

When Transmission Fails

Chris Tucker
William & Mary
cstucker@wm.edu

(The official version is published in *Philosophical Review* 2010.)

Pop Quiz: what interesting epistemic feature do the following deductions share?

Neo-Moorean Deduction (NMD)

- (NM1) I have a hand.
(If I have a hand, then I am not a
brain-in-a-vat (BIV).)
(NM2) I am not a BIV.

Zebra Deduction (ZD)

- (Z1) That creature is a zebra.
(If it is a zebra, then it isn't a
cleverly disguised mule.)
(Z2) It isn't a cleverly disguised mule.

One popular answer is that these deductions are instances of transmission failure (for example, Wright 1985, 2002, 2003, 2004, 2008; Davies 1998, 2000, 2003; McLaughlin 2000; and Dretske 2005).¹ Roughly, to say that NMD and ZD are instances of transmission failure is to say that they cannot transmit justification from their premises to their conclusions.

I argue that the above answer to the pop quiz is mistaken. My strategy, in a nutshell, is to clarify, attack, defend, and apply. In section 1, I *clarify* the meaning of 'transmission' and 'transmission failure' in epistemological contexts by connecting these terms with a general concept of transmission. In section 2, I clarify the key question concerning when deductions fail to transmit. Also in section 2, I *attack* existing views by exposing two quotidian but questionable assumptions. Crispin Wright's account of transmission failure is an impressive foe and arguably survives the initial skirmish of section 2. In section 3, however, I show that his view succumbs to counterexamples. In section 4, I propose and *defend* a novel account of transmission failure. This account articulates the permissive view that deductions of a certain kind fail to transmit only because of premise circularity. In section 5, I *apply* this account to NMD and ZD. This application will reveal that NMD and ZD transmit in an intuitively acceptable way—at least if *either* a certain kind of circularity is benign *or* a certain view of perceptual justification is false.

Before carrying out my strategy, I should distinguish the main topic of this paper, the charge that NMD and ZD are instances of transmission failure, from the related charge that they are counterexamples to some intuitive closure principle. Roughly, closure principles say that, if Pa and Rab, then Pb. In epistemological contexts, the relevant P will be an epistemic property, such as being justified or known, and R will be something like *being competently deduced from* or *being known to entail*. Transmission principles are stronger than their closure counterparts and hold that, if Pa and Rab, then Pb *in virtue of Pa and Rab*. In principle, it is possible for a deduction to violate a transmission principle without violating its closure counterpart (namely, when Pa, Pb, and Rab hold but Pb does not hold in virtue of Pa and Rab); however, it is doubtful that a plausible epistemology can reject an intuitive transmission principle without also rejecting the corresponding closure principle (see Silins 2005, 89-95; Tucker forthcoming, sec. 4.C).

¹ Smith (2009) concurs, but I address his views in manuscript a.

Since intuitive closure and transmission principles seem to stand or fall together, one may wonder why this paper is concerned with transmission failure rather than closure failure.² First, the literature that I am engaging is cast in terms of transmission failure rather than closure failure. Second, there is a sense in which transmission failure is the more fundamental issue. It seems absurd to reject intuitive closure principles because, in certain circumstances, deductions seem to transmit justification to their conclusions of necessity. It is no surprise to find, then, that defenders of closure sometimes talk as if they are defending transmission principles rather than their closure counterparts.³

1. Transmission and Transmission Failure Clarified

My goal in this section is to clarify what it is for a deduction to transmit or fail to transmit justification. In my view, the transmission of justification is a species of a more general kind of transmission which applies to all sorts of contexts, not just philosophical ones. In subsection 1.1, I will illustrate this general concept with a non-philosophical example. In subsection 1.2, I begin to apply this concept to our immediate concerns, namely the transmission of justification across a competent deduction. In 1.3, I identify some common causes of transmission failure.

1.1. *Transmission: The General Concept*

The term ‘transmission’ is not unique to philosophical discourse: religious and cultural traditions often are transmitted from one generation to the next; diseases from one person to another; and various kinds of information from one computer to another. To understand the general concept of transmission, let’s discuss a non-philosophical example.⁴

Under what conditions does Alvin’s computer A transmit information to another computer B? I suggest it will do so just in case (i) A had the information and (ii) B has the information in virtue of A’s having it. The first condition is very intuitive. If A doesn’t have the information but B acquires it anyway, it may be true that *something* transmitted the information to B. Yet unless A had the information, it won’t be true that A transmitted it to B. The second condition is intuitive but vague. If B has the information *in virtue of* A’s having it, then A *causes* B to have it. Yet mere causation is not enough to satisfy this in virtue of relation. If A sends the information to B over an Ethernet or USB cable, we do seem to have the requisite sort of causal relation, and in these cases, A seems to transmit the information to B. But consider another sort of case, one with a deviant causal chain.

Suppose A just finished downloading the information, which makes Alvin so excited that he does a wild victory dance. During this dance he accidentally hits B’s keyboard, which causes B to download the information from the internet (and not Alvin’s computer). In such a case, A’s having the information plausibly causes B to have it, but

² Thanks to Stewart Cohen for bringing this worry to my attention.

³ Williamson’s (2000, 117) “intuitive closure” principle holds that certain deductions are “in general a way of coming to know *q*” (2000, 117, emphasis removed). Hawthorne (2004, 36) treats closure principles as if they are “perfectly general principles concerning how knowledge *can be gained* by deductive inference from prior knowledge” (2004, 36, emphasis mine). Strictly speaking, however, only transmission principles concern how one can *come to know q* or how *knowledge can be gained*.

⁴ My discussion will elucidate one natural understanding of ‘transmission’, but there may be other natural ways of using the term. If so, then my elucidation of the concept is partly stipulative.

the information was not transmitted from A to B. Although transmission requires that a causal relation hold, not just any causal relation will do.

Exactly what sort of causal relation is required? That's a good question, one worth answering. But providing such an answer is beyond the scope of this paper and won't be necessary for our purposes. No one else in the transmission literature even broaches the question of exactly which causal relation is involved in transmission, presumably because our intuitive grasp of the relevant relation is sufficient to guide us when talking about the transmission of justification. Hence, I will use "in virtue of" as a placeholder for the causal relation(s) required for transmission.

In light of the preceding discussion, it seems that transmission is a three-place relation between: (i) the property P that is transmitted; (ii) the thing a from which the property is transmitted; and (iii) the thing b to which the property is transmitted. A property P is transmitted from a to b just in case b has P in virtue of a 's having P .⁵ In the above example, the property P is *having the information*; a is Alvin's computer A; and b is the other computer B. So A transmits the information to B just in case B has the information in virtue of A's having it.⁶

We now have clarified any statement of the form ' a transmits P to b ', but it is worth mentioning a different and more informative kind of transmission ascription. Contrast 'A transmitted the information to B' with the equally natural expression 'The USB cable transmitted the information from A to B'. Whereas the former notes only that the information was transmitted from A to B, the latter additionally notes how it was transmitted. Under what conditions does the USB cable (more precisely: being connected by the USB cable) transmit the information from A to B? I suggest that it will do so just in case (i) A had the information and (ii) B has the information in virtue of *both* A's having it *and* A's being connected by a USB cable to B.

Although there are obvious differences, the same concept of transmission applies to both the computer example and cases of epistemological interest. In epistemology, transmission issues concern whether some epistemic property is transmitted over some relation. For example, epistemologists wonder when testimony or inferences transmit the properties of *being justified* or *being known* or *being defeated*. They tend to have in mind, therefore, the more informative sort of transmission ascription. For example, they are concerned not just with whether a proposition is known in virtue of another proposition's being known; they are also concerned with whether entailment is the particular relation that allows the first proposition to be known in virtue of the second.

1.2. Deductions and the Transmission of Doxastic Justification

⁵ a and b are assumed to not pick out sets. A set transmits something just in case one of its members does. A set has something transmitted to it just in case one of its members has something transmitted to it.

⁶ *Marian David's Worry*: the initial statement of the computer example suggests that an item, some piece of information, is transmitted from A to B. After introducing the truth conditions, I then claim that what gets transmitted is the property *having the information*. But it sounds very stilted to say "The property *having the information* is transmitted from A to B." *Reply*: Consider an analogy. Ordinary examples of causation typically talk as though items or objects, such as a match, cause things, and it sounds stilted to say, "S's striking the match caused the fire." Nonetheless, it is generally assumed that events, not items or objects cause things. In any case, the main concern in this paper is the transmission of a property, doxastic justification, and the transmission of a property could be considered a special case of the transmission of an item (whatever precisely an item is).

