**Finding Closure- A Response to Dretske’s Criticism of the Justification Closure Principle in the Skeptical Argument by Lucas Bennett, University of Toronto**

ABSTRACT

In this paper, I criticize Fred Dretske's famous attack against the Justification Closure Principle (JCP) as applied to the skeptical argument. According to Dretske, JCP is false since it treats justification as a fully penetrating epistemic operator, his main argument being that an epistemic operator that operates on *p* may fail to penetrate to some presuppositions of *p*. After presenting his counterexample to JCP, I argue that Drestke’s argument fails since he makes an unwarranted assumption that, for any justification *J*, if *J*warrants a person *S* to believe that *p,*then that same *J* must warrant *S* to believe that *q*, given that *p* entails *q*. I also introduce the ideas of actualized justification, modal justification, and antecedent satisfaction as an explanation for Dretske's error in denying justification as a fully-penetrating operator.

I. INTRODUCTION

Historically, much of epistemology has been centered upon criticizing philosophical skepticism, the theory that the majority (if not all) of things that we commonly take for granted as having knowledge of are actually unknowable. Many of the typical skeptical arguments rely decisively upon the claim that justification is closed under entailment. We may define this principle as follows:

Justification Closure Principle (JCP): For any propositions *p* and *q*, if *S* is justified in believing that *p* and believes *q* because *S* knows that *p* entails *q*, then *S* is justified in believing *q*.

Fred Dretske, a prominent philosopher in this debate, has infamously argued that JCP can only be successful if the epistemic operator that it employs is “fully penetrating” (1970). He further to argue that the operator in JCP is, in fact, not fully penetrating, and that the principle thus fails to vindicate the skeptical argument. In this paper, I wish to present a defence of JCP against one of Dretske’s more uncommon (though, I think, more important) examples, contending that Dretske does not successfully show that the operator employed in JCP is not fully penetrating.

II. DEFINING PENETRATING OPERATORS

Let us take the epistemological category of justified belief to be loosely and primitively defined as:

An agent *S* is justified in believing that *p* iff *S* has some reason(s) that make *p* sufficiently likely to be true.

In JCP, this notion of justification is acting as the (epistemic) operator *Sj* (*S* is justified in believing that). We may define operators as predicates which, when affixed to a statement, modify it to produce a new statement. Examples of these include “it is true that,” “*S* believes that,” “it is strange that,” and so forth.

Operators may have certain properties depending upon how they operate on statements or their atomic propositions. Take the property of closure. To say that an operator has closure on entailment is to say that, if *p* entails *q,* and there is some operator *O* that operates on *p*, then *O* also operates on *q*. To give an example, if the operator “it is necessary that” has closure on entailment, then if pentails *q*, and if it is necessary that *p*, then it must be necessary that *q*. Any operator which has this property of closure for every entailment on which it operates is called, using Dretske’s terminology, a “fully penetrating operator” (1970: 1007). A penetrating operator that operates on *p* will also operate on all necessary consequences or entailments of *p*.

JCP, then, is essentially the thesis that the operator *Sj* is a fully penetrating operator. Notably, as far as closure goes, *Sj* is not as strong of an operator as “it is necessary that,” for *Sj* requires the further condition that *S* knows that *p* entails *q.* If *S* is justified in believing that *p* and *p* entails *q*, we cannot conclude that *S* is justified in believing that *q*. Compare: If being water entails being H2O, and Charles is justified in believing that the glass in front of him is filled with water, he is not necessarily justified in believing that the glass in front of him is filled with H2O. Perhaps Charles has never learned that water is identical with H2O, and hence does not know that being water entails being H2O. Unless Charles knows this entailment, he cannot be justified that the glass in front of him is filled with H2O.

