

*Instrumental Reasons*¹

“What reason have I to do *that*?” someone asks. The answer (if there is one) is often: “Doing that is a means to *something else* that you have reason to do.” When is this answer correct?

What does the existence, or weight, of such an “instrumental reason” depend on?

The focus of these questions—instrumental reasons—should be distinguished from what might be called “instrumental rationality.” *Instrumental rationality* is a matter of the coherence, or unification, of the deliberating agent’s state of mind. Insofar as one wills an end and believes that something is a necessary means to it, one is, in refusing to will those means, *at odds with oneself*.² By contrast, *instrumental reasons* concern not the coherence of one’s *deliberation*, viewed as a psychological episode, but instead the *structure of the subject matter about which* one deliberates. If there is reason for one to pursue an end (whether or not one pursues it),³ and if an action is in fact (or relative to the better information of an advisor or onlooker⁴) a means to that end (whether or not one knows it), then that is itself a reason for one to adopt the means—quite apart from any considerations about one’s psychological coherence.⁵ This is reflected in familiar patterns of advice. If I know that there is reason for you to lower your blood pressure,

¹ [Identifying note 1]

² As Kant claimed in the *Groundwork*, and as the idea has been developed (in markedly different ways) by Korsgaard 1997, Bratman 1987, and Broome 2002.

³ This formulation is agnostic on whether reasons for ends derive from our desiring those ends, or from the relation of those ends to things of independent value. However, 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. See the discussion of General Production, in section 8, for a doubt about this.

⁴ See note 13 and the preceding text.

⁵ 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 2010. Passages in Scanlon 2004 and Wallace 2006 assume or grant its correctness.

and if I know that your taking this medicine will do that, then I am liable to tell you, if I can, that *that is a reason* for you to take this medicine—whether or not you intend to lower your blood pressure, or know that this medicine will do that. Furthermore, at least on the assumption that what one ought to do depends on the reason there is for one to do it, a sort of transmission of ‘ought’s from ends to means might be expected. If I know that you *ought* to lower your blood pressure, I may well conclude that, because of this, you *ought* to take the medicine.

A burgeoning literature offers us many proposals about how this instrumental transmission of reasons and ‘ought’s works. The most popular proposals are:

Ought Necessity: If one *ought* to E, and M-ing is a *necessary* means to E-ing, then, because of that, one *ought* to M⁶

⁶ “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). The principle is often implicitly invoked: “because you promised to do *A* and cannot do *A* without doing *B*, you ought to do *B*” (Korsgaard 2009b, 38).

Ought Necessity is also entailed by certain deontic logics and semantics for ‘ought.’ In broad outline, and expressed in the idiom of this paper, these views hold that “One ought to *X*” is true iff one *X*’s at every ideal, possible outcome. (See Wedgwood 2006 for a particularly forceful defense of such views.) The argument in section 3 against Ought Necessity is, in effect, one objection to such views. (Interestingly, Horty 2000 sec. 3.4.2 presents a similar argument against such views, although not against Ought Necessity as such.) Moreover, since such views transmit ‘ought’s not only to necessary means, but also to necessary conditions, they may be subject to further objections. For instance, there’s Ross’s 1941 paradox: that “One ought (to post the letter)” entails “One ought (to post the letter or to burn it),” an entailment whose strangeness, as Cariani 2009 shows, stubbornly resists pragmatic explanation. There’s also our telegraphing boxer of section 1. If in every possible outcome in which he throws the punch he telegraphs it, then “He ought to throw it” entails, counterintuitively, “He ought to telegraph it.”

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 in section 3, that he ought to save the antique (=E), but not the case that he ought to take the necessary means of taking the taxi.

and:

Strong Necessity: If there is reason for one to E, and M-ing is a *necessary* means to E-ing, then that is a reason, *at least as weighty*, for one to M,⁷

which in turn entails:

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

However, Ought Sufficiency, Strong Sufficiency, and Weak Sufficiency, which substitute “sufficient means” for “necessary means,” have also been suggested.⁸

The negative aim of this paper is to argue against Strong Necessity, Ought Necessity, and the Sufficiency Principles. They fail to meet two basic desiderata, which are identified in sections 1 and 4. The problem with Strong Necessity, and perhaps also Ought Necessity, is that necessary means may do little to “probabilize” the end, as I explain in sections 2–3. The problem with Sufficiency principles is that sufficient means may be “superfluous” with respect to the end, as I explain in section 5.⁹ Section 6 puts forward a positive proposal, unimaginatively

⁷ “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 2010, 225). See also Millsap *ms a*.

⁸ Way 2010 224 and Bedke 2009 687 n. 10 endorse Weak Sufficiency. The “logic of satisfactoriness” of Kenny 1966 validates an analogue of Ought Sufficiency for “fiats.”

⁹ Anscombe 1957 anticipates these problems when she observes that the intention expressed by, “I do P, so that Q,” can be “contradicted” either by saying, “But Q won’t happen, even if you do P” or by saying, “But it will happen whether you do P or not” (36). In my terms, P can fail to inherit the reason to Q because P fails to “probabilize” Q—Q won’t happen even if you do P—or because P is “superfluous” with respect to Q—roughly, Q will happen whether or not you do P.

titled “General Transmission.” Indebted to the work of Raz (2005a and b), it aims to capture, with perhaps more generality and precision, the ideas animating his “Facilitative Principle” (although I leave explicit discussion of the connections to notes).

One might wonder, however, why we should care what the correct account of instrumental reasons is. So long as we grant that there is such a phenomenon as instrumental transmission, why bother to describe it precisely? A sufficient answer might simply cite the aim, which fuels so much of philosophy, of making explicit the conceptual structures that implicitly underwrite our thought and practice. But there are two more specific reasons for caring what the principles of instrumental transmission say.

First, such principles have been pressed into service by various treatments of the “normativity” of instrumental rationality: treatments of the demand, or seeming demand, to make our psychology means-end coherent. In particular, some have suggested that there are *reasons* to be instrumentally rational: for example, that one has “wide-scope” reason (either not to intend the end of, say, starting World War III, or to intend the means of launching a nuclear missile). Others have objected that, according to some principles of instrumental transmission, it would follow, absurdly, that one had “narrow-scope” reason to intend to launch a nuclear missile. While I think that this line of objection is fundamentally correct, its proponents have relied on flawed principles of instrumental transmission, and, accordingly, they have been met with plausible replies. Section 7 shows how General Transmission puts this objection on a surer footing.

Second, once we get clear on what the principles of instrumental transmission would have to look like, we may begin to doubt whether there really is such a phenomenon as instrumental transmission. Section 8 explores a line of thought that suggests, to a first

approximation, that General Transmission is just a minor theorem of a certain kind of decision theory and, going further, that the very idea that reasons for means are somehow explained by reasons for ends is a myth. While I suggest that this line of thought may be countered, it is perhaps more striking that it even needs to be.

1. First desideratum: means must probabilize the end

In this section, I discuss the first of two basic desiderata for an account of instrumental transmission. Intuitively, reasons for an end, one's E-ing, should transmit to a means, one's M-ing, to the extent that one's M-ing "probabilizes" one's E-ing, or "makes it likely." If the end for which I have reason is my putting out the fire, and using a fire hose makes that more probable than using a garden hose, which in turn makes it more probable than blowing weakly on the raging flames, then, intuitively, I have more reason to use a fire hose than a garden hose, and more reason to use a garden hose than to blow.

To a first approximation, we might say that if there is reason for one to *E*, and if there is positive probability, conditional on one's *M*-ing, that one *E*'s, then that is a reason for one to *M* whose strength depends on the reason to *E* and the probability.¹⁰ But this clearly won't do.

¹⁰ One might suggest that the weight of the reason depends instead on:

(1) the *difference* of the probability, conditional on one's *M*-ing, that one *E*'s *less the probability that one E's*.

or:

(2) the *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*.

or:

(3) the *difference* of the probability, conditional on one's *M*-ing, that one *E*'s *less the probability, conditional on the worst one could do with respect to E-ing, that one E's*.

But (1) implies, oddly, that the probability of one's *M*-ing can affect one's reason to *M*. At the limit, if one is sure to *M*, then one has no reason to *M*, since the conditional probability equals the corresponding unconditional probability. (2) also gives the wrong 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. Intuitively, the doctor has *no less* reason to give both *A* and *B*, which has a

Suppose a boxer's end is landing a punch. In every possible outcome in which he decides to throw a punch, he "telegraphs" his intention by conspicuously gritting his teeth. In spite of inadvertently warning his opponent, he nevertheless sometimes connects. So the probability, conditional on telegraphing, of connecting is positive. However, intuitively, no reason transmits to telegraphing. This is because at no possible outcome does it "help to bring it about" or "help to make it the case." Instead, telegraphing is merely a by-product of something (deciding to throw the punch) that does help to bring it about. So I formulate the desideratum as:

Means Probabilize: If there is reason to E and there is positive probability, conditional on one's M -ing, that *one's M -ing, or some part of one's M -ing, helps to bring it about that one E 's*, then that is a reason to M , whose strength depends on the reason to E and on the probability.

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 (assuming the doctor is very likely to give A but not B , if he does not give 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 .