The purpose of this paper is to identify when *competent deductions* fail to transmit *doxastic* justification, so let me clarify these terms. An **argument** is a set of propositions such that one proposition, the conclusion, is supported by or taken to be supported by other propositions in that set, the premises. An inference is the token mental act of accepting an argument. More precisely, S makes some **inference** *P therefore Q* just in case S's belief in Q is based on her belief in P.⁷ A deduction is merely an inference in which the premises entail the conclusion. In other words, S makes some **deduction** *P therefore Q* just in case S bases her belief in Q on her belief in P, where P entails Q. Not all deductions are competent. A deduction might fail to transmit for a variety of reasons (for example, the premise isn't justified), but I will argue that *competent* deductions fail to transmit only because of premise circularity. Hence, the precise meaning of 'competent' will be very important. But it won't be important until section 4.1, so I'll hold off defining the term until then.

Notice that S deduces Q from P only if S's belief in Q is *based on* her belief in P. The basing relation, like the in-virtue-of relation, is another important but poorly understood relation. For the sake of this paper, I will endorse the following relatively uncontroversial characterization. The basing relation is supposed to capture what it is for a mental state M (or perhaps the content of M) to be used as a reason for believing P. So understood, a subject can base beliefs on both experiences and other beliefs. When a subject bases a belief on another belief, she *infers* one belief from the other. Basing requires, perhaps among other things, that M cause B in a way that is difficult to specify. The difficulty here is parallel to that of specifying the causal relation required for the in virtue of relation: it is hard to rule out deviant causal chains (Korcz 2000, sec. III). Despite this similarity, the basing and in-virtue-of relations are apparently distinct. The basing relation concerns a certain kind of cause for the belief's being *held*; the in virtue of relation concerns a certain kind of cause for the belief's being *justified*.

Doxastic justification needs to be distinguished from propositional justification and warrant. As a very rough approximation, S has **propositional justification** for P just in case P is worthy of being believed by S. A **warrant** is something that makes a proposition propositionally justified for a person. 'Propositional justifier' might be a more natural name for warrant, but I follow my opponents in using the term 'warrant.'⁸ It is usually assumed that evidence can propositionally justify a proposition for a subject. In such a case, we can say that the evidence is an *evidential warrant*. It is more controversial as to whether there are *non-evidential warrants*, whether a proposition can be propositionally justified for a person by something besides evidence. Those who hold that the Neo-Moorean and Zebra Deductions are instances of transmission failure often hold that there is a type of non-evidential warrant called "entitlement." We will discuss entitlement further in section 5.2.

Recall that propositional justification is a property that *propositions* have relative to a subject. Doxastic justification, on the other hand, is a property that *beliefs* have. **Doxastic justification** for a belief in P requires (i) that S has some warrant for P and (ii)

⁷ I use "belief in P" and "belief that P" interchangeably.

⁸ Actually, I make a small simplification here. Wright (2004, 176-7) would say that some warrants, namely entitlements, only make a belief worthy of acceptance, not worthy of belief. Strictly speaking, then, in Wright's mouth, 'warrant' isn't quite equivalent to 'propositional justifier.' We can ignore this complication for the purposes of this paper.

that S's belief in P is appropriately connected to that warrant. Suppose S has some evidential warrant E for P. It is commonly assumed that S's belief in P is appropriately connected to E only if her belief in P is based on E.⁹ It is less clear when some non-evidential warrant for P (if there are such things) is appropriately connected to a belief that P.

Since we are concerned with the transmission of doxastic justification, we are concerned with whether some property is transmitted from some belief(s) to some other belief. We are concerned, in other words, with whether some inference, or *accepted* argument, transmits doxastic justification. For example:

The Counting Case: Consider this argument: (i) that there are exactly 25 people in the room; and (ii) that if there are exactly 25 people in the room, then there are fewer than 100 people in the room; therefore (iii) there are fewer than 100 people in the room. Suppose that I justifiably believe (i) on the basis of perception; that I justifiably believe (ii) a priori; and that I believe (iii) on the basis of (i) and (ii) (that is, I deduce (iii) from the conjunction of (i) and (ii)).

The Counting Case seems to be a paradigmatic case of successful transmission. My belief in (iii) seems to be doxastically justified in virtue of being based on my doxastically justified belief in the conjunction of (i) and (ii). Because the deduction in the Counting Case is a good one, the doxastic justification of my belief in the conjunction of (i) and (ii) is transmitted to my belief in (iii).

Good *unaccepted* arguments cannot transmit doxastic justification. Suppose that the Counting Case is exactly the same except that I don't believe (iii) either because I am still deliberating about whether to believe (iii) or I haven't considered it yet. While it seems natural to say that the (i)-(ii)-(iii) argument transmits in this modified case, it does not, in any straightforward way, transmit doxastic justification from my belief in (i) and (ii) to my belief in (iii), as I don't even believe (iii). Hence, in the modified counting case, the argument does not transmit doxastic justification, even if it transmits warrant. Rather than discussing the transmission of warrant as much of the literature does, I prefer to say that the argument would doxastically transmit were the subject to accept it. As I explain in 2.1, the more interesting question is whether a deduction can transmit doxastic justification, not whether it can transmit warrant. Unless otherwise noted, when I use the term 'justification', I henceforth will mean 'doxastic justification'.

1.3. *Transmission Failure: Common Causes*

An inference transmits justification just in case the conclusion is justified in virtue of being based on at least one justified premise. An inference doesn't, or fails to, transmit justification just in case the conclusion is *not* justified in virtue of being based on at least one justified premise. In this sense, all sorts of things might cause transmission failure. If none of the premises are justified, then the inference trivially fails to transmit, because the premises didn't have any justification to transmit in the first place.

It doesn't follow, though, that all of an inference's premises must be justified for it to transmit justification to its conclusion. Consider an inductive inference with 100 premises of the form 'on this occasion the unsuspended pencil fell to the ground'. If 99 of the 100 premises are justified, it seems that those 100 premises can transmit

⁹ If the basing relation is not transitive, then we would need to add that S's belief in P can be connected to E appropriately if the belief is based on a chain of reasoning that includes E as (part of) a link in that chain.

justification to the belief that the next unsuspected pencil will also fall, despite that one of the premises fails to be justified.

Premise circularity is another obvious cause of transmission failure. Take the extended inference *Q therefore P therefore Q*. Suppose that the inference from Q to P transmits justification to P. Intuitively, the justification P has in virtue of being based on Q cannot be transmitted back to Q.

Less-than-maximal evidential support also causes transmission failure. The conjunction *P and if P then Q* provides maximal evidential support for Q, so deducing Q from that conjunction is capable of transmitting all of the conjunction's justification to Q. Such an inference can make its conclusion maximally justified if its premise is maximally justified. An inference whose premises do not evidentially support their conclusion will not contribute any justification at all to the conclusion, even if the premises are maximally justified. Any such inference *completely* fails to transmit: that is, it doesn't transmit *any* justification from the premises to the conclusion. One such inference would be the following: 'I have a hand; therefore, the Stay Puft Marshmallow Man is eating a Ghostbuster'.

Then there are inferences that fall between the extremes, inferences whose premises provide some less-than-maximal degree of support to their conclusions. Such inferences can transmit some, but not all of their premises' justification. Good inductive inferences with justified premises both partially transmit and partially fail to transmit justification from the premises to the conclusion. Other things being equal, the stronger the support, the more justification the inference transmits from the premises to the conclusion.

2. Transmission and Deductions: The Crucial Question

When we are evaluating deductions, such the Neo-Moorean and Zebra Deductions, we should focus on a key question. In this section, I identify that question and show that much of the current literature either confuses that question with other important questions, or it unjustifiably assumes that the answers to these other questions will provide the answer to the key question.

2.1. *Transmission of Warrant vs. Transmission of Justification*

I claimed, in the sub-section 1.2, that this paper focuses on when a competent deduction fails to transmit *doxastic justification*. Those familiar with the literature on transmission failure may think that I am changing the subject because much of the literature is concerned with the transmission of *warrant*, not doxastic justification (for example, Wright 1985, 2002, 2003; Davies 1998, 2000, 2003; and Dretske 2005). In a representative statement, Davies maintains that "The question is whether the epistemic warrants that I have for believing the premises add up to an epistemically adequate warrant for the conclusion" (2000, 399, cf. 2003, 51; also see Dretske 2005, 15). According to these thinkers, the crucial question is:

Q1: Under what conditions does a competent deduction fail to make the warrant for the premises warrant for the conclusion?

