Fred Dretske's "Epistemic Operators"

I. (FULLY) PENETRATING OPERATORS

a. A (fully) penetrating operator is any operator, O, such that if P entails Q, then O(P) entails O(Q).

b. Among these operators are 'it is true that', 'it is a fact that', 'it is necessary that', and 'it is possible that'.

II. INITIAL QUESTION AND NON-PENETRATING OPERATORS

a. Are all sentential operators (fully) penetrating operators?

b. Answer: 'No'. Some are operators that are *not* (fully) penetrating. For example, 'it is strange that', 'it is accidental that', and 'it is a mistake that'.

c. These operators are not only not fully penetrating, but they also "fail to penetrate to some of the most elementary consequences of a proposition" (p. 133):

> 'It was accidental (lucky) that I hit both Tim and Guy with the stone, but it was not accidental that I hit Tim with the stone.'

d. Call these operators *nonpenetrating operators*.

III. SEMI-PENETRATING OPERATORS

a. 'S knows that…'
b. 'S sees (or can see) that…'
c. 'S has reason (or a reason) to believe that…'
d. 'There is evidence to suggest that…'
e. 'S can prove that…'
f. 'S learned (discovered, found out) that…'
g. 'In relation to our evidence it is probable that…'

i. These operators possess a degree of penetration greater than that of the nonpenetrating operators.

> 'If S knows that Susan and Bill married each other, then S knows that Susan got married'.

IV. Dretske's Question

a. Do the epistemic operators penetrate to all the *known* consequences of a proposition? That is, given that P entails Q, that S knows that P, and that S knows that P entails Q, does it follow that S knows that Q? Dretske's response: 'No'.

b. Dretske, that is, means to deny the following epistemic closure principle: If S knows that P, and knows that P entails Q, then S knows that Q.

c. Note that *skeptical arguments* (and some non-skeptical arguments) *rely on the claim Dretske means to deny.* If this is correct, and if Dretske is right to deny the claim, then *skeptical arguments are unsound.* Dretske claims that "traditional skeptical arguments exploit precisely those consequences of a proposition to which the epistemic operators do not penetrate, precisely those consequences which distinguish the epistemic operators from fully penetrating operators" (p. 135).

V. Epistemic Operators are Semi-Penetrating

a. S can know that my brother refused to move without knowing that it was my *brother* who refused to move.

b. S can know that the roses are wilting without knowing that it's *roses* that are wilting.

c. S can know that the water is boiling without knowing that it is *water* that is boiling.

VI. Consequences Associated with Presuppositions

a. One thing that distinguishes epistemic operators from fully penetrating operators is this: epistemic operators do not operate on certain presuppositions that are entailed by the truth of certain statements. ***(But isn't this just the claim that the epistemic operators aren't fully penetrating but only semi-penetrating?)*** For example, the truth of 'The coffee is hot' entails the truth of 'It is *coffee* that's hot'. But when S asserts that the coffee is hot, she does not assert it is *coffee* that is hot. Rather, we (usually) presuppose that additional claim. ***(Is this true? Wouldn't it be appropriate to correct S by saying, 'Well, it's hot alright; but it isn't coffee'? And why would we bother to correct her if she weren't asserting (or if we didn't take her to be asserting) that this is coffee? Is it enough here that we <u>presuppose</u> that S is asserting that it's coffee that's hot, or must she also <u>be</u> asserting that it's coffee that's hot?)***

VII. Contrast Consequences

a. A *contrast consequence* of 'X is A' can be represented in this way: 'X is not-(B and Q)', where
   i. X's being B is a possibility that is incompatible with its being A, and
   ii. 'is Q' is any predicate other than 'is A' or 'is B', usually chosen to explain why we might mistake something that's B for something that's A, and, so,
   iii. 'X is A' entails 'X is not-(B and Q)'.

b. For example, X's being a white wall cleverly illuminated to look red is a contrast consequence of X's being a red wall. X's being a white wall is incompatible with its being a red wall, and its being cleverly illuminated to look red (helps to) explain why we might mistake it for a red wall.

c. *Dretske claims that contrast consequences are consequences to which epistemic operators do not penetrate.*

VIII. The Analogy Between Epistemic Operators and Other Operators

a. The Other Operators

   i. 'R is the reason (explanatory reason) that (or why)...'
   ii. 'R is a reason for...(S to do Y)'
   iii. 'R would not be the case unless...'

   (I wonder whether the operators in (ii) and (iii) are sentential operators. If not then the analogy between those two operators and epistemic operators might break down.)

b. Like epistemic operators, each of these operators penetrates deeper than nonpenetrating operators

   i. If R is the (explanatory) reason why Bill and Harold are always invited to every party, then R is the (explanatory) reason why Bill is invited to every party. ***(Is this true?)***
   ii. If R is a reason for me to quit my job, then R is a reason for me to do something.
   iii. If the grass would not be green unless it had plenty of sunshine and water, then the grass would not be green unless it had plenty of water.

c. Like epistemic operators, each of these operators fails to penetrate to certain presuppositional consequences

   i. From the fact that R is the (explanatory) reason why the elms on Main Street are dying, it does *not* follow that R is the (explanatory) reason why there are elms on Main Street.

ii. From the fact that R is a reason for Bill to take his lunch to work, it does *not* follow that R is a reason for Bill to go to work.
iii. From the fact that George would not set fire to the church unless it was empty, it does *not* follow that George would not set fire to the church unless it was a church.

d. The three new operators do not penetrate to a certain set of contrast consequences

i. From the fact that R is the (explanatory) reason why I painted my living room green, it does *not* follow that R is the explanatory reason why I did not paint it white and cleverly illuminate it to look green.
ii. From the fact that R is a reason for Bill to paint his living room green, it does *not* follow that R is a reason for Bill to paint it white and cleverly illuminate it to look green.
iii. From the fact that the walls would not look green to George unless they were green, it does *not* follow that the walls would not look green to George unless they were white and cleverly illuminated so as to look green.

e. Thus, it is probably the case that epistemic operators do not penetrate to a certain set of contrast consequences

IX. *WHY* DON'T EPISTEMIC OPERATORS PENETRATE TO THESE CONTRAST CONSEQUENCES?

a. Because what S knows (for example) is a function of a set of relevant alternatives (to what S knows).

i. That is, the proposition on which the 'S knows that…' operator operates is "embedded within a matrix of relevant alternatives" (p. 142). S knows that P, but she does so within a framework of contrast consequences of P (say, A, B, and C). Thus, even though D might be a contrast consequence of P, it needn't be within the matrix of *relevant* contrast consequences of P.

b. And the only contrast consequences to which the 'S knows that…' operator penetrates are those which figure in S's original claim to know as relevant alternatives.