**Tradeoffs, Self-Promotion, and Epistemic Teleology**

**1.**

Here is one way to address issues of value and obligation in epistemology. First, presuppose the value of some characteristically epistemic goal states, such as believing the truth and avoiding error. Then, explain all other epistemic value and all epistemic obligation derivatively, in terms of promoting or conducing to those goals. We can fairly call such an approach “teleological” or “epistemic teleology.”[[1]](#footnote-1)

Reliabilism may be the most obvious instance of epistemic teleology. It treats true belief as the fundamental epistemic goal, and it counts beliefs as justified or not depending on whether they are formed in ways that sufficiently reliably accomplish the goal. But even evidentialists can be teleologists. They can hold that the characteristic epistemic goal is to believe what fits one’s evidence, and they can count beliefs as justified or not insofar as they constitute realizations of that goal. Or, they can hold that one ought to believe what fits one’s evidence because that is what maximizes one’s chances of achieving the goal of truth.

I borrow the term ‘teleology’, of course, from ethics. Teleological moral theories assess actions, motives, policies, etc. in relation to the promotion of some ultimate moral good. Likewise, epistemic teleology assesses beliefs, methods of inquiry, belief-forming processes, habits of mind, etc. in relation to the promotion of the ultimate epistemic good. Epistemic teleology is, perhaps, even more attractive than its ethical counterpart, but it also appears to face a significant challenge.

The problem, which Selim Berker has articulated most fully in a pair of recent papers (2013a, 2013b), concerns what I will call *cross-propositional tradeoffs* and *epistemic self-promotion*. The general phenomenon in both cases is that of *epistemic tradeoffs*: sometimes, a lesser epistemic ill is conducive to a greater epistemic good. In such cases, epistemic teleology can seem committed to wrong answers about what one is justified in believing.

To see how the problem can manifest, consider *veritism*, the version of epistemic teleology that says true belief has fundamental epistemic value and false belief has fundamental epistemic disvalue.[[2]](#footnote-2) If we understand epistemic justification as a matter of promoting or conducing to that goal, there are apparent problems. What if I could put myself into a position to acquire many new true beliefs, if only I form one belief unsupported by my evidence right now? Veritism can seem committed to calling that unsupported belief *epistemically justified*, but that assessment seems wrong. Or, what if the very fact that I believe *p* somehow increases the probability that *p*? Veritism might seem committed to counting such a belief that *p* epistemically justified, since the belief appears to be “conducive” to its own truth. Again, though, that assessment seems wrong.

The problems are not specific to veritism. We could construct similar cases for any proposed epistemic end at all—truth, empirical adequacy, coherence, acceptability under ideal scrutiny, fit with one’s evidence, whatever. Any theory that treats epistemic value and obligation in terms of the promotion of an epistemic end seems saddled with cases in which beliefs that are most conducive to the epistemic greater good are also intuitively unjustified, unwarranted, unreasonable, or irrational. The cases can come in either of two forms. *Cross-propositional* *tradeoff* cases occur when believing one proposition promotes the achievement of the epistemic good with respect to many other propositions. *Epistemic self-promotion* cases occur when believing a proposition promotes the achievement of the epistemic good with respect to that proposition itself.

In response to such concerns, one might be tempted to give up epistemic teleology altogether and find an alternative way of understanding epistemic value. As I argue toward the end of this paper, such a move is not as easy as it might initially appear. Epistemic teleology has significant advantages, and so it’s worth considering whether it can avoid the problems of cross-propositional tradeoffs and epistemic self-promotion.

I will defend epistemic teleology on two fronts. First, I argue that cross-propositional tradeoffs and epistemic self-promotion are problematic for only the least plausible forms of epistemic teleology. Minimally plausible versions of the approach avoid the problems easily. Second, I describe some of what I think are the best reasons to understand epistemic value and obligation teleologically. Along the way, an important theme will develop. The best forms of epistemic teleology take their central issue to be the evaluation of *methods of inquiry* and *belief-forming processes*, rather than the direct evaluation of beliefs themselves. Plausible epistemic teleologies address the question of what one ought to believe only by first addressing questions about how one ought to make up one’s mind.

**2.**

Some writers think of the “epistemic” domain as what is left when we have bracketed all our moral, practical, aesthetic, and other interests that are not purely intellectual. Still others identify the epistemic with that realm of value and obligation applicable to believers and beliefs *merely as such*. And some take an explicitly teleological tack: the epistemic domain is defined by characteristically epistemic goals, such as believing what is true rather than what is false.

It could appear that epistemic teleologists and non-teleologists are quibbling over the definition of ‘epistemic’. Sometimes, perhaps, they are. But there is also a substantive disagreement in the neighborhood. Are we bound by obligations pertaining to our beliefs, or to our reasoning, that aren’t ultimately dependent on the promotion of valuable states of affairs? Teleologists will say we are not; non-teleologists say we are. Even if both sides agree that we ought to proportion our belief to the evidence, they disagree about *why* that is so. Teleologists will ground that obligation in the promotion of a valuable cognitive end, such as believing the truth. Non-teleologists will ground it in something else, such as our nature as believers, irrespective of any valuable goals, epistemic or otherwise.

The teleological outlook has been popular in epistemology. Descartes opens his *Rules for the Direction of the Mind* saying, “The aim of our studies should be to direct the mind with a view to forming true and sound judgments about whatever comes before it”(1984, p. 9). William James (1896) claimed we should evaluate our beliefs in terms of the dual aims of believing what is true and avoiding error, bearing in mind that those are distinct goals to be weighed against one another. Roderick Chisholm says, in the second edition of *Theory of Knowledge* (1977), that our basic intellectual obligation is to do our best, for each proposition we consider, to believe it if and only if it is true. Laurence BonJour (1985) and Richard Feldman (2003) distinguish epistemic normativity from other sorts by reference to distinctive epistemic goals. W. V. Quine compares normative epistemology to engineering and calls it the “technology of truth-seeking” (1998; see also Wrenn (2006)). Alvin Goldman (1986) explicitly compares the reliabilism of *Epistemology and Cognition* with consequentialist (and therefore teleological) moral theories, and Hilary Kornblith (1993) contends we should understand epistemic value and epistemic obligation in relation to the intellectual goal of true belief.

Teleological theories, in ethics, epistemology, or elsewhere, start from the idea that certain kinds of things have *fundamental* or *ultimate* value and disvalue. Non-teleological theories can (but need not) do the same. The distinctively teleological moves, though, are these: (1) Teleologists think of ultimate value as something to be *pursued* or *promoted* (and correlatively for ultimate disvalue). (2) Teleologists account for all other value, and all obligation, in terms of the promotion and pursuit of what is ultimately valuable. Kantian ethics, at least as elaborated in the opening pages of the *Groundwork*, starts from the idea that only the *good will* has ultimate or fundamental value, but it does not treat that as a kind of value to be pursued or promoted, but rather as a kind of value to be *respected* or *honored*. It isn’t teleological.[[3]](#footnote-3)

The teleological structure is evident in straightforward, unsophisticated, act utilitarianism. Pleasure is fundamentally good; pain is fundamentally bad. Acts are better or worse depending on how great a surplus of pleasure over pain they produce, all things considered. One morally ought to take, in any given circumstance, whatever available action would be best (or tied for best) by that metric, and one morally ought not to take any other action. This view starts with fundamental value, and it analyzes other value and obligation in terms of that value’s promotion.

