Epistemic Atonement*

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When we think about agents who change a long-standing belief, we sometimes have conflicting reactions. On the one hand, such agents often epistemically improve. For example, their new belief may be better supported by the evidence or closer to the truth. On the other hand, such agents are often subject to criticism—indeed especially by those who think they made the right change. Examples include politicians who change their minds on whether climate change is occurring or whether vaccines cause autism. What explains this criticism, and is it ever justified? To answer these questions, I introduce the notion of *epistemic atonement*. By epistemic atonement, I mean the process of making up for one's previous epistemic failures, including believing badly. Central to my account is the idea that epistemic atonement requires restoring trust and indicating trustworthiness. I flesh out my proposal by drawing on philosophical and empirical literature on apologies, demonstrating that epistemic blame and atonement parallels the moral domain in a number of underappreciated respects.

The structure of my paper is as follows. In §1, I offer a series of examples—both real and fictional—where agents are expected to epistemically atone, i.e. make up for their previously bad believing. While §1 offers a practice-based argument for epistemic atonement, §2 offers a theory-based one. There I show how a theory of epistemic atonement is a necessary condition for a complete account of epistemic accountability while addressing one source of skepticism. §3 offers a trust-restoration account of epistemic atonement, on which such atonement aims at restoring rational epistemic trust and in-

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dicating epistemic trustworthiness. In addition, I enumerate atonement strategies and articulate how they restore trust. §4 and §5 consider two challenges to my account, the first on which epistemic atonement is not really *epistemic*, and the second on which it is not really *atonement*. §6 addresses questions regarding obligations and demands to atone. §7 ends by discussing the broader upshots for our epistemological theorizing and suggesting future work.

1 Practice-Based Motivations for Epistemic Atonement

The primary aim of this paper is to motivate and characterize the notion of epistemic atonement. I will defend the thesis that we sometimes need to atone for our epistemic mistakes. Although the notion of epistemic atonement may sound unfamiliar, the aim of this section is to show that we often *do* expect atonement. More precisely, we *normatively expect* it: we believe—often implicitly—that people ought to make up for their previously bad believing, whether we actually think they will do so. A recent example provides a vivid illustration of this dynamic:

Biden: Joe Biden was a longstanding supporter of the Hyde Amendment, which bars the use of federal funds to pay for abortion in most cases. This changed on June 6, 2019, when he reversed his position and denounced the Hyde Amendment, ostensibly after intense criticism from fellow Democrats and people on the Left.

After the change, Biden was subjected to intense criticism, especially by people who thought that he made the right change. At least some of this criticism appears paradigmatically epistemic in nature, focused not only on the downstream harms of his belief but rather on the epistemic credentials of his initial belief and the epistemic reasons—or lack thereof—undergirding his change. For example, Li Zhao questioned the flawed arguments he offered for changing his mind (Zhao 2019). Similarly, others criticized his inadequate justifications for changing his mind *now*, suggesting he was insufficiently attuned to the evidence or epistemic considerations. To justify his reversal, Biden observed that 'circumstances had changed' and women's rights were under attack these days (Nagle and Donato 2019). This led one commentator, Ana Marie Cox, to balk: "so different from all the other days," suggesting that his reasoning for changing *now* was insufficient (Lovett 2019).¹ Relatedly, Guy Branum criticized him for metaphorically being 'stuck in 1987' and failing to look for new evidence around him (Lovett

^{1.} The podcast episode Lovett or Leave It, "Straight Pride and the Hyde Divide" includes detailed and extended criticism by several panelists, including Cox and Branum, of Biden for failing to change his mind sooner and for weak justifications he offered for changing his mind (Lovett 2019).

2019). This suggests a more general epistemic fault: a lack of sensitivity to the world around him. The fact that Biden changed his mind after intense public pressure did not help his case. These factors may lead us to question not only his sincerity but also his capacity for autonomously exercising good judgment going forward.

From one perspective, these criticisms are both natural and appropriate. Biden demonstrated multifarious epistemic failures, such as a lack of attunement with the evidence and an inability to offer adequate justification, either for his previous beliefs or for changing his mind. Similarly, he demonstrated a lack of understanding of why he ought to have changed his mind sooner. From another perspective, these criticisms are puzzling. After all, Biden came to believe what those criticizing him thought he should believe. As Cox admitted, "I'd rather he change his mind than not change his mind!" What more did Biden have to do? How can we capture the sense that something was missing?

I'll argue that what was missing centrally includes epistemic atonement. More strongly, epistemic atonement allows us to make sense of what otherwise may seem puzzling, despite being embedded within our testimonial and accountability practices. Epistemic atonement refers to whatever agents must do to respond appropriately to their epistemic mistakes. It is the process of making up for one's epistemic failures. Alternative terms for this phenomenon may include epistemic repair, redress, reconciliation, or making amends.² Here 'epistemic' refers to the *object* of atonement, namely an epistemic—as opposed to moral or practical—mistake. I'll argue that a chief aim of epistemic atonement, like moral atonement, is to restore relationships—particularly of trust—between erring epistemic agents, their community, and themselves.

The central problem, on my diagnosis, is that Biden failed to acknowledge or make up for his previous epistemic failures, including his lack of responsiveness to epistemic considerations and inability to adequately justify his views. The problem wasn't simply that he failed to respond to moral reasons—though that may also be true. Rather, the worry was in part that insofar as his stated reason for changing his mind was a good one, it was an epistemic reason for him to change his mind far sooner: the attack on women's rights did not begin in June 2019. The concept of epistemic atonement allows us to interpret these criticisms of Biden—which otherwise may seem perplexing—as both intelligible and potentially fitting. Had Biden offered a good explanation for why he changed his mind, apologized for his past errors, and committing to avoiding similar mistakes in the future, then such criticisms would not have seemed appropriate, had they even been leveled.

^{2.} This paragraph draws inspiration from (Radzik 2009, 7), who employs the term 'atonement' for stylistic reasons when discussing moral repair.