The question we must now answer is this: Does the operator *Sj* have closure on entailment as defined by JCP? Intuitively, this makes sense. We expect that, if *S* is justified in believing that *p*, then *S* is justified in holding to any consequence or entailment of *p,* so long as *S* knows that *p* entails *q*. If I am justified in believing that my desk is made of oak, it seems obvious that I should also be justified in believing that my desk is made of wood on the condition that I know that oak is a type of wood. And it is this fact precisely that the skeptic resorts to when giving his argument.

III. THE SKEPTICAL ARGUMENT FROM JCP

To follow our theme, let *Real* stand for “is a real object in the external world,” *Figment* stand for “ is a figment of my imagination,” and *x* for any object of the physical world: A chair, a mountain, a cat, a tree, and so on. In one prominent form of skeptical arguments, the skeptic challenges the assertion that *Real*(*x*) by considering some predicate *Figment* that is incompatible with *Real* so that *z* cannot be both *Real* and *Figment*. It follows from this that, if *Real*(*x*), then ¬*Figment*(*x*). The skeptic then finds some other predicate which will express a condition where *x* is a figment of my imagination. In this case, let *Hallucination* stand for “is caused by a hallucination.” The skeptic then conjoins *Figment*(*x*) and *Hallucination*(*x*), and thus, if *Figment*(*x*) cannot be true when *Real*(*x*) is true, then (*Figment*(*x*) ˄ *Hallucination*(*x*)) cannot both be true when *Real*(*x*) is true. That is, if *x* is a real object in the external world, then it cannot be a figment of my imagination, and this further entails that *x* cannot be both a figment of my imagination and caused by a hallucination. Following Dretske, we may call this argument form a contrast consequence (1970: 1015). The only thing remaining to establish the skeptical argument is JC. If *Sj* is a penetrating operator, then if I am justified in believing that *Real*(*x*) and know that know *Real*(*x*) entails ¬(*Figment*(*x*) ˄ *Hallucination*(*x*)), then I must be justified in believing ¬(*Figment*(*x*) ˄ *Hallucination*(*x*)).

To have a justified belief that there are real, physical objects out there in the world, it seems that I also must be justified in believing that those objects are not figments of my imagination produced by a skeptical alternative (such as the hallucination case). At this point, the skeptic will give all the common reasons to doubt that we have justification in believing that *x* is not a figment of my imagination caused by a hallucination. And, following *modus tollens*, if we are not justified in believing that, then we cannot be justified in believing that *x* is a real object in the external world, according to JCP.

We may summarise this line of reasoning with the following syllogism.

(P1) If *S* is justified in believing that *Real*(*x*), then *S* has some reason to make *Real*(*x*) sufficiently likely to be true. [Supposed definition of justified belief]

(P2) If *Real*(*x*) entails ¬(*Figment*(*x*) ˄ *Hallucination*(*x*)) and *S* has some reason to make *Real*(*x*), sufficiently likely to be true, then *S* also has some reason to make ¬(*Figment*(*x*) ˄ *Hallucination*(*x*)) sufficiently likely to be true. [JCP]

(P3) If *S* is justified in believing that *Real*(*x*), then, provided that *Real*(*x*) entails ¬(*Figment*(*x*) ˄ *Hallucination*(*x*)), *S* has some reason to make ¬(*Figment*(*x*) ˄ *Hallucination*(*x*)) sufficiently likely to be true. [HS: 1, 2]

(P4) If *S* has some reasons to make ¬(*Figment*(*x*) ˄ *Hallucination*(*x*)) sufficiently likely to be true, then *S* is justified in believing that ¬(*Figment*(*x*) ˄ *Hallucination*(*x*)). [Supposed definition of justified belief]

(P5) If *S* is justified in believing that *Real*(*x*), *S* is justified in believing that ¬(*Figment*(*x*) ˄ *Hallucination*(*x*)). [HS: 3, 4]

(P6) *S* is not justified in believing that ¬(*Figment*(*x*) ˄ *Hallucination*(*x*)).