Any teleological theory starts with a specification of states that, so far as the theory is concerned, are primitively valuable (or primitively disvaluable). We should not put too much metaphysical weight on that fact, though. A theory might treat a state as primitively valuable, when in fact its value derives from considerations external to the theory. To accept a teleological theory is to accept a theory of how other value or obligation derive from a given source, but not to take any particular view of where that source gets its value. Consider, for example, this normative theory of chess:

I. Checkmating your opponent has primitive value; being checkmated has primitive disvalue, and ending the game in a draw is primitively neutral.

II. Where P(*W*|*m*) is the probability that you will eventually checkmate your opponent or your opponent will resign, given the board position after move *m*, P(*L*|*m*) is the probability that you will eventually be checkmated or resign given the board position after move *m*, and P(*D*|*m*) is the probability that the game will be drawn given the board position after move *m*, the *expected value of m* is E(*m*) = P(*W*|*m*) + P(*D*|*m*)/2 – P(*L*|*m*). Move *m* is better than move *n* if E(*m*) > E(*n*), worse if E(*m*) < E(*n*), and equally good if E(*m*) = E(*n*).

III. In any given situation, a move is *justified* if it is no worse than any other available move.

It is implausible to think checkmate is primitively valuable in any deep sense, outside the context of chess strategy. In doing chess strategy, though, it is irrelevant *why* checkmate is good. Rather, it is taken for granted that checkmate is a worthwhile goal, and strategy distinguishes better from worse moves in terms of their promotion of that end. If we want to know why checkmating Anand is a suitable goal for Carlson, or vice versa, we need to step outside chess and consider other things.

Straightforward, unsophisticated, act utilitarianism and the above theory of chess strategy are both specimens of teleology. They exhibit the structure Berker claims is definitive of teleological theories. That structure involves three components (Berker 2013a, pp. 344-7, 2013b, pp. 365-6):

1. A “*theory of final value*,” which either “specifies a set of states of affairs that have value or disvalue as ends in themselves” (i.e., which have primitive value or disvalue to be pursued or avoided) or “identifies a certain list of goals or aims that structure the norms under consideration. … [T]hese must be *ultimate* goals or aims, not goals or aims that serve other, more basic goals or aims” (2013a, p. 345).
2. A “*theory of overall value*,” that specifies, for each kind of entity that might “conduce toward or promote” the states affairs identified in the theory of final value, “a comparative ranking” of everything of that kind “in terms of how well, all things considered, it conduces toward or promotes the various states of affairs that, according to the teleologist’s theory of final value, have value or disvalue as ends in themselves” (2013a, p. 346). Berker calls the sorts of entities addressed by the theory of overall value *evaluative focal points*, following Kagan (2000)).
3. A “*deontic theory* that assigns deontic properties such as being obligatory or permissible, being right or wrong, being justified or unjustified, on the basis of the theory of overall value” (Berker 2013a, p. 347).

This structure allows for a wide variety of teleological theories. It does not stipulate *which* states of affairs the theory of final value must accord primitive value to.[[4]](#footnote-4) It accommodates the idea that “[d]ifferent teleological theories will interpret what it takes for an entity X to promote or conduce toward a state of affairs S … in different ways” (Berker 2013a, p. 345). Berker mentions that the theory of overall value might treat X’s “conducing to” S as some or all of: causation (X partially or entirely causes S), instantiation (X’s occurrence just is the obtaining of S), or constitution (X’s occurrence wholly or partly constitutes or is constituted by S’s obtaining) (2013a, p. 345). He even allows for a theory to be teleological if it is missing the deontic component altogether, as in scalar theories that confine themselves to comparative assessments of value without saying anything about duty or “deontic status” (2013a, p. 344).

When present, the deontic theory might concern itself with *maximizing* overall value, with *satisficing*, or it could depend on the theory of overall value in some other way. What matters is that the theory of overall value depends on the theory of final value, and the deontic theory depends on the theory of overall value (2013a, p. 344).

We can formulate any number of normative theories that share the structure Berker describes. As much as they might differ in their contents and substantive commitments, all would represent a teleological approach to their subject matter. It will be helpful for us to consider the following specimen of epistemic teleology, formulated to make the structure evident:

***Toy Process Reliabilism (TPR)[[5]](#footnote-5)***

1. Theory of Final Value
   1. *True belief* has fundamental epistemic value.
   2. *False* *belief* has fundamental epistemic disvalue.
   3. Nothing else has fundamental epistemic value or disvalue.
2. Theory of Overall Value
   1. Belief-forming process *P1* is epistemically superior to belief-forming process *P2* if and only if *P1* has a stronger propensity to output true beliefs than process *P2*.
   2. Belief-forming process *P1* is epistemically inferior to belief-forming process *P2* if and only if *P1* has a weaker propensity to output true beliefs than process *P2*.
   3. The *reliability* of a belief-forming process is its propensity to output true beliefs.
3. Deontic Theory
   1. A belief-forming process is *reliable* for S with respect to the question whether *p* if and only if its reliability is greater than 0.5 and no less than the reliability of any other process available to S for acquiring a belief as to whether *p*.
   2. S’s beliefthat *p* is *ex post justified* if and only if it is the output of a process that is reliable with respect to the question whether *p.*
   3. S’s belief that p is *ex ante justified* at time t if and only if it would be the output of a process that is reliable for S with respect to the question whether *p*.

I mean TPR to be an example of an initially plausible teleological theory. It has obvious deficiencies that should prevent us from endorsing it without modification. For example, TPR lacks a solution to the Generality Problem; it simply takes for granted the individuation of cognitive processes. It also focuses on belief *production* to the exclusion of belief *preservation*, and it lacks the usual provisos to handle cases in which reliable process *P* outputs a false belief to the effect that process *Q* is unreliable in one’s circumstances. Further, it leaves it completely unspecified what makes an alternative process qualify as “available” to S. [[6]](#footnote-6)

Despite its problems, TPR exemplifies the structure of epistemic teleology quite well. Its most obvious problems are to be solved by repairing or expanding its theory of overall value or its deontic theory, not by making deep structural changes.

We can think of TPR as a simplified, idealized teleological theory — a frictionless plane for meta-epistemology. If epistemic tradeoffs are a problem for epistemic teleology, they are a problem derived from the structure of teleological theories, rather than their specific contents. If they aren’t a problem for TPR, then I am confident they are not a serious problem for any minimally plausible version of epistemic teleology.

**3.**

To see how the problem of epistemic tradeoffs can affect epistemic teleology, let us consider these cases, all of which are based on cases Berker discusses (Berker 2013a, 2013b):[[7]](#footnote-7)

**EPISTEMIC OPPORTUNITY:** Carrie the chemist is an atheist, but she needs a grant to do her research. The only group interested in funding her has said she must believe in God to receive anything. Carrie knows she is a terrible liar, and she knows the group is very good at rooting out false faith. If she gets the funding, she will discover many new truths of chemistry, but not otherwise. Epistemically, ought Carrie to acquire a belief in God? If she did, would her belief be justified?[[8]](#footnote-8)

**ANTINOMY:** Bruce has long believed (a) that all his actions have sufficient physiological causes, (b) that he is morally responsible for some of his actions, and (c) that he is not morally responsible for actions with sufficient physiological causes. Yesterday, his friend Abbie, an expert on issues of free will and moral responsibility, showed Bruce the inconsistency of (a), (b), and (c), and she assured him convincingly that exactly one of them is false. He spent several hours trying, unsuccessfully, to figure out which was the false one. Bruce then gave up and continued believing (a), (b), and (c), despite knowing they are inconsistent with one another. Is Bruce thereby believing as he epistemically ought? Are his beliefs justified?[[9]](#footnote-9)

