Alief or belief? A contextual approach to belief ascription

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Abstract   There has been a surge of interest over cases where a subject sincerely endorses P while displaying discordant strains of not-P in her behaviour and emotion. Cases like this are telling because they bear directly upon conditions under which belief should be ascribed. Are beliefs to be aligned with what we sincerely endorse or with what we do and feel? If belief doesn't explain the discordant strains, what does? T.S. Gendler has recently attempted to explain all the discordances by introducing a controversial new cognitive category—associative clusters called 'alief'. Others think that belief explains all the discordancy cases, while others argue that in-between belief does the trick, and so on. Most advocates of the different positions, indeed, assume that their favoured analysis will explain the whole range of discordancy cases. This paper defends what I call the 'contextual view', where I argue that overturning this assumption of uniformity leads to more nuanced account of belief-ascription. On the contextual view, which analysis applies to which case depends on the discordancy case at hand. Perhaps a height-phobic stepping on a glass platform deserves different treatment to a hesitant stepper. I ground the contextual view in a biologically functional account of the alief/belief distinction, which construes alief as a real cognitive category but without the explanatory reach Gendler gives it. This functional distinction yields a principled strategy for determining the correct application of analysis to discordancy case.

Keywords   Alief · Belief · Belief-ascription · Judgment · Action · Emotion · Animal cognition · Contradictory beliefs

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1 Introduction

There has been a surge of interest over cases where a subject affirms and appears to judge that P while displaying distinctive strains of not-P in her behaviour and emotion. A professed anti-racist exhibits racist tendencies in her everyday actions and emotions. A visitor steps hesitantly onto the glass Skywalk, declaring it perfectly safe. A phobic, avowing it safe, refuses to step onto the Skywalk at all. A movie-goer cries out as the shark lunges toward him. A committed hard determinist agonises over a decision on where to send his paper. A person reaches for a lightswitch to illuminate the very room whose bulb he declares broken. Of equal interest are the converse cases in which subjects act as if P but do not affirm or judge that P. A frog snaps at a bee-bee. A puppy bats at its image in the mirror.

The discordant cases are telling because they bear directly upon conditions under which belief should be ascribed. Does belief align with what we occurrently judge and sincerely affirm? Does it align instead with what we do and feel? Or must both sides be in harmony for a state to count as belief? Different theories of belief-ascription have prompted philosophers to offer a range of positions on cases where S occurrently judges P but in some way fails to act and emote in accordance with P. These attempts are summarised in Eric Schwitzgebel (2010a, p. 537) as (1) the *pro-judgment view*, on which in such a case the subject S believes that P and fails to believe not-P, (2) the *anti-judgment view*, on which S fails to believe that P but believes not-P, (3) the *shifting view*, on which S shifts between believing P and not-P, (4) the *contradictory belief view*, on which S believes both P and not-P, and (5) the *in-between view*, on which S neither believes P nor not-P (Schwitzgebel's own position).

While proponents of each analysis focus on only a subset of illustrating discordancy cases, there is a tendency for them to shoehorn all the discordant cases into their preferred analysis. For example, in defending the pro-judgment view, Tamar Gendler (2008a, b) thinks that a unifying explanation for discordancy cases lies in the ascription of what she calls *aliefs*, pre-doxastic associative reactions to apparent stimuli. Criticising Gendler, Brie Gertler (2011) suggests that we regard all the contrary strains as *beliefs*, such that it may warrant a contradictory belief analysis. Schwitzgebel, after acknowledging the possibility that not all analyses may generalise to the cases he outlines, writes 'I will ignore this complication and treat each philosopher's analysis as generalizing to all the cases at hand' (2010a, p. 538). He then proceeds to treat all discordances as being instances of the in-between view.

This tendency is unfortunate. Ignoring the complication can lead us to overlook the very benefits that can be accrued from consideration of discordancy cases. Perhaps the situation is not that of one-size-fits-all. One discordancy case might merit different treatment to another, which may in turn affect how we should understand the ascription of belief. For instance, there is at least a prima facie case for not treating the hesitant Skywalker and the phobic to the same analysis. Both occurrently judge the platform to be safe and would bet on it being so. But the hesitant Skywalker's discordant behaviour is merely a hesitation in stepping on the platform; the phobic's discordant behaviour is that of not stepping on it at all. Could

a pro-judgment analysis fit the former, with aliefs accounting for the discordancy, while a contradictory belief analysis fits the latter?