(C1) Therefore, *S* is not justified in believing that *Real*(*x*). [MT: 5, 6]

Premises (P1-P5) are simply consequences of the conjunction of JCP and the definition of justified belief, while (P6) is verified by the conceivability of possible worlds in which it appears to me that real objects exist in the external world but where I am (unknown to me) experiencing a vivid hallucination (or any of the other common skeptical scenarios, such as being tricked by a Cartesian demon, or having my mind manipulated by a mad scientist).

Dretske’s main criticism of the skeptical argument is that JCP must be false since epistemic operators cannot be fully penetrating, and, of course, JCP employs the epistemic operator “*S* is justified that.” The upshot is that operations on the antecedent of an entailment will not always result in a transfer of the operation to the consequent. This is to the skeptic’s detriment, since he relies heavily upon the truth of JCP for the success of his argument as seen in (P2). JCP is the cornerstone for this skeptical argument, and if it fails, then this case for skepticism also seems to fail.

IV. DRETSKE'S ARGUMENT

To be clear, the claim that Dretske wants to put forward is not that JCP is a *non-penetrating* operator, that is, that JCP does not have closure on any entailments whatsoever. After all, it is quite easy to generate cases where *Sj* has closure on entailment.

(1) Mary and Nathan both ate a piece of cake entails that Nathan ate a piece of cake.

If *S* is justified in believing that Mary and Nathan both ate a piece of cake, it evidentially follows that *S* is justified in believing that Nathan ate a piece of cake. What Dretske wants to say is that there are a set of entailments where *Sj* does not have closure, and for this reason, *Sj* cannot be a fully-penetrating operator contra to JCP. Such cases, according to Dretske, are surprisingly easy to come by.

Every statement has a set of presuppositions that are entailed by the statement. For example, the statement, “Rover is a dog,” presupposes that Rover is an animal. One could further say that the fact that Rover is a dog entails that Rover is an animal, for, by satisfying the necessary conditions for being a dog, Rover thereby satisfies the necessary conditions for being an animal. Dretske maintains that though the truth of these presuppositions is entailed by the statement, they (the presuppositions) are not “part of what is operated on when we operate on the statement with one of our epistemic operators” (1970: 1014). This is because the justification of a proposition is naturally imbedded inside a background context, and it is because of this context that a justification of *p* may appropriately justify *p* while failing to justify all the presuppositions or entailments of *p*.

To demonstrate this point, Dretske gives a series of examples, the most famous of which is the “Zebra Case.” However, Gail Stine (1971) and, more recently, Martin Smith (2007) have both pointed out the controversial nature of the Zebra Case, and Dretske himself, in his paper where the example is originally presented, agrees that, “The thesis itself [that justification does not penetrate through entailment] is sufficiently counterintuitive to render controversial most of the crucial examples,” (1970: 1017) the Zebra Case being one of them. He then proceeds to develop a series of “*independent* grounds for thinking that epistemic operators do not penetrate to the contrast consequences” (1970: 1017). One of the examples that he presents, and the one that I wish to address, is quite illuminating, for it clearly displays Dretske's reasoning behind his rejection of JCP (1970: 1021-23). Suppose that someone were to state:

(2) Brenda did not order any dessert.

This statement requires no thought about what kind of person Brenda is or what her actions would have been had she ordered dessert. We simply know that there is someone called Brenda who did not order dessert. But if one tries to give a justification for why Brenda did not order any dessert, the relevant alternatives[[1]](#footnote-1) that Brenda could have chosen serve to define whether a justification is appropriate or not. The fact that she did not order dessert excludes many of these relevant alternatives that Brenda could have chosen. A justification of (2) may be appropriate if (2) is considered along with one of the relevant alternatives that it excludes, but that same justification of (2) may be unsuitable when (2) is considered alongside one of its other excluded alternatives. To see this, take (2) along with one of its alternatives:

(3) Brenda did not order any dessert entails that she did not order any dessert and eat it.

