Toward a Principle of Instrumental Transmission[1]

roughly 14,800 words, including footnotes

For many philosophers, perhaps most, it is a truism that if there is reason for the end, then there

is, because of that, reason to take the means, or at least means of certain kinds.[2] Whether reasons

for ends derive from our desiring those ends, or whether they derive from their relation to things

of independent value, the apparent truism says, these reasons "transmit" or "transfer" to their

instruments.[3] And since it is plausible that what one ought to do varies with the reason there is

for one to do it,[4] it is natural to expect a similar sort of transmission of "oughts" from ends to

means, or at least means of certain kinds.

 If there is such a phenomenon as instrumental transmission, what principles govern it?

This is the question that I pursue in this paper. After some clarification of our topic in section 1,

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[1] [Identifying note 1]

[2] See, for example, Bedke 2009, Bratman 2009, Darwall 1983 16, 46–48 and 2006, Hubin 1999, Raz 2005a and 2005b, Kolodny 2007 and 2008b, Price 2008 7, 138–139, Schroeder 2009, Setiya 2007, Vranas ms. (who distinguishes it from the kinds of support relevant to the validity of imperative inference), and Way forthcoming. Passages in Scanlon 2004 and Wallace 2006 assume or grant its correctness. Korsgaard 1997 criticizes the idea as it stands, but endorses something in its vicinity. Some may insist that the agent has reason for the means only when the agent has reason for the end *and wills the end*. To my mind, cases such as the aimless teenager of section 6 tell against adding this further condition. But adding it would not change the discussion much. [Identifying note 2]

[3] Some desire-based theorists may deny, against Hubin 1999, that their theory is a combination of a principle of instrumental transmission and the principle that reasons for ends are provided by desires. Instead, they may say, there is just one principle, a principle of, if you will, instrumental transmutation: if one desires the end, then one has reason to take the means. However, much of what the paper says about instrumental transmission applies, mutatis mutandis, to instrumental transmutation. This is particularly clear, if, as seems plausible, the principle of instrumental transmutation is extensionally equivalent to, even if not identical to, the combination of the principle of instrumental transmission and some principle that reasons for ends are provided by desires. One major exception is that the suggestion that instrumental transmission is a myth, in section 12, will hardly surprise or trouble those who accept only instrumental transmutation. They already view instrumental transmission as a kind of myth: an idea that delivers extensionally correct results, but plays no explanatory role.

[4] At very least, one ought to E only if one has more reason for E-ing than against E-ing. I say at bit more about the connections in section 10.

I identify, in sections 2–4, three desiderata for a principle of instrumental transmission: that it transmit reason to means that are (i) probabilizing, (ii) effective, and (iii) nonsuperfluous. In section 5, I formulate a principle, General Transmission, that would meet these desiderata. In section 6, I argue that General Transmission covers more cases, with greater specificity, than alternative transmission principles that have been proposed in the literature. In sections 7–11, I argue, moreover, that these alternatives (apart from one that General Transmission plausibly entails) are incorrect: most notably, Strong Necessity—which says that if one has reason for the end, then one has at least as much reason for the necessary means—and Ought Necessity—that if one ought to pursue the end, then one ought to take the necessary means. In the last section, I raise, and try partly to assuage, a doubt about instrumental transmission itself: that while reasons for means are *correlated* with reasons for ends, reasons for means may not be *explained* by reasons for ends.

1. Preliminaries

This phenomenon of instrumental transmission is easily confused with a different phenomenon, which we might call "instrumental rationality." So let us begin by distinguishing the two. Instrumental *transmission*, as I am understanding it, is a matter of the flow of *reason* from ends to means.[5] By contrast, instrumental *rationality*, as I am understanding it, is a matter of the *coherence of the agent's attitudes*: in particular, of the coherence of an attitude (such as an

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[5] Much of my discussion, however, might also be seen, by someone of a different philosophical bent, as an attempt at a partial articulation of *what it is* for something to be a means to an end in the relevant sense—or in a more Anscombean vein, of the special unity between phases of an unfolding action that allows us to identify one phase as an "end" and another as a "means." Indeed, Anscombe 1957 36 takes two of the three desiderata that I have mentioned as integral to the relation of means to end. She observes that the intention expressed by, "I so P, so that Q," can be "contradicted" either by showing (as I would put it) that P-ing does not probabilize Q-ing—by saying, "But Q won't happen, even if you do P"—or by showing (as I would put it) that P-ing is superfluous for Q-ing—by saying, "But it will happen whether you do P or not."

intention, desire, or normative belief) toward an end, the belief that something is a means to that end, and an appropriate attitude toward that (apparent) means. Reason that one has for some end (e.g., lower blood pressure) can be instrumentally transmitted to some means (e.g., taking this medicine), without one's being instrumentally irrational in refusing to adopt those means. One may not intend the end (e.g., one may not realize that one has high blood pressure), or one may not realize that such and such is a means to it (e.g., one may not know which medicine would reduce one's blood pressure). Conversely, one can be instrumentally irrational in refusing to adopt what one takes to be means to an end that one intends (e.g., voting for this candidate in order to promote a fascist agenda), without any reason being instrumentally transmitted to what one takes to be means. There may be no reason for the end (e.g., the promotion of fascism) to transmit, or what one takes to be means to it may not in fact (or relative to the better information of an advisor or onlooker[6]) be a means to it (e.g., the candidate may be a closet liberal).

As this discussion may already have indicated, I assume that principles of instrumental transmission apply only to intentions and actions. While beliefs, desires, and emotions undoubtedly can have instrumental *benefits*, it is not clear that these are *reasons* for beliefs, desires, or emotions. As I suggest in section 11, it may be harmless to say that a reason for believing *P* is that it is likely that the belief would "bring about the valuable end" of believing *P* when *P* is true. But if this is a kind of instrumental reason for belief, it is highly restricted. It does not entail that it is a reason for believing *P* that it would bring about other valuable ends, even valuable ends constituted by other true beliefs.

Notoriously, 'reason' and 'ought' are used in a variety of ways. It is, after all, perfectly good English to say: "There's a reason why the seasons change," or "The heart ought to pump

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[6] See note 11 and the preceding text.

blood." The use of 'reason' and 'ought' that I take to be involved in instrumental transmission

(or at very least one such use, on which I will focus) is what I will call the "deliberative-

advisory" use. This is the use that characteristically guides the deliberating agent to decision and

that—by extension—is offered in advice, by those who seek to help the deliberating agent reach

a decision. Of course, claims using 'ought' and 'reason' in this way can be made, or assessed, by

parties who are neither deliberating, nor advising. The point is simply that this use is

distinguished that its capacity to play this role in deliberation and advice.

Finally, the truth or falsity of claims about what one has reason, or ought, to do is

plausibly relative to certain features of context, such as a contextually specified time or body of

information.[7] The transmission principles that we will consider should be understood as

applying only within a fixed context.[8] It is no argument against a transmission principle,

therefore, that an occurrence of "There is reason for one to E" is true relative to one context,

which invokes, say, one body of information, whereas an occurrence of "There is not reason for

one to M" is false relative to a different context, which invokes a radically different body of

information.

2. Probabilizing means

With this orientation to our subject matter behind us, I work, in this and the following two

sections, toward a principle of instrumental transmission. I suggest that a principle should

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[7] For a more general discussion of the context dependence of claims about reasons, see Price 2008.

[8] There may be one exception to this. As I discuss in section 10, the truth of occurrences of an 'ought'-sentence may be relative to a contextually specified set of relevant alternative actions. It may be that "There is reason for one to E" is, by default, evaluated relative to one set of alternatives, such as {one E's, one refrains from E-ing}, whereas "There is reason for one to M" is, by default, evaluated relative to another set of alternatives, such as {one M's, one refrains from M-ing}. If this kind of context-shift is standard in moving from claims about reason for the end to claims about reason for the means, then it seems appropriate for transmission principles to accommodate it.

capture three intuitive desiderata: that whether *pro tanto* reason for an end transmits to a (putative) means depends on its being (what I will call) *probabilizing, effective,* and *nonsuperfluous* with respect to that end.

Intuitively, *pro tanto* reason for an end transmits to a means to the extent that it "makes the end probable," or "probabilizes the end," at very least in the following two senses. If there's *no* probability at all, conditional on one's M-ing, that one E's, then *no* reason is transmitted. And, other things equal, if the probability *increases*, then *more* reason is transmitted. It is less clear, however, how this notion of "probabilizing" the end should be extended beyond these two fixed points.