On the other hand, I focus on the transmission of doxastic justification:

Q2: Under what conditions does a competent deduction fail to make belief in its conclusion doxastically justified?

Recall that a warrant just is a propositional justifier, something that makes a proposition propositionally justified (for a person). So when Wright, Davies, and Dretske focus on the transmission of some warrant *W*, they are concerned with whether the property *being propositionally justified by W* is transmitted from the premise to the conclusion. They are concerned, in other words, with whether (i) the conclusion is propositionally justified (ii) by the same thing that makes the premise propositionally justified.¹⁰ When I focus on the transmission of doxastic justification, I am concerned with whether the property *being doxastically justified* is transmitted from belief in the premise to belief in the conclusion. I am concerned, in other words, with whether (i) belief in the conclusion is *doxastically justified* (ii) *whether or not* it is doxastically justified by the same thing that makes belief in the premise doxastically justified.¹¹

In asking a different question, I haven't changed the subject; rather, I have clarified what the crucial subject is. Although Wright, Davies, and Dretske ask Q1, they really want to know the answer to Q2. When Wright asks whether an inference transmits warrant, he is really concerned with whether it "is one whereby someone could be moved to rational [or justified] conviction of its conclusion" (2000, 140). Davies seems to suppose, at the very least, that "limitations on the transmission of epistemic warrants" suffice for "limitations on our ability to achieve knowledge [and presumably also justification] by inference" (2003, 35-6; cf. Dretske 2005). In short, these thinkers want to know whether someone can justifiably believe, say, that she isn't a brain-in-a-vat in virtue of the Neo-Moorean Deduction. Even though Wright, Davies, and Dretske ask Q1, they expect an answer to Q2. They are simply asking the wrong question.

They are right to want the answer to Q2, because that is the more interesting question. When we evaluate the quality of inferences (insofar as they are used to organize the beliefs in one's noetic structure) we want to know whether we can justifiably believe the conclusion in virtue of that inference. Whether an inference transmits warrant is relevant to this aim only insofar as it implies something about whether the inference transmits justification. The crucial question is Q2, not Q1.

It seems that Wright, *et. al* assume that the failure to transmit warrant suffices for the failure to transmit justification. Unless they make this assumption (or something in the general neighborhood), it is hard to explain why they ask Q1 but expect an answer to Q2. Yet this assumption is hardly obvious. Suppose that Harold's belief in *P* is doxastically justified by his evidence *E*; he notices that *P* entails *Q*; and then he subsequently deduces *Q* from *P*. It is natural to identify Harold's reason for accepting *Q as P*, not *E*. Since we are supposing that *P* entails *Q*, *P* is presumably a warrant for *Q*. But if *P* is Harold's reason for *Q* and is itself a warrant for *Q*, it doesn't seem to matter whether the deduction transmits warrant, that is, whether the deduction makes *E* into a warrant for *Q* (cf. Silins 2005, 87-8). At the end of the day, perhaps we will discover that the transmission of warrant is required for the transmission of justification, but this is hardly the sort of thing

¹⁰ The transmission of warrant should not be confused with the transmission of propositional justification. To say that propositional justification is transmitted from premise to conclusion is to say that (i) the conclusion is propositionally justified (ii) *whether or not* it is propositionally justified by the same thing that makes the premise propositionally justified.

¹¹ The transmission of doxastic justification should not be confused with the transmission of doxastic warrant, or doxastic justifiers. To say that a doxastic warrant is transmitted from belief in the premise to belief in the conclusion is to say (i) belief in the conclusion is doxastically justified (ii) *by the same thing* that makes belief in the premise doxastically justified.

we should assume at the outset. For this reason, I focus on the transmission of doxastic justification instead of the transmission of warrant. I focus, in other words, on Q2, not Q1.

2.2. *Transmission vs. Resolving Doubt*

I argued, in the previous sub-section, that the key question is:

Q2: Under what conditions does a competent deduction fail to make belief in its conclusion doxastically justified?

This question is different than:

Q3: Under what conditions does a competent deduction fail to have the power to resolve doubt about its conclusion?

A deduction *P therefore C* has the **power to resolve doubt** (about its conclusion) just in case it is possible for one to go from doubting *C* to justified belief in *C* solely in virtue of accepting *P therefore C*. As I use the term, one (seriously) **doubts** *P* just in case she either disbelieves or withholds judgment about *P*. Withholding judgment is more than merely failing to believe or disbelieve *P*: it is *resisting* or *refraining* from both believing and disbelieving *P*, and one cannot do that unless one has considered the proposition.¹²

Suppose that I have been *very* out of the loop the last several years (which isn't far from the truth), and I doubt that Obama is the president. I then discover that both CNN and the NY Times say that he *is* the president. I might justifiably infer, after all, that Obama is the president. My inference has the power to resolve doubt. The Neo-Moorean Deduction, on the other hand, does not have the power to resolve doubt. If one doubts NM2, that she isn't a brain-in-a-vat, she can't rationally believe, NM1, that she has a hand. So doubting the conclusion of NMD prevents an essential premise in the deduction from being justified, thereby preventing the deduction from justifying the conclusion. Since NMD can't justify its conclusion when the subject antecedently disbelieves or withholds judgment about the conclusion, it lacks the power to resolve doubt.

At times, Wright seems to conflate the power of a deduction to justify with its power to resolve doubt. For example, he maintains that "a cogent argument is one whereby someone could be moved to *rational conviction of—or the rational overcoming of doubt about—the truth of its conclusion*" (2002, 331, emphasis mine). In another paper, he seems to assume at the very least, that a sufficient condition for transmission failure is that an inference be powerless to resolve doubt. He says of an example that, "The inference from *A* to *B* is thus not at the service of addressing an antecedent agnosticism about *B*. So my warrant does not transmit" (2003, 63). (Wright's assumptions on this matter are discussed further in section 5.2.)

Davies (2003) and McLaughlin (2000, 104) also fail to appreciate fully the distinction between Q2 and Q3. They both connect transmission failure with begging the question, but I will focus on Davies' way of making this connection. Davies' Limitation Principles for the transmission of warrant are, he thinks, motivated "by making use of the idea that failure of transmission of epistemic warrant is the analogue, within the thought of a single subject, of the dialectical phenomenon of begging the question" (41). In Davies' view, "The speaker begs the question against the hearer if the hearer's doubt rationally requires him to adopt background assumptions relative to which the considerations that are

¹² See Bergmann (2005, 420-2) for more on the distinction between withholding judgment about *P* and taking no attitude at all towards it.

supposed to support the speaker's premises no longer provide that support" (41). Take the Zebra Deduction. If you doubted Z2, that the animal is not a cleverly disguised mule, then Davies suggests that your perceptual experience will no longer count in favor of your belief in Z1, that the animal is a zebra. So if I offered you the Zebra Deduction in order to convince you that the animal is not a cleverly disguised mule, I would beg the question against you.

It's pretty clear, as Davies' suggests, that an inference that fails to be a "*question-settling* justification," that is, an inference that lacks the power to resolve doubt, is the analogue of the dialectical phenomenon of begging the question (2003, 41-5, esp. 42). Were I to accept the Zebra Deduction when I have antecedent doubt about its conclusion, I would, as it were, beg the question against myself. Yet Davies never provides any reason to believe that *transmission failure* is an analogue of begging the question. He seems to take for granted that for something (such as an experience or inference) to provide justification at all, it must have the power to resolve doubt.

Much of the literature on transmission failure, then, operates on the assumption that the power to justify requires the power to resolve doubt. Taking this assumption for granted was probably a reasonable thing to do at the time the literature was first published; however, this assumption has now been challenged by a number of philosophers, such as Markie (2005, 409); Pryor (2004); Bergmann (2004, 717-20; 2006, 198-200), and White (2006, 529-30).¹³ Regardless of whether these philosophers are correct (as I think they are), it is no longer reasonable simply to assume that the power to justify requires the power to resolve doubt. One needs to argue for this assumption. I'll return to the distinction between the power to justify and the power to resolve doubt in section 5.2, but until then, I will focus on Q2 and will ignore Q3.

3. Wright on Transmission Failure

Although pointing out the distinctions in the last section (especially that between Q2 and Q3) is sufficient to reply to McLaughlin (2000), the views of Davies, Dretske, and Wright are not so easily rebutted and deserve further examination. Unfortunately, space doesn't permit a detailed examination of each of their views, so I will focus on those of Wright. I make this choice for three reasons. First, Hawthorne (2005) already has criticized Dretske's views powerfully and, second, Davies (2004) seems inclined to retract his earlier views in favor of a position much closer to mine. Third, discussing Wright's views will help set the stage for discussing my conditions.

