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DISCUSSION

TWO FLAGPOLES ARE MORE PARADOXICAL THAN ONE*

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The relation that holds between two singular sentences just if one of them can figure in an acceptable deductive nomological (*DN*) explanation of the other is not symmetric. As Sylvain Bromberger ([1]) pointed out some years ago, a sentence giving the height of a flagpole can figure in a *DN* explanation of a sentence specifying the length of the flagpole's shadow, but interchanging the *explanans* and the *explanandum* does not result in an explanation even though it may result in a valid argument. Recently Evan Jobe ([2]) has offered an ingenious account of such asymmetries, one which if successful would permit their characterization entirely within the framework of the *DN* model. The purpose of this note is to show that despite its attractiveness Jobe's idea will not work.

Jobe's proposal is that pseudo-explanations like that of the height of a flagpole in terms of the length of its shadow fail because in contrast to genuine explanations they are ultimately circular. Consider an argument of the form required by the *DN* model, with singular premises $p_1 \ldots p_n$ and conclusion e. Suppose further that all of the premises are true. If, for some p_i, every argument which meets the conditions for *DN* explanation (including truth of premises) has an explanans which (together with general theoretical truths) logically implies e, then the putative explanation is circular. Jobe puts it this way: "A sentence P is explanatorily dependent *on* a sentence Q if and only if there are *DN* explanations of Q that do not involve P; but every *DN* explanation of P involves Q" ([2] p. 544). Admissible explanations, real explanations, of a sentence Q must not involve any sentence explanatorily dependent on Q. Now the idea can be generalized; the circularity may not arise in explanations of one of the singular premises (P, say) of the explanation of Q but instead in every explanation of one of the singular premises of every explanation of one of the singular premises of every explanation of Q. Then

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P is "explanatorily second-order dependent on Q." Jobe's proposal is that an admissible explanation of a sentence Q must not involve a sentence P such that, for any order n, P is explanatorily n^{th}-order dependent on Q.

Unfortunately, it is easy to construct examples like Bromberger's which nonetheless appear to meet this stricture. Let us suppose that there are two flagpoles, and for simplicity further suppose that they have the same height; let $s(1,t) = r$ be the claim that shadow 1 has length r at time t. Let $h(1,t) = k$ be the claim that flagpole 1 has height k at time t, and let $h(2,t) = k$, $s(2,t) = r$ be the ananlogous claims for the second flagpole. Explain $h(1,t) = k$ as follows:

Optical laws
$s(1,t) = r$ & altitude of the sun $= a$

$h(1,t) = k$

Explain $s(1,t) = r$ as follows:

Optical laws
$h(2,t) = k$ & altitude of the sun $= a$
$s(2,t) = s(1,t)$

$s(1,t) = r$

Explain $s(2,t) = s(1,t)$ as follows:

Optical laws
$h(1,t') = h(1,t)$ & $h(2,t') = \text{h}(2,t)$
$s(2,t') = s(1,t')$

$s(2,t) = s(1,t)$

But clearly there are an infinity of other times so that $s(2,t') = s(1,t')$ can be explained in terms of $s(2,t'') = s(1,t'')$ and so on. The explanations need never become circular, so that $s(1,t) = r$ is not n^{th} order explanatorily dependent on $h(1,t) = k$ for any n. The first explanation above is therefore admissible according to Jobe's strictures.

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[2] Jobe, E. "A Puzzle Concerning *DN* Explanation." *Philosophy of Science* 43 (1976): 542–549.