this sentence, we might volunteer something like, 'There is an action x such that Jones did x slowly and Jones did x deliberately and Jones did x in the bathroom, …' and so on.

A few pages later (pp. 108–109) he adds that

> [m]uch of our talk of action suggests … that there are such *things* as actions, and that a sentence like [*Jones buttered the toast in the bathroom with a knife at midnight*] describes the action in a number of ways. 'Jones did it with a knife.' 'Please tell me more about it.' The 'it' here doesn't refer to Jones or the knife, but to what Jones did—or so it seems.

For Davidson, actions (and more generally, events) are concrete (i.e., dated) particulars, on an ontological par in this respect with both Jones himself and the piece of toast.

2 Three analyses of *do it*

Let's initially take Davidson's idea about the referent of *it* in examples like (1) seriously and ask how *do it* might be analyzed (ignoring tense) in an event semantic framework.

The first analysis:

(2) a. do $\rightsquigarrow \lambda e' \lambda x \lambda e[\mathsf{do}(e, x, e')]$
b. $\text{it}_5 \rightsquigarrow e_5$
c. Jones $\rightsquigarrow \mathsf{jones}$
d. Jones do $\text{it}_5 \rightsquigarrow \lambda e[\mathsf{do}(e, \mathsf{jones}, e_5)]$

A shortcoming of this analysis is that it leaves implicit what the relation between e and e_5 is.

The second analysis:

(3) a. do $\rightsquigarrow \lambda e' \lambda x \lambda e[\mathsf{do}(e, x, e') \wedge e = e']$
b. Jones do $\text{it}_5 \rightsquigarrow \lambda e[\mathsf{do}(e, \mathsf{jones}, e_5) \wedge e = e_5]$

This is an improvement, since it identifies e with e_5, but it would still be nice to relate the content of *do* more explicitly to other verbs of action.

The third analysis:

(4) a. do $\rightsquigarrow \lambda e' \lambda x \lambda e[\mathsf{agent}(e, x) \wedge e = e']$
b. Jones do $\text{it}_5 \rightsquigarrow \lambda e[\mathsf{agent}(e, \mathsf{jones}) \wedge e = e_5]$

The claim in this analysis that the *do* of *do it* expresses agentivity should not imply that every use of *do* is agentive:

(5) a. Jones buttered a piece of toast.
b. When did he do it? (cf. When did he do so?)

(6) a. Jones slept in the bathroom.
b. ?When did he do it? (cf. When did he do so?)

(7) a. Jones loved Rebecca.
b. #When did he do it? (cf. When did he do so?)

I will refer to the use of *do* in (1) as 'agentive *do*'.

In sum, the third analysis, in (4), succeeds best in making explicit that the object of *do* denotes an event and that the subject of *do* is the agent of that event, and as such it seems to be a reasonable way of spelling out Davidson's idea.

3 Three problems

I will present three arguments against taking the object of *do* to be event-denoting.

3.1 Event-denoting NPs

If the object of *do* denoted an event, then we would expect event-denoting NPs in general to be happy in this position. However, this is not in general the case:

(8) a. #Jones did the buttering of a piece of toast.
b. #The army did the destruction of the city.
c. #Rebecca did the breaking of the window.

d. #Do love, not war. (cf. Make love, not war.)

Nevertheless, in certain cases it appears that event-denoting NPs are acceptable in this position:

(9) a. Rebecca did the thinking and Sarah did the writing.
(Context: Rebecca and Sarah worked on a paper together; who did what?)
b. Jones did the cleaning and Peter did the cooking.
c. Who did the singing at the party?

I will call this use 'task-oriented *do*' in view of the intuition that its object seems to be not so much event-denoting as 'task-denoting'. There is evidence from German (*tun* 'do' vs. *machen* 'do, make') in support of this distinction:

(10) Jones tat es langsam, vorsätzlich, im Badezimmer, mit einem Messer, um
Jones did it slowly, deliberately, in-the bathroom, with a knife, at
Mitternacht. (cf. (1))
midnight

(11) a. Rebecca hat das Denken gemacht (#getan) und Sarah hat das Schreiben
Rebecca has the thinking done and Sarah has the writing
gemacht (#getan).
done
b. Jones hat das Reinigen gemacht (#getan) und Peter hat das Kochen
Jones has the cleaning done and Peter has the cooking
gemacht (#getan).
done
c. Wer hat das Singen auf der Party gemacht (#getan)?
who has the singing on the party done

The object of task-oriented *do* may be event-denoting, though sentences such as the following are somewhat awkward:

(12) a. ?Rebecca did the thinking out of the ideas and Sarah did the writing of the paper.
b. ?Jones did the cleaning of the bathroom and Peter did the cooking of dinner.
c. ?Who did the singing of the songs at the party?