Option (3), which is pursued in unpublished work by Matt Bedke, avoids these problems, and has an appealing simplicity. But I worry that it sacrifices relevant structure. To anticipate (and to vary slightly) an example from section 4, suppose that the end is my entering, and no matter what, either I enter by the front or I enter by the back. Then the worst I can do by way of entering is just as good as the best I can do. (3) implies, counterintuitively to my mind, that I have no reason to enter by the front. (Note that (1) and (2) also have this counterintuitive implication.) There seems to me an intuitive difference between my reason to enter by the front in this case and my reason, say, to immobilize myself by tying my ankle to a stake in the front lawn in an altered case in which that is possible. If you ask me, "Why did you do that? What reason had you to?" I could give an intelligible answer in the first case, but not in the second. In any event, I suspect that my approach and approach (3) can be made to deliver the same 'ought'-judgments, at least relative to a given Reasons-Ought principle of the kind introduced in section 3. Moreover, the choice between these approaches does not affect the criticism of the Necessity and Sufficiency principles in sections 2, 3, and 5, or the implications discussed in sections 7 and 8.

“Helping to bring about” need not mean only *causing*. It can also mean *constituting, satisfying preconditions of, or preventing things that would prevent*,¹¹ as well as *helping* to cause, constitute, satisfy preconditions of, or prevent things that would prevent. This means that one’s refraining from doing something that would prevent one from E-ing may help to bring about one’s E-ing, insofar as such refraining, in effect, prevents a preventer. We can leave open whether there are still other ways of helping to bring about an end.

Why “or some part of one’s M-ing”? We don’t even need this clause, if we assume that an action helps to bring about an outcome whatever any part of it helps to bring about at that outcome. But suppose we do not assume this. Consider a case in which (i) giving the patient Drug A brings it about that we save his life at every outcome whether or not we also give Drug B at that outcome, (ii) that (giving Drug A and giving Drug B) does not help to bring it about that we save his life at any outcome, and (iii) that (giving Drug A and giving Drug B) brings it about that we improve his complexion at every outcome. Intuitively, we have at least as much reason (to give Drug A and to give Drug B) as we have to give Drug A. But, without the phrase “or some part of one’s M-ing,” why should this be? There would be very strong reason to give Drug A, because it is instrumental to saving the patient’s life, but only much weaker reason (to give Drug A and to give Drug B), which is instrumental only to improving his complexion. If we add “or some part of one’s M-ing,” by contrast, then (giving Drug A and giving Drug B) inherits the instrumental reason of its part, giving Drug A.

¹¹ See Hall’s tour de force XXXX for examples of preventers of preventers and for an argument that, on one conception of causation, they are not causes. It might seem that “helping to bring about” as I am understanding it here is just the other conception of cause that he distinguishes: roughly, counterfactual dependence among distinct items. But this would not cover cases of, say, constitutive means, which are not suitably distinct from the end.

The relevant notion of “probability” can be understood in different ways. I favor an epistemic framework, where the possible outcomes (perhaps sets of worlds or underspecified worlds) are ways things might be relative to a relevant body of information, and where the probabilities assigned to those outcomes are likewise fixed by that body of information.¹² I stress that the relevant body of information *need not be that of the agent at the time of acting*. It may be instead the information, for example, of an advisor, or an onlooker. More generally, it may be contextually specified.¹³ However, there are other frameworks, which are compatible with much of what I go on to say. For example, on a historical framework, the possible outcomes are ways things might unfold, compatibly with how they have actually unfolded up to the relevant time (and possibly also constrained by certain physical and psychological laws), and the probabilities (here not epistemic) attached to those outcomes are determined by how things

¹² Insofar as we use the epistemic framework, we may need some response to Newcomb’s problem XXXX. Adding the phrase “helps to bring about” is, in itself, no response, since both one-boxing and two-boxing help to bring about the relevant payoffs. One response, which would not radically affect the discussion, would be to screen off whatever information one’s M-ing gives about the probability of factors that (i) bear on whether one’s M-ing helps to bring about one’s E-ing, but that (ii) one’s M-ing itself does not help to bring about. One method for doing this, adapted from Skyrms 1980, would be to take a partition of the possible states, S_i , that one’s M-ing does not help to bring about. (These are not quite states of “nature,” since they may depend on other things, besides M-ing, that one may independently do. We are not assuming that M-ing is an “exhaustive” action in the sense of note 48.) Then we sum, over i , the products of the probability, unconditional on one’s M-ing, of S_i , and the probability, conditional on M-ing in S_i , that one’s M-ing helps to bring it about that one E’s in S_i . (Note that this formula still needs the phrase “helps to bring it about that.” Without it, the formula might deliver a *positive* probability, on telegraphing, of connecting, and so imply, wrongly, that there is reason to telegraph.) However, as Egan XXXX and Wedgwood XXXX suggestively argue, this may be the wrong response to Newcomb’s problem. If so, it is possible that the right response would more radically affect our discussion.

¹³ 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’ or ‘reason’ 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.

actually are (and the laws in play) at the relevant time.¹⁴ When I say that something is “necessarily” the case, that is equivalent to saying that it is the case at all possible outcomes, however these are understood. I assume that some positive probability attaches to every possible outcome (although, in principle, this may fail when there are infinitely many possible outcomes).

2. *Why Strong Necessity has trouble with the probabilization desideratum*

If something along the lines of Means Probabilize is correct, it suggests an objection to Weak Necessity. “Weak Necessity may seem plausible, because if one *fails* to take a necessary means, then there is *no* chance of achieving the end. However, it is compatible with that truth that *even if one does* take the necessary means, one has no chance of achieving the end. If so, then those necessary means do not probabilize the end at all. So, if something along the lines of Means Probabilize is correct, then no reason would transmit to such necessary means.”¹⁵

However, there are plausible replies to this objection. First, if there is *no* chance of one’s E-ing even if one takes the *necessary* means of M-ing, then there is no chance of one’s E-ing at all. And if there is *no* chance of one’s E-ing, then it is not clear that one has *reason* to E in the first place. That would follow, at least, from the conjunction of the claims:

Reasons Availability: One has reason to X only if X is available to one.

and:

Weak Availability: X is available to one only if there is some possible outcome at which one X’s.

¹⁴ See Belnap, Perloff, Xu 2001 and Horty 2000. On such a framework, “outcomes” would be more naturally understood in terms of histories, instead of worlds. If agents are conceived as choosing “freely” in a strong sense, probabilities will be unavailable whenever the occurrence of the end depends some further “free” choice. Nevertheless, “sure-thing” reasoning may still be possible, as Horty shows.

¹⁵ Raz 2005a 7 makes essentially this point with the case of buying a ticket to visit one’s grandmother on Easter Island when the airline workers are on strike.

Second, if there is no chance of E-ing, then there is a danger that *everything*, trivially, becomes a necessary means to E-ing. If no matter what one won't E, then can't one say of anything that, unless one does that, one won't E?

Taking these replies on board, I work with the following:

Definition of Necessary Means: One's M-ing is a *necessary* means to one's E-ing iff:

- (i) in every possible outcome at which one E's (one's M-ing helps to bring about one's E-ing and if one had not M-ed, one would not have E-ed),
and
- (ii) there is *some* possible outcome at which one E's.

This definition ensures that necessary means probabilize the end to at least some degree. So, Means Probabilize gives us no grounds to doubt that *some* reason transmits to necessary means, at least on this definition. So *Weak* Necessity seems secure.

Yet why should we expect *Strong* Necessity to hold? Granted, since necessary means probabilize the end to some extent, they inherit *some* of the reason. But necessary means might probabilize the end only to some minute degree. Why then should the necessary means inherit, as it were, *all* of the weight of the reason for the end?

Consider Lucky and Unlucky, who occupy parallel universes. Each has an antique sitting on his front porch, which the rain threatens to ruin. A necessary means to saving the antique is taking a taxi back home. There is reason to refrain from¹⁶ taking the taxi; it costs money, say \$20. But this cost is outweighed by the value of the antique, say \$100. The only difference in their situations is that in Lucky's universe, the rain will be slow in coming, and so he is very

¹⁶ One might also naturally describe the cost as a "reason not to taxi" or a "reason against taxi-ing." For simplicity, I assume that reasons not to X and reasons against X-ing are just equivalent to reasons to refrain from X-ing. This assumption may well be false, but I don't think it affects the argument in any substantive way.

likely to get him home in time, if he takes the taxi: say that the probability is .9. In Unlucky's universe, by contrast, he is extremely unlikely to get him home in time, even if he takes it: say the probability is .1.

Intuitively—and as Means Probabilize implies—Unlucky has *weaker* reason to taxi than has Lucky, given the low probability that the taxi will get there in time.¹⁷ Therefore, if Lucky and Unlucky have the reason of the same strength to save the antique, then we have a counterexample to Strong Necessity. For Strong Necessity would then imply, incorrectly, that Unlucky has reason of the same strength as has Lucky to take the taxi.

Lucky and Unlucky would seem to have reason of the same strength to save the antique. At least, this would follow from the:

Conditionalization Principle: The reason for one *to X* should be a function only of how things are likely to be, or will be, *if one X's*.¹⁸

If Unlucky saves the antique, things will be, in relevant respects, just as they are *if Lucky saves it*. Granted, if Unlucky *tries to save* the antique (say, by taking the taxi), then things are not likely to be as they are if Lucky tries to save the antique. Yet according to the Conditionalization

¹⁷ To see this, suppose that Lucky and Unlucky have some third alternative open to them. Each could instead use the \$20 cabfare to save a second antique of lesser value, say \$40, for sure. While it seems that Unlucky ought to do this, it does not seem that Lucky ought to. Presumably, this is because Lucky has stronger reason than Unlucky has to use the cabfare to save the first antique.