One might first suggest that more reason is transmitted to the extent that M-ing *raises* the probability of E-ing: to the extent that there is a *greater difference* of the probability, conditional on one's M-ing, that one E's *less the probability that one E's*. But this view implies, oddly, that the more likely one is to M, the less reason there is for one to M. This is because the more likely one is to satisfy the condition, M-ing, the more the conditional probability approaches the unconditional probability.

This problem is avoided by a second view, which says that more reason is transmitted to the extent that M-ing *rather than not-M-ing raises* the probability of E-ing: to the extent that there is a *greater difference* of the probability, conditional on one's M-ing, that one E's *less* the probability, conditional on one's *not* M-ing, that one E's. But this view too has odd results. Suppose the only relevant end is keeping the patient alive. Giving drug *A* alone improves the patient's chances of living by 98 percentage points, and giving drug *B* in addition improves them by a further percentage point. The doctor is very likely to give *A*, but very unlikely to give *B* (even if he gives *A*). Intuitively, the doctor has *no less* reason to give both *A* and *B,* which has a

99% chance *exactly* of keeping the patient alive, than to give the patient at least *A*, which has *at most* a 99% chance. However, giving both *A* and *B* rather than not giving both *A* and *B* raises the probability by something approaching only one percentage point, whereas giving at least *A* rather than not giving at least *A* raises the probability by something approaching 98 percentage points. So the current proposal implies, counterintuitively, that the doctor has *less* reason to give both A and B than to give at least A.

The problems with these two construals suggest to me that the relevant notion of "probabilizing" the end is not a comparative one at all: making the end *more* probable than some alternative. So I propose, instead, that *some* of the reason to E is transmitted to M-ing if there is *positive* probability, conditional on M-ing, of E-ing, that *more* of the reason is transmitted as this probability increases, and that *all* of the reason is transmitted if the probability is one. This avoids the two problems with the comparative construals that we just discussed. Being more or less likely to M has no effect on a probability *conditional* on M-ing, so being more likely to M does not reduce one's reason to M. And the probability, conditional on giving A and B, of saving the patient's life, is higher than the probability, conditional on giving at least A, of doing so, so we get the intuitive result.

Admittedly, it may sound odd that to say, when the probability is very small, that one has reason to M. If the end is winning a million-to-one lottery, do I have reason to buy a ticket? But it is crucial to bear in mind, first, that the reason transmitted to the means is only *pro tanto*. It may, and often will, be outweighed; it may well not be the case that I *ought*, or have *conclusive* reason, to take the means, and it may well be the case that I ought not, or have conclusive reason not, to take the means. Second, while it can sound odd to say that one has reason to do something when this reason is very weak, or vastly outweighed, there is a plausible pragmatic

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explanation of this. As Schroeder 2004, 2005, and 2007 observes, it is a violation of the Maxim of Relation of Grice 1989 to say that there is a reason, when, as one knows, it is very weak or vastly outweighed. So long as one bears this in mind, it does seem true that one has *some* reason to buy a ticket. At least *this* much can be *said for* doing so, whatever else can be said against it: there is *some* chance, if one does, of winning a lot of money as a result.[9]

How should we understand this conditional probability? I suggest that we understand it as the proportion of the "relevant" worlds at which one M's where one E's. This is oversimplified in several ways; for example, it requires the set of relevant worlds to be finite. But it should suffice for the points that I want to make.

What are the "relevant" worlds? For the most part, I want to be open minded about this. The set of relevant worlds could be: (i) the epistemically possible worlds—not ruled out the relevant body of information, (ii) the historically possible worlds—not ruled out by the history of the actual world up until the relevant time, or (iii) the worlds at which one M's that are closest to the actual world (in which case the probabilities will often be zero or one).[10] I should stress that, with epistemic framework (which I personally favor), the relevant body of information *need not*

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[9] It may also sound odd to say, as our account sometimes implies, that there is reason to take means that *lower* the probability of the end relative either to the status quo or to not taking the means. For example, birth control pills increase the risk of thrombosis. So there is positive probability, conditional on refraining from taking the pill, of avoiding thrombosis. But this conditional probability may be lower than both the unconditional probability of avoiding thrombosis and the probability of avoiding thrombosis conditional on not refraining from taking the pill. This is because taking the pill avoids pregnancy, and pregnancy itself increases to a greater degree the risk of thrombosis. Again, however, the implication that some reason transmits to refraining from taking the pill should not seem so odd on reflection. One does have some reason, as far as avoiding thrombosis is concerned, to refrain from taking the pill: namely, that it avoids possible cases of (pill-induced) thrombosis. But one has *even more* reason, as far as avoiding thrombosis is concerned, to *take* the pill: namely, that it avoids even more numerous possible cases of (pregnancy-induced) thrombosis.

[10] Why not also: (iv) the actual world alone? That would mean that reason transmits to M-ing only if one actually does M. Otherwise the probability is not positive (because undefined). But it seems that one can have reason to M even though one does not M.

be that of the agent at the time of acting. It may be instead the information, for example, of an *advisor*, or an *onlooker* (as a limiting case, an omniscient observer). More generally, it will be contextually specified.[11]

3. Effective means

However, more must be true of a (relevant) world, in order for that world to count in the numerator of the conditional probability, than that one E's there. One other thing that must be true is that one's M-ing is *effective* with respect to one's E-ing: that one's M-ing *helps to bring about* or *to make it the case* that one E's. Suppose a boxer's end is landing a punch. Whenever he decides to throw a punch, he "telegraphs" his intention with a conspicuous facial twitch. In some of the relevant worlds, in spite of inadvertently warning his opponent, he connects. The probability that he connects conditional on telegraphing is positive. But it doesn't seem that any reason transmits to telegraphing. This is because in none of the relevant worlds at which he connects does telegraphing help to bring it about. Rather telegraphing is merely a by-product of something—deciding to throw the punch—that does help to bring it about. By "helping to bring about" I have in mind not simply *causing*, but also *constituting*, *satisfying preconditions of*, as well as *helping* to cause, constitute, or satisfy preconditions of. And there may be still other ways of helping to bring about an end. But for our purposes, we need not fully analyze the relation of helping to bring about. We only need to say enough about when putative means do and do not help to bring about ends— for example, that means that help to cause the end help to bring it about—to evaluate candidate principles of instrumental transmission.

4. Nonsuperfluous means

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[11] As for the question of *how* context determines the relevant body of information, I favor the view of Kolodny and MacFarlane ms., that the truth of an occurrence of an 'ought'-sentence depends on the information relevant at a context of *assessment*: to a first approximation, the information of the person—agent, advisor, onlooker, etc.—who is considering the occurrence.

However, yet something more must be true of a world, in addition to one's E-ing and to one's M-ing helping to bring about one's E-ing, in order for it to count in the numerator of the relevant probability. Suppose the end is relieving the patient's pain. Drug 1 alone will do this for sure, as will Drug 2 alone. Moreover, if both are given, they at first neutralize one another, but then combine in the patient's bloodstream to become Drug 3, which also relieves the patient's pain for sure. Dr. Twoways is sure to give the patient Drug 1; in every relevant world, she does so. Dr. Oneway is sure not to give Drug 1. Intuitively, Dr. Twoways has no reason to give the patient Drug 2—or at very least less reason than Dr. Oneway has to give Drug 2. But what we have said so far does not explain this. For both of them, the probability, conditional on giving Drug 2, that the pain is relieved and that giving Drug 2 helps to bring this about, is *one*. At every world at which they give Drug 2, their doing so *helps to cause* the relief of pain. After all, at every such world, Drug 3 is the proximate cause of the relief of pain, and the presence of Drug 3 is a causal consequence of having administered Drug 2.

The difference is that for Twoways, in every relevant world in which Drug 2 helps to bring it about that the pain is relieved, Drug 2 brings this about *superfluously*, whereas for Oneway, in *no* relevant world in which Drug 2 helps to bring it about that the pain is relieved does Drug 2 do so superfluously. This suggests that a world counts in the numerator of the probability only if one's M-ing not only helps to bring about one's E-ing, *but also does it nonsuperfluously*, at that world.