**SELF-PROMOTION:** Jane suffers from a disease that is almost always fatal, and her doctors have given her only a few weeks to live. As it happens, Jane is more likely to recover if she sincerely believes she will recover, irrespective of what the doctors say. Jane’s belief that she will recover thus increases the likelihood that, in believing it, Jane has a *true* belief. Is it thus epistemically right for Jane to believe that she will recover, irrespective of what the doctors say? Is such a belief justified?[[10]](#footnote-10)

Berker thinks it is clear that, if one were to form a belief in God in order to get research funding, the belief would not be epistemically rational/reasonable/warranted. Yet, he says, a veritist would have to grant that, in Carrie’s case, forming such a belief would maximize overall epistemic value. “And,” he writes,

this would seem to be so regardless of whether the veritist’s theory of overall epistemic value is applied to [beliefs] or to [belief-forming processes or methods]: a belief-forming process that yields a belief in God’s existence in the given circumstance would, surely, tend to promote veritism’s ultimate epistemic ends better than one that doesn’t…. So, regardless of how we fill in the veritist’s epistemic theory, it appears that the veritist is committed to the highly implausible claim that [Carrie’s] coming to believe in God’s existence in order to get the grant is epistemically rational/reasonable/justified. (2013a, p. 365).

Berker applies similar reasoning to a case like **Antinomy** (2013a, p. 370). If Bruce were to withhold belief in the three propositions, he would lose two true beliefs and one false one. By continuing to believe the propositions, he is believing in a way that produces a surplus of true over false beliefs. So, it seems Bruce best promotes the aim of believing what is true rather than false by believing as he does. Berker thinks veritists are thus committed to counting Bruce’s continued belief in the three propositions as epistemically justified, reasonable, or rational, even though that is clearly the wrong judgment (according to Berker).

Both **Epistemic Opportunity** and **Antinomy** are addressed against veritism, the family of teleological theories that assign ultimate value to true belief and ultimate disvalue to false belief. It is clear, though, that they could be modified for use against forms of teleology with different theories of final value. What matters is that they are *cross-propositional tradeoff* cases. In **Epistemic Opportunity**, the great epistemic good of all Carrie’s new true beliefs about chemistry outweighs whatever epistemic ill there is in her mercenary theism. In **Antinomy**, the epistemic ill of Bruce’s one false belief is outweighed by the epistemic good of his two true beliefs.

A teleologist might try to avoid the problems posed by cases such as **Epistemic Opportunity** and **Antinomy** by ruling out cross-propositional tradeoffs from the outset. Berker considers one way of doing that, which involves two steps. First, the teleologist would formulate her theory of overall value not in terms of evaluative focal points such as *beliefs* and *belief-forming processes* but, instead, in terms of focal points such as *beliefs-that-p* and *belief-that-p-forming-processes.* For example, Berker mentions that the theory might address not the broad process, “forming a belief about the external world via visual perception,” but the much narrower one, “forming a belief that there is a computer in front of one via visual perception” (2013b, p. 375). Second, the teleologist would “restrict the conducing relation in [her] theory of overall value so that an item in an evaluative focal point with a given propositional content only counts as conducing toward an epistemically valuable end if that epistemically valuable end *has the same propositional content*” (2013b, p. 375).[[11]](#footnote-11)

Even if those moves enable a teleologist to avoid problems from cross-propositional tradeoffs, Berker thinks the teleologist is still on the hook for cases along the lines of **Self-Promotion**. In those cases, a belief conduces to *its own* truth (or another epistemically valuable end with respect to that very belief). Here is what Berker says about these cases:

[B]y stipulation, Jane’s belief that she will recover raises the chances that she will in fact recover. Or in other words: Jane’s belief that she will recover raises the chances that she will thereby have a true belief. Or in other words: Jane’s belief that she will recover promotes her being in a cognitive state which (according to advocates of veritism) has final epistemic value, where this cognitive state has the same propositional content as the state that promotes it. But, I insist, Jane’s belief is not for that reason epistemically justified. (2013b, p. 376)

Berker endorses a doctrine of “the epistemic separateness of propositions.” According to that doctrine,

When it comes to the evaluation of individual beliefs, it is never epistemically defensible to sacrifice the furtherance of our epistemic aims with regard to one proposition in order to benefit our epistemic aims with regard to other propositions (even if we grant to the teleologist that there are such things as distinctively epistemic aims and that all epistemic appraisal should be explicated in terms of how well the objects of appraisal conduce toward the furtherance of those aims). (2013a, p. 365)

A teleological theory that violates “the separateness of propositions” is bound to face counterexamples from cases such as **Epistemic Opportunity** and **Antinomy**. But a teleological theory that does *not* violate the separateness of propositions is bound to face counterexamples such as **Self-Promotion**. Either way, Berker thinks, counterexamples are inevitable, and they derive from the teleological structure of the theory (2013b, p. 378).

**4.**

There is no doubt that there are possible teleological theories that would suffer precisely the problems Berker describes, but he himself allows that some logically possible theories might wriggle past the problem of epistemic tradeoffs (Berker 2013a, p. 380, 2013b, p. 379). Such theories, he thinks, would be hopelessly baroque (2013a, p. 380) or else they would have to incorporate a non-teleological component (2013b, p. 379).

This section aims to show that **Epistemic Opportunity**, **Antinomy**, and **Self-promotion** are not counterexamples to TPR.[[12]](#footnote-12) Section 5 discusses how epistemic teleology can avoid the general problem of epistemic tradeoffs—no baroque codicils or non-teleological components required.

According to TPR, a process is reliable with respect to the question whether *p* if and only if its propensity to produce true outputs is at least 0.5 and no less than that of any other available process for deciding whether *p*. TPR also says that a belief is *ex post* justified iff it is the output of a reliable process and *ex ante* justified iff it would be the output of such a process. TPR does not say that a belief-forming process is reliable iff its use at time *t* would cause one, in the long run, to believe more truths than one would believe if one did not use it at *t*. Nor does it say that a belief is justified iff having it would cause one, in the long run, to believe more truths than one would if one did not have it. By TPR’s lights, the fact that Carrie would gain many true beliefs about chemistry, if only she formed a belief in God, is irrelevant to both the *ex post* and *ex ante* justification of her belief. The justification of the belief depends on its causal history, not its downstream effects.

**Epistemic Opportunity** could work out in either of two ways. Perhaps Carrie’s need for funding motivates her to revisit the arguments for and against the existence of God, taking care to approach them with an open mind and to guard against bias. She might then become convinced of God’s existence, as a result of using reliable belief-forming processes. In that case, TPR would count her belief justified, as would our intuitions.

On the other hand, Carrie could start attending the local megachurch, tuning in to evangelical radio stations, and listening to moving Christian pop music, because she knows she is liable to believe almost anything she hears often enough from enthusiastic people. Such a process might make her a believer. Then intuition says her belief would be unjustified, but so does TPR. The belief is not the output of a reliable belief-forming process.

In **Antinomy**, TPR will again focus on the processes of which Bruce’s beliefs are outputs. It need not count Bruce’s beliefs as justified, unless they are the outputs of reliable processes. If they are not, TPR is not committed to calling them justified, even if having them would realize more overall epistemic value in the long run than withholding judgment would.

Bruce’s beliefs could be sustained by ordinary memory or by the usual processes whereby we keep on believing what we used to believe. Then TPR (or a version that addresses belief-sustaining as well as belief-forming processes) might have to count them justified, but there is nothing implausible about that. The mere knowledge that a set of beliefs is inconsistent does not undermine its justification. After all, you probably know the totality of your beliefs *right now* is inconsistent (or at least contains some falsehoods), but that doesn’t mean you are not justified in holding any of them. To the contrary, we tend to think of beliefs as justified when they are formed and sustained in a reliable way, despite our acknowledgement of our own inconsistency and fallibility.