3.1. Wright on Transmission Failure

Wright's uses a number of examples to motivate his transmission principle,¹⁴ and it will be helpful to discuss one such example.

¹³ Sometimes these thinkers (for example, White, 529-30) don't distinguish between the ability of an argument to justify its conclusion and its ability to resolve doubt. Instead, they distinguish between whether an argument can justify its conclusion and whether it would be *dialectically appropriate* to offer an argument to someone who doubts the conclusion. This difference isn't significant in this context because the arguments in NMD and ZD lack the power to resolve doubt and it is their lacking this power that makes it inappropriate to offer them to someone who doubts their respective conclusions.

¹⁴ Wright typically addresses the transmission of non-inferential and inferential warrant separately, but he maintains that both kinds of transmission are unified at a deeper level (2002, 345). I focus on Wright's

Election

E1 Jones has just placed an X on a ballot paper.

Therefore,

E2 Jones has just voted.

Therefore,

E3 An election is taking place.

He says:

The tendency E1 has to support E2 is, in these circumstances, conditional on your possessing *independent* reason to accept E3—reason provided by your background knowledge that the marking of X’s on bits of paper in the sort of circumstances surrounding Jones is a reliable indicator that an election is in progress. So the ground provided by E1 for believing E2 is *not* transmissible across the entailment from E2 to E3. (2002, 334, emphasis original)¹⁵

Let’s unpack this passage. Wright maintains that E1 supports E2 only if one has reason to believe:

E1⁺ One’s placing an X on ballot paper in a situation like that of Jones is a reliable indication that she has voted.

I agree—at least for the most part. What Wright says suggests that, given the appropriate background knowledge, E1 supports E2. Although I think it is natural and convenient to talk this way, I think this way of talking is misleading. Strictly speaking, it seems to me that E1 cannot support E2 under any circumstances; rather, it is only the *conjunction* of E1 and E1⁺ that evidentially supports E2. I am not certain that I actually disagree with Wright on this point,¹⁶ and even if I do, the disagreement won’t affect my arguments in this paper. Hence, I will continue to talk as if E1 can’t support E2 by itself, even though the conjunction of E1 and E1⁺ can and does support E2.

In the first sentence of the above quotation, Wright suggests that E1⁺, by itself, provides a good reason to believe E3. That doesn’t seem quite right, but it is in the neighborhood. What E1⁺ says is that *if* someone places an X on a ballot in a situation like that of Jones, then it is likely that this person just voted; however, it doesn’t say whether anyone has placed an X on a ballot. Thus, it cannot support the claim that an election is taking place *all by itself*. In addition to E1⁺ what we need is a claim like E1, that someone did in fact place an X on a ballot in the relevant circumstances. It seems, then, it is only the conjunction of E1 and E1⁺ that supports E3.

What we have concluded thus far is that the conjunction of E1 and E1⁺ supports both E2 and E3. It seems that our warrant for E2 (the conjunction of E1 and E1⁺) is also a warrant for E3, and perhaps any warrant for E2 is also a warrant for E3. Let us say that a deduction *P therefore Q* has an **inefficient structure** just in case (i) the subject has (non-

discussion of inferential warrant transmission for the sake of space, but the principle I call “TFP1” is intended to cover the non-inferential variety as well.

¹⁵ Wright names the premises differently than I do, and in this quotation I replace his names with mine. This will make referring to the premises of the deductions less cumbersome.

¹⁶ If we do disagree, I think the disagreement amounts to the following. I think that the evidential support relation is a binary relation that holds between two (sets of) propositions. Instead, Wright’s view may be that the evidential support relation is ternary: it is a relation between three (sets of) propositions. There is the supporting proposition, P, the supported proposition, Q, and a proposition, R, relative to which P supports Q. In general, if Wright thinks that P supports Q *relative* to R, I will say that the conjunction of P and R supports Q (no relativization needed).

inferential or inferential) evidence E that warrants both P and Q, (ii) P entails Q, and (iii) the subject bases his belief in Q on his belief in P, a belief which is itself already based on E. This structure is inefficient in that, other things being equal, the subject could have appropriately based Q on E without using P as an intermediate step. Notice that *Election* has an inefficient structure: the conjunction of E1 and E1+ warrants both E2 and E3, and instead of basing a belief in E3 directly on a belief in that conjunction, the hypothetical subject uses E2 as an intermediate step.

This structural feature of *Election* is precisely what bothers Wright: “one has a body of evidence which is a warrant *simultaneously* for [E2] and [E3], and it is not because it is a warrant for [E2] that it is a warrant for [E3]. So there is, arguably, a failure of transmission” (2002, 335).¹⁷ I will concede for the sake of argument that *Election*’s inefficient structure prevents it from transmitting *warrant*, which is Wright’s explicit point here. Yet Wright assumes, as we mentioned in 2.1, that the failure to transmit warrant suffices for the failure to transmit doxastic justification. Wright holds, then, that the inefficient structure of *Election* prevents it from justifying its conclusion.

When Wright holds that *Election* fails to transmit justification on the grounds of its inefficient structure, he seems to appeal to something like this transmission failure principle:

TFP1: Necessarily, S’s competent deduction *P therefore Q* fails to transmit (doxastic) justification if S’s belief in P is justified (at least partly) in virtue of S’s warrant for Q.

TFP1 lays down a sufficient condition for transmission failure, namely that S’s belief in P is justified in virtue of S’s warrant for Q, and let us say that a deduction satisfies TFP1 just in case it satisfies that sufficient condition. Any inefficiently-structured deduction will satisfy TFP1 if its premise is justified. The premise in such deductions is based on some evidence that warrants both the premise and the conclusion. Hence, assuming the warrant successfully justifies the premise and is not, say, defeated by counterevidence, the premise will be justified in virtue of a warrant for the conclusion.

I suspect that Wright thinks that the main thing going for TFP1 is that it condemns a certain type of circularity. Any deduction that satisfies TFP1 or is inefficiently-structured will be such that the premise is justified (if at all) in virtue of warrant for the conclusion, which makes such deductions in some sense circular. Wright apparently assumes that this circularity is always bad; but it clearly isn’t.

Consider the Counting Case from sub-section 1.2. The perceptual evidence that warrants me in believing the premise, namely that there exactly 25 people in the room, seems to be an equal warrant for the conclusion, namely that there are fewer than 100 people in the room. The deduction from the Counting Case, therefore, has an inefficient structure and satisfies TFP1. It nonetheless seems clear that it transmits (doxastic) justification to its conclusion.¹⁸

¹⁷ This passage originally concerned another deduction, *Soccer*, but Wright clearly thinks that the problem with these two deductions is parallel (2002, 334).

¹⁸ When I introduced the Counting Case, I said it had two premises: (i) that there are exactly 25 people in the room; and (ii) that if there are exactly 25 people in the room, then there are fewer than 100 people in the room. I am assuming that the conditional premise, (ii), isn’t an essential premise, just as it is commonly assumed that the conditional premises of NMD and ZD aren’t essential premises.

Further counterexamples to TFP1 are not hard to come by. Consider the deduction *the object is red therefore it is colored*. Suppose that S's belief in the premise is justified in virtue of some warrant W. W also warrants the conclusion, since any warrant for the premise seems to be a warrant for the conclusion. Hence, S's belief in the premise is justified in virtue of warrant for the conclusion, thereby satisfying TFP1. If W is an evidential warrant, then presumably S's deduction also would be inefficiently-structured. Despite satisfying TFP1 and whether or not it is inefficiently-structured, S's deduction is clearly capable of transmitting justification to its conclusion.

Or consider any deduction in the form *P therefore P or Q*. Suppose that S's belief in the premise is justified in virtue of some warrant W. W also warrants the conclusion, since any warrant for the premise seems to be a warrant for the conclusion. Hence, S's belief in the premise is justified in virtue of warrant for the conclusion, thereby satisfying TFP1. If W is an evidential warrant, then presumably S's deduction also would be inefficiently-structured. Despite satisfying TFP1 and whether or not it is inefficiently-structured, S's deduction is clearly capable of transmitting justification to its conclusion.

I contend that even *Election* is a counterexample to TFP1. If I base my belief in E2 on my justified belief in the conjunction of E1 and E1⁺, then both Wright and I think my belief in E2 will be justified in virtue of being based on that conjunction. Yet Wright maintains that it would be inappropriate to then base my belief in E3 on my justified belief in E2. What Wright says here strikes me as counterintuitive. It seems clear to me that, in these circumstances, my belief in E3 would be justified in virtue of being based on E2.