Defining the relevant sense of "superfluity" is not easy. A necessary condition of one's M-ing helping to bring about one's E-ing in a superfluous way at a world is that the counterfactual is true, at that world, that *if one had not M-ed, one would still have E-ed*. But this is not a sufficient condition. Suppose that in every relevant world in which I enter by the front

door (and so not by the back door), it is true that if I had not entered by the front door, I would have entered by the back door, and vice-versa. If the above necessary condition were sufficient, then no reason would transmit to entering by the front door and that no reason would transmit to entering by the back door, even though I have reason to enter and even though (entering either by the front or by the back) is necessary and sufficient for entering.

The crucial difference between entering by the front door, which is not superfluous at any relevant world, and Twoways's giving drug 2, which is superfluous at every relevant world, seems to be this. At every world at which I enter by the front door, I do *not also* enter by the back door, whereas at every world at which Twoways gives Drug 2, Twoways *also* gives gives Drug 1. Hence, we might say that M-ing is superfluous toward E-ing at world just when at that world *both* (1) if one had not M-ed, one would still have E-ed and (2) for some M*:

> (i) one M*'s and one's M*-ing helps to bring about one's E-ing,
>
> (ii) if one (had not M-ed but had still M*-ed), then (one would still have E-ed and one's M*-ing would still have helped to have brought about one's E-ing), and
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> (iii) it is metaphysically possible that one (M's and does not M*).

This condition is fulfilled for Drug 2 as M, with Drug 1 serving as the relevant M*. But this condition is not fulfilled for front door as M, with back door serving as the relevant M*. At no world at which one enters by the front does one also enter by the back, so (i) fails. Now, it might still seem that we could show that entering by the front door is superfluous by citing as the relevant M* *either* entering by the back door *or* entering by the front door (or, alternatively, by citing E, i.e., entering, as the relevant M*). At every world at which one enters by the front, one (enters either by the front or by the back)—this satisfies (i)—and (entering either by the front or by the back) suffices, even without entering by the front, to bring about entering—this satisfies

(ii). But this choice of *M** is ruled out by condition (iii). It is not metaphysically possible that one enters by the front door but does not enter either by the front or by the back.[12] I am not sure whether this is a fully adequate account of the notion of superfluity. But, again, for our purposes such an account is not needed. We need only to say enough about when means are and are not superfluous—for example, that if one would not have E-ed even if one had not M-ed, then M-ing is not superfluous to E-ing—to be able to evaluate candidate principles of instrumental transmission.

5. General Transmission

Putting these suggestions together, we have the following basic structure:

> *General Transmission*: If there is reason for one to *E*, and there is positive probability, conditional on one's M-ing, that (one *E*'s and one's *M*-ing helps to bring about one's *E*-ing in a nonsuperflous way), there is reason for one to *M*, more reason the higher this probability, and at least as much reason as there is for one to *E* if the probability is one.

Some may worry about the intelligibility of speaking of a conditional probability of something's helping to bring something else about in a nonsuperfluous way. For this is often to speak, in effect, of a conditional probability of certain counterfactual and causal states of affairs. But suppose that we can say, of any given relevant world, whether the relevant counterfactual or causal claim is true: say, by considering the worlds surrounding it. And suppose that we understand conditional probability in the way I have suggested. Then the conditional probability invoked by General Transmission is perfectly intelligible. We calculate it, so to speak, by

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[12] Why does (iii) invoke metaphysical, rather than historical or epistemic possibility? Because, in the drug case, it is not historically or epistemically possible that Twoways *M*'s (i.e., gives Drug 2) but does not *M** (i.e., give Drug 1). If (iii) were put in terms of historical or epistemic possibility, reason would transmit to giving Drug 2.

counting the worlds, in the set of relevant worlds at which one M's, at which the relevant causal or counterfactual claims are true.

Our first task is to consider some possible refinements to this basic structure, at least some of which I am inclined to adopt. To introduce the first refinement, consider a problem explored by Millsap ms. a (who credits it to Kenny Easwaran) and Bedke 2009 679 n. 12 (who credits it to Jamie Dreier). In Millsap's example, Kenny has reason to prepare a display on the life of Marie Antoinette, which requires that he bake a cake and a loaf of bread. We can assume that there's a positive probability, conditional on baking a cake, that he prepares the display and that his baking the cake helps to bring this about in a nonsuperfluous way. So General Transmission implies that Kenny has reason to bake a loaf of bread. We can also assume that there's positive probability, conditional on baking a mega-loaf, which uses all of the available flour, that he bakes a loaf of bread and that baking a mega-loaf helps to bring this about in a nonsuperfluous way. So General Transmission implies that Kenny has reason to bake a mega-loaf. But baking a mega-loaf prevents Kenny from baking a cake, and so prevents him from preparing the display—which was the point of baking a loaf in the first place. A reason to do something has led to a reason to prevent himself from doing it.

The problem here, one wants to say, is that Kenny does not have reason to bake a loaf, period. Instead, he has a reason to bake a loaf *in a way that helps him to achieve the end of preparing the display*. And baking a mega-loaf, while a means to baking a loaf, is not a means to *that*: to baking a loaf in a way that helps Kenny achieve the end of preparing the display. In other words, reason for a means to a means is transmitted directly from the "ultimate" end, not from the means to which it is a means. Hence, the first refinement, that General Transmission should begin as:

If there is reason for one to *E that is not explained by an application of General Transmission to reason for some distinct E'…*[13]

The case for a second refinement is clearest within the epistemic framework. Consider a case from Parfit ms.: I know that ten miners are trapped either in Shaft *A* or in Shaft *B*, with floodwaters rising. If I block off *A*, then I save all ten if they are in *A*, but none if they are in *B*. If I block off *B*, then I save all ten if they are in *B*, but none if they are in *A*. If I block neither, letting the water run evenly into both shafts, then, for certain, I save nine, no matter where they are, but the tenth, lowest in the shaft, drowns. Plausibly, I have *most reason* to save nine (but only nine) for sure.

Do I *also* have reason to save all ten? That seems the wrong thing to say. If I did, then wouldn't I, perversely, have *less* reason to save all ten than I have to save only nine, since saving only nine is what I have *most* reason to do? The right thing to say, it seems, is that I don't have reason, in the present circumstances, to save all ten, because saving all ten is not "available" to me.

Why isn't it available to me? The problem isn't physical. It is not that I *can't* save all ten. Either they are in *A* or they are in *B*. If they are in *A*, then blocking *A*, which I can do, saves all ten. If they are in *B*, then blocking *B*, which I can do, saves all ten. Either way, I can save all ten. The problem is instead epistemic. It's not quite that there is nothing that I can do such that, under some description, I know that it will save all ten. As we have seen, I can save all ten, and I know that, tautologously, saving all ten will save all ten. It's rather that there is nothing that I can do such that, under some description, I *knowingly* do it and know that it will save all ten. I

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[13] Bedke opts for more or less the same solution. Millsap's solution differs. It is worth noting that, if we add this "intransitivity" restriction, then we need not worry about the problem of "explosion"—that if there is reason for something, then there is reason for anything—that Millsap ms. b notes is a consequence of certain transmission principles.

can't *knowingly* save all ten, as such. I can knowingly block *A*, but it is possible that this will not save all ten. And I can knowingly block *B*, but it is possible that this will not save all ten. This suggests the following constraint:

> There is reason for one to *E* only if *E*-ing is available to one: that is, only if there is some action denoted by '*X*' such that it is epistemically possible that (one *X*'s and knows that one *X*'s) and it is epistemically necessary that (one *X*'s ⊃ one *E*'s).[14]

All the same, I surely have *some* reason to block one shaft—there is *something* to be said for it—even if, on balance, there is *more* to be said in favor of blocking neither. What there is to be said for it is that it raises (from zero) the probability of saving all ten—even if this is outweighed by lowering (from one) the probability of saving at least nine. Thus, we have a case in which:

(i)   one does not have reason to *E* (i.e., save all ten), but

(ii)   there is reason to *M* (i.e., block one shaft) because there is positive probability, conditional on one's M-ing, that one *E*'s and one's *M*-ing helps to bring it about in a nonsuperfluous way.

Condition (i) means that General Transmission does not explain my reason to *M*. But condition (ii) suggests that it should explain this reason. After all, this case seems continuous with the phenomenon of instrumental transmission that we have been discussing. This argues in favor of changing General Transmission to begin:

> If there is reason for one to *E*, *or if it is possible that one E's and there would be reason for one to E, if E-ing were available to one,*...