It is also worth pointing out that we often do find ourselves in situations not very different from Bruce’s, and we count the resulting beliefs as justified. Suppose I have given a medical test to 1,000 people and believed its results in every case. Later, I learn the test results are correct only 99% of the time, and so there is nearly a 100% chance that at least one of the test results is wrong. I do not then give up my 1,000 beliefs, nor do any of them become unjustified. Bruce’s situation is similar to mine, except that he is dealing with three beliefs instead of 1,000.

That difference might matter. Bruce is sure one of the three beliefs is false, and so each of them appears to have only a two-in-three chance of truth, which is much worse than each medical belief’s 99% chance of truth. Maybe a two-in-three chance is just too low. And in that case TPR might be giving a wrong answer. But note that it isn’t TPR’s *teleology* that produces this wrong answer; it is TPR’s over-tolerance of epistemic risk-taking. If teleology were at fault, then we should count all 1,000 beliefs about the medical test results as unjustified, because it is practically certain that they are not all true.

TPR is not committed the view that Bruce’s beliefs are formed by a reliable process, and so it is not committed to the view that they are justified. On TPR, Bruce might or might not be justified in believing as he does, depending on the reliability of the processes that produce and sustain his beliefs.

According to Berker, the only way to avoid cross-propositional tradeoffs is to honor the separateness of propositions. Maybe TPR does that. But then, if Berker is right, it should face the tradeoff problem in cases such as **Self-Promotion**. It should have counterexamples from cases in which holding a belief promotes the achievement of the epistemic good with respect to that belief itself.

TPR appears to escape that problem as well. According to TPR, what would make Jane’s belief justified would be that it is the output of a process whose reliability is more than 0.5 and not less than any other available process for deciding whether she will recover. So, for Jane to be justified in believing she will recover, her belief must come from a process that is *at least as reliable as* deferring to her doctors regarding her prognosis (assuming that qualifies as an available alternative process). The mere fact that believing in her recovery boosts her chances is insufficient to justify her belief. After all, Jane’s chance of recovering given that she believes might be 2 in a million, while she has only a 1 in a million chance of recovering if she does not believe. Believing *doubles* the chance that the proposition believed is true, but it still doesn’t promote epistemic value in the way TPR requires for epistemic justification.

Berker imagines a version of this case in which Jane’s failure to believe she will recover would (without her knowing it) *cause* her to have only a 10% chance of recovery, but her believing she will recover would (again, without her knowing it) cause her to have a 90% chance of recovery (Berker 2013b, p. 376). We are now guaranteed that, whatever process Jane uses to arrive at her belief, she has a 90% chance of believing the truth. According to Berker, this commits the teleologist to counting Jane’s belief as justified (2013b, pp. 376-7).

I disagree. As Ahlstrom-Vij & Dunn (2014) point out, we must consider what process outputs Jane’s belief. If the process is *wishful thinking*, then TPR counts it as unjustified because it is the output of an unreliable process (even if it has a 90% chance of correctness in this case). On the other hand, if her belief is the output of a specialized *belief-about-my-prospects-of-recovery-forming process*, then it might turn out to be reliable in these circumstances. The mere fact that the belief helps to cause its own truth is no barrier to its being justified. Ahlstrom-Vij & Dunn mention that a judge’s belief that a prisoner will be sentenced and a priest’s belief that a couple will be wed can help to cause the relevant states of affairs as well. The main intuitive obstacle to counting Jane’s belief unjustified appears to be her ignorance of the causal connection between her belief and her chances of survival. In that case, though, the problem would not be that TPR is *teleological*, but rather that it is *externalist* (Ahlstrom-Vij & Dunn, 2014, p. 549).

**5.**

Epistemic teleology might appear bound to count unjustified beliefs as justified when it serves the greater epistemic good to hold an intuitively unjustified belief. There are logically possible epistemic teleologies with that feature. They treat the ‘ought’ of ‘Epistemically, what ought I to believe?’ as an all-things-considered practical ‘ought’ aimed at a characteristic epistemic goal, such as the veritist’s goal of believing what is true rather than false. On these theories, just as what one ought to *do*, as a lover of truth, is whatever best conduces to the goal of believing a large surplus of truths over falsehoods, what one epistemically ought to *believe* is whatever, in the believing it, best conduces to that same goal. And when one believes as one epistemically ought, one’s belief is epistemically justified.

Such a theory, unlike TPR or anything as plausible as it, conflates epistemic justification with prudential justification relative to the epistemic goal. It thereby treats the question of what one ought to *believe* too much on the model of the practical question of what one ought to *do*. We can decide what to do on the basis of consequences of doing it, but we generally can’t decide what to *believe* by considering the consequences of *believing it*. Carrie can’t take note that it would promote the epistemic good for her to become a theist, and on that basis decide that God exists. Even Bruce doesn’t *decide*, on the basis of consequences, to believe rather than withhold judgment. Rather, he decides to stop his inquiry. He makes that decision just as we make any practical decisions about inquiry: by considering whether continued investigation is likely enough to improve his position with respect to the truth goal. Bruce decides it isn’t, so he calls it off.

A plausible epistemic teleology would acknowledge the distinction between practical deliberation about what to do and theoretical deliberation about what is so. It would not evaluate their products in the same way. Such a theory would still be teleological, though. It would explain epistemic normativity in terms of the value of our epistemic goals. Those goals play different roles in theoretical deliberation than they play in practical deliberation.

A minimally plausible teleology, such as TPR, addresses its theory of overall value to processes, methods, or strategies of inquiry in the first instance. If individual beliefs are evaluated at all (either in the theory of overall value or in the deontic theory), they are evaluated *in relation to* those processes/methods/strategies. The theory’s evaluation of a particular belief is based on (a) what process output it, and (b) the propensity of that process to output beliefs that constitute realizations of our epistemic goals.

A similar theoretical structure occurs outside epistemology. A teleological account of benevolence could say that acting from benevolent motives is good because it tends to make people better off, while acting from malevolent motives is bad because it tends to make them worse off. A particular malevolent action might happen to have the overall consequence of improving everyone’s lot. Such an action would have the good feature of making everyone better off and also the bad feature of being malevolent. If we ask whether one ought, morally, to have taken the action, the answer can depend on why we are asking. Are we interested in laying blame? Then the right answer might be that one should not have done it, as there are sound reasons to assign blame on the basis of motives. On the other hand, if our interest is not in blame but in overall welfare, we might care less about motives than results and allow that one did as one should, albeit from a deplorable motive. And if we ask whether the act was good or bad all things considered, we might have to settle for an equivocal answer: it was good in one way, bad in another.

It is rare to ask what one ought to believe in a context where our main concern is our overall best interest, and rarer still to ask in the practical sense of “What belief will give me the greatest surplus of true over false beliefs, on the whole and in the long run?” Instead, we ask it in the sense of “What is the case?”, or with an eye to figuring out what method to apply to a problem. A plausible epistemic teleology will treat the justification of beliefs *etiologically*. Beliefs are justified in virtue of their origins in epistemically good kinds or methods of reasoning.

Berker supposes that, in order to honor the separateness of propositions, a teleology must restrict its theory of overall value to evaluative focal points with fixed propositional content: *beliefs-that-p*, and *belief-that-p-forming processes*. That is not the teleologist’s only option. TPR avoids cross-propositional tradeoffs by evaluating beliefs in terms of their histories, rather than their effects.