¹⁸ One might reply that, while one's reason to X should be, in part, a function of how things are likely to be if one X's, it may *also* be a function of other things. Fair enough. But I doubt that any function of this kind would change our conclusion. For example, along the lines of (1) in note 10, one might argue that Unlucky's reason to save depends on the difference between how things are likely to be if Unlucky saves *and how things are likely to be unconditionally*. But, as we saw, this sort of function is problematic. In any event, if Lucky and Unlucky are, unconditionally, just as likely to take the taxi, then Unlucky would have *stronger* reason to save than Lucky. That would not help Strong Necessity.

Principle that bears not on the question of whether there is reason to *save* the antique, but instead on the question whether there is reason to try to save it (say, by taking the taxi).

In sum, the Conditionalization Principle implies that Lucky and Unlucky have the same reason for the end. Means Probabilize implies that Lucky has more reason for his necessary means, since his means have a higher probability of achieving the end. Strong Necessity, which says that there is as much reason for the necessary means as there is for the end.^{19,20}

¹⁹ Insofar as Schroeder 2009 246 takes his “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 ”) to entail Strong Necessity, it also seems to face this problem.

²⁰ “How can Strong Necessity be false?” one might object. “After all, it is just the analogue to a perfectly plausible principle of the transmission of reasons for belief:

Theoretical Strong Necessity: If there is reason to believe P , and it is epistemically necessary that $(P \supset Q)$, then that is a reason at least as strong to believe Q .”

As Darwall 1983, 47–48 writes: “[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 transferred between premises and conclusion.”

So where and why does the analogy break down? One way of answering this question is to treat reasons for believing P as just like reasons for action, except directed *exclusively* at bringing about a distinctive kind of “end”: namely, believing P truly. Then we can actually *deduce* from our positive proposal, General Transmission of section 6, a version of Theoretical Strong Necessity: that is, a version that adds the further conditions (A) that the epistemic probabilities P and Q are independent of whether one believes them, and (B) that there is no more reason to believe P truly than to believe Q truly. Along the way, we can identify two crucial differences that explain why we cannot similarly deduce Strong Necessity from General Transmission.

Applying General Transmission to the idea that reasons for believing something are transmitted from reasons for the “end” of believing it truly, we get that:

if (i) there is reason to believe P truly and (ii) there is positive epistemic probability, conditional on believing P , that (believing P helps to bring it about nonsuperfluously that one believes P truly), then that is a reason to believe P , whose strength depends on the reason to believe P truly and the probability.

At every outcome at which P is true, believing P brings about its end—believing P truly—nonsuperfluously. This is the first crucial difference. There is no general standing condition such that, at every outcome at which it holds, M -ing brings about *its* end— E -ing—nonsuperfluously. This allows us to rewrite (ii) as:

(ii’) there is positive epistemic probability, conditional on believing P , that P .

Now assume (A). Since P is independent of whether one believes P , (ii’) becomes simply:

(ii’’) there is positive epistemic probability that P .

3. Why Ought Necessity may have trouble with the probabilization desideratum

Is Ought Necessity likewise falsified? What seems intuitively clear is that Lucky ought to save the antique, that Lucky ought to taxi, and that it is not the case that Unlucky ought to taxi.

Indeed, this last point seems forced on us by the point just made: namely, that Unlucky's reason for taxi-ing weakens as the probability lowers. By contrast, his reason to refrain from taxi-ing—namely, to avoid its cost—remains constant. So, as the probability lowers, a point is reached at which there is more reason to refrain from taxi-ing than to taxi. Given:

Refrain Reasons-Ought: One ought to X only if there is not more reason to refrain from X-ing than to X,

it would follow that it is not the case that Unlucky ought to taxi.

The question, then, is whether Unlucky ought to save the antique. If so, then Ought Necessity is falsified. While there may be some hesitation to say that Unlucky ought to save, it is not clear how much weight to place on it. Even if Unlucky ought to save, presumably it is not the case that Unlucky ought *to decide* to save. Deciding to save will likely only lead him to

Thus we have:

if (i) there is reason to believe P truly and (ii'') there is positive epistemic probability that P , then that is reason to believe P , whose strength depends on the reason to believe P truly and the probability

and similarly:

if (i) there is reason to believe Q truly and (ii'') there is positive epistemic probability that Q , then that is reason to believe Q , whose strength depends on the reason to believe Q truly and the probability

Now assume (B): there is at least as much reason to believe Q truly as there is to believe P truly. Then there is at least as much reason to believe Q as there is to believe P so long as the epistemic probability that Q is at least as high as the epistemic probability that P . And it is, if the antecedent of Theoretical Strong Necessity is fulfilled: i.e., if it is epistemically necessary that $(P \supset Q)$. This is the other crucial difference. Whereas Strong Necessity assumes a necessary connection between the *responses* for which one might have reason (e.g., one's M-ing), Theoretical Strong Necessity assumes a necessary connection between their *contents* (e.g. that P). A truer theoretical analogue to Strong Necessity would read not "... ($P \supset Q$)..." but instead: "... (one believes $P \supset$ one's believing Q helps to bring about one's believing Q and if one had not believed Q , one would not have believed P)." And *that* principle is not at all plausible.

waste money on the taxi. And it is natural to confuse the question, “Ought Unlucky to save?” with the question, “Ought Unlucky *to decide* to save?” So, our reluctance to say that Unlucky ought to save may simply stem from our recognition that it is not the case that Unlucky ought *to decide* to.

Indeed, on what seems to me the most natural account of the relation between reasons and ‘ought’s, it would appear that Unlucky ought to save:

Relevant Reasons-Ought: One ought to X iff X-ing is, from among the relevant, available options, what one has most reason to do (or, in the case of ties, the disjunction of the options that one has most reason to do).²¹

The available, relevant alternatives would by default be {save, refrain from saving}, but for our purposes might just as well be {save, refrain from saving, taxi, refrain from taxi-ing}. According to the Conditionalization Principle, the reasons for Unlucky’s saving depend only on how things will be if Unlucky saves the antique: namely, that he will certainly be up an antique, down a cabfare.²² It is hard to see how Unlucky could have *as much* reason to refrain from saving (or to refrain from taxi-ing). Such reason could depend only on how things are if he refrains from saving (or from taxi-ing): namely, that he will at best neither up an antique, nor down a cabfare.

²¹ This conclusion, that Unlucky ought to save, doesn’t much depend on Relevant Reasons-Ought. It would also be true according to:

Necessary Reasons-Ought: One ought to X iff X-ing is, or is a *necessary means* to, what, from among *all* the available options on balance, to do.

The option for which Unlucky has most reason will presumably include saving the antique as a necessary component. Presumably, this is some “exhaustive” option, which determines, for every available action that might relevantly affect the outcome, whether or not one performs that action, such as: saving the antique and donating it to Oxfam and working tirelessly henceforth to end world hunger and.... Counting against Necessary Reasons-Ought, however, is that it implies, implausibly (albeit consistently with Ought Necessity) that Unlucky ought to taxi.

²² It will also be the case that Unlucky will have done something (namely, taxi) that, relative to the present context, he ought not do. But I assume that this is not itself a *further* reason to refrain from taxi-ing. It is not as though Unlucky has made a promise, or side-bet, not to do something that, in the present context, he ought not do.

And it is even harder to see how Unlucky could have as much reason to taxi, since that reason can depend only on how things are if he taxis: namely, that he is almost certainly down a cabfare, with nothing to show for it.²³

Might one reply that it is not the case that Unlucky ought to save, because saving is not *available* to him? But it certainly is *Weakly Available*; there is *some* possible outcome at which he saves. And it won't help Ought Necessity to assume:

Moderate Availability: X is available to one only if there is some Y such that it is possible that one knowingly Y's, knowingly Y-ing is fully under one's control, and there is a probability exceeding some threshold less than one (e.g. .75), conditional on one's knowingly Y-ing, that one X's.

Imagine that Unlucky has a .76 chance of saving the antique, conditional on taxi-ing, so that saving is Moderately Available. Then, so long as the value of the antique is higher than the taxi, Unlucky ought to save (at least according to Relevant Reasons-Ought). Now raise the cost of the taxi—say to \$95—so that it is only slightly less than the value of the antique. We still get the result that it isn't the case that Unlucky ought to taxi, contradicting Ought Necessity.

As far as I can see, the least restrictive principle that would block such revised cases would be:

Strong Availability: X is available to one only if there is a series of “secure” steps to one's X-ing, such that each step guarantees control over the next, and the last step guarantees X-ing. More precisely: there is some 1, 2, ... N such that it is possible that one knowingly 1's, knowingly 2's, ...and knowingly N's, and it is necessary that knowingly 1-ing is fully under one's control and if one knowingly 1's, it will be

²³ Way 2010 225 n. 32 reports an objection to Ought Necessity along these lines from John Broome.

necessary that there is some 2 such that knowingly 2-ing will be fully under one's control and if one knowingly 2's, ... it will be necessary that there is some N such that knowingly N-ing will be fully under one's control and if one knowingly N's, then it will be necessary that one X's.²⁴

Saving the antique is not Strongly Available to Unlucky, so long as the probability that if he takes the taxi, he will get there in time, is less than one, which the counterexample, as we have been understanding it, requires.