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[14] Compare Kolodny and MacFarlane forthcoming. Keep in mind that the information relative to which the epistemic possibility and necessity are determined need not be the information of the agent.

The final possible refinement may seem to be called for by a "silencing" objection that has been brought against other transmission principles.[15] Suppose the end is slightly improving college policy, which, at least at first glance, is something that I have reason to do. The only roadblock is the kindly old don who is sure to veto any proposed change. Suppose there's a positive probability, conditional on poisoning the don, that I change college policy and poisoning the don helps to bring this about in a nonsuperfluous way. General Transmission implies that I *some* reason to poison the don—although obviously overridden by the reasons against doing so. But some will say that I don't even have overridden reason for the means; reason for the means is "silenced."

This would seem to argue for a third refinement: namely, to append at the end of General Transmission:

> *... so long as the reason against one's M-ing is not sufficiently more weighty than the reason that there is, or would otherwise be, for one's M-ing.*

However, I am not convinced that this refinement is necessary. I grant that it is odd to say that there is reason to poison the don. And I grant that a fully virtuous agent would not *treat* the improvement to college policy as a reason for poisoning the don. That thought would not even arise in his deliberations.[16] But I doubt that we should conclude from these observations that there is no such reason.[17]

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[15] See Setiya 2005, Broome 2005.

[16] See McDowell 1998a, b, and c; Price 2008 12 n. 9, 184 n. 72; and Setiya 2005.

[17] I am not here questioning the "particularist" idea that a consideration that is a reason in one context may not be a reason in another. For example, that something would bring one pleasure is often a reason to do it, but not when the something is causing an innocent to suffer. I am only questioning the claim that *within a fixed context*, there might be reason for the end without reason for probabilizing, effective, nonsuperfluous means.

As Millsap ms. a, Raz 2005b 3, and Bedke 2009 684–686, observe, Schroeder's pragmatic point (discussed in section 2) seems to explain why it is odd to *say*. And, to entertain the thought, at least in the context of a live deliberation, does indeed indicate a vice.[18] (Doesn't it go without saying, or thinking, that the agent shouldn't kill the don, in which case entertaining thoughts about the reason for doing so is idle? So why is he entertaining thoughts about them? Is the verdict somehow not obvious to him? Or is he somehow tempted to defy it?) But the viciousness of entertaining the thought is compatible with its truth. It similarly indicates a vice of one kind to entertain lascivious but true thoughts, during wedding vows, that sex with the officiant would be pleasurable, and a vice of another kind to entertain distracting but true thoughts, during oral argument, that it is time to treat oneself to a new judicial robe.

So, in sum we have:

General Transmission: If there is reason for one to *E*, or if it is possible that one *E's* and there would be reason for one to *E,* if *E*-ing were available to one, where this reason is not explained by an application of General Transmission to reason for some distinct *E'*, and there is positive probability, conditional on one's *M*-ing, that (one *E*'s and one's *M*-ing helps to bring about one's *E*-ing in a nonsuperflous way), there is reason for one to *M*, more reason the higher this probability, and at least as much reason as there is for one to *E* if the probability is one [so long as the reason against one's *M*-ing is not sufficiently more weighty than the reason that there is, or would otherwise be, for one's *M*-ing].

As I have said, the final, bracketed clause seems to me optional.

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[18] It is worth noting that McDowell sometimes characterizes silencing in this way: in terms of the virtuous agent's not *treating* the consideration as a reason instead of in terms of its not *being* a reason. Of course, on some views (and perhaps McDowell's own), there is little or no difference between the two; a reason just is a consideration that a virtuous agent would treat in a certain way.

6. Comparison with other principles

I turn now to comparing General Transmission with other transmission principles that appear in the literature. Several philosophers seem to endorse what I will call:

> *Strong Necessity*: If there is reason for one to E, and M-ing is a *necessary* means to E-ing, then there is *at least as much* reason for one to M.[19]

This would also commit them to:

> *Weak Necessity*: If there is reason for one to E, and M-ing is a *necessary* means to E-ing, then there is *some* reason for one to M.

Some of the same philosophers, as well as others who are uncommitted to Strong Necessity, accept:

> *Ought Necessity*: If one ought to E, and M-ing is a *necessary* means to E-ing, then one ought to M.[20]

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[19] "Reasons for me to make something my end are, owing to the hypothetical imperative, equally reasons for me to take the necessary means to it" (Darwall 1983, 16). "If one has conclusive reason to believe that one will *E* only if one *F*s, then one has reason to *F* that is at least as strong as one's reason to *E*" (Kolodny 2007, 251). "If *X* has an objective reason to do *A* and to do *A X* must do *B*, then *X* has an objective reason to do *B* of equal weight to *X*'s objective reason to do *A*" (Schroeder 2009, 245). "If *R* is a practical reason in favor of *X*, *X* is attainable by the agent, and *M* is a necessary means to or necessary constitutive element of *X*, then *R* is a practical reason in favor of *M*" (Bratman 2009, 424). "If you have a reason to do *A* and doing *B* is a necessary means to doing *A*, you have a reason to do *B* which is at least as strong as your reason to do *A*" (Way forthcoming, ms. 21). See also Millsap ms a.

[20] "If you should do *E*, all things considered, and doing *M* is a necessary means to doing *E*, you should do *M*, all things considered" (Setiya 2007, 660). "If *X* objectively ought to do *A*, and to do *A X* must do *B*, it follows that *X* objectively ought to do *B*" (Schroeder 2009, 239). One might think that the "end-relative" account of 'ought' presented by Finlay 2009 and forthcoming is also committed to Ought Necessity, since that account implies that, whatever else one ought to do in a given context, one ought to take necessary means to the "end" specified by that context. However, what is substituted for E in Ought Necessity need not be this contextually specified end itself. If the contextually specified end is, say, maximizing expected value (see Finlay 2009 326 n. 26), then it might be the case for Unlucky, discussed below, that he ought to get a Ph.D. (=E), but not the case that he ought to take the necessary means of applying to graduate school.

There has also been discussion, although more limited, of analogous principles—Strong Sufficiency, Weak Sufficiency, and Ought Sufficiency—which substitute "sufficient means" for "necessary means."[21]

In the most developed treatment of instrumental transmission, to which I am deeply indebted, Raz 2005a avoids endorsement of any of the Necessity principles, which are otherwise so popular.[22] Instead, he puts forward the:

> *Facilitative Principle*: When we have an undefeated reason to take an action, we have reason to perform any one (but only one) of the possible (for us) alternative plans that facilitate its performance (Raz 2005a, 6),

and what I will label the:

> *Steps Principle*: we have only conditional reason to take [steps within a plan], the condition being that we have adopted and are pursuing the plan (and that it is still reasonably likely to facilitate what it is meant to facilitate) (2005a 6).

One advantage of General Transmission over the alternative principles mentioned so far is that it covers kinds of means that these principles do not address. Suppose an aimless teenager has not adopted any plan that contains taking the SAT as a step. Nevertheless, a parent may know that an aimless teenager has reason to take the SAT exam as a means to a college education (perhaps partly because the parent knows that, in time, the teenager will begin to take his future seriously and take other steps, such as filling out application forms). While there is reason for the teenager to take the SAT, it is neither a necessary means (the ACT is another

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[21] Way forthcoming 20 and Bedke 2009 687 n. 10 endorse Weak Sufficiency. The "logic of satisfactoriness" of Kenny 1966 validates an analogue of Ought Sufficiency for "fiats," which are something like expressions of intention (and so "verdictive" or "all things considered" in the way that 'ought'-judgments are).

[22] The closest he comes is, in Raz 2005b 9, to allow that the fact that means are necessary may affect the "stringency" of the reasons transmitted to them.

option), nor a sufficient means, nor a step within an adopted plan. And it doesn't seem to be

what Raz means by "facilitating plan." For one thing, if taking the SAT did count as a

facilitating plan toward the end of getting a college education, then other partial means, such as

mailing in the application, would also count as facilitating plans to that end. But then the "but

only one" restriction of the Facilitative Principle would imply that the teenager does not have

reason (at least as far as getting a college education is concerned) to both take the SAT and mail

the application. By contrast, General Transmission explains this reason, on the assumption that

there is a positive probability that, conditional on taking the SAT, the teenager goes to college

and his taking the SAT helps to bring this about in a nonsuperfluous way. And if we don't

assume this, then it is no longer clear that he does have reason to take the SAT.