That same feature also allows TPR to avoid tradeoff problems based on epistemic self-promotion. The theory does not imply that a belief is justified when holding it increases its likelihood of truth, nor does it imply that it even counts in favor of a belief that holding it increases its probability. The consequences of *believing* a proposition are irrelevant to TPR; what matters is how strongly the process generating the belief tends to achieve the epistemic goal.

Such an approach differs from what Berker typically assumes teleologists must do. To generate counterexamples to most teleological epistemologies, he thinks it suffices to follow a simple recipe. If the theory does not honor the “separateness of propositions,” then construct a cross-propositional tradeoff case for it. If it does, then construct a problematic case of epistemic self-promotion. “I believe,” he writes,

it is possible to use my recipe to construct problem cases for all varieties of epistemic consequentialism that do not go so far as to restrict the conducing relation to the instantiation relation, or (even more radically) to give up on the epistemic evaluation of individual beliefs all together. (Berker 2013b, p. 379)

What he says against consequentialism, he means to go for teleology more generally as well (2013b, p. 379). Berker underestimates the prospects of what we might call *etiological epistemic teleology*, which is precisely what TPR represents. The approach is teleological in that it ties all value to the value of a goal state, but it allows for uses of ‘ought’, ‘justified’, ‘reasonable’, etc. that concern history and not just consequences. It neither restricts “the conducing relation to the instantiation relation” nor gives “up on the evaluation of individual beliefs altogether.” Instead, it emphasizes the evaluation of belief-forming processes in the first instance, but it has the resources to build evaluations of individual beliefs out of those prior evaluations.

**6.**

Promising as it is, the etiological move, which I think any plausible epistemic teleology will make, does not solve all tradeoff problems. Berker considers some cross-propositional tradeoff cases that might still be trouble for etiological teleology. Consider, for example, the following case:

**DOXASTIC ABUNDANCE:** Debbie’s mind includes a strange module, implementing a process we’ll call NOPE. Whenever she considers the question whether a given number *x* is prime, NOPE outputs 100 beliefs. One is the belief that *x* is not prime (irrespective of *x*’s primeness). Each of the others is a belief to the effect that some random composite number is not prime. *At worst*, this process’s ratio of true outputs to all its outputs will be .99. So, when Debbie considers whether 11 is prime and comes to believe it is not, is her belief justified?[[13]](#footnote-13)

TPR can seem committed to counting Debbie’s belief that 11 is not prime as justified. After all, it is output by a process that is extremely reliable. But one might have the intuition that Debbie’s belief should not count as justified. How can a teleologist avoid this kind of case?

One response would be akin to the one Berker considers for teleologists. The teleologist might focus on the reliability Debbie’s *belief-that-11-is-not-prime-forming process,* instead of her *belief-forming process*. While the latter is quite reliable, the former is not. That move, though, is implausible. No *belief-that-11-is-not-prime*-*forming process* is reliable, but surely it is possible to believe, with justification, that 11 is not prime. (Maybe the International Congress of Number Theorists announces a surprising discovery of the non-primeness of 11, and it is much more likely that one has been mistaken about what prime numbers are than that the ICNT would make a false announcement of a non-prime number so small.)

A better response would be to move in a similar direction, but not quite as far. Michael Bishop and J. D. Trout (Bishop & Trout, 2008, 2005) argue for a view they call “strategic reliabilism.” A key feature of that view is that the reliability of a problem-solving strategy is always relativized to a range of problems the strategy is intended to solve. We do not ask whether the strategy is reliable *full stop*, but whether it is reliable *over range R*.

Bishop and Trout’s idea can be adapted to other teleological views. Consider this amended version of TPR:

***TPR2***

1. Theory of Final Value
   1. *True belief* has fundamental epistemic value.
   2. *False* *belief* has fundamental epistemic disvalue.
   3. Nothing else has fundamental epistemic value or disvalue.
2. Theory of Overall Value
   1. The *reliability* of a given belief-forming process, over its intended range of problems, *R*, is the propensity of that process to output true answers to questions in *R*.
      1. Belief-forming process *P1* is epistemically superior to process *P2* over problem range *R* if and only if:
         1. *R* is part of both P1 and P2’s intended ranges of problems, **and**
         2. Either:
            1. *P1* is more reliable in *R* than process *P2,*
            2. *P1* and *P2* are equally reliable but, whenever their outputs in answer to a given question differ, *P1*’s answer is correct and *P2’s* answer is incorrect.
   2. Belief-forming process *P1* is epistemically inferior to process *P2* over problem range *R* if and only if *P2* is epistemically superior to *P1* in *R*.
3. Deontic Theory
   1. A belief-forming process is *reliable* for S with respect to problem range *R* if and only if its reliability is at least 0.5 and it is not epistemically inferior to any other process available to S for answering questions in *R*.
   2. S’s belief that *p* is *justified* relative to problem range *R* if and only if the belief has been output as the answer to a question in *R* by a belief-forming process that is reliable over *R*.

We can think of the input to a belief-forming process as including both questions and relevant background data. A process outputs *answers* to the questions it takes as input, even if it might output some other beliefs as well. The reliability of the process depends on its tendency to give true answers to the questions it addresses, not just its tendency to produce true beliefs.

The relativization of reliability to problem-ranges is not an ad hoc codicil, needlessly complicating TPR to honor the separateness of propositions. It is, to the contrary, a well-motivated amendment we would want to make on independent grounds. First, when we engage in inquiry, we can decide what to believe only indirectly. We decide among candidate problem-solving strategies, and then we wind up believing the result of the strategy we chose. So, the question we ask ourselves is, “How can I best *solve this problem*?”, and we answer it by considering the available ways of solving problems in the relevant domain. That alone can motivate the relativization of reliability to problem-ranges. As it happens, that relativization also provides means for dealing with the so-called generality problem for reliabilism (Bishop & Trout 2005, pp. 178-82).

Consider some questions Debbie might pose to herself. She might ask herself whether 11 is prime. The fact that NOPE outputs true beliefs that are not answers to her question is irrelevant. Only two things matter. First, how strong is NOPE’s propensity to output true answers *to questions it is applied to answer*? Second, is there a more reliable alternative process available to Debbie for answering her question?

There is a further problem, though. NOPE doesn’t just have a high ratio of truths among its outputs, but it also might appear to be quite reliable *at answering questions about whether numbers are prime*. That appearance is due to the fact that the prime numbers are pretty spread out among the natural numbers on their usual ordering, and so the chance that a randomly selected number is prime can seem to be vanishingly small. Nevertheless, isn’t Debbie unjustified in believing that 11 is not prime, having come to that belief by employing NOPE?

Suppose there is no better alternative available. Then the most reliable method available to Debbie for deciding about the primeness of a number is NOPE, and her resulting belief could well be justified. Now suppose Debbie does have another method available. She knows how to test a number *n* for primeness by checking its divisibility by every positive integer from 2 to *n* / 2. This algorithm is epistemically superior to NOPE. If it is available, Debbie should not rely on NOPE, and her belief formed via NOPE is not justified. These are the intuitively correct conclusions—at least, they satisfy *my* intuitions.