One might assume, as Wright (2002, 335) seems to, that a deduction transmits justification only if it can provide an original, or first-time, warrant for its conclusion. The above counterexamples refute this plausible assumption. Inefficiently-structured deductions, by definition, *cannot* provide original warrant for their conclusions, because the premises of such deductions are justified, if at all, by prior warrant for their conclusions. Since some such deductions can transmit justification to their conclusions, the above assumption is mistaken.

Although inefficiently-structured deductions cannot provide a first-time, or original, warrant for a conclusion, they nonetheless can make two important epistemic contributions. First, they might provide belief in their conclusions with first-time *doxastic justification*. Recall from sub-section 1.2 that doxastic justification requires more than that one have warrant for the believed proposition. A doxastically justified belief in P also must be appropriately connected to some warrant for P. Second, inefficiently-structured deductions can provide this original doxastic justification because they can provide an original, appropriate (inferential) connection between a belief and a pre-existing warrant. If a subject acquires for the first time a belief in Q using an inefficiently-structured deduction, the subject's belief in Q is connected to a relevant pre-existing warrant via an inference from P. This new connection is an epistemically significant contribution which plausibly allows the conclusion to be doxastically justified.

3.2. Fixing TFP1

What makes TFP1 seem initially attractive is its ability to rule out a certain kind of circularity. If a premise is justified in virtue of warrant for the conclusion—or as Wright prefers to say, if the premise's justification is *conditional* on a prior warrant for the

conclusion—then the deduction is in some sense circular. Yet we saw in the previous sub-section that this circularity is not always bad. There is, however, a promising restriction on TFP1, namely:

TFP2: Necessarily, S's competent deduction *P therefore Q* fails to transmit (doxastic) justification if S's belief in P is justified (at least partly) in virtue of S's being justified in believing Q.

Whereas TFP1 holds that transmission failure occurs whenever the premise is justified in virtue of prior *warrant* for the conclusion, TFP2 holds only that it occurs whenever the premise is justified in virtue of prior *doxastic justification* for the conclusion. TFP2 plausibly counts as a restriction of TFP1: (i) when a belief is justified in virtue of doxastic justification for belief in its conclusion, it presumably also is justified in virtue of warrant for the conclusion (so every deduction that satisfies TFP2 also satisfies TFP1); but (ii) when a belief is justified in virtue of a warrant for the conclusion, it does not follow that it is justified in virtue of doxastic justification for belief in the conclusion (so not every deduction that satisfies TFP1 also satisfies TFP2).

TFP2 has two advantages over TFP1. First, TFP2 avoids the counterexamples that plagued TFP1. Each counterexample concerned a perfectly good deduction whose premise was justified in virtue of warrant for its conclusion. TFP1 says any such deduction fails to transmit. Since the premises of these deductions are not justified in virtue of prior doxastic justification for the conclusion, TFP2 correctly allows them to transmit.

Second, TFP2 seems to condemn a type of circularity that is *always* bad. An inference seems defective when believing a premise is justified in virtue of doxastic justification for believing the conclusion. Consider *Election'*, a modified version of *Election* which replaces E1⁺ with:

E3 An election is taking place.

Election', then, is *E1 and E3 therefore E2 therefore E3*. Since the subject's belief in E2 is based on her belief in the conjunction of E1 and E3, it is justified in virtue of prior doxastic justification for belief in the conclusion, which makes *Election'* exhibit the condemned circularity. This type of circularity seems bad because it prevents an inference from playing any useful epistemic function. In particular, such inferences can't make the two epistemic contributions made by inefficiently-structured deductions. Deductions that satisfy TFP2 are such that their premises are justified in virtue of prior doxastic justification for belief in their conclusions. Prior to the deduction, then, belief in the conclusion is *already* doxastically justified and so *already* appropriately connected to a pre-existing warrant. Hence, such deductions can provide neither a first-time doxastic justification for belief in their conclusions nor a first-time appropriate connection to a pre-existing warrant. Like TFP1, TFP2 is motivated at least in part by the desire to condemn some type of circularity. Unlike TFP1, TFP2 condemns a type of circularity that is *always* bad.

TFP2 claims that an inference fails to transmit justification if its premise is justified in virtue of the conclusion's being justified. Under what conditions does that happen? I suggest:

The Basing Requirement: A belief in P can be justified (at least partly) in virtue of S's justified belief in Q only if S's belief in P is based on *either* S's justified

belief in Q *or* on a chain of reasoning that employs S's justified belief in Q as (part of) a link in that chain.

The Basing Requirement is entailed by two plausible claims. The first is that a justified belief in P can be justified in virtue of one's justified belief in Q only if the latter is relevant in some appropriate way to one's belief in P. The second plausible claim is that a justified belief in Q is relevant in the appropriate way only if one's belief in P is based on one's justified belief in Q *or* on a chain of reasoning that uses one's justified belief in Q as (part of) one link in that chain. The latter qualification is needed to account for longer basing chains in the event that the basing relation is not transitive. For example, if one's belief in Q is based on one's belief in P and one's belief in P is based on some evidence E, it is plausible that E is relevant in the appropriate way to one's belief in P. An inefficiently-structured deduction makes a warrant relevant in the appropriate way via one of these longer basing chains. The intuitive appeal of these two plausible claims is enough to give the Basing Requirement some initial plausibility, and I will assume that it is true for the rest of this paper.

The Basing Requirement makes TFP2 more transparent: it tells us when TFP2 is satisfied by telling us when a premise is justified in virtue of prior justification for belief in the conclusion. It will be helpful to focus on the following version of TFP2 that already exhibits this transparency.

TFP3: Necessarily, S's competent deduction *P therefore Q* fails to transmit (doxastic) justification if S's belief in P is justified in virtue of being based on *either* S's justified belief in Q *or* a chain of reasoning that employs S's justified belief in Q as (part of) a link in that chain.

Speaking loosely, we can call any inference '**premise circular**' just in case the premise is based on *either* a justified belief in the conclusion *or* a chain of reasoning that employs a justified belief in the conclusion as (part of) a link in that chain. In slogan form, TFP3 says that premise circularity is *sufficient* for transmission failure.

4. When Transmission Fails

4.1. Premise Circularity and Transmission Failure

In the last section, we considered Wright's account of transmission failure. We concluded that it relies on a principle, TFP1, that is subject to counterexamples (3.1). The failure of TFP1 showed us that a competent deduction can transmit justification even if the premise is justified in virtue of warrant for the conclusion. We then replaced TFP1 with TFP3, that an inference fails to transmit if it is premise circular (3.2).

The goal of this section is to answer:

Q2: Under what conditions does a competent deduction fail to make its conclusion doxastically justified?

TFP3 provides a partial answer to this question, as it says that that a competent deduction will fail to transmit *if* it is premise circular. My answer to this question extends TFP3 by adding an "only if:"

TFP4: Necessarily, S's competent deduction *P therefore Q* fails to transmit (doxastic) justification if and only if S's belief in P is justified (at least partly) in virtue of being based on *either* S's justified belief in Q *or* a chain of reasoning that employs S's justified belief in Q as (part of) a link in that chain.

TFP4, in slogan form, says that premise circularity is both necessary and sufficient for transmission failure in competent deductions. Our intuitions in favor of TFP3 (and TFP2) just are intuitions in favor of premise circularity's *sufficiency* for transmission failure. Since I don't know of anyone who would reject it,¹⁹ our intuitions in favor of TFP3 seem adequate to support the sufficiency of premise circularity for transmission failure.

I began defending the necessity of premise circularity for transmission failure in section 2. In that section, I argued that we shouldn't assume (as much of the literature does) that a deduction's failing to transmit warrant or its lacking the power to resolve doubt is sufficient for transmission failure. I continued this defense in section 3, where I challenged Wright's rival conditions for transmission failure. Yet I need to say more in order to clarify TFP4 and make it plausible that premise circularity is *necessary* for transmission failure in competent deductions. I discharge these obligations in the remainder of this section.

In 1.2, I defined "deduction" as "an inference whose premises entail its conclusion," and it is now time for me to define "*competent deduction*."²⁰

Competent Deduction: S's deduction of Q from P is *competent* just in case:

- (i) S has and retains justified belief in P throughout the deduction;
- (ii) P evidentially supports Q; and
- (iii) S has no relevant defeaters.

Once we understand each condition, we will be in position to see that the most obvious sources of transmission failure (besides premise circularity) cannot infect competent deductions. That is, we will be in position to see the plausibility in claiming that premise circularity is *necessary* for a competent deduction's failing to transmit. Perhaps the most obvious cause of transmission failure is the trivial reason that none of the premises are justified. Yet, by definition, all the premises of a competent deduction are justified. The lack of justified premises cannot cause transmission failure in competent deductions.