A more recent alternative, Bedke's 2009 678 "Instrumental Principle":

One has reason to take the means to what one has ultimate reason to do,

does cover means such as the teenager's taking the SAT. However, it is silent on how much

reason is transmitted. Schroeder's 2009 246 "General Reason Transmit":

If X has… reason to do A and X's doing B would facilitate her doing A, then X has…

reason to do B of weight at least proportional to X's… reason to do A, and to how well

her doing B would facilitate her doing A,

says more on this front. But this principle leaves it largely open how "how well" is to be

understood. Schroeder himself seems to favor an understanding that would make Strong

Necessity a special case of General Reason Transmit. In any event, General Transmission can be

seen as a proposing an alternative understanding of "how well": a different way of fleshing out

Schroeder's basic idea.

7. Sufficiency Principles, the Facilitative Principle, and problems with superfluity

Another advantage of General Transmission, which will occupy us in this and the next two sections, is that all but one of these alternatives seem subject to counterexamples that General Transmission avoids. The Sufficiency Principles, the Facilitative Principle, and the Instrumental Principle have difficulties with *superfluity*. Ought Necessity, Strong Necessity, and General Reason Transmit have difficulties with necessary means that *fail to probabilize the end sufficiently*. Ought Necessity and Ought Sufficiency have further trouble with *costly means*. Only Weak Necessity survives, at least on a plausible assumption. But friends of General Transmission can welcome this. Given this assumption, Weak Necessity is entailed by General Transmission.

Beginning, then, with the Sufficiency principles, we need to specify what a "sufficient means" is. The most natural interpretation is that one's M-ing is a *sufficient* means to one's E-ing iff (i) at *every* relevant world at which one M's, one E's and one's M-ing helps to bring this about, and (ii) there is *some* relevant world at which one M's. (This second conjunct, (ii), is there to avoid the result that anything that one does at no relevant world is trivially sufficient means to any given end.) In the epistemic framework, for example, M-ing would be a sufficient means to E-ing iff there is some epistemically possible world where one M's, and at every epistemically possible world where one M's, one E's and one's M-ing helps to bring this about. In the closest-to-the-actual-world framework, to take another example, M-ing would be a sufficient means to E-ing iff there is some world at which one M's and at all the closest worlds to the actual world at which one M's, one E's and one's M-ing helps to bring this about.

The problem with Weak Sufficiency is that a sufficient means can still be superfluous at every relevant world at which it is taken. This is, recall, what happens with Dr. Twoways. For Twoways no less than Oneway, Drug 2 is a sufficient means to relieving the patient's pain. So,

according to Weak Sufficiency, and the Instrumental Principle insofar as it entails Weak

Sufficiency, Twoways does have reason to give Drug 2. However, for Twoways, unlike

Oneway, Drug 2 is superfluous toward the end of relieving pain in *every* relevant world where

she gives Drug 2. So intuitively Twoways has no reason to give Drug 2 (at least not as far as this

end is concerned). It seems even clearer that Twoways has *less reason* than Oneway—which

tells against Strong Sufficiency—and that while Twoways *ought* to relieve the patient's pain (as

she will do by giving Drug 1), it is *not* the case that she ought to give Drug 2—which tells

against Ought Sufficiency.

It may be a concern with superfluity that lies behind the "but only one" restriction in

Raz's Facilitative Principle. The restriction, it seems, can be understood in two ways. We might

first read it as saying that if A and B are each facilitating plans, no reason is transmitted to the

conjunction of A and B. But this seems implausible. Suppose giving medicine A will relieve the

patient's pain, giving medicine B will relieve the patient's pain, and, since there are no

interactions between A and B, giving both medicines simultaneously will also relieve the

patient's pain. It seems to me that reason to relieve the patient's pain transmits to giving both A

and B. There is this much to be said for doing so: if one does it, then doing it will bring it about

that the patient's pain is relieved. Of course, there is more to be said *against* giving both

medicines than there is to be said against giving *exactly one* medicine. Giving both uses up more

medicine than giving exactly one. But that is a different question.

So I understand the restriction in a different way: if at all relevant worlds, one takes some

facilitating plan A (perhaps because one has, as one knows, already taken it), then no reason is

transmitted to taking a second facilitating plan B. This restriction certainly makes sense if, when

this condition is met, taking B is superfluous. And if by "facilitating plan" Raz *had* meant

"sufficient means," then, when this condition is met, taking B *would* be superfluous. However, Raz writes that the Facilitative Principle is only "roughly speaking" about sufficient means to an end or "what we may crudely and inaccurately describe as means sufficient for its realization" (2005b 9). But if A is not sufficient, then, unless more is said about what a facilitating plan is, B need not be superfluous. It might be a failsafe, in case the A doesn't come to fruition. Intuitively, in such a case, it seems that at least some reason to take B is transmitted from the end. So, unless more is said about what a facilitating plan is, the "but only one" restriction seems too strong.

It might be replied that by "facilitating plan" Raz means an *unimprovable* means. Unimprovable means need not be *sufficient*; they may fail to achieve the end. But they fail to achieve the end *only when this couldn't have been helped*: only when taking additional means would not have achieved it either. (This would explain why taking the SAT doesn't count as a facilitating plan; it can be "improved" by also mailing in the application.) More rigorously, a means, M-ing, to E is *unimprovable* iff there is *no* distinct means M^* such that if one M's at every relevant world, there is some relevant world at which one E's and one's M^*-ing helps to bring about one's E-ing in a nonsuperfluous way. This would validate the "but only one" restriction. If one is sure to take an unimprovable means, then *any* further (putative) means are (at best) superfluous at every relevant world.

The problem is that if facilitative plans are identified with unimprovable means, then the Facilitative Principle transmits reason to facilitating plans that are superfluous. Suppose that, at all relevant worlds, one takes some means, M^*-ing, that is improvable and so not a facilitating plan. M^*-ing makes taking some further means, M-ing, which *is* unimprovable and so a facilitating plan, superfluous at every relevant world. If one additionally M's, one will still be

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taking only one facilitative plan overall. So the Facilitative Principle allows reason to transmit to additionally M-ing, even though it is superfluous at every relevant world.

For an illustration, suppose that at every relevant world, one gives the patient Drug *A* (our M*). Drug *A* will cure the patient if the patient has Disease 1, as is likely. However, administering Drug *A* is not unimprovable, and so not a facilitating plan. If one additionally gives the patient Drug *B*, this will not interfere with the effect of Drug *A* and will cure the patient on the off chance that the patient has Disease 2. If one additionally gives the patient Drug *C* (our M), this will combine with Drug *A* to make Drug *D*, which has exactly the same effect as Drug *A*. However, giving Drug *C* is unimprovable, let us suppose, since it precludes Drug *B* from having any effect. So giving Drug C is a facilitating plan. According to the Facilitative Principle, under the present interpretation, one has reason to give Drug C, in addition to A. But this seems wrong, since giving Drug C is superfluous at every relevant world.

At this point, someone might protest that these counterexamples succeed only by misinterpreting what others have meant by "sufficient means" or "facilitating plan." By "sufficient means," what was implicitly meant was (what I would call) "nonsuperfluous sufficient means." By "facilitating plan," what was meant was "nonsuperfluous unimprovable means." That's fine by me. My aim isn't to show that anyone's *implicit* view was mistaken. It is rather to make *explicit* what such principles would have to say and to show that, once the required qualifications are made explicit (e.g., once we restrict Weak Sufficiency to nonsuperfluous means), the principles can be seen to be special cases of General Transmission. Indeed, if one wants to say that General Transmission just elaborates the animating idea of Raz's Facilitative Principle, in particular, I certainly have no objection. (As a matter of intellectual autobiography, that's more or less how the paper was originally conceived.)

8. Necessity Principles and problems with probabilization

Let us turn now to the Necessity Principles. By analogy to the definition of "sufficient means,"

let me being by understanding one's M-ing to be a *necessary* means to one's E-ing iff (i) at *every*

relevant world at which one E's, one M's and one's M-ing helps to bring about one's E-ing and

(ii) there is *some* relevant world at which one E's.