To Schwitzgebel's taxonomy I therefore add a position (6), which I call *the contextual view* (and later, the *contextual analysis*). It says that depending on the discordancy case at hand, any of (1)–(5) may offer a correct explanation of S's doxastic stance in relation to P and not-P. This paper aims to defend the contextual view, anchoring it in a biologically functional account of the alief/belief distinction, which provides a principled way of determining when to apply what analysis to what case.

The contextual view accommodates the varying intuitions over differing discord cases by relying on a more liberal criterion of belief ascription (which I call the *disjunctive view*), upon which satisfying either judgment-based or action-based criteria will suffice for believing P. While permitting a wider-than-normal range of situations where belief may be present, including the ascription of belief to animals, my version of the disjunctive view nevertheless forbids the ascription of belief in some cases where most favouring a disjunctive view have been willing to ascribe it. These will usually be cases where alief should be ascribed. My account will suggest, for instance, that the hesitant Skywalker and the phobic's endorsements of safety imply a belief that the platform is safe. But it will also suggest that patterns in their emotion and behaviour imply belief to be present in the case of the phobic (meriting a contradictory belief analysis) and absent in the case of the hesitant Skywalker (meriting a pro-judgment alief analysis).

What advantages are there to taking a contextual and disjunctive approach to belief-ascription? An advantage of the contextual view has already been aired: it accounts for and develops the intuition that not all the discordancy cases, such as the phobic and hesitant stepper, merit similar doxastic treatment. An advantage of the disjunctive view is that by allowing both action-based and judgment-based criteria to suffice for the ascription of belief, it reconciles a longstanding lack of resolution between these two approaches. Many concede it is not clear which approach to adopt, as common platitudes about belief encompass both sides.[1] Regarding each approach as providing sufficient rather than necessary conditions for belief-ascription has the advantage of not forcing a choice between these approaches to belief.

These advantages go only so far to recommend the position. I will also offer a more theoretical reason for endorsing a contextual approach to belief ascription, a reason anchored in a functional account of the alief/belief distinction. The notion of alief is new, and there is much disagreement over its explanatory utility and the existence of the phenomenon to which it is supposed to correspond. On one side are those who express scepticism over whether alief is an independent cognitive category that has any special explanatory role that cannot be played, for instance, by belief.[2] On the other side are those who think that alief gives explanatory unity to

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[1] A point made eloquently by Zimmerman (2007, pp. 61–67).

[2] E.g. see Mandelbaum (2012), Kung (2012), and Kwong (2012). Kwong explains the discordances in terms of inferences made from a number of beliefs held by the subject. Although I do not directly address Kwong's view, the position developed in my paper for the functional unity of alief (in both humans and animals) would imply that any application of Kwong's analysis must be limited.

the discordances, perhaps even replacing the role of belief and desire in driving much of our daily concordant (as well as discordant) behaviour.[3] In defending the contextual view, this paper steers a middle course between the two camps. I argue that alief, via its special functional role, is a robust cognitive category that has a specific explanatory role to play in our cognition, which complements rather than competes with the role of belief. And through understanding its proper reach in both concordant and discordant cases, it becomes clear that alief does not play as wide a role as Gendler contends; it does not primarily explain all the discordant cases. Belief, for instance, explains some of them.

Having now set the scene in some detail, the paper will proceed as follows. In Sect. 2, I provide a fourfold taxonomy of positions on belief-ascription that are divided according to weight given to judgment-based versus action-based criteria. Amongst them is the disjunctive view, which I begin to defend in this section. I will take myself to have shown that satisfying judgment-based criteria, at least, can guarantee the presence of belief—a conclusion that (in keeping with the contextual view) spells trouble for any global application of anti-judgment or in-between analyses of discordancy cases. The question still remains with the other side: can the presence of action-based criteria suffice for belief to be present, and in such a way that beliefs always explain the discordancy cases, or might aliefs do the explanatory work? In Sect. 3, after describing what aliefs are and giving independent reason to suppose that something like aliefs might exist, I argue that Gendler has not done enough to show that alief is a robust cognitive category that explains the discordances. Determining the proper reach of alief and belief on the discordancy cases will require a deeper investigation into what grounds the purported alief/belief distinction.