But should we accept Strong Availability? One reservation is that it is very restrictive. For example, it would mean that saving the antique was not available even to *Lucky*. And yet there is little hesitation to say that *Lucky* ought to save it. Worse, in conjunction with Reasons-Availability (which was used to defend *Weak* Necessity), it would follow that Lucky does not even have *reason* to save the antique. Worse still, that would in turn threaten the judgment that

²⁴ Two more restrictive proposals are:

Super-strong Availability: X-ing is available to one only if there is some Y such that it is possible that one knowingly Y's, that knowingly Y-ing is *now* (i.e., at the same time as the context of the reason- or ought-judgment) fully under one's control, and if one Y's, then it is necessary that one X's;

and:

Perfectly tailored Availability: X is available to one only if for every necessary means, Y, to X, one ought to Y.

These make not only Unlucky's saving, but also the ends in the Revised Unlucky and Procrastinate cases below, unavailable. But these views seem overly restrictive. Perfectly Tailored Availability, for example, makes options in Buridan's ass cases unavailable, and Super-Strong Availability would make Dispatch's reviewing the book unavailable (see note 29). Moreover, Perfectly Tailored Availability risks confusing questions, by making availability itself dependent on prior judgments about what one has reason to do, and it risks begging the question, by building Ought Necessity into the definition of availability. Super-Strong Availability risks crowding out the phenomenon of instrumental transmission itself. Very often, the reason to take the means is to *put* oneself in a position from which there is something that one can do to guarantee the end. (Indeed, for Raz 2005a, this is by definition what "facilitating plans" do.) But according to Super-Strong Availability (with Reasons Availability), one has no reason for an end unless one is *already* in such a position. Nor can it be said that the ability to *intend* the end *always* puts one in such a position. Intentions often don't guarantee the end (which an advisor might be in a good position to predict, even if the agent isn't).

Lucky even has reason to *take the taxi*. After all, any such reason would be instrumental, in the service of some end. But of what end? We cannot say that the reason is transmitted from the end of *saving the antique*, since we are denying that Lucky has reason for that end. It only pushes the problem back to say that it is transmitted from reason to *try* to save the antique. That reason is also instrumental, in the service of what such trying might bring about.²⁵

So there are serious questions about whether we should accept Strong Availability.²⁶ But even if we do accept it, there are *other* counterexamples to Ought Necessity—albeit more controversial—that *satisfy* Strong Availability.

In *Revised Unlucky*, the taxi is guaranteed to get both Lucky and Unlucky home in time. Here Unlucky's misfortune is that the cost of the taxi is now \$120: more than the value of the antique. Clearly, there is stronger reason to refrain from taxi-ing than there is to taxi, and so

²⁵ One might reply that the instrumental reason derives directly from the *value of the state of affairs* of the antique's being saved, instead of from any reason for the *end* of one's saving it. To anticipate just one of two problems with this reply, which will be discussed in section 8, there may not be any such valuable of a state of affairs. It might be the case, to alter the scenario, that the reason to save the antique is not that one's saving it would *itself* be a valuable state of affairs, but instead that one's saving it would honor something, or someone, of value, e.g., the memory of Unlucky's grandmother, who schlepped the antique from the old country. (Hence the awkward example of saving an antique!)

²⁶ One consideration that speaks in favor of Strong Availability, however, is that it would solve the following puzzle. Suppose ten miners are trapped in one of two shafts, we know not which, with the floodwaters rising. If we block shaft A, all ten will survive if they are in A, whereas all will die if they are in B. If we block shaft B, the reverse. If we block neither shaft, nine will survive and one will die wherever they are. It seems that we ought to block neither, which will save nine wherever they are. But why ought we not instead block *whichever shaft the miners are in*? After all, *that* is sure to save *all ten*, wherever they are. As Kolodny and McFarlane 2010 XXXX observe, something like Strong Availability would give us an answer: namely, because there is nothing under our control, that we can knowingly do, that is sure to bring it about that we block the shaft the miners are in. Another answer, however, appeals to the confusion between what we ought to do and what we ought to decide to do. Even if it is true that what we ought to *do* is to block whichever shaft the miners are in, it is doubtful that among the *decisions* available to us, the decision with the *content* "to block whichever shaft the miners are in" is the one for which we have most reason.

(according to Refrain Reasons-Ought) it is not the case that Unlucky ought to taxi. But is there likewise stronger reason to refrain from *saving* than there is to save?

Well, what reason *is* there to refrain from *saving*? It is hard to see what the answer could be, if not that refraining from saving somehow *avoids the cost of taxi-ing*. (The only other salient feature of refraining from saving the antique is that it prevents, or at least fails to bring about, the antique's being saved, which is hardly a reason in its favor.) This reason may not be covered by Means Probabilize, at least not if Unlucky's avoiding the cost of taxi-ing is not itself an *action* of Unlucky's. But even so, it would seem to be governed by a similar principle:

Cost Avoidance: If there is a positive probability, conditional on one's X-ing, that one's X-ing helps to bring it about that one avoids some cost C, then there is reason to X, whose strength depends on the cost and the probability.²⁷

In fact, we tacitly assumed something like Cost Avoidance to explain Unlucky's reason to refrain from *taxi-ing*: namely, that so refraining brings it about *for sure* that he avoids its cost. The question of what reason Unlucky has to refrain from *saving* thus turns on how probable it is, conditional on his refraining, that his refraining helps to bring it about that he avoids the cost of taxi-ing. And this turns on how Unlucky is likely to refrain from saving, if he does refrain. If—as we would usually expect—Unlucky is likely to refrain from saving, if he refrains, by refraining from taking the taxi, then, yes, refraining from saving is very likely to avoid the cost of taxi-ing. But if—to consider a more unusual case—Unlucky is likely to refrain from saving, if he refrains, by akratically taking the taxi and then dawdling on the front porch, gossiping with his neighbor, until the antique is ruined, then, no, refraining from saving isn't very likely to avoid the cost of taxi-ing. In this more unusual case, Unlucky might have very weak reason to refrain

²⁷ This might be a special case of General Production of section 8.

from saving, since he is so likely incur the costs of the taxi anyway. By manipulating the probabilities, we can make his reason to refrain from saving *weaker* than his reasons to save. Thus, it would be consistent with Refrain Reasons-Ought, and entailed by Relevant Reasons-Ought (at least relative to the set {save, refrain from saving}), that he ought to save.²⁸ As we might think: “It is not the case that Unlucky ought to take the taxi in the first place, since it costs more than the antique. But given that he is so likely (foolishly) to take the taxi whether or not he saves the antique, he ought at least to save the antique and cut his losses.”

The second counterexample to Ought Necessity that satisfies Strong Availability is *Procrastinate*, described by Jackson 1985 and Jackson and Pargetter 1986. Professors Procrastinate and Dispatch have equally strong reason to review a book. A necessary means to this is accepting the commission to review it. Accepting has one cost: namely, that of contacting the difficult-to-reach review editor in time to accept. Whereas Dispatch is sure to write the review, if he accepts, Procrastinate is extremely unlikely to write the review, if he accepts. Reviewing the book is Strongly Available. If either accepts the commission, then it is necessary that writing the review will be, at a later time, fully under his control, and that if he writes the

²⁸ One might reply that this cannot be so. “It follows from:

Refrain Strong Necessity: If there is reason to refrain from M-ing (say, because M-ing would incur some cost), and if one M-ing is a necessary means to one’s E-ing, then that is a reason at least as strong to refrain from E-ing,

that there is reason at least as strong to refrain from saving as to refrain from taxi-ing. And since there is stronger reason to refrain from taxi-ing than to save, it would follow that there is stronger reason to refrain from saving than to save.” I can’t rule out an argument that would show that Refrain Strong Necessity was ultimately more compelling than Cost Avoidance. But I suspect that Refrain Strong Necessity seems appealing only because it is a special case of:

Strong Necessary Condition: If there is reason to X, and necessarily, one X’s only if one Y’s, then that is a reason at least as strong to Y.

And the arguments of the last section against Strong Necessity as well as the points in note 6 already tell against this principle.

review, then it will be necessary that he reviews the book.²⁹ But otherwise the structure of the case is relevantly similar to Lucky and Unlucky. Intuitively, Procrastinate has weaker reason to accept than to refrain,³⁰ and so Refrain Reasons-Ought implies that it is not the case that he ought to accept. And on Relevant Reasons-Ought, Procrastinate, like Dispatch, ought to review.

While the Revised Unlucky and Procrastinate cases involve Strongly Available ends, they, unlike the original Unlucky case, are more controversial. This is because they conflict with the:

Control Principle: One's reason for doing something cannot depend on what is likely to happen as a result of other factors that will be under one's control in the future.

For example, when we claim that Procrastinate has weak reason to accept, and so it is not the case that he ought to, we base this on the fact that, even if he accepts, he is unlikely to write, because he is likely to procrastinate, which will be under his control in the future (even if it isn't now). But we should not be troubled by this conflict, however, because the Control Principle is untenable.

Granted, as the Conditionalization Principle holds, one's reason to do something does not depend how likely one is to do *that very thing*. But that isn't what is at issue. What is at issue is

²⁹ I am assuming that it is not true of Procrastinate or Dispatch that if he *now intends* to write, it is necessary that he writes. Even if he so intends, it will be in his power to change his mind in the interim (which Procrastinate is very likely to, whereas Dispatch is very unlikely to, do). This is why neither satisfies Super-Strong Availability of note 24. They satisfy Strong Availability, by contrast, because there is a series of secure steps (perhaps simply refraining from changing their minds at each successive moment) that will put them in a position at some future time such that if they *then* intend to write, it is necessary that they write. (Suppose, however artificially, that factors outside of their control are known, or fated, not to get in their way in the meantime.)