Suppose we give a justification of why Brenda did not order dessert: She was on a diet. The fact that she did not order any dessert clearly entails that she did not order dessert and eat it. That Brenda is on a diet appropriately justifies the antecedent and the consequent, for it explains why she did not order dessert as opposed to ordering and eating dessert. However, suppose that we exchange the entailed consequent (Brenda did not order dessert and eat it) for another relevant alternative that is entailed by the antecedent and form a contrast consequence:

(4) Brenda did not order dessert entails that she did not order dessert and throw it at the waiter.

Dretske argues that the justification (that Brenda was on a diet) no longer seems to explain why it is that Brenda did not order dessert. If someone asks why Brenda did not order dessert and throw it at the waiter, it will not be helpful if you tell them that Brenda was on a diet. The obvious question in response would be, “But why would Brenda have wanted to throw the dessert at the waiter in the first place?” Brenda’s diet certainly explains why she did not order dessert, but it does not seem to give any reason for why she did not order dessert *and* throw it at the waiter.

This, according to Dretske, boils down to a simple fact about justification. Any justification of a fact is embedded in a framework of competing alternatives, and though a fact may entail the falsity of a relevant alternative, a justification of the fact does not necessarily justify why the relevant alternative did not occur. It follows from this line of reasoning that, since there are cases in which the operator *Sj* does not penetrate to every entailment of *p*, *Sj* cannot be a fully penetrating operator. The upshot is that JCP must be false, and hence the argument for skepticism is refuted.

V. RESPONDING TO DRETSKE

How might the skeptic (or more generally, any epistemologist committed to the truth of JCP) defend against Dretske’s criticism? It seems to me that Dretske is making a paramount but unwarranted assumption about JCP, namely that for any justification *J*, if *J* is sufficient for *S* to be justified in believing that *p*, then that very same *J* must be sufficient for *S* to be justified in believing that *q*, given that *p* entails *q*. This assumption unfairly pigeonholes JCP. In order for *Sj* to be a fully penetrating operator, the same justification that applies to *p* need not apply to *q*. Rather, the justification of *p* may serve in itself as the justification of *q*. This answers Dretske’s problem of presuppositions and entailments very neatly: If *p* entails *q* simply because *q* is a presupposition of *p*, then the truth of *p* is sufficient in itself to make *q* true. Hence, any justification of *p* will permit *p* to serve as the justification for *q*. Given the explanation that Brenda is on a diet, we are given a justification for believing that Brenda did not take any dessert. It need not be the case that the fact that Brenda is on a diet gives an explanation for why Brenda did not order any dessert *and* why she did not throw it at the waiter. What we want to say is that Brenda’s diet serves as the rationale for her not taking any dessert, and the fact of her not taking any dessert itself justifies why she did not order any dessert *and* throw it at the waiter.

Objection: This answer does not appear to deal directly with Dretske’s question. After all, it still appears that each entailment of (2) requires a different explanation. For example, if it is asserted from this proposition that Brenda did not order dessert and throw it at the waiter, we desire an explanation about Brenda’s mood towards the waiter. Alternatively, if it is asserted that Brenda did not order dessert and take it home with her, we may want an explanation based upon Brenda’s beliefs about whether the dessert is the kind that could survive the trip home, or something similar.

Counter response: Here it is useful to differentiate between two types of justifications: Actualized justification and modal justification. I assume that, for the majority of events and actions *k*, there is some possible alternative event or action *l* that could have occurred instead of *k*. We may then formulate the following types of justification:

Actualized justification: For any justification *J*, if *J* justifies *S*’s belief that *k*, given that *k* obtains in the actual world *@*, then *J* is an actualized justification of *k*.

Modal justification: For any *J*, if *J* justifies *S*’s belief that *l* could have obtained in *@*, given that *l* obtains in some possible world *W*, then *J* is a modal justification of *l*.

In the case of modal justifications, although *l* does not actually occur, *S* has a justification for the belief that *l* could have occurred instead of the event that has actually occurred, *k*. We may also have use for the concept of a “negative” modal justification as a justification of *S*’s belief of why *l* does not obtain in *@*. In sum, an actualized justification is one that justifies that an event has occurred, a modal justification is one that justifies that an event could have occurred, and a negative modal justification is one that justifies why an event did not occur, even though it could have. For instance, take the following proposition:

(5) Abigail rode her bicycle to class.