A final point regarding the object of non-task-oriented agentive *do* in (1) is that it cannot be questioned with a *wh*-phrase such as *Which event?* (*What event?*):

(13) a. #Which event (#What event) did Jones do?
b. What did Jones do?

Compare the unacceptability of (13a) with the acceptability of (14a), which uses *take place*:

(14) a. Which event (What event) took place in the bathroom at midnight?
b. What took place in the bathroom at midnight?

All in all, if the object of non-task-oriented agentive *do* in (1) were event-denoting, then we would expect event-denoting NPs in this position to be acceptable and unexceptional, and yet this is not the case.

3.2 Repeated events

If the *it* of *do it* referred to a particular event, then any sentence in which *do it* is used to assert that a particular event is repeated is predicted to be problematic, and yet this is not the case:

(15) a. Jones buttered a piece of toast at midnight and he will do it again at noon.
b. Jones mostly butters a piece of toast in the bathroom but occasionally he does it in the kitchen.
c. Jones buttered a piece of toast twice today but he will do it five times tomorrow.

In fact, Cargile (1970, p. 133) long ago pointed out this difficulty for Davidson's idea:

> For example, consider the sentence 'Shem kicked Shaun and he did it repeatedly'. We certainly don't want: 'There is an event x such that x is a kicking of Shaun by Shem and Shem did x repeatedly.' There is no such x. A kicking is not the sort of thing that takes place repeatedly. We can, of course, say: 'A kicking has taken place here every day for the past week.' But this does not mean that there is a kicking which has taken place daily. So here is a case where representing the form of 'Shem kicked Shaun' in the way recommended by Davidson doesn't help us at all with finding the antecedent of 'it'.

Let's grant Davidson the possibility that the *it* of *do it* may sometimes function as a bound variable:

(16) a. If Jones butters a piece of toast, he does it in the bathroom at midnight.
b. $\forall e[\mathsf{butter}(e) \wedge \mathsf{agent}(e, \mathsf{jones}) \wedge \exists x[\mathsf{piece\text{-}of\text{-}toast}(x) \wedge \mathsf{patient}(e, x)] \rightarrow$
$\exists e'[\mathsf{agent}(e', \mathsf{jones}) \wedge e' = e \wedge \mathsf{in}(e', \mathsf{the\text{-}bathroom}) \wedge \mathsf{at}(e', \mathsf{midnight})]]$

However, the examples in (15) are not amenable to this kind of treatment, precisely because a particular event cannot be repeated (this is Cargile's point):

(17) Incorrect analysis of (15a):
$\exists e[\mathsf{butter}(e) \wedge \mathsf{agent}(e, \mathsf{jones}) \wedge \mathsf{at}(e, \mathsf{midnight} \wedge \exists x[\mathsf{piece\text{-}of\text{-}toast}(x) \wedge$
$\mathsf{patient}(e, x)]] \wedge$
$\exists e'[\mathsf{agent}(e', \mathsf{jones}) \wedge e' = e \wedge \mathsf{at}(e', \mathsf{noon})]]$

Davidson (1980b, p. 183) was aware of this difficulty for his suggested analysis of *do it* (perhaps because of Cargile's criticism):

> ... last night I dropped a saucer of mud, and tonight I did it again (exactly the same thing happened). The 'it' of 'I did it again' looks for a reference, a thing that can recur.

And his conclusion (p. 184) is that "[r]ecurrence may be no more than similar, but distinct, events following one after another." This is obviously a major concession, but it is unclear whether Davidson was ready to retract his original idea in toto.

3.3 Doing that

Imagine the following context:

- Rebecca had a file named '`temp.txt`' on her computer, and she believed that this file contained nothing important.