I begin this part of the investigation by arguing in Sect. 4 that an underlying feature of belief—in both humans and animals—is that it tracks accuracy, rather than truth (which may require rational capacity). Placing norms of rationality upon all belief-ascription ignores deep commonalities between human and animal cognition. Based upon this, I propose in Sect. 5 that the biological function of belief is to *track accuracy*. Such cognitions accrue advantage by disposing the individual to *act* in the presence of relevant stimuli and desire, thereby explaining the common action-based platitude around belief-desire pairs causing action. The biological function of alief, by contrast, is not to track accuracy or directly guide action, but to *ready the individual for action* by speeding up reaction time through the association of sensory or cognitive stimuli with affective and behavioral proclivities. This functional alief/belief distinction both completes my defence of the disjunctive view and yields a clear criterion for determining how to arbitrate on the discordancy cases. In Sect. 6, I finalise my defence of the contextual view by applying the criterion to a range of discordances with a view to showing that different cases will often merit different analyses.

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[3] While Gendler (2008a, b) sees alief as offering explanatory unity of the discordances, Kriegel (2012) thinks that aliefs also explain much of our everyday concordant behavior.

2 A preliminary defence of the disjunctive view

Let us say that a subject *endorses* P when that subject is disposed to judge that P and/or to sincerely affirm that P.[4] I take judgment to be an occurrent mental act, while endorsement (like belief) is a dispositional mental state.[5] One of the questions at issue here is whether endorsing P suffices to believe that P. In typical cases, a subject's judgments will normally align with observable patterns in his emotion and behaviour, and there will be no problem. The difficult cases are those in which the subject endorses P, while the subject's behavior and emotion in some way reflects not-P.[6] Here there are a number of possible views, which we can call the 'judgment-based view', the 'action-based view', the 'conjunctive view', and the 'disjunctive view'.[7]

According to the judgment-based view, at least to a first approximation, S believes a proposition P iff S endorses P. In cases where a subject endorses P and yet exhibits patterns of not-P-ish behaviour and emotion, the subject believes that P all the same.[8] Why a first approximation? The reason is that the endorsement must be *non-defective*, in that the disposition to judge is part of a broader or multi-track disposition to follow certain norms of rationality. This reflects the widely held idea that belief is normative, in that belief requires following norms of rationality. So for advocates of the judgment-based view (recently, Gendler 2008a, b; Kriegel 2012; Zimmerman 2007), it stands to reason that "if a subject claims to have a belief, in a conscious way, then she cannot fail to recognise the normative requirement (that only truths should be believed)".[9] Advocates standardly include, in their criteria for belief-ascription, norms such as those pertaining to inference ("If S believes p, she typically believes propositions that

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[4] It is plausible that whenever a subject is disposed to sincerely affirm that P, the subject is disposed to judge that P. If so, we can define endorsement in terms of dispositions to judge alone.

[5] I have heard it suggested that the notion of judgment presupposes the notion of belief, and that subjects count as judging P only if they believe P. This claim seems too strong, as belief is typically regarded as a dispositional state. It seems possible that a subject who does not believe that P and who lacks a disposition to judge that P could nevertheless judge that P on one occasion. However, if one thinks that the connection between judgment and belief is trivial, one can also adopt an understanding on which a subject endorses P iff they seem to themselves to believe that P. Much of what I say in this paper will still apply. (Thanks to Wayne Davis for bringing this point to my attention).

[6] The emphasis here is on belief-*ascription* rather than the nature of the belief ascribed (e.g. dispositional, representational, functional, etc.). One's stance on belief-ascription may nevertheless constrain the sort of accounts about the nature of belief that are compatible, and vice versa. For a recent taxonomy on what it is to believe, see Schwitzgebel (2010b).

[7] I owe this terminology to David Chalmers. Zimmerman (2007, pp. 72–73) outlines a similar taxonomy, but with different terminology, and without reference to the disjunctive view. Each of these views about criteria for belief has analogues (outlined in subsequent notes) in Schwitzgebel's taxonomy of analyses of discordancy cases. To avoid confusion with Schwitzgebel's taxonomy, I will from now on refer to the positions within his taxonomy as 'analyses' and those in my taxonomy as 'views'. In keeping with this switch, the 'contextual view' becomes the 'contextual analysis'.