The problem for Strong Necessity is that necessary means may not probabilize the end

sufficiently. Let's begin with Lucky and Unlucky, both of whom have the same reason to get a

Ph.D. A necessary means is to apply to graduate school. There are no side-benefits to accepting;

the only reason to accept, if there is any, transmits from the reason to get a Ph.D. However, in

Lucky's universe, there is little competition, so he is extremely likely to be admitted, if he

applies. In Unlucky's universe, by contrast, there is fierce competition, so he is extremely

unlikely to be admitted, even if he applies. It seems that Lucky has more reason to apply than

Unlucky has. To bring this out, imagine that each has to pay the same application fee. If the fee

is high enough, but not too high, then we might advise Unlucky, but not Lucky, that he ought not

to apply. Given that they both have the same reason against applying, it is hard to see what else

would explain this difference in what they ought to do, if not that Unlucky has less reason than

Lucky to apply. According to Strong Necessity, however, each should have the same reason:

namely, as much reason as there is to get a Ph.D.

A natural, if somewhat inchoate, worry is that Lucky and Unlucky don't have reason to

get a Ph.D, strictly speaking, because it somehow isn't yet "up to them." After all, the

admissions committee still has to weigh in on the matter. One way of articulating the worry

would be to say that they only have reason for a conditional end: to get a Ph.D. *if admitted*. But

applying seems a necessary means to *that* too, since it is unclear how one can *succeed* (in getting

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a Ph.D. if admitted) if one does not apply. One might say that a means to (getting a Ph.D. if admitted) just is a means to avoiding *failing* in (getting a Ph.D. if admitted). And applying is not a necessary means to that. But this seems the wrong thing to say. For it implies that *not* applying is a *sufficient* means to the end in question.

There is a more forceful way of expressing the worry, however, which is at our disposal within at least the epistemic framework. In the given context, getting a Ph.D. is not *available* to Lucky and Unlucky in the sense of section 5: there's nothing that they can knowingly do that is certain (given, e.g., what we who are assessing their situation know) to bring it about. Of course, I think that we should broaden our transmission principles to allow transmission from ends for which we would have reason if they were available. (After all, why else do Lucky and Unlucky have reason to apply if not in service of the end of getting a Ph.D.?) Nevertheless, this is not a counterexample to Strong Necessity as it stands, since Strong Necessity speaks only of reasons in the given context, not of reasons that we would have in another context, where certain other options were available to us.

Another counterexample, however, avoids this problem. Take Professor Procrastinate, a character from Jackson 1985 and Jackson and Pargetter 1986. He and Professor Dispatch have equally strong reason to review a book. A necessary means to this is accepting the commission to review it. Reviewing the book is available to both: they only need to accept the commission and then to write the review. The problem is that while Dispatch is sure to write the review, if he accepts, Procrastinate is extremely unlikely to write the review, if he accepts. According to Strong Necessity, Dispatch and Procrastinate have the same reason to accept: namely, as much reason as they have to write the review. (Assume, as before, that there are no side-benefits to accepting.) But intuitively Dispatch has more reason to accept than Procrastinate has. Note that

this is not to say that the reason to do something depends on how likely one is to do *that very thing* (a claim that we found unacceptable in section 2). It is rather to say, as seems to me undeniable, that one's reason to do something depends on *what else* is likely to happen, where that what else is something brought about by, or even consists in, *other things* that one does.

"Procrastinate *actually* has just as much reason to accept," one might object. "It just sounds *odd* to say that he has just as much reason as Dispatch *to* accept, because Procrastinate has so much more reason than Dispatch *against* accepting—just as it seems odd to say that one has reason to kill the don, because one has so much reason against doing so. Suppose Procrastinate's accepting prevents someone else from writing the review. So—if you like—there is positive probability, conditional on Procrastinate's accepting, that his doing so brings it about nonsuperfluously that *no one* writes the review. That certainly seems like a reason *against* accepting. By contrast, the comparable probability is lower for Dispatch, since even though his accepting also prevents someone else from writing the review, Dispatch is so likely, if he accepts, to write the review himself. So Procrastinate has much more reason against accepting than Dispatch has." To control for this, consider a case in which accepting but not writing would *not* prevent anyone else from writing the review. Imagine that Procrastinate and Dispatch inhabit different universes in which each is the only qualified reviewer, so that no one else will review the book if he doesn't. More generally, imagine that the *only* reason *against* accepting is the cost of replying to the review editor (who has written, "You only need to reply if you accept"). *This* cost is not affected by the probability of writing. So both Procrastinate and Dispatch have the same reason against accepting, since apart from the probability of writing, their situations are identical. Hence, the pragmatic explanation no longer applies. All the same, it still seems that Procrastinate has less reason to accept. If the cost of replying were high

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enough, but not too high, then we would advise Procrastinate, but not Dispatch, that he ought not accept.

This argument also tells against Schroeder's General Reason Transmit, at least if it is understood so as to entail Strong Necessity. And a similar objection tells against Ought Necessity. We only need to suppose that Procrastinate's reasons to write the review are strong enough to make it the case that he ought to write, but the probability of writing if he accepts low enough and cost of replying high enough that it is not the case that he ought to accept.[23] Of course, this does not mean that, when Procrastinate does not accept, we cannot criticize him. We can criticize him for having the vice of procrastination. Moreover, we can even criticize him for failing to do something that he *ought* to do: namely, for failing *both* to accept and to write. All that is compatible with the answer to the question, "Ought I to *accept*?" being "No."

No such low-probabilization objection, however, touches Weak Necessity. According to our definition of "necessary means," accepting is a necessary means only if there are some relevant worlds in which Procrastinate writes. Again according to our definition, these worlds will also be ones where Procrastinate accepts and his accepting helps to bring about his writing. Hence, there is positive probability, conditional on accepting, that Procrastinate writes and accepting helps to bring this about. Unless his accepting is superfluous at all these worlds, this seems enough to make it true that Procrastinate has *some* reason to accept, which is all Weak Necessity claims. And his accepting is not superfluous at any of these worlds, at least not if we make the following assumption: that for every relevant world, the closest worlds at which one does not M are themselves relevant worlds. Then at every relevant world at which Procrastinate writes and accepts and his accepting helps to bring it about that he writes, it is true that, if he had

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[23] Way forthcoming 22 n. 32 reports a similar objection to Ought Necessity from John Broome.

not accepted, he would not have written. (Take such a world, W. By our assumption, the closest worlds to W at which Procrastinate does not accept are themselves relevant worlds. So, since accepting is a necessary means, they are worlds at which if Procrastinate does not accept, he does not write. So it is true at W that if he had not accepted, he would not have written.) But, as we noted in section 4, Procrastinate's accepting is superfluous only if he would have written even if he had not accepted. Hence, at every relevant world at which Procrastinate writes and accepts and his accepting helps to bring it about that he writes, his accepting does so nonsuperfluously. In sum, given our definition of "necessary means" and our assumption, Weak Necessity survives the objections to the other principles.

Yet this is what we should expect. Given our definition of "necessary means" and our assumption, Weak Necessity is *entailed* by General Transmission. As we in effect have just seen, that definition and assumption entail that if M is a necessary means to E, then there is positive probability, conditional on one's M-ing, that one E's and one's M-ing helps to bring this about nonsuperfluously. So, according to General Transmission, if there is some reason to E, and M is a necessary means to E, there is some reason to M.

9. Ought principles and problems with costly means

It will surprise few that Ought Sufficiency has trouble with cases of costly means. Suppose we ought to visit my folks for Thanksgiving. Options *A* and B are sufficient means in the sense defined. But *A* involves a 36-hour, $5,000 flight with six layovers, where *B* involves only a six-hour, $150, direct flight. It is not the case that we ought to take *A*. This seems in part because visiting my folks doesn't *require* A. There's also B.

What is more surprising is that Ought Necessity also has trouble with costly means. Suppose I decide that we ought to visit my parents for Thanksgiving. I might then learn that the

expense of buying plane tickets there, which is the only way to get there in time, is prohibitive: that even the cheapest ones would overdraw on our bank account. (The problem is not, as with Procrastinate, that the cost of the means is too high because of the *low probability* of achieving the end conditional on taking the means, but instead that the cost of the means is too high even if we are *certain* to achieve the end conditional on taking the means.) In other words, I might learn that it is not the case that we ought to buy tickets to there, despite my earlier judgment that we ought to visit. Isn't this a counterexample to Ought Necessity?