- Since Rebecca is a tidy person and does not like to keep useless files around, she deliberately deleted the file `temp.txt`.
- However, Rebecca made a mistake—the file `temp.txt` actually contained her important letter to the rector, and she would never have deliberately deleted the file containing this letter.
- Thus, Rebecca did not deliberately delete the file containing her letter to the rector. (That is, she deleted the file containing her letter to the rector, but not deliberately.)
- In sum, Rebecca deliberately deleted the file `temp.txt` but she did not deliberately delete the file containing her letter to the rector.

In this context, the following sentence need not be contradictory:

(18) Rebecca deliberately did *that* but not *that*.

The problem is that (18) should be contradictory because there is only one plausible event referent for *that*—after all, Rebecca's deleting of the file `temp.txt` is presumably identical to her deleting of the file containing her letter to the rector.

Note that treating *deliberately* as an intensional adverb does not help:

(19) a. deliberately $\rightsquigarrow \lambda R \lambda x \lambda e[R(e,x) \wedge \mathsf{deliberate}(e,x,{}^\wedge R(e,x))]$
b. $\text{that}_6 \rightsquigarrow e_6$
c. do $\text{that}_6 \rightsquigarrow \lambda x \lambda e[\mathsf{agent}(e,x) \wedge e = e_6]$
d. deliberately do $\text{that}_6 \rightsquigarrow \lambda x \lambda e[\mathsf{agent}(e,x) \wedge e = e_6 \wedge$
$\mathsf{deliberate}(e,x,{}^\wedge\mathsf{agent}(e,x) \wedge e = e_6)]$

(20) Incorrect analysis of (18):
(Rebecca deliberately did $\textit{that}_6$ but not $\textit{that}_6$.)
$\exists e[\mathsf{agent}(e,\mathsf{rebecca}) \wedge e = e_6) \wedge$
$\mathsf{deliberate}(e,\mathsf{rebeccca},{}^\wedge\mathsf{agent}(e,\mathsf{rebecca}) \wedge e = e_6] \wedge$
$\exists e'[\mathsf{agent}(e',\mathsf{rebecca}) \wedge e' = e_6 \wedge$
$\neg\mathsf{deliberate}(e',\mathsf{rebeccca},{}^\wedge\mathsf{agent}(e',\mathsf{rebecca}) \wedge e' = e_6)]$

The formula in (20) states that Rebecca deliberately did e_6 and that she did not deliberately do e_6, which is a contradiction.

To conclude, the view that the object of *do* is event-denoting cannot naturally account for the meaningfulness of the contrastive focus in examples such as (18).

4 *Do* as a light verb

In this section, I propose a new analysis of the *do* of *do it* in (1) and briefly discuss four of its consequences.

4.1 Doing it

Let's treat *do* as an agentive light verb that has an event argument like any other verb of action but which gets its descriptive content from its object, which denotes not a particular action but rather an *action type*, which is construed as a two-place relation A between events and agents:

(21) a. $[_{\text{VP}}\ [_{\text{NP}}\ \beta\ ]\ [_{\text{V'}}\ [_{\text{V}}\ \text{do}]\ [_{\text{NP}}\ \alpha\ ]]]$

b. A , A', ... are variables for two-place relations between events e and ordinary individuals x such that x is the agent of e (i.e., action types)

c. do $\rightsquigarrow \lambda A \lambda x \lambda e[A(e,x)]$

The next step is to allow for an analysis of *it* as a free variable over action types:

(22) $\text{it}_8 \rightsquigarrow A_8$

We then get the following as the analysis of *Jones do it*:

(23) Jones do $\text{it}_8 \rightsquigarrow \lambda e[A_8(e, \text{jones})]$

In the context for (1), we have the following action type as the referent for *it*:

(24) $[\![A_8]\!]^g = g(A_8) = \lambda x.\lambda e.x$ butters a piece of toast in e

In this context, then, the event predicate in (23) denotes the set of events (actions) in which Jones butters a piece of toast.

4.2 Consequences

The first consequence is that since the object of *do* denotes not a particular action but rather an action type, we do not expect event-denoting NPs to be acceptable in this position and—as argued in section 3.1—they are not. Furthermore, although V′-constituents may denote action types, they cannot appear in this position either, because they are not NPs:

(25) #Jones did butter a piece of toast.
(unacceptable with agentive *do*)

Note, however, that the object of *do* can still be specified using a V′, as long as the V′ is not syntactically its object:

(26) Jones did it, namely, butter a piece of toast.