[8] So long as judgment-based criteria are met, discordancy cases are to be described as fitting the pro-judgment analysis. If the judgment-based criteria are not met, then advocates of the view *should* describe the discordancy case as fitting an in-between analysis insofar as S neither believes P nor not-P (although S need not have an in-between *belief*). When pushing for a universal application of the pro-judgment view, however, its advocates don't always clearly do this.

[9] From Engel (2004, p. 83), in relation to Bernard Williams's argument against belief-voluntarism.

fairly obviously follow from p", Zimmerman 2007, p. 64), betting behaviour (S is disposed to bet high stakes on P being true), and truth-tracking "in the sense that belief is subject to immediate revision in the face of changes in our all-things-considered evidence" (Gendler 2008b, p. 565). I will take it that criteria of this sort are required for non-defective endorsement. Then we can say that S believes a proposition P, (on the judgment-based view), iff S non-defectively endorses P.[10]

   The action-based view ascribes belief to a subject solely on the basis of distinctive patterns of behavioral and affective response.[11] Does verbally affirming that P (or betting on P being true, and so on) count as an action-based criterion on this view? That depends. If S lacks a disposition to exhibit standard patterns of not-P-ish behaviour and emotion, then verbally affirming (or being disposed to verbally affirm) P can be taken as determinate evidence that S believes P. But in cases of conflict where S verbally affirms that P but is disposed to exhibit standard patterns of not-P-ish behaviour and emotion, S will believe not-P.[12] 'Standard patterns' will include those exemplified in belief-desire analyses of behaviour, whereby a belief "dispose[s] the subject to behave in certain ways that would promote the satisfaction of his desires if its content were true" (Velleman 2000, p. 255).[13] They will also include patterns pertaining to affective response, whereby if S desires that P, then coming to believe that P will elicit positive emotion, and coming to believe not-P will elicit negative emotion (Zimmerman 2007, p. 64).[14] Although affective responses need not take the form of action, for purposes of this discussion, I will include them alongside behavioral patterns as action-based criteria.[15]

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[10] Should an endorsement of P persist in the face of contrary evidence it can still suffice, on this criteria, for a belief that P. In normally rational subjects, an isolated failure to follow evidential norms would make it appropriate to criticise the belief in that instance as false or unreasonable, but it would not make the belief defective in my sense. (An example might be where one takes oneself to be a better driver than the evidence would suggest). In cases that I regard as genuinely defective (which may include various pathologies of clinical delusion or extreme self-deception), a disposition to judge that P is not part of a broader or multi-track disposition to follow norms of rationality. Here, an endorsement of P would not suffice for a belief that P.

[11] Insofar as they "privilege evidence accessible from the third-person perspective", Zimmerman (2007, pp. 71–73) attributes variants of an action-based position to Williamson (2000), Smith (1994), Stalnaker (1984), Davidson (1984) and Dennett (1987). We should not assume that they all subscribe to the action-based view discussed here.

[12] On other variants, S may simply fail to believe P. On any action-based position, if the discordant strands do meet the relevant action-based criteria, the case merits an anti-judgment analysis. If the discordant strands do not meet the action-based criteria, but the case as a whole does, then a pro-judgment analysis should be taken. If the discordancy case altogether fails to meet action-based criteria, then the case should be described as fitting an in-between analysis (see note 8).

[13] So if S believes she is in danger, and has an overriding desire to be safe, then she will be disposed to behave in ways that extricate her from the danger. Velleman does not himself endorse this "purely motivational" conception of belief ascription.

[14] It would be wrong to assume that a lack of explicit pairing of belief with norms of rationality (associated with the judgment-based view) makes belief, when ascribed on action-based criteria, a non-rational cognition. As Schwitzgebel points out, many of our unreflective (verbal and non-verbal) behaviors and emotions are sensitive to evidence in a way that can be judged rational or irrational (2010a, pp. 538–541). Nevertheless, those ascribing beliefs on the basis of action-based criteria (including proponents of the disjunctive view) have more leeway to ascribe beliefs to non-rational subjects such as infants and animals. This becomes relevant later in the paper.