"No," some will reply. "What you have learned is not only that it is not the case that you ought to buy tickets, but also that it is not the case that you ought to visit after all. Just as the fact that buying tickets *involves* a cost is a reason against buying the tickets that outweighs the reason to buy them, so too the fact that visiting *requires* this cost is a reason against visiting that outweighs the reason to visit. If it is not the case that you ought to pursue the end in the first place, then it is no objection to Ought Necessity that it is not the case that you ought to take the necessary means."

Once we take into account the fact that a necessary means to an end can probabilize it to varying degrees, however, this reply is no longer so convincing. *Why* is the fact that visiting requires buying a reason against visiting? Suppose, as seems plausible, that reason *against X*-ing just is reason *to refrain from X*-ing. So the question is: Why is reason to refrain from buying the tickets reason to refrain from visiting? The reply of the last paragraph needs some explanation of this. The most natural explanation, to my mind, is that refraining from visiting is a *means* to refraining from buying. *By* refraining from visiting, we refrain from buying.

Suppose, as seems plausible, that one's refraining from *X*-ing is one's bringing it about that it is not the case that one *X*'s. Then while *some* ways of refraining from visiting—i.e.,

bringing it about that we do not do it—help to bring it about that we refrain from buying the tickets, other ways don't. Refraining from calling the airline until it is too late *does* help to bring it about that we refrain from buying the tickets. But refraining from driving to the airport, after buying the tickets, *doesn't* help to bring it about that we refrain from buying them. So *how much* refraining from visiting *probabilizes* refraining from buying depends on *in what way* we are likely to refrain from visiting, if we do refrain. To be sure, refraining from visiting *by refraining from calling the airline until it is too late* does significantly probabilize refraining from buying. The point is that refraining from visiting *simpliciter,* which encompasses all the ways we might bring it about that we do not visit, need not much probabilize refraining from buying, depending on how we are likely to refrain from visiting. (If in a spasm of filial guilt, I am *very likely* to buy the tickets akratically, then refraining from visiting does not much probabilize refraining from buying. If we refrain from visiting, we are almost sure do so in some way that does not help to bring it about that we refrain from buying.) In such a case, the reason to refrain from buying the tickets remains unchanged, but there is less reason to refrain from visiting. Thus, while it is still not the case that we ought to buy the tickets, it can be the case that we ought to visit: that we ought to pursue to the end, even though it is not the case that we ought to take the necessary means.

10. Ought Necessity and Inheritance

Proponents of these alternative principles may protest that, while I have raised counterexamples to them, I have not addressed their deeper theoretical motivations. In this section and the next, I try to address two such motivations, for Ought Necessity and Strong Necessity, respectively.

Many are drawn to Ought Necessity, I suspect, because it is entailed by what Cariani 2009 calls:

Inheritance: If one ought to *E*, and at every relevant world at which one *E*'s, one *M*'s, then one ought to *M*.[24]

Now, to be sure, there are counterexamples, in addition to the Procrastinate case, to Inheritance. There's Ross's 1941 paradox: that "One ought (to post the letter)" entails "One ought (to post the letter or to burn it)." And there's our telegraphing boxer: if in every relevant world in which he throws the punch he telegraphs it, and if he ought to throw it, then, according to Inheritance, he ought to telegraph it. Nevertheless, Inheritance can seem attractive.

First, Inheritance may well hold for a use of 'ought' *different* from the deliberative-advisory use that has been our focus. This is a use where "Procrastinate ought to accept" is heard as something like "If Procrastinate were deontically perfect, Procrastinate would accept."[25] To the extent that we are using 'ought' in this way, we no longer engaged in deliberation or advice, but instead in reporting what the ideal would be, with an eye to appraising or evaluating Procrastinate against it, rather than to guiding his decision. I don't mean to contest that there is such a report-of-the-ideal use of 'ought,' or that Inheritance holds of it. All that I have argued is that there is the deliberative-advisory use, and that Inheritance does not hold of *it*.[26]

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[24] For a recent defense of something like Inheritance, see Wedgwood 2006.

[25] It should be intuitively clear what "deontically perfect" is getting at—it would involve at least Procrastinate's not procrastinating—but it can also be more explicitly related to the deliberative-advisory use. If A were deontically perfect, A would X iff there is some Y such that (i) at all relevant worlds where A Y's, A X's, (ii) A ought (in the deliberative-advisory use) to Y and (iii) if the set of relevant worlds were contracted to include only worlds in which A in fact Y's, there would be no Z such that, relative to that contracted set, A ought (in the deliberative-advisory use) to Z, but at some world in that set A does not Z. Hence, if Procrastinate were deontically perfect, he would accept (X), because he ought to accept and write (Y), and relative to a contracted set where he accepts and writes at all worlds in the set, it is not the case that he ought not to accept (Z).

[26] Of course, it is open to someone to argue that, semantically speaking, there is only the report-of-the-ideal sense and the appearance of a deliberative-advisory sense is purely pragmatic. "It's clear why we don't *tell* Procrastinate, 'You ought to accept,' i.e.: 'If you were deontically perfect, you would accept,'" one might say. "We fear that this will lead him to accept, from

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The second attraction is that Inheritance follows from a particularly serviceable approach to the semantics of 'ought.' According to this approach, what ought to be the case is what is the case at all "ideal" worlds, where all ideal worlds are relevant (e.g., epistemically possible). Although this approach may be useful for certain purposes, and mirrors the standard treatment of modal operators with which 'ought' is commonly associated, it is not, as I have been arguing, the right way to think about the deliberative-advisory use.

Let me briefly sketch an approach more suited to that use, which is indebted in various ways to Jackson 1985 and Cariani 2009. We assume that the truth of an occurrence of "S ought to X" at a context[27] depends, among other things, on a set of relevant alternative actions specified by that context. Then we say that an occurrence of "S ought to X" at a context, C, which specifies set of alternatives, A, is true iff:

(i)   "X" denotes a disjunction of actions in A such that for every denotation "Y" of an action in A, an occurrence of "There is no less reason for S to X than to Y" at C is true

and

(ii)   for every denotation "Z" of an action in A that is not a disjunct of the disjunction denoted by "X," an occurrence of "There is more reason for S to X than to Z" at C is true.[28]

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which no good will come." Offhand, though, it is hard to see what pragmatic explanation can be given of *Procrastinate's* thinking, as he surely might think: "Even though, if I were deontically perfect I would accept and write, and so accept, I ought to not to accept, because I am not deontically perfect."

[27] Or pair of context of occurrence and context of assessment. See note 11.

[28] Along with our assumption in section 9 that reason against *X*-ing is reason for refraining from *X*-ing, this would validate the claim in note 4: that one ought to *X* only if there is more reason for *X*-ing than against *X*-ing (at least when refraining from *X*-ing is a relevant alternative).

Roughly: when a single action is what one has most reason to do, one ought to do it, and when several actions are "tied" for what one has most reason to do, one ought to do the disjunction of them. This avoids Ross's Paradox, since burning the letter isn't "tied" with posting it. And if we represent the alternative actions as *actions*, rather than as sets of worlds, then "The boxer ought to throw the punch" can be true while "The boxer ought to telegraph it" is false—even at a context (say, that of the coach who knows he's incorrigible) where the relevant worlds in which the boxer throws the punch are *exactly* those worlds at which he telegraphs it.[29]

While the above sketch leaves open how the truth of occurrences of 'reason'-sentences at C is determined, I am of course supposing that General Transmission will supply much of the answer. Within the epistemic framework, for example, whether an occurrence of "S has more reason to X than to Z" at C is true will depend, among other things, on reason for various ends and the probabilities, relative to the information specified by C, that the actions denoted by "X" and "Z" help to bring about those ends in a nonsuperfluous way. Much more, of course, would need to be said. But this at least suggests a route to a semantics of 'ought' that avoids Inheritance and squares with General Transmission.