A second potential cause of transmission failure is less than conclusive support, for even deductions can fail to support their conclusions. Suppose Goldbach's Conjecture is necessarily true. If so, then it is trivially entailed by the claim that I am an absent-minded professor (and every other proposition). Nonetheless, that I am such a professor in no way evidentially supports the conjecture. Unless a deduction's premises evidentially support its conclusion, it will fail to make its conclusion justified or known. Yet competent deductions, by definition, provide deductive evidential support. Thus, competent deductions can't fail to transmit because they provide less than maximal evidential support.

A third potential cause of transmission failure is the presence of relevant defeaters.²¹ Presumably, any *relevant* defeater will be a defeater for S's belief in Q. For example, S might have some evidence that Q is false, such as testimony from a relevant expert that $\sim Q$. Or she might have evidence that her belief in Q is unreliably formed, such as

¹⁹ Cling (2002) *might* reject TFP3, but I don't have the space to consider his views here.

²⁰ I define 'competent deduction' so that the term will be useful for my purposes, and I do not ensure that I define the term as others do (for example, Hawthorne 2005, Silins 2005) or as I do in other work (forthcoming).

²¹ In this paper, I am concerned only with those defeaters which prevent *prima facie* justification from constituting *ultima facie* justification. I ignore propositional defeaters, those true propositions which prevent a (*ultima facie*) justified belief from constituting knowledge.

evidence that her coffee was spiked with a drug known to cause egregious mistakes in reasoning. In any case, defeaters cannot cause transmission failure in *competent* deductions, because they rule out (relevant) defeaters by definition.

A fourth potential cause of transmission failure is a failure to satisfy some higher-level requirement. The most popular higher-level requirement is the strong requirement that an inference can justify a belief in its conclusion only if the subject has a *justified belief* that her premises support her conclusion. I reject this strong higher-level in favor of a weaker alternative: an inference can justify a belief in its conclusion only if the subject is aware of her premises' supporting her conclusion, *whether or not* the awareness is doxastic or justified (manuscript b). On my view, however, a competent deduction can't fail to satisfy this requirement. This is so, because a subject can't base her belief in P on a belief in E unless she (doxastically or non-doxastically) takes E to support P.²² But, necessarily, if she takes E to support P when E does in fact support P—as is the case with the premises of competent deductions—then she is aware that E supports P.

Other than premise circularity, there is no obvious source of transmission failure which might infect competent deductions.²³ Hence, it is at least plausible that premise circularity is necessary and sufficient for a competent deduction's failing to transmit. But does TFP4 stand up to further scrutiny?

4.2. An Alleged Counterexample

Suppose Christian accepts:

The God Inference

G1: God just told me the grass is green.

G2: The grass is green.

G3: Therefore, God was right.

G4: Therefore, God exists.

TFP4, in slogan form, says that a competent deduction fails to transmit just in case the deduction is premise circular. Hence, as long as Christian doesn't base his belief in G1 or G2 on the belief that God exists,²⁴ TFP4 says the deduction from G3 to G4 transmits justification. An anonymous referee objects that the deduction from G3 to G4 fails to transmit, which if correct, would make the (the final stage of the) God Inference a counterexample to my account.

We should get clearer about some details before we assess the force of this potential counterexample. Since TFP4 concerns only *competent* deductions which require justified premises, Christian's belief in the sub-conclusion/premise G3 must be justified. If Christian's belief in G3 is justified, then his belief in the premises also must be justified.

²² I do not rely on this "taking requirement" anywhere else in this paper. It is somewhat common to hold that S bases a belief in P on E only if S believes (justifiably or not) that E supports P. My "taking requirement" is similar, except that it also can be satisfied by non-doxastic states, such as its seeming to S that E supports P or S's being acquainted with E's supporting P.

²³ One might think that how much justification a competent deduction can transmit is affected by how reliable the subject is in basing her beliefs on good evidence. The idea here would be that a deduction can transmit more justification when the subject doesn't make a good inference just by luck. In my view, this sort of reliability (or lack of it) is relevant to transmitting knowledge, but not to the transmission of justification.

²⁴ For simplicity's sake, I ignore the possibility that belief in G1 or G2 is based upon a longer chain of reasoning in which a justified belief that God exists is used as (part of) a link in that chain.

We can suppose, then, that Christian has some evidence E1 and E2 that justifies G1 and G2, respectively. Presumably, E1 warrants G4: it is hard to see how some evidence can warrant the claim that God just told me that the grass is green without also warranting the claim that God exists.

We said that a deduction has an inefficient structure just in case E warrants both P and Q, P entails Q, and the subject's belief in Q is based on her belief in P which itself is based on E. Inefficiently-structured deductions, therefore, have two stages: the transition from E to P and the transition from P to Q. The God Inference, on the other hand, has three stages: the transition from E1 and E2 to G1 and G2, respectively; the transition from G1 and G2 to G3; and the transition from G3 to G4. In inefficiently-structured deductions the latter stage is unnecessary because the subject could have justifiably based a belief in Q directly on E. In the God Inference, the latter *two* stages are unnecessary because the subject could have based a belief in G4 directly on E1. The God Inference is even less efficient than deductions I dubbed "inefficiently-structured."

Greater inefficiency makes the God Inference a convoluted way to conclude that God exists, but it doesn't follow that it is an instance of transmission failure. Suppose someone makes the following extended inference: there are exactly 25 people in this room; so there are fewer than 26; so there are fewer than 27...so, finally, there are fewer than 100 people in the room. This is a terribly inefficient way of concluding that there are fewer than 100 people in the room, but no stage of the inference fails to transmit. So far we have no reason to think that the God Inference is an instance of transmission failure, and so we have no reason to think that it is a counterexample to TFP4.

There is, however, one additional feature of this deduction that we have yet to consider. In inefficiently-structured deductions, one's warrant for the conclusion is identical—so *not* antecedent—to one's warrant for the premise. It is different with one stage of the God Inference. G1 (God said the grass was green) entails G4 (God exists), so it warrants G4 all by itself. Yet it is arguable that God's saying something, by itself, does *not* warrant G3, the claim that God was right.²⁵ Since it is only the conjunction of G1 and G2 that warrants G3, the subject's warrant for the conclusion, G4, is *antecedent* to her warrant for the premise, G3. Does this peculiar structural feature prevent the deduction from justifying its conclusion? I don't see why it would. It doesn't seem relevantly different from an inefficient structure. Although deductions with this structure cannot provide a first time warrant for their conclusions, it nonetheless seems plausible that they can make the two epistemic contributions that inefficiently-structured deductions can make. It seems, in other words, that they (i) can provide a first-time doxastic justification for their conclusion by (ii) providing a first-time appropriate connection between the conclusion and a pre-existing warrant. The God Inference is clearly inefficient. It is clearly convoluted. But it is far from clear that it is an instance of transmission failure and a counterexample to TFP4.

5. TFP4 Applied to NMD and ZD

It is common to charge that the following deductions are instances of transmission failure:

²⁵ If you think God, by definition, never says anything false, then simply replace "God" with "Mary's twin" in the God Inference. Mary's twin's saying something, by itself, is certainly not a warrant that Mary's twin is correct.

Neo-Moorean Deduction

(NM1) I have a hand.

(NM2) I am not a BIV.

Zebra Deduction

(Z1) That creature is a zebra.

(Z2) It isn't a cleverly disguised mule.

In this section, I apply TFP4 to these deductions in order to argue (i) that TFP4 entails that this charge is incorrect and (ii) that TFP4 allows these deductions transmit in an acceptable way. The upshot of this section is that the plausibility of TFP4 makes it plausible that NMD and ZD can transmit justification to their conclusions.

5.1. TFP4 Entails that NMD and ZD can Transmit

The charge under consideration is that NMD and ZD fail to transmit justification to their conclusions. TFP4 allows that this charge to be correct only if *either* the respective premises are justified in virtue of being based on their respective conclusions²⁶ *or* neither deduction can be competent. Apparently, the first disjunct doesn't obtain because it seems excessive to demand that, for a belief in NM1 or Z1 to be justified, it must be based on a justified belief in NM2 or Z2, respectively. The second disjunct doesn't obtain either. Let me explain.