Cases like Biden's abound within politics. We often criticize politicians for their past views, even if they have the right view now. For example, politicians who voted for the Iraq War still have this blemish leveraged against them, not just because of the horrible consequences, but also because it exemplified poor *judgment*. We also sometimes criticize people who should have known better, even if they have since updated. For example, we might criticize a father for not knowing whether his child is playing safely (Morvan 2012), and we may criticize doctors for failing to know the most up-to-date treatments (Goldberg 2017). This also holds for politicians: for example, Bernie Sanders was criticized for failing to know more about the Soviet Union before praising it (Nichols 2020). As Goldberg (2017) persuasively argues, the criticism leveraged here is partly epistemic. Oftentimes, failures to know what one should have known reflect negligent belief-forming practices or biased inquiries. Again, these points matter not only for *moral* character but also their *epistemic character* and *trustworthiness*. Even once these figures change their minds, they may need to epistemically atone.

Admittedly Biden's case, like other political examples, contains noise. Biden's case is simply a vivid illustration of an expectation, sometimes manifested as a demand, that we sometimes have of others and ourselves in light of our epistemic failures. This is an expectation to *epistemically atone*. Here we can be neutral about what constitutes an epistemic mistake. Failing to respond to one's evidence, holding inconsistent or unjustified beliefs, and believing in biased ways constitute paradigmatic epistemic failures. A more capacious list includes negligent or biased evidence-gathering practices, failures to redeliberate between or justify changes of mind, or failures to know better. We can also be neutral about whether we only need to atone for *blameworthy* epistemic failures. Of course, we may err in our expectations, falsely assuming an epistemic mistake was made or that it was blameworthy. The point of the examples is not to show that demands or expectations of epistemic atonement are always appropriate, but rather that they are part of our practices.

Still, I want to offer a further, less noisy example where epistemic atonement seems appropriate. This case illustrates that expectations of epistemic atonement arise not only for politicians or those with special roles or obligations, but also in ordinary relationships. Moreover, it can arise even when there's nothing clearly moral or practical at stake. Consider the following:

Truther: You and Marjorie have recently become good friends through a college class. One day, Marjorie reveals that she used to be a 9/11 'Truther,' committed to the view that 9/11 was an 'inside job.' She believed this despite having a great deal of evidence against this conspiracy theory, which she simply refused to update on, as it would threaten her worldview. Mar-

jorie only abandoned her belief in the Truther conspiracy six months ago. She now believes that al-Qaeda was responsible for the attacks.

When Marjorie reveals that she was until recently a 9/11 'Truther,' do you just file this away as a random, quirky fact about Marjorie? Are your concerns about her epistemic inclinations fully assuaged by the fact that she has since changed her mind? For many, the answer to these questions is *no*. When you first learn about her doxastic track record, you would likely regard her with some epistemic suspicion. You might wonder, "How could you have ever believed the Truther conspiracy in the first place?" Plausibly, you would reduce your trust in her epistemic judgment—at least with respect to subject matters on which a conspiracist mindset might intrude. This reaction reaffirms that changing one's mind alone is insufficient for restoring trust.

What else do we want, and why do we want it? To be fully assuaged, you might want some explanation for how she came to hold these beliefs in the first place and why she changed her mind. You might also want a clear disavowal of her past beliefs. These details allow you to assess how trustworthy her judgment is going forward, for they give you evidence regarding her commitment to being sensitive to epistemic considerations. In the meantime, you might find yourself less inclined to defer to her for at least some of your beliefs, especially those that sound conspiratorial. If she tells you that the United States used to experiment on patients with psychedelics in a project called 'MK-Ultra,' you would be more hesitant to trust her. This sounds like a conspiracy theory, despite being true. By contrast, you would be willing to take such testimony seriously from people without a history of conspiracy theorizing.

To probe the atonement intuition further, imagine that someone criticizes Marjorie for her previous failure to believe in accordance with the evidence. She cannot dismiss this criticism by appealing to the fact that she *now* believes in accordance with the evidence. More generally, there is something amiss when someone fails to atone at all. Compare this to the moral domain. Imagine that your friend, Amir, promises but fails to pick you up from the airport on time, simply because he forgot. When you call him, he admits to having forgotten but assures you that he'll leave immediately, arriving 45 minutes late. In some sense, like Marjorie, he did what he ought to have done all along. Indeed, their cases are structurally analogous: in both cases, an agent ought to ϕ at t_1 , fails to do so, but ϕ 's at t_2 . And both need to make up for their failure to ϕ earlier. In Amir's case, it would clearly be problematic if he did not at least acknowledge that he was late and apologize for forgetting. He cannot rebuff criticism by pointing to the fact that he eventually got there. Without atonement, something would be amiss.

We can bring out this suggestion in two ways. First, focus on Amir. Wouldn't

there be something off if he failed to even acknowledge that he was late and apologize? Second, consider *your* perspective. If your friend failed to address the fact that he was late, wouldn't it be odd, even inappropriate, to maintain trust in his promises henceforth? Analogously, there would be something amiss with fully trusting Marjorie without atonement.

The analogy suggests that in both the epistemic and moral domains, there is some residue that does not dissipate by doing what one ought to have done—or believing what one ought to have believed—at an earlier time. It's relatively clear how agents can make up for their moral failings. But how can they make up for their epistemic ones?

On my proposal, which I defend in §3, epistemic atonement requires restoring trust and demonstrating trustworthiness. More precisely, it requires demonstrating *epistemic* trustworthiness, or trustworthiness with respect to one's doxastic states and belief-forming practices. This is an important foundation for rational epistemic trust. Agents can achieve this by using a variety of strategies familiar in the moral domain: accepting responsibility, offering explanations, expressing negative attitudes, offering forward-looking commitments, and engaging in community service. As we've seen, explanations can be a helpful part of the package in contextualizing the error and signaling awareness.

So far, I've argued that we need an account of epistemic atonement to make sense of our practices and expectations. Still, some readers may remain skeptical. In the next section, I'll address several sources of skepticism about the very idea of epistemic atonement. We'll see that we need an account of epistemic atonement not only for practical reasons, but also theoretical ones.