³⁰ One can't object: "No, Procrastinate only has stronger reason *to refrain from accepting*." The *only* reason to refrain from accepting is the cost of contacting the editor, which *both* incur with certainty by accepting. Assume that accepting won't risk preventing anyone else from writing the review (since each inhabits a universe in which he is the only possible reviewer), or disappointing or embarrassing anyone (all parties are stoically immune to such things).

whether one's reason to do something can depend on how likely one is to do *other things in the future*, which are not yet, but will be, under one's control. To deny this would be to paralyze normative thought. After all, just about everything that bears on the point of present actions—what to buy, what appointments to make, etc.—is affected, at least in part, by possible future actions that will be within my control. Tomorrow I won't, but I certainly *could*, quit my job, move away, abandon my family, or embark on a sex change. If we can't take into account that it is extremely unlikely that I will do any of these things—if we somehow have to leave it indeterminate whether I will be a man or a woman, here or there, with or without a job, living with my family or not—then isn't clear *what* we can say about what I have reason to do now.³¹ My future would be almost wholly indeterminate. For a less dramatic example, and one that involves no prediction of irrational or unreasonable action, suppose that I have sufficient reason to attend one, but only one, of the Eastern, Central, or Pacific APA meetings. Suppose that, for whatever reason, I am very likely to attend the Central, and very unlikely to attend any of the others. The three conference hotels are offering a steep discount on bookings made by the end of today. It seems that I have more reason to book a room at the Central, which I will almost certainly use, than at the Eastern, which will be a waste.³² But the Control Principle would forbid us from making even this pedestrian point.

This is not to deny—to end this section on a concessive note—that it *matters* whether or not the low probability of achieving the end, if the means are taken, depends on what the agent

³¹ Apart from the possibilities mentioned in note 14.

³² One might reply that the relevant phenomenon is a matter of instrumental rationality, not of instrumental reasons. “Insofar as you intend to attend the Central, it would be *irrational* of you to refuse intend what you believe to be necessary means to it.” But, compatibly with the description of the case, I may not have yet decided to attend, and I may not believe that booking today is a necessary means. It may not *be* a *necessary* means, and at any rate, I may not *know* about it. [Identifying note 2.]

will later do. It certainly matters for *criticism*. Procrastinate will be criticizable for failing achieve the end (whether because he fails to write having accepted, or refuses to accept because he predicts he will fail to write). By contrast, Unlucky will not be criticizable for failing to achieve the end (whether because the taxi doesn't get there in time, or because he opts against the taxi, predicting it won't get there in time). Nor is it to deny that there may be a use of 'ought' in criticism that obeys the Control Principle. The point is simply that the Control Principle does not apply to one kind of 'ought,' and, in particular, a kind of 'ought' that figures significantly in deliberation and advice about means and ends.

4. Second desideratum: means must not be superfluous

To recap: We identified a desideratum for a principle of instrumental transmission, namely, Means Probabilize. Then we observed that it tells against Strong Necessity and arguably also against Ought Necessity. Now we turn to the second desideratum, which is revealed by a defect in Means Probabilize, although a defect that does not affect the arguments given so far.

Suppose Dr. Twoways has the end of relieving the patient's pain. Drug 1 alone will do this for sure. If he also gives Drug 2, it will at first neutralize Drug 1, but then combine with Drug 1 in the patient's bloodstream to become Drug 3, which will also relieve the patient's pain for sure. Suppose that at every possible outcome Twoways gives the patient Drug 1. (Either it is known, or fated, that he will give Drug 1.) In this case, it seems that no reason transmits to Twoways's giving Drug 2.³³ However, Means Probabilize implies that reason *does* transmit.

³³ If this doesn't seem immediately intuitive, consider: If there were some cost, no matter how slight, to giving Drug 2, then intuitively Twoways ought to refrain from giving Drug 2. This suggests that Twoways has no more instrumental reason to give Drug 2 than to refrain. But he has no instrumental reason to refrain. (It is true that if he refrains, he will do something else, namely give Drug 1, that will relieve the patient's pain. But the same is true of the boxer's telegraphing in section 1, to which no reason transmits. If he telegraphs, he will do something else that will land the punch.) So he has no instrumental reason to give Drug 2.

The probability, conditional on giving Drug 2, that Twoways relieves the patient's pain and that giving Drug 2 helps to bring this about, is *one*. In *every* possible outcome in which he gives Drug 2, his doing so *helps to cause* the relief of pain. In every such outcome, 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 reason why no reason transmits, one wants to say, is that in every possible outcome in which Drug 2 helps to bring it about that the pain is relieved, Drug 2 brings this about *superfluously*. In other words, we should replace Means Probabilize with:

Means Probabilize Nonsuperfluously: If there is reason for one to *E*, and there is positive probability, conditional on one's *M*-ing, that one's *M*-ing, or some part of one's *M*-ing, helps to bring it about that one *E*'s *in a nonsuperfluous way*, then there is reason for one to *M*, whose strength depends on the reason for one to *E* and on the probability.

The intuitive idea is that one's *M*-ing is *superfluous* with respect to one's *E*-ing in outcome *W* just when, if one's *M*-ing were "removed" from *W*, one would still *E*. Consider any outcome in which Twoways gives Drug 2. If we "took away" Twoways's giving Drug 2 from that outcome, Twoways's giving Drug 1 would "still be there," and so Twoways would still relieve the patient's pain.

To say "if one's *M*-ing were 'removed' from *W*, one would still *E*" is *not* to say "if one did not *M*, one would still *E*." One difference is that the counterfactually "closest" world, as it were, in which one does not *M* may be one in which *not only* is one's *M*-ing "taken away," *but also something new* is "added in." For example, suppose the end is entering the house. In every possible outcome in which I enter by the front door, it is true that if I had not entered by the front door, I would have entered by the back door. In other words, at the "closest" world at which I do

not enter by the front, not only is my entering by the front “taken away,” but also something new, my entering by the back, is “added in.” Intuitively, we don’t want to count entering by the front door as superfluous. If we did, then no reason would transmit to entering by the front door, and (if the situation is symmetrical) no reason would transmit to entering by the back door, even though (entering either by the front or by the back) would be necessary and sufficient for the end. But it would surely be wrong to say of me, after I enter by the front, not only that there was no more reason for me to do that than to enter by the back (which is true enough), but moreover that, as far as entering the house was concerned, there was no reason for me at all to do it—as one might properly say of me if I had instead tied myself to a stake in the lawn, preventing myself from entering the house.

Another reason why “if one’s M-ing were ‘removed’ from W, one would still E” is *not* equivalent to “if one did *not* M, one would still E” is that the “closest” world in which one’s does not M may be one in which only *part* of M-ing, not the whole of it, is “taken away.” For example, it might be the case at every outcome at which Twoways (gives Drug 1 and gives Drug 2) that, if Twoways did not give both, Twoways would still give Drug 1. Even though, given that Twoways gives Drug 1, giving Drug 2 is superfluous, we *don’t* want to say that given that Twoways gives Drug 1, giving *both* is superfluous. Suppose that giving both drugs (and only giving both) will improve the patient’s complexion, and that giving both is no more costly than giving Drug 1 alone, since Drug 2 is about to spoil anyway. Intuitively, Twoways has more reason to give both than to give only Drug 1: that will relieve the patient’s pain and, without any additional cost, improve his complexion. But if we count giving both as superfluous, then reason to relieve pain will transmit only to giving Drug 1 alone. Since reason to relieve the patient’s

pain outweighs the reason to improve the patient's complexion, Twoways will have more reason to give only Drug 1 than to give both.

To capture the intuitive idea, therefore, we should say something like this:

Definition of superfluous means: One's *M*-ing is superfluous with respect to one's *E*-ing in an outcome *W* iff there is some *M** such that:

- (i) one *M**'s in *W*
- (ii) one's *M**-ing in *W* is not a part of one's *M*-ing at *W*
- (iii) at *W* it is true that, if one did not *M*, then one would still *M** in the same way and one would *E* and one's *M**-ing would help to bring about one's *E*-ing.

Clause (i) saves entering by the front door from superfluity, because when one enters by the front door, one does not also enter by the back door.³⁴ Clause (ii) saves giving both drugs from superfluity, on the assumption that giving Drug 1 is part of (giving Drug 1 and giving Drug 2).

It is crucial to distinguish the notion of a superfluous means from the notion of an "excessively costly" means. An *excessively costly* means is a means that is more costly than an alternative means that is at least as good a means.³⁵ Reason *does* transmit to excessively costly

³⁴ It is true that when one enters by the front, one "also" (enters by the back or by the front) in some determinate, by-the-front, way. However, in violation of clause (iii), it is not true that if one did not enter by the front, one would still (enter by the back or by the front) *in that determinate, by-the-front, way*. Of course, this raises a question about how "ways" should be individuated. But I see no reason to doubt that they can be individuated so as to lead to plausible results.

³⁵ More precisely: *M*-ing is an *excessively costly* means to one's *E*-ing iff there is some *M** such that:

- (i) it is possible for one to *M** without *M*-ing,
- (ii) the probability, conditional on one's *M**-ing without *M*-ing, that one's *M**-ing, or some part of one's *M**-ing, helps to bring about one's *E*-ing nonsuperfluously is at least as high as the probability, conditional on one's *M*-ing, that one's *M*-ing, or some part of one's *M*-ing, helps to bring about *E*-ing nonsuperfluously (which is positive),

means. It is just that the reason transmitted is typically *outweighed* by the excessive cost. While giving both drugs is not superfluous, for instance, it may well be excessively costly. For example, it may use up more scarce medicine than giving Drug 1 alone, which is at least as good at relieving the patient's pain. While there is as much reason *for* giving both as for giving Drug 1 alone—either option is equally good a means to relieving the patient's pain—there is stronger reason to refrain from giving both—it uses up more medicine.