The second advantage of the analysis in (21) is that repeated events no longer pose a special problem (see section 3.2), because what is repeated is the action type and not the particular action:

(27) Correct analysis of (15a) (cf. (17)):
(Jones buttered a piece of toast at midnight and he will do it_2 again at noon.)
$\exists e[\text{butter}(e) \wedge \text{agent}(e, \text{jones}) \wedge \text{at}(e, \text{midnight} \wedge \exists x[\text{piece-of-toast}(x) \wedge$
$\text{patient}(e,x)] \wedge$
$\exists e'[A_2(e', \text{jones}) \wedge \text{at}(e', \text{noon})]$
(where $[\![A_2]\!]^g = \lambda x.\lambda e.x$ butters a piece of toast in e)

The third consequence is that once we allow for the possibility that *that* (like *it*) may refer to an action type, the issue with contrastive focus on *that* in (18) (see section 3.3) is also no longer a problem:

(28) a. $\text{that}_1 \rightsquigarrow A_1$
(where $[\![A_1]\!]^g = \lambda x.\lambda e.x$ deletes the file `temp.txt` in e)

b. $\text{that}_7 \rightsquigarrow A_7$
(where $[\![R_7]\!]^g = \lambda x.\lambda e.x$ deletes the file containing x's letter to the rector in e)

The analysis of (18) is then as follows (the negation is assumed to associate with *deliberately*, just as in (20)):

(29) Correct analysis of (18) (cf. (20)):
(Rebecca deliberately did that$_1$ but not that$_7$)
$\exists e[A_1(e, \text{rebecca}) \wedge \text{deliberate}(e, \text{rebecca}, {}^\wedge A_1(e, \text{rebecca}))] \wedge$
$\exists e'[A_7(e', \text{rebecca}) \wedge \neg\text{deliberate}(e', \text{rebecca}, {}^\wedge A_7(e', \text{rebecca}))]$

Finally, as an extra bonus, we can account for why the aspectual value of *do it* appears to vary in different contexts (an observation due to Eckardt (1998, p. 36), yet she problematically assumes, following Davidson, that *it* refers to an event):

(30) a. Rebecca ran in the park. She did it for twenty minutes (#in twenty minutes).
b. Rebecca ran to the station. She did it in twenty minutes (#for twenty minutes).

If we assume (essentially following Krifka (1992)) that durative adverbials such as *for twenty minutes* apply to event predicates that are cumulative and that time-span adverbials such as *in twenty minutes* apply to those that are quantized, then (30a) can be analyzed as follows:

(31) a. Rebecca run in the park $\rightsquigarrow \lambda e[\text{run}(e) \wedge \text{agent}(e, \text{rebecca}) \wedge \text{in}(e, \text{the-park})]$
b. $\text{CUMULATIVE}(\lambda e[\text{run}(e) \wedge \text{agent}(e, \text{rebecca}) \wedge \text{in}(e, \text{the-park})])$
c. it$_9 \rightsquigarrow A_9$
(where $[\![A_9]\!]^g = \lambda x.\lambda e.x$ jogs in the park in e)
d. she$_2 \rightsquigarrow x_2$
(where $[\![x_2]\!]^g =$ Rebecca)
e. she$_2$ do it$_9 \rightsquigarrow \lambda e[A_9(e, x_2)]$

The time-span adverbial *in twenty minutes* is unacceptable in (30a) because the action type that *it* refers to yields a an event predicate that is cumulative and not quantized. The analysis of (30b) is parallel, except that the respective event predicate is quantized and not cumulative.

References

Cargile, James. 1970. Davidson's notion of logical form. *Inquiry* 13, 129–139.

Davidson, Donald. 1980. *Essays on actions and events*. Oxford: Clarendon Press.

Davidson, Donald. 1980a. The logical form of action sentences. In Davidson (1980, pp. 105–122).

Davidson, Donald. 1980b. Events as particulars. In Davidson (1980, pp. 181–187).

Eckardt, Regine. 1998. *Adverbs, events, and other things: Issues in the semantics of manner of adverbs*. Linguistische Arbeiten; 379. Tübingen: Max Niemeyer Verlag.

Krifka, Manfred. 1992. Thematic relations as links between nominal reference and temporal constitution. In *Lexical matters*, Ivan A. Sag and Anna Szabolcsi (eds.), 29–53. Stanford: CSLI Publications.