2 Theoretical Motivations for Epistemic Atonement

The suggested symmetry between moral and epistemic normativity may be surprising, even counterintuitive. Indeed, philosophers working on epistemic blame have expressed skepticism about the notion of epistemic atonement. One reason for skepticism about epistemic atonement comes from reflecting on asymmetries between the moral and epistemic domains. One apparent disanalogy is that, unlike moral failings, purely epistemic failings do not create victims. Hence, there is no one to atone *to*. Another is that certain reactive attitudes familiar in the moral domain seem inappropriate in the epistemic domain.

Indeed, philosophers writing on epistemic blame have offered precisely these moti-

vations for skepticism about epistemic atonement. For example, Jessica Brown writes, "epistemic failings aren't associated with resentment, the demand for compensation or punishment. Nor would it seem appropriate for the subject of the failing to feel guilty, apologise to others or recompense them" (Brown 2020b, 14). Adam Piovarchy agrees, observing that "genuine apologies seem out of place in cases of epistemic blameworthiness," and "epistemic guilt doesn't seem like something that we experience" (Piovarchy 2021, 7). For both Brown and Piovarchy, the explanation for this disanalogy is in part that remedial duties only arise from *wronging* others. These concerns suggest that the notion of epistemic atonement is out of place.

My aim here is to turn this objection on its head. Far from showing that the notion of epistemic atonement is unfounded, the literature on epistemic blame in fact demonstrates the need for such an account. More generally, this section aims to offer three theoretical reasons in favor of developing such a notion.

First, existing accounts of epistemic blame actually motivate the notion of epistemic atonement. To see why, we should review existing accounts of epistemic blame. Consider Brown's own account first. Following Sher (2006), Brown (2020b) argues that blame consists of a characteristic set of dispositions to feel and behave, which are unified by a belief-desire pair. Applied to epistemic blame, the requisite belief is that some agent believed badly, while the requisite desire is that they had not believed badly. Importantly, this is often accompanied by a forward-looking desire that the agent appreciate the relevant epistemic reason that she ignored or flouted. As Sher notes, apology is one way in which the wrong-doer demonstrates appreciation of moral reasons that she previously ignored or flouted (Sher 2006, 111). Analogously, epistemically blameworthy agents need a method for demonstrating their (newfound) appreciation of relevant epistemic reasons. Epistemic atonement can play this role.

A similar point holds for Piovarchy's account. For Piovarchy, our blaming practices are justified because they help cultivate epistemic agency. Epistemic atonement provides a way for agents to demonstrate responsiveness to epistemic considerations, which is central to epistemic agency. Piovarchy observes that when we recognize that we made an epistemic mistake, "we often experience regret or embarrassment, and we quickly feel strong desires to avoid making similar mistakes in the future. We're also likely to ruminate on our blunders and the things that led us to commit them" (Piovarchy 2021, 11-12). Demands for epistemic atonement amplify and encourage this reflection. Furthermore, he notes that an "acknowledgement of error" might be "fitting," even if apology or recompense are not. These remarks suggest room for the notion of epistemic atonement.

The need for epistemic atonement is particularly clear on views on which epistemic blame consists in relationship modification, often manifestating as trust-reduction. According to Cameron Boult (2021b, forthcoming)—who models his account on Scanlon's—epistemic blame consists of a distinctive type of relationship modification (Scanlon 2000). In the epistemic domain, this relationship modification often takes the form of reducing or suspending the presumption of trust in someone—at least locally. Antti Kauppinen offers a related account of what he calls epistemic accountability: we hold agents epistemically accountable by reducing trust in them (Kauppinen 2018). On both accounts, the need for epistemic atonement is clear. On Boult's picture, if blame involves a relationship-downgrade, we also want to know how it can be upgraded again. Similarly, epistemically criticizable agents plausibly want to know how to restore trust. Epistemic atonement allows them to do just that.

A second theoretical reason in favor of a notion of epistemic atonement comes from reflection on the various roles that atonement plays. Moreover, reflecting on these roles allows us to diagnose why philosophers have tended to deny the need for epistemic atonement. When philosophers claim that we have no use for a corresponding notion of epistemic apologies or remediation, they are focusing on just one of the many functions of apologies, namely their victim-centered role. To victims, apologies provide recognition of the harm suffered, restore a sense of self-worth, and afford them confidence that the relevant parties will treat them with respect in the future (Gill 2000). Yet, purely epistemic failures typically have no victims, and hence no wrongs to recognize or self-worth to restore.

However, there are other important yet overlooked functions of apologies. Apologies also play roles for the *offender* and the *public*. They allow offenders to re-establish themselves as part of the moral community, to recover from their moral failing, and to reaffirm their commitment to moral ideals and norms. For the public, apologies play several forward-looking roles. They help hold offenders accountable. A sincere apology assures us that the offender won't commit the offense again. Moreover, apologies can reaffirm the value and validity of norms in place (Gill 2000). In fact, we do need something to play these functions in the epistemic domain. Those who had blameworthy beliefs need a way to signal that they are trustworthy again—including to themselves! And others need a way to trust them again. Moreover, we all have an interest in epistemic norms being reaffirmed and recommitted to—after all, many of us have seen first-hand the consequences of being in a 'post-truth' environment, where norms governing responding to evidence or having consistent beliefs are seen by many as optional at best and Procrustean at worst.

A final theoretical motivation comes from reflection on the roles of emotions and reactive attitudes within epistemology. Certain such attitudes do seem appropriate in the epistemic domain. *Pace* Brown, Lindsay Rettler suggests that both guilt and resentment can be appropriate in the epistemic case (Rettler 2018, 2208). Minimally, some attitudes and emotions do seem appropriate (Tollefsen 2017). First-personally, we might experience shame, regret, or embarrassment, while second-personally, we might feel non-retributive anger, frustration, or disappointment. Epistemically blameworthy agents plausibly want to know how to respond to such reactions and render them less appropriate by making amends.

In sum, there are plausible practical and theoretical reasons for thinking that something must play the role of atonement and apologies in the epistemic domain. Far from showing that the notion of epistemic atonement is misplaced, any complete account of epistemic accountability must recognize it.