5. *Why the Sufficiency principles have trouble with the nonsuperfluity desideratum*

If Means Probabilize Nonsuperfluously is correct, then it poses a problem for the Sufficiency principles. The Sufficiency principles may seem plausible, because if one takes some sufficient means, then one is *sure* to achieve the end. The problem is that compatibly with that truth, one may be sure to achieve the end *even if one does not* take that sufficient means. This can happen, in particular, because the sufficient means are superfluous. In such cases, at least if Means Probabilize Nonsuperfluously is on the right lines, no reason transmits to those sufficient means.

To make the case more exactly, let's use an analogue to our earlier definition of necessary means:

Definition of Sufficient Means: One's M-ing is a *sufficient* means to one's E-ing iff

- (i) in *every* possible outcome in which one M's, one's M-ing helps to bring about one's E-ing, and
- (ii) there is *some* possible outcome in which one M's.

So understood, a sufficient means can be superfluous in every possible outcome at which it is taken. Indeed, this is exactly what happens with Dr. Twoways. Drug 2 is a sufficient means to relieving the patient's pain. So, according to Weak Sufficiency, Twoways has reason to give

(iii) there is stronger reason to refrain from M-ing than from M*-ing.

Drug 2. However, since Drug 2 is superfluous toward the end of relieving pain in every possible outcome, Twoways intuitively has no reason to give Drug 2. And if Weak Sufficiency fails,³⁶ then so does Strong Sufficiency. If no reason transmits, then *a fortiori* reason at least as strong does not transmit. If we assume Refrain Reasons-Ought, and that there is some reason to refrain from giving Drug 2, then Ought Sufficiency also fails.³⁷ Since there is no reason for giving Drug 2, and some reason to refrain from giving it, Refrain Reasons-Ought implies that it is not the case that Twoways ought to give Drug 2.

One might object to this argument against Weak Sufficiency, on the grounds of:

Reasons Non-Necessity: One has reason to X only if it is possible that one does not X. Since it is necessary that Twoways relieves the patient's pain (by giving Drug 1), Reasons Non-Necessity implies that he has no reason to do so. So Weak Sufficiency does not imply that he has reason to give Drug 2.

However, Reasons Non-Necessity seems implausible. Knowing that I will, or even that I am fated to, refrain from committing suicide in the next minute, for example, doesn't undermine my judgment that I have reason to refrain. In any event, there are counterexamples to Strong and

³⁶ Broome ms. argues against Weak Sufficiency with an example that, I believe, exploits superfluity. An itchy donkey has the end of scratching its itch. If it walks to the scratching-post, which it hates to do, that will help to bring it about that it scratches its itch. However, the donkey can also easily, effortlessly scratch the itch with its hind leg. In that case, Broome suggests, it has no reason to walk to the scratching-post. But this judgment seems so natural, I think, only because we implicitly assume that, because the donkey can so easily scratch its itch with its hind leg, it is almost sure to do so. In that case, its walking to the scratching-post, in addition to its hind-legging it, is superfluous (as well as excessively costly). Alternatively, we might imagine that the donkey will hind-leg it only if it does not walk. In that case, walking is not superfluous (but still excessively costly). It has just as much (itch-alleviation) reason *to* walk as to hind-leg it (although more reason to refrain from walking than from hind-legging it).

³⁷ Unsurprisingly, Ought Sufficiency is also falsified by sufficient means that are excessively costly. 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. Presumably, it is not the case that we ought to take *A*.

Ought Sufficiency compatible with Reasons Non-Necessity. Suppose that Drug 1 fails in one out of every N cases, whereas Drug 2 works in every case. Even if it is necessary that Twoways gives Drug 1, it is not necessary that he relieves the pain. So, compatibly with Reasons Non-Necessity, there is reason to relieve the pain. Nevertheless, only weak reason transmits to the sufficient means of giving Drug 2, because in $N-1$ cases, giving Drug 2 is superfluous. By making the transmitted reason suitably weak (by the right choice of N), we can construct counterexamples to Strong and Ought Sufficiency.³⁸

³⁸ For rather subtle reasons, Joseph Raz's:

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)

also has trouble with superfluity. This is so, despite the fact that his “but only one” restriction seems intended to ban transmission to superfluous means. So understood, the restriction would presumably say (in the idiom of this paper) that if in all possible outcomes, one takes some facilitating plan A, then no reason is transmitted to taking a second facilitating plan B. (Alternatively, the restriction might be understood as a ban not on superfluous means, but instead on excessive costly means. It would then say that if A and B are each facilitating plans, no reason is transmitted to the facilitating plan consisting of the *conjunction* of A and B, at least if that conjunction is more costly than either alone. But this restriction would be misplaced, since, as Raz 2005b 2–4 rightly stresses, reason transmits to excessively costly means.) The problem is that this restriction bans *more* than merely superfluous means. The condition might be met even though B is not superfluous. B might be a failsafe, in case 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.

One might reply that by “facilitating plan,” Raz means “sufficient means.” Taking a second *sufficient* means, when one has already taken one sufficient means, *is* always 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).

Alternatively, one might reply that by “facilitating plan,” Raz means “*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. More rigorously, a means, M -ing, to E is *unimprovable* iff there is *no* means M^* such that if one M 's in every possible outcome, there is some possible outcome which one's M^* -ing helps to bring about one's E -ing in a nonsuperfluous way (and the way in which one M 's at that outcome is not the way in which one M^* 's at that outcome). This would validate the “but only one” restriction. If one is sure to take an unimprovable means, then

6. A positive proposal: General Transmission

Having criticized Strong and Ought Necessity, and the Sufficiency principles, I now suggest a positive proposal:

General Transmission: If there is reason for one to *E*, and there is positive probability, conditional on one's *M*-ing, that one's *M*-ing, or some part of one's *M*-ing, helps to bring it about that one *E*'s nonsuperfluously, then that is a reason for one to *M*, whose strength depends on the reason for one to *E* and the probability, *so long as the reason for one to E is not explained by an application of General Transmission to reason for one to achieve some distinct E'*.

Observe, first, that General Transmission meets our desiderata; it is, essentially, Means

Probabilize Nonsuperfluously plus a proviso. Second, General Transmission is informative: it

says something not only about whether *some* reason is transmitted, but also about *how much*

any further (putative) means are (at best) superfluous at every possible outcome. 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, in every possible outcome, 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 in every possible outcome. If one additionally *M*'s, one will still be taking only one facilitative plan overall. So the Facilitative Principle allows reason to transmit to additionally *M*-ing, even though it is superfluous in every possible outcome. (For an illustration, suppose that in every possible outcome, 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 in every possible outcome.)

reason is transmitted and what it depends on.³⁹ Third, General Transmission is comprehensive: it says whether reason transmits to *any kind* of means (not simply, say, necessary or sufficient means).⁴⁰ Finally, General Transmission implies, as a special case, the one principle that survived criticism: namely, Weak Necessity.

One might find it a shortcoming of General Transmission that it tells us nothing about the instrumental transmission of ‘ought.’ But I suspect that this is as it should be. The problems

³⁹ This is in contrast to the Weak principles, Bedke’s 2009 678 “Instrumental Principle” (“One has reason to take the means to what one has ultimate reason to do”), and Raz’s Facilitative Principle. The Strong principles and Schroeder’s General Reason Transmit are more informative. However, while Schroeder says that the strength of the reason depends on “how well” the means facilitates the end, he leaves it largely open how “how well” is to be understood. General Transmission might be seen as offering one understanding.

⁴⁰ To illustrate, suppose an aimless teenager has not adopted any plan that contains taking the SAT as a step. Nevertheless, a parent may know that the 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). Taking the SAT is neither a necessary means (since some schools permit the ACT instead), nor a sufficient means (since other partial means, such as submitting the application are necessary). By contrast, Bedke’s Instrumental Principle and Schroeder’s General Reason Transmit apply to such means.

Raz’s Facilitative Principle, however, seems not to. Taking the SAT does not fit the description of a “facilitating plan”: “Facilitating steps can come in ordered sequences, each constituting one way of bringing us to the point where we can take the action we have reason to take. We could call each a (possible) plan of how to get to a point at which we can take that action” (2005a 5). (Moreover, if taking the SAT were a facilitating plan, then other partial means, such as submitting the application, would also count as facilitating plans to that end. But then the “but only one” restriction of the Facilitative Principle would imply, incorrectly, that the teenager does not both have reason to take the SAT and have reason to mail the application.) Nor is it covered by Raz’s supplemental claim that “we have only conditional reason to take [steps within a plan], the condition being that we have adopted and are pursuing the plan” (2005a 6). The teenager has not adopted, and is not pursuing, any plan that has taking the SAT as a step. To be sure, Raz observes that reason can transmit to such means, which “keep options open” for not yet adopted plans (2005b 8). The problem, to be pedantic, is that letter of his formulations doesn’t actually allow for this. Furthermore, General Transmission applies to means, such as taking the left bale as a means to taking either the left or the right bale, that cannot be steps even within adopted facilitative plans, since such means do not put the agent in a position to perform the action, but instead are ways of performing the action. Again, the point is pedantic, since Raz 2005a 13 n. 18 clearly recognizes transmission to such “means,” governed by the more basic and general principle that, as I recount in section 7, he uses to argue for Weak Detachment.

with Ought Necessity and Sufficiency that we have discussed suggest that there may be no interesting generalities about the instrumental transmission of ‘ought.’ Perhaps all we can say, in general, is that reasons transmit in the way that General Transmission describes, and that ‘ought’ depends on reasons (perhaps in the way that Relevant Reasons-Ought suggests). Whether, in any given case, the reason transmitted from an end to means will ensure that the ‘ought’ that accompanies the end will also accompany the means may just depend on the specifics of the given case.