11. Strong Necessity and the Analogy to Deduction

I suspect that Strong Necessity strikes many as plausible because it resembles a plausible principle of the transmission of reasons for belief. Darwall 1983, 47–48 suggests precisely this: "[T]he force of reasons is, as it were, transferred back and forth along the line connecting an end and its necessary means in the same way that the rational force of a deductive argument is

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[29] Indeed, this approach implies that, when "M" and "E" denote distinct actions, "S ought to E" and "S ought to M" can't both be true relative to the same context. But typically there will be a shift in the set of relevant alternative actions from the occurrence of one sentence to the next—e.g., from {one E's, one refrains from E-ing} to {one M's, one refrains from M-ing}— which can allow both occurrences to be true. See note 8.

transferred between premises and conclusion." The thought, in other words, is that Strong

Necessity, at least within the epistemic framework, is simply the practical analogue of the

theoretical principle:

> If there is reason to believe P, and if it is epistemically necessary that $(P \supset Q)$, then there
>
> is at least as much reason to believe Q.[30]

I have argued that Strong Necessity is false. But I grant that this theoretical principle (or

something close to it) is true. So proponents of Strong Necessity are entitled to ask, "Why

shouldn't the analogy hold?"

I approach this question by assuming, for the sake of discussion, a highly stylized theory

of reasons in general, which applies both to reasons for belief and reasons for action:

> Reason to R = sum over all relevant values, V_i, of the epistemic probability that (V_i is
>
> realized and one's R-ing helps to bring it about that V_i is realized in a nonsuperfluous way
>
> | one R's) * V_i,

What I then try to show is that, even assuming that reasons for belief and for action have this

common basis, we can explain why something like the theoretical transmission principle should

hold for reasons for belief, but no analogue should hold for reasons for action.

Consider first reasons for believing P. First, there is *only one kind of value* that believing

P can realize, namely the value of believing P when P is true. It is no reason to believe P, for

example, that it would make one happier or would make some *other* belief—such as the belief

that one believes P—true. (Or if it is, there is no reason to expect the theoretical principle to

hold.) Hence,

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[30] Note that this claim speaks only of *pro tanto* reason for belief. It says nothing about *pro tanto* reason against belief (provided by the disvalue of false belief), and so nothing about sufficient or conclusive reason for belief.

Reason to believe P = the epistemic probability that (one believes P truly and believing P helps to bring it about in a nonsuperfluous way | one believes P) * the value of believing P truly.

Second, believing P is *necessary* for this value. So it is never the case that one would have believed P truly if one had not believed P; believing P is never superfluous for believing P truly. Finally, so long as P, believing is *sufficient* for and *helps to bring about* this value. So:

the epistemic probability that (one believes P truly and believing P helps to bring it about in a nonsuperfluous way | one believes P) =

the epistemic probability that (one believes P and P) / the epistemic probability that one believes P.

If P is independent of whether one believes P, then this is just the probability that P. Thus we have:

The reason to believe P = the epistemic probability that P * the value of truly believing that P.

Likewise for Q, if Q is independent of whether one believes Q. Now assume that it is epistemically necessary that $(P \supset Q)$. Then:

the epistemic probability that $Q \geq$ the epistemic probability that P.

And so, provided that the value of truly believing $P \leq$ the value of truly believing Q (e.g., that Q isn't a trivial, uninteresting consequence of P):

the reason to believe $Q \geq$ the reason to believe P.

This gives us the theoretical transmission principle:

If there is reason to believe P, and it is epistemically necessary that $(P \supset Q)$, and the value of believing Q truly is at least as great as the value of believing P truly, and the

epistemic probability that *P* is independent of whether one believes *P*, and the epistemic

probability that *Q* is independent of whether one believes *Q*, then there is at least as much

reason to believe *Q*.

There is nothing like this, even with all of its qualifications, in the practical case. First,

reasons for action are provided by the realization of *all kinds of values*, whereas reasons for

belief are provided only by the value of the belief's being held while true. Second, an action is

often not necessary for the realization of the values that provide reasons for it, whereas beliefs

are always necessary for the realization of the value of their being held while true. And, finally,

an action is *often not sufficient* (or sufficient given some standing condition) for the values that

provide reasons for it, whereas, provided that it is true, a belief is sufficient for the realization of

the value of its being held while true.

For simplicity, let's consider a special case where the only values are, first, a value, V_E,

that is realized just by *E*-ing and a value, V_M, that is realized just by *M*-ing. We can then say:

Reason to $E = V_E +$ the epistemic probability that (V_M is realized and *E*-ing helps to bring

this about in a nonsuperfluous way | one *E*'s) * V_M.

Reason to $M =$ the epistemic probability that (V_E is realized and *M*-ing helps to bring this

about in a nonsuperfluous way | one *E*'s) * $V_E + V_M$

But the further information provided by the condition of Strong Necessity—that it is

epitsemically necessary that (one *E*'s $\supset$ one *M*'s and one's *M*-ing helps to bring about one's *E*-

ing) and epistemically possible that one E's—does not allow us to determine any interesting

relationship between these probabilities. So even with information about the ratio between the

values V_E and V_M (which would correspond to the assumption that the value of believing *P* truly

is no greater than the value of believing Q truly), we cannot determine any interesting

relationship between the reason for the end and the reason for the means.

12. The myth of instrumental transmission?

I conclude by considering a doubt that there really is instrumental transmission, at least as it is

ordinarily understood. We have been assuming that there is reason for certain ends. But what

accounts for them? One suggestion, associated with a broadly consequentialist outlook, is:

> *Production*: If there is positive probability, conditional on one's X-ing, that some
>
> valuable state of affairs, S, is realized and one's *X*-ing helps to bring S about in a
>
> nonsuperfluous way, then there is reason for one to *X*, which depends positively both on
>
> the value of S and the probability.

For example, I have reason to save the whales, because saving the whales is *sure* to bring about a

valuable state of affairs: the whales' salvation. But if Production explains my reason to save the

whales, then why shouldn't Production explain directly, without any detour through General

Transmission, my reason to take means to that end? My reason to take the means is just that

doing so has *some probability* of bringing about a valuable state of affairs. Why shouldn't

reason for the means be explained in just the same way (modulo differences in the degree of

probabilization) as reason for the end?

This question seems all the more pressing when we consider that there is no reason for

ends that are unavailable in the sense of section 5. If there is nothing that I can knowingly do

that is sure to save the whales, then I do not have reason to save them. Nevertheless, I have

reason to *try* to save them. What explains my reason to try? One might first consider the reason,

due to Production, that I *would* have to save the whales, if it *were* available to me, and then apply

General Transmission to explain my reason to try. But one might bypass the now even more

circuitous detour through General Transmission and such hypothetical reasons by invoking Production directly.

Even if this direct explanation were correct, it wouldn't follow that General Transmission was false. The correlation between the reason for the end and the reason for the means that it describes would still obtain. But General Transmission would *not explain* the reason for the means. It would just be an observation, as it were, about the deliverances of what does explain the reason for the means: namely, Production. Whenever Production gives us reason for the end, General Transmission would observe, Production also gives us reasons for the means. But one might just as well observe that whenever Production gives us reason for the *means*, it also gives us reason for the *end*. The idea that we have reason for the means *because* we have reason for the end would stand revealed as a myth.

My own suspicion is that this line of reasoning exploits special features of Production. Production does not, I think, explain all reasons for action. A reason to *X* can be instead that *X*-ing honors or respects something of value, even though it does not bring about a valuable state of affairs.[31] Suppose that one cannot (knowingly) do anything that guarantees that one honors *V*. (Honoring *V* is something that one can get right or wrong, presumably, and one can be unsure whether a particular action will get it right.) Still one has reason to try. Is this explained by an analogue of Production that represents a genuine alternative to General Transmission? The most natural analogue, to my mind, would be:

> *Recognition*: If there is positive probability, conditional on one's *X*-ing, that one honors something of value, V, and one's *X*-ing helps to bring it about in a nonsuperfluous way that one honors V, then there is reason for one to *X*, which depends positively both on the

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[31] One might say that the state of affairs of honoring the thing of value is *itself* a valuable state of affairs, but this seems to me distorting, even if a useful fiction for some modeling purposes.

reason that one has to honor V (or would have if doing so was available to one), and on

the probability.

According to Recognition, the explanation of one's reason to try is, first, that one would have

reason to honor the value if doing so were available to one and, second, that one's trying has

some probability of honoring the value. This explanation hardly seems an *alternative* to General

Transmission.

At any rate, my primary aim here is not to defend instrumental transmission from the

charge that it is a myth. It is merely to observe that such a defense is so much as needed. That is

itself surprising—or, at least, surprised me.

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