3 Epistemic Atonement: A Trust-Restoration Account

With epistemic atonement motivated, we can now turn to my positive account of how to atone. How can individuals like Biden and Marjorie make up for their epistemically blameworthy beliefs? My proposal is that they have to restore trust and demonstrate trustworthiness.³ More precisely, I propose the following *Trust-Restoration Account*:

The Trust-Restoration Account: To epistemically atone, agents must restore *epistemic* trust and demonstrate *epistemic* trustworthiness, or trustworthiness with respect to their doxastic states and processes.

This thesis—that epistemic atonement centrally involves trust-restoration—is motivated by three considerations. First, epistemically blaming or criticizing others often involves reducing trust in them, at least with respect to some domains.⁴ It is natural to think that atonement requires restoring what has been lost. Second, my proposal is intuitively motivated. When we ask ourselves what agents like Marjorie need to do to make up for their past epistemic track record, a natural response is that she needs to give us reasons to trust her again. Finally, the view that atonement generally

^{3.} In cases where there was no trust to begin with, agents may need to instead cultivate or establish trust. Alternatively, they may need to reaffirm their trustworthy status. Trust-restoration is meant to encompass these relations. Thanks to Michael Hannon for discussion.

^{4.} This is most obvious on Boult's and Kauppinen's accounts. However, it is also compatible with other views of epistemic blame, assuming that trust-reductions are among the characteristic ways of feeling or behaving in light of epistemic violations (Brown 2020b) or expressing blaming reactions, like disappointment (Piovarchy 2021).

involves restoring trust is well-motivated not just in the epistemic domain but also the moral domain. Apologies are a clear form of atonement in the moral domain. It is well-established, both philosophically and empirically, that a key function of apologies is to restore trust and to indicate trustworthiness.⁵ §§3.1–3.2 are dedicated to establishing this parallel.

Before turning to those details, two final housekeeping points are in order. First, although I will often speak of restoring *trust*, I am primarily concerned with restoring *rational* trust and demonstrating *trustworthiness*. By rational trust, I mean trust that would be rational or appropriate for the hearer to have, given (for instance) facts about the speaker and whether she has offered reasons to view her as trustworthy again. Given the contingencies of trust-restoration, I care primarily about how individuals can restore *rational* trust and indicate *trustworthiness*—these are necessary conditions for appropriate cognitive and behavioral propensities to trust. For ease of discussion, I will often write in terms of restoring trust, keeping these caveats in mind.

Second, I have spoken about the importance of trust and trustworthiness in both the epistemic and moral domains. But what exactly does trustworthiness in the epistemic domain amount to? While a full answer to this question is beyond the scope of this paper, we can note some generic features of epistemic trustworthiness. First, note that epistemic trustworthiness—like trustworthiness generally (Jones 2012)—is always with respect to a subject matter or domain: we can be epistemically trustworthy about some matters but not others. Second, epistemic trustworthiness goes beyond mere reliability: epistemically trustworthy agents are not just prone to getting things right; they also have good reasons for their beliefs (and other doxastic attitudes) and are sensitive to epistemic considerations (Elgin 2008). Hence, epistemically trustworthy agents are typically agents to whom we can rationally defer for our doxastic attitudes. Third, epistemic trustworthiness often coincides with intellectual humility (Dormandy 2020). Epistemically trustworthy agents tend to be aware of their epistemic limitations—and the limitations of the data—and communicate these as appropriate. Of course, none of us is perfectly trustworthy; just as trustworthiness can be *local*, it can also be *partial*: it comes in degrees.

^{5.} Another form of atonement besides apologies is community service. I'm viewing apologies as a subset of atonement, and atonement as a subset of remedial strategies. In general, remediation aims to transform or reposition the relevant act's 'meaning' and to salvage the transgressor's image (Goffman 1971). Besides apologies, other forms of remediation include denials, justification, and excuses. Thanks to Adam Waggoner for pressing me to clarify these relationships.

3.1 Why Atonement Involves Restoring Trust: The Moral–Epistemic Parallel

In the moral domain, the connection between atonement and trust-restoration is wellestablished, both philosophically and empirically. On the philosophical side, Radzik argues that a proper aim of atonement is restoring one's status as a trustworthy agent (Radzik 2009). Other philosophers who highlight the idea that atonement renews relationships of trust include De Greiff (2008), Gill (2000), and MacLachlan (2015). Successful apologies in the moral domain help restore trust by communicating to the addressee and others that the wrongdoer shares the same overarching norms and values, despite having violated them in the past. By apologizing, the wrongdoer commits to trying to abide by those norms in the future, hence signaling intentions and propensities toward trustworthiness (Schniter and Sheremeta 2014). It is similarly important that agents reaffirm their commitment to epistemic norms. On the empirical side, that apologies serve to actually restore trust and judgments of trustworthiness has been well-documented in a wide range of research. Unsurprisingly, research demonstrates that participants who receive an apology are more likely to trust their counterpart than those who do not (Ma et al. 2019). This newfound propensity to trust is mediated by perceptions or judgments of the transgressor's trustworthiness (Kim et al. 2004; Ma et al. 2019). Other atonement strategies, like promises and compensation, also restore trust (Ma et al. 2019; Schniter et al. 2011).

Moreover, there are clear parallels between strategies that can be used to *morally* atone and those that can be used to *epistemically* atone. Epistemic atonement strategies include taking responsibility, offering narrative explanations, expressing negative emotions, making conditional commitments, and engaging in 'epistemic community service.' These have clear analogues in the moral domain. For example, taking responsibility, expressing negative emotions, and making commitments to improve are all taken to either be constituents of apologies or *apology strategies* (Bovens 2008; Gill 2000; MacLachlan 2015; Scher and Darley 1997). The fact that these strategies naturally apply or have clear analogues in the epistemic domain lends further support to one of my key claims: there are clear and heretofore underexplored parallels between moral atonement and epistemic atonement.

^{6.} See MacLachlan (2015, 445) for further ways in which apologies restore trust.

^{7.} See, for example, Kim et al. (2004); Ma et al. (2019); Schniter et al. (2011); Schweitzer et al. (2006) and references therein.

3.2 Atonement Strategies

Additionally, each strategy can function in a distinctive way to restore epistemic trust. In the remainder of this section, I'll illustrate these strategies in action and articulate how they can achieve atonement's aim. Furthermore, by offering concrete illustrations of how these strategies can be and already are employed, we gain further evidence that epistemic atonement is already part of our everyday practices. (Readers who find these strategies natural or self-explanatory may jump to the summary in Table 1.)