This paper is concerned with whether NMD and ZD transmit justification to their conclusions. If the premises of NMD and ZD aren't justified, then NMD and ZD would fail to transmit in a trivial way because their premises wouldn't have any justification to transmit. So for this issue to be interesting, we need to assume that the premises of NMD and ZD are justified. Moreover, it seems very plausible, first, that their premises evidentially support their conclusions and, second, that it is possible for one to base one's belief in the conclusions on one's justified belief in the premises without encountering any relevant defeaters. Hence, it is very plausible that NMD and ZD can constitute competent deductions.

Given TFP4, one of two things must be true in order for the charge of transmission failure to stick, but as I just explained, neither thing is true. I conclude that TFP4 entails that it is possible for those deductions to justify their conclusions. If TFP4 allows those deductions to justify their conclusions in an acceptable way, then the plausibility of TFP4 gives plausibility to the claim that those deductions can transmit. On the other hand, if TFP4 allows them to transmit in an intuitively unsatisfactory way, then we would have reason to doubt TFP4. Thus, to defend TFP4 and the claim that NMD and ZD can transmit, I need to argue that TFP4 allows those deductions to transmit in a satisfactory way. (In the rest of this section, I focus on NMD, but the discussion can easily be adapted to address ZD too.)

5.2. TFP4 and Theories of Perceptual Justification

To determine whether TFP4 allows NMD to transmit in an acceptable way, we will combine TFP4 with three different theories of perceptual justification. These theories will tell us how the premise, NM1, is justified in a competent deduction. As we will see, whether TFP4 allows NMD to transmit in an acceptable way *may* depend on which theory of perceptual justification is true.

Conservatives (about NM2) endorse the claim that antecedent warrant that one is not a brain-in-a-vat is part of what makes one have perceptual justification; **liberals** deny this

²⁶ For simplicity's sake, I ignore the possibility that they are based upon a longer chain of reasoning in which a justified belief in the conclusion is used as (part of) a link in that chain.

claim (cf. Pryor 2004, 353-5). To consider whether TFP4 allows the Neo-Moorean Deduction to transmit in an acceptable way, I will consider one liberal and two conservative accounts of perceptual justification. Recall that a belief that P is doxastically justified only if the subject has a warrant for P and that warrant is appropriately connected to the belief that P. Each account will tell us what can constitute a warrant for P and what it takes for that warrant to be appropriately connected to the relevant belief.

Here is the liberal account of justification:

Dogmatism: (i) a perceptual experience that I have a hand is, by itself, a warrant for NM1 and (ii) a belief in NM1 is appropriately connected to that experience just in case it is based on the experience.²⁷

Dogmatism counts as a liberal view because it allows a perceptual experience to justify a belief without the help of antecedent warrant that one is not a brain-in-a-vat.

It is clear that the conjunction of TFP4 and Dogmatism allows NMD to justify its conclusion, at least when a belief in NM1 (I have a hand) is based on a perceptual experience that NM1 is true. Since the only premise, NM1, is justified in virtue of being based solely on some experience, it is not justified in virtue of being based on the conclusion, NM2 (I am not a brain-in-a-vat). Thus, TFP4 says the deduction should transmit.

Some philosophers have protested that it is absurd to allow the above version of NMD to justify its conclusion and therefore may be tempted to reject the conjunction of Dogmatism and TFP4. Yet we can explain these intuitions without concluding that NMD lacks the power to justify: the intuitions allegedly against allowing NMD the power to justify are really intuitions against allowing NMD the power to resolve doubt. Distinguishing between the power to justify and the power to resolve doubt allows us to see the plausibility of allowing NMD to transmit. I am not the first to suggest an error theory along these lines, as Pryor (2004, 361-2), Markie (2005, 409), and Bergmann (2004, 717-20; 2006, 198-200) have defended similar views.

Wright (2008, 38) criticizes a strategy similar to the one just proposed for a different, but related deduction, and he contends that “If Moore’s Proof [*I have a hand therefore there is an external world*] is indeed transmissive, it should be able...to produce a warrant to believe in the external world for such an agnostic [one who antecedently withholds judgment concerning the external world].” Apparently, he assumes that an inference transmits justification only if it has the power to resolve antecedent agnosticism, even if it doesn’t have the power to resolve antecedent disbelief. But, as far as I can tell, he says little, if anything, to support this claim.

Suppose that Jim recognizes for the first time that his belief in NM1 entails NM2, thereby considering NM2 for the first time, and then immediately bases a belief in NM2 on his belief in NM1. Or suppose that Tim considers NM2 for the first time, wonders whether it is true, notices that it follows from his belief in NM1, and then bases his belief in NM2 on his belief in NM1. Jim and Tim accept NMD without antecedently taking a doxastic attitude toward NM2, that is, without antecedently believing, disbelieving, or

²⁷ What Pryor (2000) calls “dogmatism” is essentially Dogmatism(i), but I expect that he is also sympathetic with Dogmatism(ii). I defend Dogmatism(i) in my manuscript c and would endorse something like Dogmatism(ii).

withholding judgment²⁸ about NM2. Even though NMD can't transmit for someone who antecedently withholds judgment about NMD, why can't it transmit for Jim and Tim? More generally, even if NMD can't produce a doxastically justified belief in NM2 for those who antecedently withhold judgment about NM2 (such as skeptics), why can't it produce a doxastically justified belief for one who has no antecedent doxastic attitude toward NM2? Wright owes us an answer to that question.

Wright fails to give us any reason to doubt this error theory. I conclude, then, that it is at least plausible that the conjunction of TFP4 and Dogmatism allows NMD to transmit in an acceptable way, but even this claim is controversial (Cohen 2005, 418-9).

To define the first conservative account, it will be useful to rely on these abbreviations:

NM0 I am having a perceptual experience that I have a hand.

NM0⁺ A perceptual experience that P is a reliable indication that P is true.

The first conservative account is:

Strong Conservatism: (i) only doxastically justified belief in both NM0 and NM0⁺ can constitute a warrant for NM1, and (ii) a belief in NM1 is appropriately connected to belief in NM0 and NM0⁺ just in case the former is based on the latter.

This view counts as a conservatism because justified belief in both NM0 and NM0⁺ is itself a warrant that one is not a brain-in-a-vat.

Given Strong Conservatism, if one justifiably believes NM1, she does so on the basis of believing both NM0 and NM0⁺. In such circumstances TFP4 allows NMD to transmit justification because the premise, NM1, is not justified in virtue of being based on the conclusion, NM2.

TFP4, when combined with Strong Conservatism, clearly allows NMD to transmit in an acceptable way. Notice that the conjunction of NM0⁺ and NM0 is a warrant for both NM1 and NM2. Thus, if Strong Conservatism is true, belief in NM1 will be based on evidence that warrants both the premise, NM1, and the conclusion, NM2. Hence, Strong Conservatism makes NMD an inefficiently-structured deduction. Since the circularity involved in inefficiently-structured deductions is benign, the conjunction of TFP4 and Strong Conservatism allows NMD to transmit in an acceptable way.²⁹

The third and last theory of perceptual justification is endorsed by Wright (2004), Davies (2003, 29-30), Cohen (1999, 76-7), and White (2006, 552-3), among others. It holds that:

Entitlement Conservatism: (i) a perceptual experience that I have a hand is a warrant for NM1 only in combination with an entitlement to NM2 (that I am not a brain-in-a-vat), and (ii) a belief in NM1 is appropriately connected to this warrant just in case it is based on the perceptual experience.

²⁸ Recall from sub-section 2.2 that withholding judgment about P is *refraining* or *resisting* believing or disbelieving P, which requires having considered the proposition.

²⁹ One might make a more plausible requirement by weakening Strong Conservatism so that it demands that one have an experience as of a hand (rather than justifiably believing NM0) and/or that one have only antecedent evidential warrant for NM0⁺ (rather than having a doxastically justified belief in NM0⁺). But this weaker requirement would still make NMD inefficiently-structured, and so combining the weaker requirement with TFP4 would still allow NMD to transmit in an acceptable way.

Both conditions require comment. The first condition introduces the term ‘entitlement’. An entitlement to P is a default, or non-acquired, warrant for P.³⁰ Since evidence is something we *acquire* over the course of our lives, entitlement must be non-evidential. Most epistemologists, even externalists, deny that there is such a thing as entitlement. Although most externalists allow for non-evidential warrant, they hold that this warrant is *acquired* as one relies on, say, reliable faculties.