Giving an actualized justification of (5) will involve an explanation of why Abigail rode her bicycle to class. On the other hand, in this context, giving a modal justification involves explaining why Abigail could have instead chosen a relevant alternative, such as taking the car to class (or some other option), while giving a negative modal justification involves explaining why Abigail *did not* actually chose a relevant alternative (such as taking the car to class), even though she could have.

Now, suppose that (5) does obtain and so excludes all the relevant alternatives. An obvious entailment of (5) is that Abigail did not actually choose one of her alternatives, say, taking some other form of transportation like a car to class. Hence we have the following expanded proposition:

(6) Abigail rode her bicycle to class entails that she did not take the car to class.

For (6) to be true, we do not require two justifications: An actualized justification to explain why the antecedent actually occurred and a negative modal justification to explain why the relevant alternative in the consequent did not occur, even though it could have. In other words, we do not require an explanation of the fact that Abigail rode her bicycle to class *in addition* to an explanation of why she did not take the car to class. Giving an actualized justification of her bicycling to class will sufficiently justify the consequent of the entailment as well (that she did not drive to class) in virtue of removing the possibility of any relevant alternative from occurring. After all, it cannot be the case that Abigail did both *x* and ¬*x*, that she both rode her bicycle and that she did not ride her bicycle. When we give an actualized justification for why Abigail rode her bicycle to class (such as the fact that she finds nothing more enjoyable than riding her bicycle to class in the warmth of the afternoon), then, by the principle of non-contradiction, we have a justification for why she did not actually take some other form of transportation such as a car (namely, because she was riding her bicycle, and she cannot both ride and not ride her bicycle at the same time). If Abigail rode her bicycle to class at a time *t*1, then, given how the world actually turned out to be, this fact precludes a state of the world where she takes her car at *t*1 instead. Although we may admit that she could have chosen one of her relevant alternatives, such as taking her car rather than her bicycle, for whatever reason, it simply turned out that she did not. We may be interested for other purposes in a negative modal justification to explain why she *did not drive* her car instead of ride her bicycle, but this is not necessary.

The same results will show if we conjoin any other related proposition to the consequent of (6) to form a contrast consequence:

(7) That Abigail rode her bicycle to class entails that she did not take car to class and do *x* (e.g. drive her car off a cliff).

The fact that Abigail actually rode her bicycle is still enough to justify why she did not actually take the car to class *and* drive her car off a cliff, even though we do not have a negative modal justification for the consequent and, hence, do not have an individual explanation of why she did not choose a relevant alternative (taking her car and driving it off a cliff), even though she could have.

In ordinary language, we typically look for both an actualized and a negative modal justification in these situations. If someone were to ask Abigail why she (Abigail) did not drive her car off a cliff, it would be very strange for her to reply, “Oh, I just love to ride my bicycle to class on warm afternoons.” The questioner, in this case, would likely be looking for some sort of negative modal justification, one that explains why Abigail did not drive her car off the cliff, even though she could have. For instance, a plausible explanation would be that Abigail does not have suicidal tendencies and so did not feel the urge to end her life by driving her car off the cliff. But this does not mean that, logically speaking, the actualized justification for riding her bicycle somehow fails to justify the entailment that she did not take her car to class. Although as noted, there are many contexts involving ordinary language in which this would be an odd explanation, there are equally many other contexts in which this justification would absolutely be appropriate. Suppose Abigail’s friend borrows her car and ends up driving it off a cliff. When asked why Abigail was not in the car at the time, and why she did not drive the car off the cliff, she replies, “Oh, I just love to ride my bicycle to class on warm afternoons.” In this context, this is an entirely appropriate response: Abigail explains that she did not take her car to class and drive it off a cliff because she was riding her bicycle instead. Hence, given that the consequent is an entailment of the antecedent, any actual justification of why Abigail rode her bicycle to class will be sufficient enough to justify why she did not actually take her car to class and drive it off a cliff (namely, because the former logically excludes the latter) even though we may lack a negative modal explanation for the latter.