First, individuals can epistemically atone by *taking responsibility*. For example, Marjorie might acknowledge and take responsibility for ignoring the evidence. Agents who take responsibility for their epistemic mistakes are better candidates for avoiding them in the future. Plausibly, this is one reason why critics were worried that Biden had never even acknowledged a mistake. An admission of responsibility "conveys to the listener that the speaker is aware of the social norms that have been violated, and therefore conveys that the speaker will be able to avoid the offense in future interactions" (Scher and Darley 1997, 129). Moreover, taking responsibility allows individuals to affirm their status as *epistemic* agents, indicating that they are responsive to epistemic reasons and criticism.

Second, agents can offer an explanation for their mistake. Explanations are an important part of "narrative accounting" (Griswold 2007, 51). They can also play a valuable role in restoring epistemic trust. First, explanations signal awareness. If you are aware of the circumstances that led you to make epistemic mistakes, you may be better equipped to avoid them henceforth or to mitigate potential harm. Second, explanations allow you to assess someone's character, including their epistemic character or dispositions. If I learn that you made an epistemic mistake simply because you failed to get enough sleep last night, or because you failed to drink enough coffee, then I learn that your epistemic mistake is not the product of broadly epistemically vicious dispositions (Lasonen-Aarnio 2021), and my trust-reduction will be more local.

Third, agents can *express negative emotions*, such as shame or embarrassment. These displays of emotions can be especially helpful for restoring trust when cynicism may otherwise interfere. Consider again Biden. Had he expressed shame and regret for his past beliefs about the Hyde Amendment, he may have been more persuasive. Without such displays, it is easier to attribute his change "of mind" to a change in political self-interest. Indeed, emotions like this seem to reflect a genuine understanding of *why* it was problematic to believe in these ways. Expressions of negative emotions also help signal that the apology is genuine: emotional displays are generally both reliable and costly signals (Schniter and Sheremeta 2014). They also serve to deflect unfavorable

judgments about the transgressor: if a transgressor expresses negative emotions immediately following a transgression, then others are less likely to attribute to them a problematic underlying disposition (Scher and Darley 1997).

Fourth, agents can *commit to improve*. Such commitments increase trust by offering assurance to hearers while providing a mechanism for public accountability. If the agent fails, she can be doubly criticized—both for the transgression itself, and for her failure to fulfill her commitment. This makes her commitment more credible, for it raises the stakes of transgression. This strategy applies naturally in the epistemic domain. When we make an epistemic mistake, we can commit to doing better in the future. Most obviously, we can commit to being more cautious and surveying a wider array of evidence. In other cases, we might be blameworthy for being too *slow* to judge (Ichikawa 2020; Miracchi 2019). While we can't reasonably commit to avoiding *all* epistemic errors, we can commit to trying to improve.

Finally, one can atone by engaging in 'epistemic community service.'8 Consider two examples of ill-supported beliefs: Republican and former governor Chris Christie's initial belief that the coronavirus was not a big deal, and QAnon conspiracy theorists' belief that Hollywood elites are harvesting adrenochrome extracted from children's blood. When these agents change their minds, they can atone by trying to convince others who shared their initial unsupported belief. Indeed, they are often best-suited to do so (DiPaolo 2018). For example, a focus group study showed that Republicans were more likely to be persuaded to get the COVID-19 vaccine by Chris Christie than other spokespersons from their political party. He emphasized not only his own struggle with COVID, but also the fact that he had initially downplayed the pandemic and since had a change of heart—and mind (Mole 2019). It's easy to see why people like Christie would be persuasive spokespersons: they signal to copartisans that it's safe to change their mind. Similarly, ex-QAnon believers—like Jitarth Jadeja—seem uniquely positioned to try to convince others to change their views, for they can better empathize with them. Indeed, Jadeja has become a prominent spokesperson for ex-QAnon'ers, and he emphasizes how much he regrets spreading false beliefs. Agents who engage in epistemic community service signal the genuineness of their change while also playing an invaluable role in helping others change their views.

We have now seen several strategies—summarized by Table 1—that agents can actually employ to restore trust. This list is not intended to be exhaustive. There may be other ways in which agents can epistemically atone, such as publicly disavowing previous stances, expressing humility, and avoiding repeat mistakes. Oftentimes, a

^{8.} Thanks to Josh Hunt for this label.

combination of strategies will be most effective. Which strategies are necessary or sufficient for atonement will arguably be contextual; small errors may need only a simple acknowledgement and apology, while more egregious or pervasive errors may require demanding strategies. This context-sensitivity is no less visible in the epistemic than in the moral domain (Radzik 2009).

Strategy	Example	How It Restores Trust
Accepting	"I acknowledge I ignored the evidence, and	Signals awareness of norms.
Responsibil-	I'm sorry about that."	Indicates that will attempt to avoid the
ity	"I made a mistake; that's my fault for not	relevant mistakes in the future.
	paying more attention."	Affirms status as epistemic agents.
Offering	"I'm sorry I made that silly logic mistake; I	Signals self-awareness (relevant for pre-
Explanations	didn't get much sleep last night."	vention or mitigation).
	"I grew up in a household of conspiracy	Allows hearer to assess agent's epistemic
	theorists."	dispositions vs. environment.
Expressing Nega-	"I feel so embarrassed of my past beliefs."	Signals that atonement is genuine.
tive Emotions	"I can't believe I ever believed that."	Deflects unfavorable judgments about the
	Physiological action-tendencies (e.g. red-	transgressor.
	dening of cheeks to indicate shame)	
Commitments to	"I promise to avoid hasty judgments in the	Offers assurance to hearers.
Improve	future."	Provides mechanism for public account-
	"I'll try to more carefully assess the evi-	ability.
	dence in the future."	Raises stakes of future transgression.
Epistemic Com-	reformed anti-vaxxer; Jitarth Jadeja; reluc-	Signals genuineness of change while
munity Service	tant converts as advocates (DiPaolo 2018)	playing valuable epistemic advocacy role.