The second condition of Entitlement Conservatism poses a stark contrast to the second conditions of Dogmatism and Strong Conservatism. The latter two views hold that a belief in NM1 is appropriately connected to a relevant warrant just in case the belief is based on the *whole* warrant. On the other hand, Entitlement Conservatism requires only that the belief be based on *part* of the warrant. Taking the part-talk loosely, Entitlement Conservatism holds that there are two parts to one’s warrant for NM1, a perceptual experience and some entitlement for NM2. Yet it only requires a belief in NM1 to be based on part of that warrant, the experience.³¹

When combined with Entitlement Conservatism, TFP4 clearly allows the Neo-Moorean Deduction to transmit justification to its conclusion. Although Entitlement Conservatism holds that one’s warrant for NM1 partly consists in a warrant for NM2, one’s belief in NM1 needn’t be based on that warrant for NM2, much less a belief in NM2. Hence, the conjunction of Entitlement Conservatism and TFP4 allows NMD to transmit justification. But does it do so in an intuitively satisfactory way?

Given Entitlement Conservatism, one must have antecedent warrant for the conclusion, NM2, in order to be justified in believing its premise, NM1. This sort of conservatism makes NMD exhibit some kind of circularity, but Cohen (1999, 77, 87, nt. 52) suggests that it is benign. There is something to be said for this suggestion. This type of circularity seems analogous to the peculiar structural feature exhibited by the God Inference in sub-section 4.2. In both cases, one has warrant for the conclusion that is *antecedent* (so not identical) to one’s warrant for the premise. Since the circularity didn’t seem vicious in the God Inference, perhaps it isn’t vicious here either.

Entitlement isn’t a particularly well-understood epistemic status (if it comes by default, why does it count as an epistemic status at all?), so perhaps there is something about entitlement that prevents the analogy with the God Inference from holding. In other words, perhaps transmission failure occurs more easily when a premise is justified by an entitlement for the conclusion rather than by some other type of warrant for the conclusion. In any event, the probability is high that *either* the conjunction of TFP4 and Entitlement Conservatism allows NMD to transmit in an acceptable way *or* Entitlement Conservatism is false. The analogy with the God Inference suggests that the first disjunct obtains, and I argue for the second disjunct at length in my 2009.

In this section, I have argued that TFP4 allows the Neo-Moorean and Zebra Deductions to transmit in an acceptable way. When combined with either of the first two theories of perceptual justification, TFP4 allows these deductions to justify their conclusions in acceptable ways. When combined with the third view, it is somewhat less clear whether TFP4 allows them to transmit in an acceptable way. This isn’t a problem

³⁰ My use of “entitlement” follows that of Wright (2004). There are others (Christopher Peacocke, Tyler Burge) who use entitlement in a different way. The simplification I mentioned in note 8 is also relevant here.

³¹ Silins (2007, 118) seems to think that this commitment is a cost of Entitlement Conservatism.

for TFP4, however, because it is reasonable to think that *either* TFP4, when combined with Entitlement Conservatism, allows them to transmit in an acceptable way *or* Entitlement Conservatism is false.

Conclusion

I have accomplished three things in this paper. First, I have clarified what transmission and transmission failure are (section 1). Second, I have raised problems for the views of my opponents by pointing out their dubious assumptions (section 2) and by providing a detailed criticism of Wright's account of transmission failure (section 3). Third, I have shown that there is a plausible account of transmission failure that, on at least two views of perceptual justification, allows the Neo-Moorean and Zebra Deductions to transmit in an acceptable way (sections 4 and 5). These accomplishments should be enough to carry the discussion forward.³²

References

- Bergmann, Michael. 2006. *Justification without Awareness*. Oxford: Oxford University Press.
- _____. 2005. "Defeaters and Higher-Level Requirements." *The Philosophical Quarterly* 55: 419-36.
- _____. 2004. "Epistemic Circularity: Malignant and Benign." *Philosophy and Phenomenological Research* 69: 709-27.
- Cling, Andrew D. 2002. "Justification-Affording Circular Arguments." *Philosophical Studies* 111: 252-75.
- Cohen, Stewart. 2005. "Why Basic Knowledge is Easy Knowledge." *Philosophy and Phenomenological Research* 70: 417-30.
- _____. 1999. "Contextualism, Skepticism, and the Structure of Reasons." *Philosophical Perspectives* 13: 57-89.
- Davies, Martin. 2004. "Epistemic Entitlement, Warrant Transmission, and Easy Knowledge." *Aristotelian Society Supplementary Volume* 78: 213-45.
- _____. 2003. "The Problem of Armchair Knowledge." In *New Essays on Semantic Externalism and Self-Knowledge*, edited by Susana Nuccetelli, 23-56. Cambridge, MA: MIT Press.
- _____. 2000. "Externalism and Armchair Knowledge." In *New Essays on the A Priori*, edited by Paul Boghossian and Christopher Peacocke, 384-414. Oxford: Oxford University Press.
- _____. 1998. "Externalism, Architecturalism, and Epistemic Warrant." In Wright, Crispin, C. Smith, and C. Macdonald (eds.). *Knowing Our Own Minds*. Oxford: Oxford University Press, pgs. 321- 361.

³² Michael Bergmann and Stewart Cohen gave especially generous and helpful comments. I also received very helpful comments from Rod Bertolet, E. J. Coffman, Ian Church, Martin Curd, Paul Draper, Marian David, Matthew Lee, Jeff Snapper, and the anonymous referees for *Philosophical Review*. The Purdue Research Foundation and the Center for Philosophy of Religion at the University of Notre Dame provided the financial support which made writing this paper possible. I thank each of these individuals and institutions.

- Dretske, Fred. 2005. "The Case against Closure." In *Contemporary Debates in Epistemology*, edited by Matthias Steup and Ernest Sosa, 13-25. Malden, MA: Blackwell Publishing.
- Korcz, Keith Allen. 2000. "The Causal-Doxastic Theory of the Basing Relation." *Canadian Journal of Philosophy* 30: 525-50.
- Hawthorne, John. 2005. "The Case for Closure." In *Contemporary Debates in Epistemology*, edited by Matthias Steup and Ernest Sosa, 26-42. Malden, MA: Blackwell Publishing.
- _____. 2004. *Knowledge and Lotteries*. Oxford: Oxford University Press.
- Markie, Peter J. "Easy Knowledge." *Philosophy and Phenomenological Research* 70: 406-16.
- McLaughlin, Brian. 2000. "Skepticism, Externalism, and Self-Knowledge." *The Aristotelian Society Supplementary Volume* 74: 93-118.
- Pryor, James. 2004. "What's Wrong with Moore's Argument." *Philosophical Issues* 14: 349-77.
- _____. 2000. "The Skeptic and the Dogmatist." *Nous* 34: 517-49.
- Silins, Nicholas. 2007. "Basic Justification and the Moorean Response to the Skeptic." *Oxford Studies in Epistemology* 2: 108-40.
- _____. 2005. "Transmission Failure Failure." *Philosophical Studies* 126: 71-102.
- Smith, Martin. 2009. "Transmission Failure Explained." *Philosophy and Phenomenological Research* 79: 164-89.
- Tucker, Chris. Forthcoming. "Transmission and Transmission Failure in Epistemology." *Internet Encyclopedia of Philosophy*.
- _____. 2009. "Perceptual Justification and Warrant by Default." *Australasian Journal of Philosophy* 87: 445-63.
- _____. Manuscript a. "Transmission Failure *Not* Explained: A Reply to Martin Smith."
- _____. Manuscript b. "Higher-Level Requirements and Inferential Justification."
- _____. Manuscript c. "Why Open-Minded People Should Endorse Dogmatism."
- White, Roger. 2006. "Problems for Dogmatism." *Philosophical Studies* 131: 525-57.
- Williamson, Timothy. 2000. *Knowledge and Its Limits*. Oxford: Oxford University Press.
- Wright, Crispin. 2008. "The Perils of Dogmatism." In *Themes from G. E. Moore: New Essays in Epistemology and Ethics*, edited by Susana Nuccetelli and Gary Seay, 25-48. Oxford: Oxford University Press.
- _____. 2004. "Warrant for Nothing (and Foundations for Free)?" *Aristotelian Society Supplementary Volume* 78: 167- 212.
- _____. 2003. "Some Reflections on the Acquisition of Warrant by Inference." In *New Essays on Semantic Externalism and Self-Knowledge*, edited by Susana Nuccetelli, 57-78. Cambridge, MA: MIT Press.
- _____. 2002. "(Anti)-Sceptics Simple and Subtle: G. E. Moore and John McDowell." *Philosophy and Phenomenological Research* 65: 330-348.
- _____. 1985. "Facts and Certainty." *Proceedings of the British Academy*, 429-472. Reprinted in *Skepticism* (1993), edited by Michael Williams, 303-346. *Skepticism*. Aldershot: Dartmouth Publishing Company Limited.