[15] It will be argued later that despite appearances, aliefs *do not* properly fit these standard behavioral and affective patterns, and so do not conform to action-based criteria.

Proponents of a conjunctive view hold that neither judgment-based nor action-based criteria are, alone, enough to determine whether the ascription of a belief to a subject is correct: elements from each side must be included. Schwitzgebel (who prefers a dispositional approach to belief) defends the conjunctive view, arguing that "to believe is to possess… a cluster of dispositions" which can include cognitive and phenomenal as well as behavioral dispositions (2010a, p. 535). A disposition to judge that P, or to act as if P were true, is only one amongst many such dispositions needed to ascribe to a subject a belief that P. In discordancy cases (described above) where there are not enough of the relevant dispositions present, the subject will neither believe nor fail to believe P, but will (in line with the in-between analysis) have an in-between belief.

Proponents of a disjunctive view, finally, hold that satisfying either judgment-based or action-based criteria will suffice for the ascription of a belief to a subject (and satisfying either one or the other will be necessary). Advocates of the view (recently Keith Frankish 2009; Brie Gertler 2011; Fred Sommers 2009) have usually taken discordancy cases to imply the presence of contradictory beliefs. So long as the criteria are satisfied, the contradictory belief analysis will indeed be the correct one. But in discordancy cases where either judgment-based or action-based criteria fail to be satisfied, advocates of the disjunctive view (unlike with the other views) should still describe the case at hand in terms of one of Schwitzgebel's four remaining analyses: pro-judgment, anti-judgment, shifting, or in-between. For this reason the disjunctive view must be held if one wishes to defend the contextual analysis.

Defending the disjunctive view against its rivals will hence be critical to my eventual defence of the contextual analysis, and in the remainder of this section I begin this task (as well as advancing the contextual analysis by ruling out a global application of both the in-between and the anti-judgment analyses). I first attempt to defend the 'judgment-based-sufficiency' arm of the disjunctive view by investigating whether judgment-based criteria always guarantee the correctness of an ascription of belief. If they do, then the action-based view, on which action-based criteria can trump judgment-based criteria, will be ruled out, as will the conjunctive view, on which judgment-based criteria must be supplemented by action-based criteria. I then address the 'action-based-sufficiency' arm of the disjunctive view by investigating whether action-based criteria can, in the absence of judgment-based criteria, always guarantee the ascription of belief. If they can, then the judgment-based and conjunctive views, which rely on the presence of judgment-based criteria for any ascription of belief, will be ruled out. It will emerge that it is easier to establish the first arm of the disjunctive view than the second.

Consider the arm of the disjunctive view that seeks to establish (*contra* the action-based and conjunctive views) that judgment-based criteria are enough, by themselves, to guarantee the ascription of belief. To show this, we need to consider cases where the subject endorses P even though they otherwise behave and feel in a way accords with not-P. Someone undergoing a phobic reaction is ideal for these purposes. The phobic subject has overwhelmingly not-P-ish emotions and behaviours, despite judging and verbally affirming P. If we were to be persuaded

that the phobic nevertheless believes that P, there would be excellent reason to suppose that judgment-based criteria suffice for a belief that P.

Suppose, then, that Ben has no aversive reaction when faced with large heights. When stepping on the Skywalk, he sincerely judges that P (where P = 'the Skywalk is safe'), and ascribes to himself the belief that P. Suppose also that his endorsement of P is non-defective, arising from a wider disposition to display predictable patterns of assertion, inference, betting behaviour, etc. The best explanation for the success of these predictions is surely that Ben *believes* (rather than hopes, regrets, imagines, hypothesises) that P is true. Note that this explanation seems entirely natural and well grounded without knowing anything else about his wider behaviour and emotional responses with reference to P (such as the lack of vertigo). Now take phobic Fiona's reflective endorsement of the Skywalk's safety. Despite being in the midst of a violent phobic reaction (having found herself on the platform!) we can suppose that she also, like Ben, sincerely judges that P and self-ascribes the belief that P. So what best explains the success of predictions about her related assertions, inferences and betting behaviour? Again, the best explanation is that she believes (rather than hopes, etc.) that P. It seems inconsistent, moreover, to allow that a belief that P serves as the best explanation in the case of Ben but not Fiona. An advocate of the conjunctive view, such as Schwitzgebel, can avail himself of the belief hypothesis in Ben's case but not in Fiona's. All he can say of Fiona's 'in-between' stance is that she has dispositions to judge that the Skywalk is safe. Similarly, advocates of the action-based view (upon which the wider patterns of emotion and behaviour trump contrary affirmations) will, in the case of Fiona, have little recourse to the belief-hypothesis. And yet it seems much more plausible to allow, on judgment-based grounds, that, as with Ben, Fiona believes that the Skywalk is safe.