Table 1: Summary of Epistemic Atonement Strategies

4 What Makes Atonement *Epistemic*? The Private Belief Problem

With my account of epistemic atonement in hand, we can now turn to two objections. The first contends that 'epistemic atonement' is not really *epistemic*, while the second worries that it is not really a form of *atonement*. I discuss each objection in turn, addressing the first here and the second in §5.

The first worry is that epistemic atonement is not truly *epistemic*. Rather, the objector claims, it reduces to moral or role-based atonement. One way to press this is to show that we only need to atone for our epistemic mistakes when they are tied to testimony or action. Thus, there is nothing distinctively *epistemic* about the phenomenon at issue.

Call this *the Belief Falls in the Forest Problem*. The challenge proceeds as follows:

P1. If epistemic atonement is purely epistemic, then there should be cases where one ought to atone for purely private epistemic mistakes.

- P2. But, it's never the case that we ought to atone for purely private epistemic mistakes.
- C. Therefore, epistemic atonement is not purely epistemic.

I want to begin by rejecting premise 2. First, agents may need to restore *self*-trust.⁹ Consider Marjorie. By her own lights now, she has epistemically erred by believing in the Truther conspiracy theory. She needs to restore trust in herself that she will not egregiously fail at believing in accordance with the evidence henceforth. If she is unable to restore self-trust, she may be more hesitant to form or be confident in beliefs where a conspiracist mindset might intrude. The more egregious the perceived epistemic mistake, the more difficult and important it is to re-establish self-trust. However, we may also need to re-establish self-trust for more quotidian epistemic mistakes. Suppose that I find myself making basic logic mistakes one day while teaching. I will slightly reduce my trust in my ability to avoid basic logic mistakes, at least in the classroom. Until I have restored appropriate self-trust, I will find it more difficult to rely on my reasoning without double-checking it. This is not to suggest that one ever ought to view oneself as infallible. Intellectual humility is compatible with self-trust.

Second, just because we typically find out about epistemic errors via testimony or manifestations in action, it does not follow what one epistemically atones for is the testimony or action (though one may also need to atone for those as well). Compare the following reasoning: we only demand apologies from people who were caught. Therefore, one only ever needs to apologize for getting caught. In both cases, the reasoner conflates how we *find out* about an error with what one ought to apologize *for*. People who apologize solely for getting caught characteristically miss the point. Moreover, when we are caught, we don't merely apologize for the consequences of our actions. Suppose that Suzy throws a football, and it accidentally hits and breaks a window. She should not only apologize for breaking the window, but also for doing what caused the window to break. It would be inappropriate for her to say, "I'm sorry for breaking your window, though I'm not sorry for throwing the football." This would be akin to apologizing to your partner for making them upset, but not for the action that justifiably caused them to be upset. Nonetheless, the fact that the window broke, or that your partner is upset, is largely why an apology is demanded. Similarly, in the epistemic case, agents can still be expected to epistemically atone for their beliefs, even if the downstream consequences of such beliefs are a necessary pre-condition for atonement being sought in the first place.¹⁰

^{9.} Radzik (2009) similarly emphasizes the importance of self-trust when discussing moral repair.

^{10.} Relatedly, Basu (2018) emphasizes that we can't capture the full extent of the ways we can wrong

Finally, we can compare private errors in the moral domain. Suppose that I maliciously intend to break my friend's vase but fail, and my friend never learns of this intention. Apologizing to her would be inappropriate, for it may cause gratuitous distress. Still "some response is required from me, such as shame and a resolution to control my temper in the future," even if restitution or apology is not (Radzik 2009, 48).

A similar point holds for epistemic atonement. In cases of private epistemic errors, some response is required, even if it need not be publicly communicated. For example, we impht solely feel shame and inwardly commit to improve. Indeed, there are practical reasons against communicating atonement for private errors. Injudiciously admitting your past epistemic mistakes might make people overly suspicious of your epistemic character. Even if we privately morally err by coveting our neighbor's house, we ought to atone for such sins in the confessional, not their doorstep.

It's now worth stepping back and questioning the presuppositions of the objection. The objection assumes, first, a narrow understanding of the 'epistemic' and second, that epistemic atonement must be *purely* epistemic. Arguably, our roles as testifiers are partly epistemic roles. Hence, the fact that we expect people to atone for their poor testimony does not automatically entail that such atonement must be solely moral or role-based. Thus, there are reasons to reject premise 1. Relatedly, for epistemic atonement to be interesting and novel, it need not be a *purely* epistemic phenomenon. It's enough that it has a distinctively epistemic component or flavor, even if typically infused with the moral and practical. At worst, attempting to separate epistemic atonement from our social needs as testifiers and hearers betrays an overly individualistic epistemological focus.

5 A DISANALOGY? EVIDENTIAL VS. INTERPERSONAL VALUE

So far, I have argued for an overlooked analogy between the epistemic and moral domains. Now I want to consider a potential disanalogy, one which threatens the idea that epistemic atonement really is a form of *atonement*, at least in a way that truly parallels the moral domain. On my view, a central role of epistemic atonement is to offer evidence that one is an epistemically trustworthy agent, whose testimony can be relied on. People who have proven unreliable in the past must demonstrate that they have since modified their belief-forming processes. It might be thought, then, that epistemic atonement plays a purely evidential role.

others if we focus exclusively on the downstream consequences or the upstream causes of our beliefs.

This would give rise to two worries.¹¹ First, it suggests that if we can attain evidence of trustworthiness in some other way, then epistemic atonement is unnecessary. Hence, it would not be as central to our practices as I claim. Second, if epistemic atonement really does play a purely evidential role, then this seems to motivate a stark disanalogy to the moral domain. In the moral domain, we don't want people to atone simply because doing so offers us evidence that they are a good person. Even if you learn that Amir will never forget another commitment again, he still owes you an apology. Hence, the value of moral atonement does not reduce to its evidential value, unlike in the epistemic domain. For this reason, it may seem inappropriate to even call epistemic atonement 'atonement.'