When Ahlstrom-Vij & Dunn (2014) address Berker’s cases, they emphasize that reliabilism avoids giving the wrong conclusions because it evaluates the reliability of processes with respect to their “direct outputs.”[[14]](#footnote-14) That is, it rates processes as better or worse in terms of the ratio of truths among the beliefs they output directly. To see why it is important *also* to take into account what questions the process is engaged to answer, consider a case similar to **Doxastic Abundance**. Suppose Peggy employs a process, YEP, that always gives an *affirmative* answer when queried about whether a given number is prime, but also always outputs 99 other, true beliefs to the effect that some other, random, nonprime numbers are not prime. YEP’s reliability with respect to its direct outputs is no less than 99%, but it is still quite *unreliable* with respect to the questions actually put to it. If reliability is measured in terms of direct outputs, without taking into account a process’s intended range of application, we can be forced to count unreliable processes as reliable. On the other hand, measuring reliability in terms of the ratio of *true answers* a process outputs to questions in its range avoids the problem.

We can now describe some general features of teleological theories that can enable them to avoid counterexamples from epistemic tradeoffs. First, and crucially, they should evaluate beliefs on the basis of their causal *histories*, not the beliefs’ own consequences. Doing so is consistent with teleology, because what makes a way of arriving at beliefs good or bad is still a matter of how well it promotes ultimate epistemic value.

The second important feature is an orientation *away* from the evaluation of individual beliefs and *toward* the comparative evaluation of cognitive processes themselves, considered as strategies for answering related sets of questions. That move maintains the emphasis on cognitive goals. We want true answers to our questions, or well-supported ones. When worked out well, the move avoids counterexamples from cases like self-promotion as well as cross-propositional tradeoffs. Even if believing that *p* somehow increases the probability of *p*, that does not mean the process outputting a belief that *p* is automatically the most reliable available for answering questions in its intended range of problems. That is how it avoids self-promotion cases. It avoids cross-propositional tradeoffs by evaluating processes in terms of their answers to questions, rather than all their outputs or all the effects of engaging the processes.

When Berker entertains the possibility of a teleology that gives “up on the epistemic evaluation of individual beliefs altogether,” he considers such a teleology to be extremely radical, presumably so radical that it might constitute giving up on epistemology altogether. Nothing as radical as that is necessary for teleologists, though. They do not need to *give up* on the evaluation of individual beliefs. It suffices for them simply to recognize that those evaluations depend on a more fundamental evaluation of ways of getting answers to our questions.

**7.**

Even if plausible epistemic teleologies avoid epistemic tradeoff problems, there might be other reasons to prefer a non-teleological understanding of epistemic value and obligation. It is thus worth considering what advantages the teleological approach has over alternative views.

Berker describes two examples of non-teleological epistemology. One is a form of evidentialism, according to which one epistemically ought to fit one’s belief to one’s evidence, with the notion of “fit” understood in an unspecified, non-teleological way. Another is a view on which rationality overall is a matter of conforming to certain rules, the subset of which that govern theoretical reasoning qualify as “epistemic.” The rules are to be understood as fundamental and constitutive of rationality, not as derived from the value of anything (Berker 2013a, pp. 380-3).

It may be possible to shoehorn these views into the teleological framework, especially if we treat *instantiating* an end as a way of conducing toward it. Still, there is a difference in spirit between these sorts of views, which focus on the requirements of reason as such, and paradigmatic teleology, which focuses on the effective pursuit of valuable intellectual goals. Perhaps it is best to think of non-teleological epistemology more along the lines of what is often called “deontology” in ethics (while turning a blind eye to uses of ‘deontology’ inspired by Alston’s (1988) discussion of a quite different set of issues). It can be hard to pin down just what ethical deontology amounts to, but one way comes from Thomas Nagel’s (1986) “side constraint” approach. On Nagel’s view, there are some moral constraints on how we pursue whatever ends we happen to have. They are rules it is wrong to break, even for the sake of preventing further violations of the rules. If lying is wrong in that way, then it is wrong for me to lie, even if lying once right now would prevent me or someone else from lying five times tomorrow.

The epistemological analog would be the idea that there are constraints on our believing that we epistemically ought not to violate, even if doing so would prevent further violations later. Don’t believe one proposition on inadequate evidence today, even if doing so would keep you from believing five propositions on inadequate evidence tomorrow.

Whatever utility the distinction between deontology and teleology has in ethics, the analogous distinction in epistemology looks misguided, especially given that the distinction between practical and theoretical reasoning is already in place.

A plausible epistemic teleology treats the justification of beliefs etiologically. Such a theory can allow for the possibility that what is practically best to believe, from the standpoint of maximizing epistemic value, might not be epistemically justified. Suppose beliefs based on wishful thinking are unjustified, and suppose I could avoid forming five wishful beliefs tomorrow by forming one today. Today’s wishful belief would be unjustified because it would have the wrong sort of causal history; it would be output by a process that is relatively unreliable over its range. Its effects are irrelevant to its justification. Unjustifiedness is a form of wrongness, and so there is a way in which, even on TPR, it is wrong for one to think wishfully, even in order to avoid more wishful thinking later.

Even the Nagel-inspired characterization of non-teleological normative epistemology seems not to provide the clear distinction between teleological and non-teleological epistemology that we want. Worries about exactly how to draw the distinction aside, teleology does enjoy some important advantages. I will describe three.

First, the teleological approach does justice to the fact that, in tradeoff cases, the belief in question is good in one way and bad in another. Suppose my unjustified belief causes me to acquire many other, justified beliefs. The former belief is unjustified; that’s a way of being bad. But there is also a way in which it is good: it is helpful in the achievement of my epistemic ends. The same could even be said for cases in which the most epistemically prudent strategy is epistemically inferior to other available strategies. The use of such a strategy is good in that it puts one into a position to acquire more true beliefs, but it is bad in that it is less likely output true beliefs than an alternative strategy.

It is not clear that a non-teleological approach can do justice to such nuances. While it might have room to allow that there is something, in some sense, good about the promotion of valuable cognitive goals, it also appears forced to insist that the non-teleological constraints of rationality trump that goodness. Those constraints govern our *pursuit* of cognitive goals, but they have no basis in the value of our *achieving* them. Even if a belief that violates those constraints is good in some way, for the non-teleologist it isn’t good in a way that matters for the purposes of normative epistemology.

The second advantage of epistemic teleology is a close relative of the first. The teleological approach provides a unified account of two arenas of goodness in inquiry. On the one hand, there is the forward-looking, practical goodness involved in conduciveness to the goals of inquiry. On the other, there is the backward-looking, theoretical goodness of beliefs originating from good methods of inquiry, where “good methods” are those of a type that tends to be good in the first, practical sense. Ultimately, both sorts of value derive from the value of the same goal. It will thus be no surprise that, on the teleological approach, choosing methods that promote the aims of inquiry is also likely to result in the acquisition of justified beliefs. On a non-teleological approach, though, one might be left to wonder what connection there is between believing as one epistemically ought and accomplishing one’s cognitive goals, or even if there is any connection at all. If what I want is truth, why should I believe rationally? Teleologists have a more direct answer, because they understand epistemic rationality by reference to the truth goal in the first place.

A final advantage for teleology is more aptly described as a disadvantage for epistemic non-teleology. The latter view is susceptible to objections very much like common objections to non-teleological *ethics*. For example, imagine a normative ethic without a welfare component at all. This is a theory that ignores the welfare consequences of actions in evaluating them. On such a theory, the fact that an act would do great harm to many people does not count morally against it. Likewise, the fact that an act would benefit many people greatly does not count in its favor. There will be cases in which the right thing to do, according to the theory, is something that makes everyone worse off, and is known to do so. Now suppose a non-teleological theory has a welfare component, but it can be trumped by other considerations. So long as that welfare component can be trumped by deontological considerations, there will be cases in which the theory forbids what would make the world better, or requires what would make the world worse. Though some philosophers are happy to go that way, my moral compass points elsewhere.