The reason for the italicized “Intransitivity Proviso” is 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 loaf of bread and a cake. General Transmission might well imply that Kenny has reason to bake a loaf of bread. One means to that is to bake a normal loaf. Another is to bake a mega-loaf, which is very likely to leave no flour left to bake a cake, and so to prevent Kenny from preparing the display. Applying General Transmission with E = baking a loaf, it might well be that Kenny has the same reason to bake a mega-loaf as to bake a normal loaf. However, applying General Transmission with E = preparing the display, Kenny will presumably have much less reason to bake a mega-loaf as to bake a normal loaf. Intuitively, it is the latter conclusion, not the former, which is correct. The Intransitivity Proviso reflects this, by saying that reason for a means to a means is transmitted directly from the “ultimate” end, not from the means to which it is a means.⁴¹

⁴¹ This is more or less Bedke’s solution. Millsap’s solution differs. It is worth noting that, if we add the Intransitivity Proviso, 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, and that similarly appears to worry Raz 2005a 12 n. 17.

Some might urge a second, “Silencing Proviso”: “...and the reason for one to refrain from M-ing is not overwhelmingly more weighty than the reason that there is, or would otherwise be, for one’s M-ing.” This would accommodate an objection that is often raised against transmission principles. 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 there is *some* reason for me to poison the don—although obviously overridden. But some will say that reason for the means is “silenced.” Yes, when means carry some moderate cost, reasons for them may be overridden. But when means are overwhelmingly costly or objectionable in this way, there isn’t even any reason to be overridden. Transmission in such cases is simply blocked.⁴²

Like many others, however, I find the objection unpersuasive. 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. But I doubt that we should conclude from these observations that there is no such reason. As Millsap ms. a, Raz 2005b 3, and Bedke 2009 684–686, observe, a point made by Schroeder 2004, 2005, and 2007 seems to explain why it is odd to *say*. It is a violation

⁴² For discussion of silencing, see McDowell 1998a, b, and c; and Price 2008 12 n. 9, 184 n. 72. Setiya 2005 raises this silencing objection against something like Weak Necessity, whereas Broome 2005 appears to raise it against Weak Sufficiency and Raz’s Facilitative Principle. Broome 2005 argues that no reason transmits from the end of alleviating one’s hunger to the overwhelmingly (prudentially, if not also morally) objectionable, but not superfluous, means of killing oneself. In Broome ms., he claims to make the same point with a different example: the itchy donkey of note 36. But the donkey makes a different point. Its walking is superfluous, but not overwhelmingly objectionable. What may lead Broome to assimilate the two examples is that, in both, the means are excessively costly. But that may be a red herring.

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. And, to entertain the thought, at least in the context of live deliberation, does indeed indicate a vice. (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, as Seidman 2005 observes, 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. Thus, I find it more natural to conclude that, when taking some means is opposed not simply by reasons that would be *moderately overriding*, but moreover by *overwhelmingly strong* reasons, this makes it odd (or vicious) to cite (or contemplate) reason for the means, than to say that it somehow blocks transmission of reason. But for those who are troubled by the objection, the option of adding the Silencing Proviso is there.⁴³

7. *Implications: No reasons to be instrumentally rational*

At least for the sake of argument, suppose that the cases against Strong and Ought Necessity, and against the Sufficiency principles, and for General Transmission, have succeeded. What then follows for appeals to principles of instrumental transmission to show that “narrow-scope”

⁴³ Kieran Setiya suggests another response: namely, that even if there are intuitive cases of silencing, the Silencing Proviso is unnecessary, because such cases are already handled by the Intransitivity Proviso. We resist the conclusion that I have reason to poison the don, for example, only because we think that the *ultimate* end for which I have reason is not changing policy, but instead changing policy *in a morally permissible way*, which poisoning the don (like baking the mega-loaf) does nothing to further. Whether this ingenious suggestion will handle all the intuitive cases of silencing, however, I am not sure (in part because I don't share many of the relevant intuitions).

reason or ‘ought’ for the consequent F “detaches” from “wide-scope” reason or ‘ought’ for a material conditional (one E ’s \supset one F ’s)? Recall that detachment threatens the claim of Broome 1999 that, in general, one ought to be instrumentally rational: that is, that one ought to see to it that (one intends at t to E and believes at t that intending at t to M is a necessary means to E -ing \supset one intends at t to M). For it scarcely seems to follow from the facts that one intends to start World War III and that one believes that intending to launch this missile is necessary for starting World War III, that one has “detached,” “narrow-scope” *reason* to intend to launch the missile, let alone that one *ought* to!

Setiya 2007 and Schroeder 2009, revisiting an observation of Greenspan 1975, advocate:

Ought Detachment: If one ought to make it the case that (one E ’s \supset one F ’s) and one cannot alter the fact that one E ’s, then one *ought* to F .

According to Ought Detachment, Broome’s 1999 claim implies that if one could not alter the intention and means-end belief above, one ought to intend to launch the missile. However, Setiya’s and Schroeder’s arguments for Ought Detachment rely on Ought Necessity, which we have questioned. So it not clear that we have grounds for accepting Ought Detachment.

To a similar purpose, Raz 2005a argues for:

Weak Detachment: If one has reason to make it the case that (one E ’s \supset one F ’s), then one has reason to F ,

which he takes to follow not from the Facilitative Principle, but instead from the more basic and general idea that: “People have reason to do what will bring them into conformity with the reasons that apply to them” (2005b, 3). Bedke 2009 argues that something similar follows from his “Instrumental Principle.” If they are right about this, then we need no auxiliary assumptions,

about unalterable intentions or anything else, to refute Broome 1999. If there were reason to be instrumentally rational, there would *always* be reason to intend to M , for any M whatsoever!

But, first, the case *for* Weak Detachment rests on questionable principles. Since Bedke's Instrumental Principle entails Weak Sufficiency, it would seem to be falsified by the phenomenon of superfluity. The "more basic" idea of Raz's quoted above also seems falsified by superfluity. Presumably we do not have reason to do what *superfluously* brings us into conformity with what we have reason to do.

Second, there is an argument *against* Weak Detachment. Rippon 2011 12 notes that Weak Detachment seems to prove far too much. There are arguably some wide-scope reasons: for example, that I have reason (I am in France \supset I speak French). Now suppose that I'm not in France; I'm in the USA, surrounded by English monolingualists. Weak Detachment implies that I have reason to speak French. But intuitively I have no reason at all to do this.

Nevertheless, I believe that we can derive from General Transmission analogues to Ought and Weak Detachment that vindicate Setiya's and Schroeder's, and Raz's and Bedke's, lines of argument. Let us make two plausible assumptions. First, one's F -ing helps to bring it about that (one E 's \supset one F 's). Second, when the probability in General Transmission is one, then the reason for the means is of the same weight as the reason for the end. Then General Transmission implies:

Strong Detachment: If one has reason to make it the case that (one E 's \supset one F 's), and, in every possible outcome, one E 's, then that is a reason *of the same weight* to F .⁴⁴

⁴⁴ Whether General Transmission validates Ought Detachment is less clear, at least in the absence of a settled theory of how reasons and 'ought's relate: that is, of which Reasons-Ought principles are correct.

This is because, when the antecedent holds, *F*-ing helps to bring about the end nonsuperfluously in *every* outcome in which one *F*'s. Strong Detachment implies that if in every possible outcome one has the intention and means-end belief above, and if one has reason to be instrumentally rational, then one has at least as much reason to intend to launch the missile, which seems absurd enough.⁴⁵

General Transmission also validates:

Restricted Weak Detachment: If one has reason to make it the case that (one *E*'s \supset one *F*'s), and there is positive probability, conditional on one's *F*-ing, that one's *F*-ing helps to bring it about in a nonsuperfluous way that (one *E*'s \supset one *F*'s), then one has some reason to *F*.⁴⁶

This seems to suffice for Raz's and Bedke's purposes. It entails that if at *some* possible outcome intending to launch the missile is *not superfluous* to being instrumentally rational, and if one has reason to be instrumentally rational, then one has reason to intend it, which again seems absurd enough.

Moreover, Restricted Weak Detachment handles Rippon's counterexample, even if we grant the (perhaps dubious) claim there is a wide-scope reason to see to it that (I am in France \supset I speak French). When we suppose, in entertaining Rippon's counterexample, that I am not in

⁴⁵ While sympathetic to Broome 1999, Bratman 2009 avoids this result by arguing that in such exceptional cases, the general reason to be instrumentally rational lapses, because it derives from reason to be "self-governing," which is not possible in such cases. See Brunero 2010 for criticism.