Let's take each objection in turn. The first objection questions the necessity of atonement given other evidence of trustworthiness. In response, I want to make two points. First, as a practical matter, it can be very difficult to get this evidence in the absence of atonement. It can be hard enough to know what people's beliefs are without relying on their testimony; it is even harder to know what their belief-forming *processes* are. Given cognitive and temporal limitations, we often have no choice but to rely on atonement. Yet even when we can gain evidence of trustworthiness in other ways, atonement provides a valuable shortcut.

Second, even then, there are reasons to prefer atonement over, or in addition to, more impersonal evidence of trustworthiness. Atonement adds something that impersonal evidence cannot. We might say that atonement offers a kind of assurance. When someone offers assurance, they assume a certain responsibility for what the hearer believes (Moran 2005, 6). A similar point holds for epistemic atonement. As noted in §3.2, when someone commits to epistemically improve, she can be doubly criticized: both for the epistemic violation itself and for her failure to honor her commitment. This raises the stakes of a future transgression. More generally, there seems to be an important interpersonal element to epistemic atonement, not captured by its impersonal evidential value.¹²

To illustrate, imagine two agents—Bernice and Denise—who have the same, unreliable epistemic track records. You receive strong impersonal evidence that they are both equally reliable now. However, Bernice—but not Denise—also epistemically atones for her past mistakes. For example, she apologizes for her past track record and commits to improve in the future. Intuitively, it seems that you have gained something valuable

^{11.} Thanks to Sarah Moss, Josh Petersen, Adam Piovarchy, and Hannah Tierney for pressing versions of these worries.

^{12.} Relevant here is Moran's discussion and rejection of the 'telepathic ideal,' on which it would be better if we could exclusively mind-read rather than rely on testimony (Moran 2018). Something valuable would be missing in a world without testimony (and atonement).

from Bernice. Even if you are justified in not only relying on but also trusting each, you would be justified in trusting Bernice *more*. This greater trust may come with further epistemic benefits. For example, if you trust Bernice more, you may become more confident in her claims than in her counterpart's. Epistemic atonement may also carry additional *moral* benefits. We might morally trust people who epistemically atone more than their counterparts, and we may be more inclined to view them as epistemic *agents* rather than truth-indicators.

Hence, the disanalogy between the moral and epistemic domains is not as stark as presumed. For as we have seen, epistemic atonement also has an invaluable interpersonal component, one that impersonal evidence cannot adequately replace.¹³

One might worry that, in defending this phenomenon as a form of *atonement*, we have undermined its status as *epistemic*.¹⁴ Suppose that your *total* evidence—including both impersonal and interpersonal evidence—supports the claim that both are equally reliable. In that case, is differential trust really appropriate? First, I suggested that it is unlikely that your total evidence will equally support both conclusions. But suppose that it does. If so, I am willing to grant that you ought to trust Bernice and Denise equally. But does granting this now undermine my claim that it is really *atonement*?

It would only do so if trust-restoration were the *only* function of epistemic atonement. But I am only committed to it being a central function. Epistemic atonement can play other important roles. For example, practices of atonement allow agents to demonstrate respect for the relevant norms. This is true in both the moral and epistemic domains. Suppose that you truly had evidence that someone was never going to make a moral or epistemic mistake again. You may still want atonement in each case because you want them to demonstrate respect for the moral law or epistemic norms, respectively.¹⁵ In addition, epistemic atonement may better enable you to view people as epistemic agents, as opposed to just truth-indicators, and hence may have moral or affective benefits as well. Finally, and most concessively, I am willing to grant that the interpersonal element is more central in moral atonement. Indeed, this difference is unsurprising on the assumption that paradigmatic epistemic norms do not have any victims. However, this is a difference in degree rather than kind, for we can still need to atone for moral mistakes that have no victims. Moreover, if there are cases where there are victims of epistemic mistakes—a possibility I want to leave open—then the

^{13.} Although I have been distinguishing between *interpersonal* and *evidential* aspects of atonement, one might think—as I do—that the interpersonal element of atonement may offer a better or further form of evidence, beyond impersonal evidence. Hence, I've emphasized that the relevant contrast from the interpersonal is *impersonal* evidence.

^{14.} Thanks to an anonymous referee for raising this worry and to Michael Hannon for discussion.

^{15.} Thanks to Josh Hunt for this suggestion.

interpersonal element of epistemic atonement will be just as important in such cases.

6 Obligations and Demands to Atone

Throughout this paper, I have tried to convince you that we need an account of epistemic atonement for both practical and theoretical reasons, and that we should understand atonement in terms of trust-restoration. In making these arguments, I have tried to remain relatively neutral about a wide variety of controversial assumptions, such as the extent to which epistemic mistakes have victims and the centrality of epistemic atonement's interpersonal element. We can appreciate the importance of epistemic atonement without these assumptions, even if accepting them would provide a notion of epistemic atonement that more closely parallels moral atonement.

Another question we can be neutral on is when we need to epistemically atone. I hope to investigate this question more thoroughly in future work. For now I want to suggest the following starting point: being epistemically blameworthy is *sufficient* for an obligation to atone, at least when blameworthiness indicates untrustworthiness. 16 Epistemically blameworthy agents are agents who violate epistemic norms without an excuse (Brown 2020a) or who exhibit bad epistemic vices or dispositions (Lasonen-Aarnio 2021). Most clearly, we can be epistemically blameworthy for our doxastic states; these include not only our beliefs, but also our credences and how we suspend judgment. A paradigmatic example of epistemically blameworthy states involves failures to form one's beliefs in accordance with the evidence that she has. Examples include dogmatism, wishful thinking, delusions, perceptual non-responsiveness, and unwarranted optimism. More controversially, perhaps we can also be epistemically blameworthy for practices of inquiring or gathering-evidence (Flores and Woodard forthcoming). For my purposes, we need not settle disputes about the scope of epistemic blameworthiness. The point is simply that the more often we are epistemically blameworthy, the more often we need to epistemically atone.

Whether agents ever ought to epistemically atone for *blameless* beliefs is a more difficult question. In the moral domain, we sometimes owe apologies even when our mistakes were *excused*. For example, if I spill red wine all over your white carpet, then I may owe you an apology, even if I only spilled it because someone hit into me.¹⁷ In the moral domain, agents are excused for an action (or omission) if the act was wrong,

^{16.} Thanks to Janice Dowell for this qualification.