In the case of non-teleological epistemology, similar objections apply, and may be even more forceful. There will be cases in which one knows the best way to pursue the cognitive good is by doing something the non-teleologist’s rules forbid. In those cases, it turns out to be unequivocally *epistemically irrational* to do what best promotes the epistemic good. That, it seems to me, is a mistake.

To see why it is a mistake, consider the ongoing debates concerning cognitive heuristics and ecological rationality. A recurring theme in those debates is that there are families of cases in which people naturally employ decision-making strategies that violate *a priori* canons of reasoning. Commonly, the strategies involve ignoring relevant information. Nevertheless, in the problem-solving environments where the strategies are normally employed, the counter-normative strategies can be faster and more reliable than their *a priori* counterparts. Some of this has to do with features of the environment, and some is due to our own psychological imperfection. Just as preventing teen pregnancy through contraception turns out to be more reliable in the field than the *a priori* better method of abstinence, heuristic reasoning in the field can turn out to bring us to the truth more reliably than taking into account all the relevant information would (Gigerenzer & Goldstein, 1996).

From a teleologist’s perspective, it is a mistake to demand that people abide by canons of reasoning that are either unreliable in their circumstances or that they can’t reliably implement. Decision-making strategies that will reliably produce better outcomes, from the standpoint of our cognitive goals, are epistemically better strategies, and one ought to use good strategies in the pursuit of those goals. When one does, one’s beliefs are justified. That is the fundamental insight of epistemic teleology, and it is difficult at best for a non-teleological approach to accommodate it.

Even for a teleologist, there will be cases in which one might best promote the overall epistemic good by employing unreliable processes. Carrie the chemist may be in such a case. She can go to the megachurch and listen to the evangelical radio station and, ultimately, induce herself to embrace theism, with the consequence that she gains a lot of new true beliefs about chemistry. The teleologist can give a nuanced assessment of the case. Carrie’s mercenary theism is *good* in at least one way; it is helpful in her achievement of further epistemic goals and so, all things considered, epistemically prudent. But it is also *bad* in at least one way; it is unjustified by virtue of being the output of an unreliable process.

**8.**

One way to do normative epistemology is to focus on the appraisal of particular beliefs. This approach, which I have called “belief-centered epistemology” (Wrenn 2008), emphasizes such questions as “Epistemically, what ought I to believe?” over methodological questions, such as “What is the best way for me to find out the answer to this question?”

If we take the belief-centered approach, a number of problems might arise for us. One of the most obvious is the problem of doxastic voluntarism. Do we have the right sort of control over our beliefs for talk about what we *ought* to believe, epistemically or otherwise, to make any sense?

We do not have to think about normative epistemology in that way. We can instead emphasize *methods* over *beliefs*. Even if we don’t have the sort of control over our beliefs presupposed by epistemic duties to believe (or not to believe), we often do have considerable control over how we find answers to our questions. We could start with questions about *how we ought to inquire*. We might even give a trivial answer to the question what one ought to believe. What ought you to believe as to *p*? You ought to believe whatever properly conducted inquiry leads you to believe. This shift from belief-centered normative epistemology to an epistemology that is more methodologically oriented is, to my mind, a good idea.

Once we see the possibility of normative epistemology as something other than a discipline dedicated to passing judgment on the justification of beliefs, we can also see how epistemic teleology can avoid tradeoff problems. Cross-propositional tradeoffs and epistemic self-promotion are problematic only so long as we think of *beliefs themselves* as means to our cognitive ends. On plausible epistemic teleologies, they are not. Rather, the means to our cognitive ends are the belief-forming processes we engage, and beliefs are evaluated, if at all, only in relation to the processes of which they are outputs.

If we put our emphasis in the first instance on evaluating methods of inquiry, rather than beliefs, we can also begin to address such issues as *which* outputs of a process matter to its epistemic evaluation. I have suggested that the outputs that matter are the process’s answers to questions posed to it. Such an approach enables teleology to avoid the kinds of tradeoffs involved in cases such as **Epistemic Abundance**. There might be other ways to avoid those problems, some of which may be better than my suggestion.

Until recently, epistemic teleology has received little direct scrutiny. Many who have endorsed it have seen little reason to argue for it, perhaps thinking it was just a trivial matter of the definition of ‘epistemic’. I have sought to remedy that situation in two ways. I have argued that there are plausible epistemic teleologies that do not suffer counterexamples from cross-propositional tradeoffs or self-promotion. Epistemic teleology is not committed to identifying our justified beliefs with the beliefs that are practically best, all things considered, with respect to our epistemic goals. I have also argued that epistemic teleology has important advantages over a non-teleological approach to epistemology. It makes sense of the fact that, in tradeoff cases, there is something epistemically good *and* something epistemically bad about the target beliefs. It gives a unified account of how those two forms of value are legitimately *epistemic*, and it does not condemn as unjustified or irrational beliefs or decision-making strategies that are better suited to one’s situation than those recommended by *a priori* norms. Those are advantages that non-teleological epistemology seems to lack.[[15]](#footnote-15)

**References**

Ahlstrom-Vij, K., & Dunn, J. (2014). A defence of epistemic consequentialism. *The Philosophical Quarterly*, *64*(257), 541-551. doi:10.1093/pq/pqu034

Alston, W. P. (1988). The deontological conception of epistemic justification. *Philosophical Perspectives*, 257-299.

Berker, S. (2013a). Epistemic teleology and the separateness of propositions. *Philosophical Review*, *122*(3), 337-393. doi:10.1215/00318108-2087645

Berker, S. (2013b). The rejection of epistemic consequentialism. *Philosophical Issues*, *23*(1), 363-387. doi:10.1111/phis.12019

Bishop, M. A., & Trout, . D. (2008). Strategic reliabilism: A naturalistic approach to epistemology. *Philosophy Compass*, *3*(5), 1049-1065. doi:10.1111/j.1747-9991.2008.00161.x

Bishop, M. A., & Trout, J. D. (2005). *Epistemology and the psychology of human judgment.* New York: Oxford University Press.

BonJour, L. (1985). *The structure of empirical knowledge.* Cambridge, Mass.: Harvard University Press.

Chisholm, R. M. (1977). *Theory of knowledge.* Englewood Cliffs, N.J.: Prentice-Hall.

Descartes, R. (1984). Rules for the direction of the mind. In *The philosophical writings of Descartes* (Vol. 1, pp. 7-78). Cambridge; New York: Cambridge University Press.

Fantl, J., & McGrath, M. (2002). Evidence, pragmatics, and justification. *Philosophical Review*, 67-94.

Feldman, R. (2003). *Epistemology.* Upper Saddle River, N.J.: Prentice Hall.

Firth, R. (1981). Epistemic merit, intrinsic and instrumental. *Proceedings and Addresses of the American Philosophical Association*, 5-23.

Fumerton, R. (2001). Epistemic justification and normativity. In M. Steup (Ed.), *Knowledge, truth, and duty: Essays on epistemic justification, responsibility and virtue* (pp. 49-61). Oxford, UK: Oxford University Press.

Gigerenzer, G., & Goldstein, D. G. (1996). Reasoning the fast and frugal way: Models of bounded rationality. *Psychological Review*, *103*(4), 650.

Goldman, A. I. (forthcoming). Reliabilism, veritism, and epistemic consequentialism. *Episteme.*

Goldman, A. I. (1979). What is justified belief? In G. Pappas (Ed.), *Justification and knowledge* (pp. 1-23). Springer Netherlands. doi:10.1007/978-94-009-9493-5\_1

Goldman, A. I. (1986). *Epistemology and cognition.* Cambridge, Mass.: Harvard University Press.