This similarly applies to Dretske’s example of Brenda. Given that *k* is an event that occurred in @, and *l* is a relevant alternative to *k*, then the fact that *k* occurred entails the fact that *l* did notoccur. Using our new terminology, Dretske is essentially criticizing the actualized justification of *k* for not providing a negative modal justification for why *l* did not occur. “Brenda is on a diet” justifies the fact that Brenda did not order dessert, but because this same actualized justification does not provide an explanation of why the alternative possibility–Brenda ordering dessert and throwing it at the waiter–did not occur even though it could have, Dretske assumes that the operator has failed to fully penetrate through the entire entailment. This is false. The fact that Brenda did not order any dessert *presupposes* that she did not throw her dessert at the waiter. Since she cannot both order and not order dessert, we can properly and justifiably infer from this that she did not actually order dessert and throw it at the waiter. In this context of justification, we are only concerned *that* she did not actually throw the dessert at the waiter. Although it may be useful, we do not actually need to know *why* she did not throw the dessert at the waiter, for the fact that she did not order dessert in the first place eliminates the possibility that she did order dessert and throw it at the waiter. In a more abstract sense, we are only concerned with what relevant alternative did not occur, and not the negative modal explanations of why this relevant alternative did not occur.[[2]](#footnote-2)

Note that we are not saying that from the fact that Brenda did not order any dessert that she therefore had no reason to order dessert and throw it at the waiter. As previously stated, we are not trying to provide a negative modal justification for Brenda’s relevant alternatives. In other words, we are not trying to provide a justification for why Brenda did not instead partake in any of the relevant alternatives she could have actualized (like ordering dessert and throwing it at the waiter). Maybe Brenda was absolutely livid with the waiter for his obnoxious attitude and his sloppy service, and yet simply chose not to order dessert and throw it at the unsuspecting waiter. Information of this sort is very useful, but certainly not necessary for actualized justification.

Peter Klein has argued that, regarding JCP, the same evidence that justifies the consequent need not be the same evidence that justifies the antecedent. He furthermore argues that *p* may count as evidence itself for *S* to be justified in holding *q* (1981). For reasons independent to Klein's, namely the preceding distinctions between the applicability of various justifications, and that an actualized justification of the antecedent can be sufficient without the need for an appeal to a negative modal justification of the consequent, I think that a similar, straightforward principle can be established regarding JCP, what I call antecedent satisfaction:

Antecedent Satisfaction: If *S* knows that *p* entails *q* and *S* is justified in believing *p*, then the fact that *p* is justified is itself enough to satisfy the justification of *q*.

This may be despite the fact that we might lack independent reasons (i.e. those not based upon the justification of *p*) for why *q* is justified. All we require is that the antecedent satisfies the justification in the consequence. Consequentially, Dretske’s criticism fails to demonstrate that the epistemic operator *Sj* is not fully penetrating in JCP, and so the skeptical argument remains undefeated.

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1. Dretske defines a relevant alternative as “an alternative that might have been realized in the existing circumstances if the actual state of affairs had not materialized” (1970: 1021). [↑](#footnote-ref-1)
2. This is a fine boundary and worth a little more explanation. Take any entailment *p* entails ¬*q* where we are justified in holding to *p*. Given this set of information, all we may determine is that we are justified in holding to ¬*q* simply because we are justified in holding to *p*. We likely have many negative modal justifications for why *q* does not obtain in the actual world, but these are supplementary and are not determinable simply given the previous information. As Dretske demonstrates, there are cases in which we may want to know the negative modal justifications for why *y* does not obtain in the actual world, but we must not infer from this that we therefore are not justified in holding to ¬*q*. [↑](#footnote-ref-2)