^{17.} This example comes from Basu and Schroeder (2019). Baron (2004) also makes this point regarding excuses. One reason we often need to apologize for excused actions is that failing to do so can generate expressive harms (Cohen 2018). An analogous claim may hold in the epistemic domain.

but the wrongdoer not blameworthy. An agent can be excused due to facts about her, her environment, or both (Baron 2004). This distinction also holds for beliefs. Consider Ina, who is stuck in an epistemic bubble—"a social epistemic structure in which some relevant voices have been excluded through omission"—through no fault of her own (Nguyen 2020, 142). Perhaps due to her meagre information environment, Ina is excused for believing—for example—that climate change is not occurring. By contrast, consider a schizophrenic who believes that his dog was poisoned despite the dog's healthy appearance. He may be excused for his delusional belief if he is unable to believe otherwise, given his disorder (Bortolotti and Miyazono 2016).

What should we say about atonement in such cases? On the one hand, we likely wouldn't want to rely on these agents for our beliefs. On the other hand, it could be unfair to demand them to atone. Expectations for them to have done better may be unreasonable. For this reason, it might seem too strong to say that such agents have an obligation to atone. (Though perhaps they still have a *pro tanto* but overridden obligation.) In any case, even if it would be a good thing—even obligatory—for such agents to atone, it would be unfair to enforce this demand.

This brings us to a more general question regarding when *demands* for atonement are appropriate. This question is politically, not just epistemically, important. It may be imprudent to demand atonement of people who have since changed their mind if doing so disincentivizes such changes, even when such demands would be fitting. Alternatively, demands for atonement may also be unfitting or arrogant. For example, we might have unreasonable expectations of agents to be perfectly infallible. Moreover, such demands are hypocritical: the demander herself fails to meet this excessively demanding standard.

Investigating when we have the standing to epistemically blame or demand atonement is a topic for future investigation.¹⁸ For now, observe that it can sometimes be imprudent to demand atonement, even when fitting. There are distinctive costs to criticizing people who change their mind for the better. For concreteness, imagine a well-known scientist or politician who used to believed, against the evidence, that climate change is not occurring. Perhaps they were negligent in their belief-forming methods or succumbed to a positivity bias. On my view, they ought to epistemically atone for this epistemic mistake. But, should we demand epistemic atonement? Should we publicly criticize the scientist or politician for their past views?

Before criticizing them, we ought to consider the potential costs. Leveraging such criticisms may be *imprudent* if they disincentive future changes of mind. Changing

^{18.} For recent discussion of standing to epistemically blame, see Boult (2021a). For discussion of standing conditions on moral blame, see Tognazzini and Coates (2021).

one's mind is difficult, and there are numerous obstacles against doing so even when the need is obvious. First, agents who change their mind and initially had a correct belief are prone to greater degrees of *regret* (Kirkebøen et al. 2013). Second, and conversely, agents who stick to their guns despite the evidence may end up being socially rewarded. Hindsight bias at hand, others might claim that we should've deferred to them all along; such agents may even be seen as savants (consider Democritus on atoms!). Third, changing your mind about issues such as climate change can require rethinking your own values or risk risk alienating you from your own communities. When changing one's mind is already difficult, we ought not make it harder by criticizing such agents and demanding atonement. Public criticisms of people who have changed their minds—and thereby epistemically improved—may further disincentivize both targets and hearers from questioning and revising their beliefs.

Conversely, there may be practical reasons to *celebrate* changes of mind more often than we may be inclined. First, changes of mind often result in epistemic improvement. Second, we may want to encourage a culture of rethinking and open-mindedness, which has positive epistemic consequences (Grant 2021). Finally, people who have changed their minds may be particularly well-suited for epistemic advocacy (DiPaolo 2018).

Whether we ought all things considered to criticize someone for their past views or failures to atone depends on the details. It also depends on empirical evidence regarding how and when these disincentives operate. I do not deny that it is often appropriate and important to criticize people for the material consequences of their beliefs, such as policy decisions. My point is that there are potential costs of criticizing or mocking people for their past *views* and demanding epistemic atonement: it can further disincentivize changes of mind.

7 Upshots and Future Work

People often epistemically improve when they change their minds. Is that enough? I've argued that it often is not. They sometimes need to epistemically atone. To do this, they can employ various strategies familiar from the moral domain. By elucidating the notion of epistemic atonement, we make progress on how agents can epistemically improve in intellectually responsible ways.

The notion of epistemic atonement has important upshots for other parts of our epistemological theorizing. First, it suggests further underexplored parallels to the moral domain. Building on work here, we might pursue questions about the nature of

epistemic forgiveness (is it identical to, or does it go beyond, coming to trust?), conditions on standing to demand atonement, and the scope of atonement-obligations. By attending to these parallels, we may come to a deeper understanding of our interpersonal epistemic practices and expectations of one another.

Second, epistemic atonement may also help illuminate other debates within the ethics of belief and social epistemology. For example, it may help shed light on a potentially overlooked aspect of *doxastic wronging*, whereby one person wrongs another in virtue of what she believes about him (Basu and Schroeder 2019). Insofar as such agents do something *epistemically*, not just *morally*, wrong in such cases, they may need to epistemically atone. Within social epistemology, accounts of testimony often contend that we need to monitor people's credentials in order to justifiably trust their testimony. One question to explore is whether we can come to justifiably believe or know claims from agents who have failed to epistemically atone on a relevant matter. In this respect, thinking about epistemic atonement can further clarify the scope of monitoring requirements and their effects on testimonial justification and knowledge.

Finally, this paper shows that those who criticize public figures for their past judgment often get something right: politicians and scientists—like laypersons—often incur an obligation to restore trust in light of their epistemic mistakes. By clarifying obligations to atone and why they are important, we can better understand when such obligations count as fulfilled. At the same time, for prudential reasons, we sometimes ought to be careful about *demanding* atonement. Otherwise, we risk disincentivizing changes of mind, leaving us both epistemically and politically worse off. Thus, articulating when such demands are not only fitting but also prudential is an important project not just in epistemology but also in social and political philosophy.

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