James, W. (1896). *The will to believe, and other essays in popular philosophy.* Longmans.

Kagan, S. (2000). Evaluative focal points. In E. Mason, B. Hooker, & D. E. Miller (Eds.), *Morality, rules, and consequences: A critical reader* (pp. 134-55). Rowman & Littlefield.

Kornblith, H. (1993). Epistemic normativity. *Synthese*, *94*(3), 357-376.

Korsgaard, C. M. (1983). Two distinctions in goodness. *The Philosophical Review*, *92*(2), 169-195.

Nagel, T. (1986). *The view from nowhere.* New York: Oxford University Press.

Quine, W. V. (1998). Reply to Morton White. In L. E. Hahn & P. A. Schilpp (Eds.), *The philosophy of W. V. Quine* (Expanded ed., pp. 663-5). La Salle, IL: Open Court.

Wrenn, C. B. (2006). Epistemology as engineering? *Theoria*, *72*(1), 60-79.

Wrenn, C. B. (2008). Naturalism and belief-centered epistemology. In C. B. Wrenn (Ed.), *Naturalism, reference, and ontology: Essays in honor of Roger F. Gibson* (pp. 77-92). New York: Peter Lang.

1. On one use of ‘teleology’, “epistemic teleology” would involve studying the purposes our cognitive faculties are meant to fulfill, either by evolution or by a conscious designer. I wish to remain uncommitted as to whether it is the *purpose* of our faculties to achieve the cognitive good, so I am not using the word in that sense. On another use, ‘teleology’ is a synonym for ‘consequentialism’, the idea that the value of something is a function of the value of its effects. That is not my sense of it either. As I am using the word, teleology is the view that value and obligation are to be understood in terms of promoting or conducing toward the realization of fundamentally valuable goal states. Since *causing* a valuable state is a way of promoting it, consequentialism turns out to be one species of teleology, but perhaps not the only one. [↑](#footnote-ref-1)
2. There are possible views, aptly called “veritism,” that assign fundamental epistemic value and disvalue to true and false belief, but that aren’t teleological because they do not treat other epistemic value as derived from the *promotion* *of* or *conduciveness to* them. As I will use the term, though, ‘veritism’ combines the view true and false belief have fundamental epistemic value and disvalue, respectively, with the view that non-fundamental epistemic value/disvalue derives from promotion of or conduciveness to what has fundamental epistemic value/disvalue. [↑](#footnote-ref-2)
3. Berker (2013a, p. 343) makes a similar point. [↑](#footnote-ref-3)
4. I follow Berker in calling the part of a teleological theory specifying the valuable ends to be promoted or avoided a “theory of final value,” but I am reluctant to describe those ends as “finally valuable” or as bearers of “final value” in the sense of Korsgaard (1983). So, I will generally refer to the value of a teleological theory’s specified ends as “ultimate,” “fundamental,” or “primitive,” to emphasize that the theory takes their value to be underived from the value of anything else. [↑](#footnote-ref-4)
5. TPR bears some similarities to Berker’s (2013a, pp. 349-50) “(Simplified) Process Reliabilism” exemplar of epistemic teleology, which we can call SPR. There are also important differences between TPR and SPR. First, SPR calculates truth-ratios as ratios of true beliefs produced to false ones. TPR, like most reliabilist theories, calculates them as the proportion of true beliefs among total outputs. Second, SPR counts any process as reliable if its truth ratio meets a certain threshold. TPR, in contrast, counts processes as reliable only if there are no other, available processes whose reliability is greater. Third, SPR’s deontic theory does not distinguish *ex ante* and *ex post* justification (Goldman 1979), while TPR does. Though I suspect TPR and SPR both avoid the problem of epistemic tradeoffs, I focus my discussion on TPR because I find it to be *prima facie* more plausible. [↑](#footnote-ref-5)
6. As one reader has pointed out, if all processes one could possibly engage count as “available,” then TPR will count beliefs as justified only if formed by the most reliable process possible, which is almost certainly too demanding. So, TPR needs to restrict the range of alternative processes that count as “available.” There are several ways of doing that. For example, one might count alternative processes as “available” only if they are not too expensive to be worth employing, given the importance of getting a true belief as to *p*. Such a move would allow for “pragmatic encroachment” on justification(Fantl & McGrath, 2002), and it might be a departure from a purely veritistic conception of epistemic value. It would not, however, be a departure from epistemic teleology. Even if it turns out that a process can be *reliable enough* to provide justification without being the *most reliable available*, the required changes to TPR would not involve giving up teleology, but rather altering its way of setting the threshold of reliability for the output beliefs of a process to be justified. [↑](#footnote-ref-6)
7. Berker discusses a series of different cases, each built in response to moves he takes to be required to avoid the problems raised by earlier ones. It would be impractical to address all those cases in this space, but doing so is also unnecessary. Berker (2013a; 2013b) only indirectly considers the response to the problem of epistemic tradeoffs I consider, by way of the cases like the **Doxastic Abundance** case discussed in Section 6, below. [↑](#footnote-ref-7)
8. This case is based on Berker’s scientist case (2013a, pp. 363-4). See also Firth (1981) and Fumerton (2001). [↑](#footnote-ref-8)
9. This case is based on Berker’s paradox case (Berker 2013a, p. 370). [↑](#footnote-ref-9)
10. This case is based on Berker’s Jane Doe case (2013b, p. 376). [↑](#footnote-ref-10)
11. See Ahlstrom-Vij & Dunn (2014) and Goldman (forthcoming) for criticisms of the liberties Berker takes in identifying processes here. [↑](#footnote-ref-11)
12. See Ahlstrom-Vij & Dunn (2014) and Goldman (forthcoming) for additional defenses of different versions of reliabilism. Like me, they argue that Berker errs in assuming reliabilists must assess the justification of beliefs in terms of the consequences of holding or forming them, rather than in terms of the reliability of the processes that produce or sustain the beliefs, and they argue that Berker underspecifies the belief-forming processes in the cases he discusses. [↑](#footnote-ref-12)
13. This case is a relative of Berker’s prime number cases (2013a, p. 375, 2013b, pp. 374-5), modified to incorporate features of his self-knowledge case (2013b, p. 373), which make things even harder for reliabilism. In Berker’s prime number case, the process simply delivers a negative answer to the question that a given number is prime, whatever number it is asked about; it does not also output the 99 other true beliefs. The inclusion of those beliefs guarantees that the ratio of true outputs to total outputs of this process will be quite high, *regardless* of how reliable its “just say no” heuristic is at deciding whether a given number is prime. [↑](#footnote-ref-13)
14. In response to Berker’s prime number cases, which involve processes that always answer “No” to the question whether a given number is prime, Ahlstrom-Vij and Dunn agree with Berker that reliabilists should say the output beliefs are justified, but they also insist that is the right answer to give. It is likely they would contend that, if a more reliable alternative process is available to Debbie, that would might be a *defeater* of her justification, but the possibility of such defeat does not count against epistemic teleology at all. [↑](#footnote-ref-14)
15. Previous versions of this paper were presented at the 2013 Southeastern Epistemology Conference and the 2014 meeting of the Southern Society for Philosophy and Psychology. I am grateful to the audiences at both conferences for their helpful discussion. I am also grateful to Stuart Rachels, Susanna Siegel, and an anonymous reviewer for this volume for the valuable feedback and suggestions they gave me on earlier versions of this paper. [↑](#footnote-ref-15)