⁴⁶ Against Weak Detachment, Bratman 2009 422 suggests that reason in favor of one's *F*-ing "involves an implicit comparison of [one's *F*-ing] with its available alternatives," including refraining from *E*-ing. Thus, it might be that refraining from *E*-ing, rather than *F*-ing, is "what there is reason to do." But this reply seems to the point only if "there is reason to *X*" means, in the idiom of this paper, "at least as much reason for *X*-ing as for any alternative to which we are implicitly comparing *X*-ing" (a usage which makes "overridden reason" an oxymoron). That isn't the usage at issue here.

France, we are in effect shifting to a context in which there is no (epistemic⁴⁷ or historical) probability that I am in France. But, in that case, the material conditional (I am in France \supset I speak French) is already guaranteed to be satisfied, which makes speaking French a *superfluous* means to satisfying it (as Rippon 2011 15 n. 31 in fact observes). And *Restricted Weak Detachment* does *not* say that reason transmits to the consequent when satisfying the consequent is a *superfluous* means to satisfying the conditional. So it does *not* follow from *Restricted Weak Detachment* that, when I am not in France, I have reason to speak French. In other words, Rippon's case simply exemplifies the general point that reasons don't transmit to superfluous means, as General Transmission says.

In reply, it might be said that if we add the Silencing Proviso of section 6 to General Transmission, then Strong Detachment and Restricted Weak Detachment will inherit it. Since the reasons to refrain from intending to launch this nuclear missile are presumably overwhelming, no reason transmits to intending to launch it.

As I have said, I doubt we should accept the Silencing Proviso. But even if we do accept it, we still have a recipe for bootstrapping cases. Suppose (i) Bettering is incompatible with intending Worse, (ii) there is slightly stronger reason to Better than to intend Worse, but (iii) not *so* much stronger that the reason for intending Worse is "silenced." I am assuming here that we cannot insist that *whenever* there is stronger reason for an alternative, reason is silenced, on pain of denying that there are ever overridden reasons. Now, suppose further (iv) that, in some possible outcome, one will knowingly have a higher-order intention to intend Worse (or, if we wish to use Strong Detachment, that, in *every* possible outcome, one will have this intention). This means that, in this possible outcome, one will be instrumentally irrational unless one intends

⁴⁷ Compare Yalcin 2007 and Kolodny and MacFarlane 2010.

Worse, since this is, as one knows, a necessary means to what one intends. If we assume that one has reason to be instrumentally rational, then, according to Restricted Weak Detachment, even with the Silencing Proviso, some reason will transmit to intending Worse (and, on the alternative scenario for Strong Detachment, that reason of the same strength will transmit). But this seems absurd. If we make the reason for Better slightly weaker than the reason to be instrumentally rational, for instance, then we risk the conclusion that one ought to intend Worse.

8. Conclusion: Is instrumental transmission a myth?

I close by noting a further implication of General Transmission: namely, that it may pave the way for the conclusions, first, that, strictly speaking, there is no such thing as instrumental transmission and, second, that whatever truth there is in the vicinity is just a consequence of a certain kind of decision theory.

We have been supposing that there are reasons for ends. But where do these come from? On a value-based view, at least *some* reasons for ends are presumably provided by *valuable* states of affairs. And on a desire-based view, *all* reasons for ends are provided by *desires* for states of affairs. So says:

General Production: If S is a valuable (or desired) state of affairs, and if there is positive probability, conditional on one's X-ing, that one's X-ing, or some part of one's X-ing, helps to bring about S "nonredundantly"—that is, helps to bring about S when S would not have obtained if one had not X-ed—then that is a reason for one to X, whose strength depends positively on the value of (or strength, depth, etc. of desire for) S and the probability.

The need for "nonredundantly" can be seen from a variant of the Twoways case. Here a *different* doctor has already given the patient Drug 1. Has Twoways reason to give Drug 2? Suppose that

the valuable state of affairs is simply that the patient's pain is relieved, it does not matter who brings it about. (While the value of some states of affairs may depend on who brings them about, this is just not such a case.) Although there is some probability that Twoways helps to bring it about that the patient's pain is relieved, there is no probability that Twoways helps to bring this about nonredundantly. So General Production says, as seems intuitive, that he has no reason to give Drug 2. Nonredundancy is not the same thing as nonsuperfluity. The *redundancy* of an action with respect to a state of affairs is a matter of whether that *state of affairs would have obtained* (by one's agency, by someone else's agency, by natural causes, etc.) even if one had not performed that action. By contrast, the *superfluity* of an action with respect to an end is (roughly) a matter of whether *one would have achieved a given end* (by, specifically, one's own agency) even if one had not performed that action.

"Now assume that General Production explains *all* reasons for ends," one might challenge. "Then wouldn't it *also* explain *all* reasons for means, without needing any help from General Transmission? Suppose there is reason for an end. By assumption, this will be because it helps to bring about some valuable (or desired) state of affairs. But then any means to that end will also be likely to help to bring about that valuable (or desired) state of affairs. And if so, won't General Production imply there will be a reason for those means too? General Production, thus, explains General Transmission. The latter becomes, as it were, minor theorem of a kind of decision theory.⁴⁸ Indeed, to be more accurate, instrumental transmission is not so much

⁴⁸ General Production may differ from standard decision theories, however, in at least two respects. Decision theory is typically presented as a theory of *rationality*, and so focuses on epistemic probabilities fixed by *the agent's information at the time of acting*. By contrast, judgments about *reasons* often depend on other probabilities (e.g., such as those fixed by the information of an advisor, or the non-epistemic historical situation). Second, decision theory often focuses on "exhaustive" actions, which determine, for every available action that might relevantly affect the outcome, whether or not one performs that action: e.g., "going to the store

explained by General Production, as explained *away*. For now the reason for the means is simply *that it helps to bring about a valuable state of affairs*. *Reason for the end* appears nowhere in the explanation. It simply drops out. Of course, we can still say that whenever there is reason for the end, there is also reason for the means. But we can also say, with equal justice, that whenever there is reason for the *means*, there is reason for the *end*. The idea of instrumental transmission—that there is reason for the means *because there is reason for the end*—is an illusion.”

This conclusion—that instrumental transmission is a myth—may be less damaging to the argument of this paper than it might at first appear. We could change General Transmission to accommodate it. We would rewrite “...then *that* is a reason...” as “...then *there is also* a reason ...” So revised, General Transmission would still be a *useful* truth. It would still help, for example, to clarify the debate over “detachment.” And it would be a *neglected* truth, overlooked, in particular, by proponents of extant transmission principles. The fact that this revised General Transmission would be a minor theorem of decision theory would not change this.

However, I have doubts that the challenge succeeds. First, at least on a value-based view, the initial assumption of the challenge is far from obvious. On a value-based view, one might deny that all reasons for ends *are* provided by the value of states of affairs, and so explained by

and paying for the goods and not killing the cashier and not destroying them on the way home and...” By contrast, ordinary judgments about reasons rarely, if ever, involve exhaustive actions. Moreover, focusing on exhaustive actions threatens to crowd out the very phenomenon of instrumental transmission itself. For it ignores other actions from which to transmit reason *to*, or to which to transmit reason *from*, exhaustive actions. (See Wedgwood’s insightful 2011 for an analogous point about instrumental rationality.)

General Production.⁴⁹ For example, I may have reason to honor or respect something of value, whether or not doing so brings about a valuable state of affairs.⁵⁰

Second, even if all reasons for *ends* were explained by General Production, there would still be reasons for *means* that were *not* explained by General Production. The trouble is that, paradoxically, something can be a *means to the end* of helping to bring about a valuable (or desired) state of affairs nonredundantly (and so, intuitively, reason can transmit to it) without *itself* helping to bring about that state of affairs *nonredundantly* (and so without, as far as General Production is concerned, any reason transmitting to it). Suppose that the valuable (or desired) state of affairs is my being in the house, regardless of how this comes about. In every outcome in which I enter by the front, if I hadn't, I would have entered by the back. As we saw in section 4, entering by the front is *not a superfluous* means. So, according to General Transmission, I have reason to enter by the front, as seems intuitive. However, my entering by the front is a *redundant* means, because in every outcome in which I enter by the front, even if I hadn't entered by the front, the state of affairs of my being in the house (it matters not how) would have obtained. So, according to General Production, I would have *no* reason to enter by the front, which seems false.⁵¹ In sum, even when one's end is one's helping to bring about a valuable or desired state of affairs (whose value or status as desired does not depend on how it comes about), we still need to think of means as helping to bring about *that end: one's* bringing about that state of affairs *oneself*. We can't bypass the reason for end, and treat the means

⁴⁹ Compare Anderson XXXX, Scanlon XXXX, and Raz forthcoming.

⁵⁰ This isn't to deny that one can treat the state of affairs of honoring the thing of value as *itself* a valuable state of affairs and still get many of the right "results." But it is still a distortion, even if useful for certain modeling purposes.

⁵¹ Insofar as decision theory cares only about *ranking* actions, it does not need to distinguish this sort of case, in which two actions are equally ranked because there is the reason of *equal strength* for either, from a case in which two actions are ranked equally because there is *no* reason for either.

simply as something that helps to bring about the obtaining of that valuable or desired state of affairs. So, contrary to the challenge, reasons for ends don't drop out of the explanation of reasons for the means.

This suggests, to my mind, that we should keep General Transmission in its original form and, more generally, that instrumental transmission is not a myth. But what is perhaps more remarkable is not that this challenge can be countered, but that it could be raised in the first place. That is itself surprising—or at least surprised me. If nothing else, it testifies to the importance of getting clear about the principles governing (to put it neutrally) the relations between reasons for ends and means. Whatever comes of the challenge, I hope that this paper is some means in furtherance of that end.

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