If we agree with these reflections, then we can secure the first arm of the disjunctive view by concluding that the presence of judgment-based criteria are sufficient to guarantee the presence of belief, thus ruling out the rival action-based and conjunctive views of belief-ascription that require adequate contribution from action-based criteria. [16] We can also advance the contextual analysis by concluding that both the in-between and the anti-judgment analyses are not convincing as a unifying explanation for every discordancy case. There are at least some cases that they don't cover.[17]

Let us now turn to the second arm of the disjunctive view, which seeks to establish (*contra* the judgment-based and conjunctive views) that action-based criteria can be enough for the ascription of belief. Can a reverse argument be forwarded against the conjunctive and judgment-based views, such that Fiona's distinctly not-P-ish phobic behaviour and emotion is best explained by a belief that the platform is dangerous, in spite of her sincere judgment that the platform is safe? If it can, then the presence of judgment-based criteria will not be necessary for an ascription of the (phobic) belief that not-P. The story, however, is not so

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[16] The argument also rules out variants of an action-based position upon which S simply fails to believe P (see note 12).

[17] At the end of the paper, I indicate how these analyses, on a contextual approach, could apply to various discordancy cases.

straightforward. For when it comes to classifying not-P-ish strains of emotion and behaviour, that may belie a subject's endorsement of P, there are competing hypotheses.

To see how this is so, consider recent claims that have been made by philosophers defending a disjunctive view of belief ascription. Frankish (2009), Sommers (2009), and Gertler (2011) have each suggested that belief can be ascribed to a subject on either action-based or judgment-based criteria. This is evident in their treatment of discordancy cases, where they recommend a contradictory belief approach. The phobic would thus, for example, have contradictory beliefs about the safety of the platform. While some may take exception to the idea of contradictory beliefs, this is not the issue of focus here. At issue is whether they are warranted in automatically treating the contrary not-P-ish strains to a doxastic interpretation. While a doxastic analysis may seem more plausible in the case of a phobic or extreme racist, it does not, at least to me, seem so plausible that a convinced atheist praying at the foxhole believes that God exists (as Sommers 2009, p. 271, would have us believe) or that the errant light-switcher believes the bulb hasn't broken (as Frankish, 2009, p. 274, would have us believe) or that the hesitant Skywalker believes the platform is dangerous (as Gertler 2011, p. 136, n8, would have us believe). At least some unendorsed reactions may be due to something like alief rather than belief. And if some of them are due to alief, then perhaps *all* of them are—as Gendler would have us believe. In defending a universally pro-judgment analysis of discordancy cases, Gendler cites the compatibility of alief with standard action-based criteria: "it may be possible to paraphrase the content of aliefs using the language of belief and desire, [although] alief cannot be factorised into belief and desire" (2008b, p. 558). Kriegel (2012), indeed, holds that alief explains not only the discordancy cases, but all of our concordant automatic and unreflective action, the sort of action that has traditionally been given a belief-desire explanation.

While it seems evident, then, that the satisfaction of judgment-based criteria can verify the ascription of belief, thus ruling out the action-based and conjunctive views, establishing the other arm of the disjunctive view is not as straightforward as its existing advocates assume. The ambiguity around how to regard the unendorsed 'not-P-ish' strains of emotion and behaviour leaves open a judgment-based view of belief-ascription, upon which *all* the unendorsed strains, in keeping with the pro-judgment analysis, are considered aliefs (or suchlike). Until this position is ruled out, the disjunctive view—which must allow at least some cases of unendorsed strains to be doxastic—remains tenuous, as does the contextual analysis, which rejects a uniform treatment of the discordancy cases. In the next step of my investigation I take a closer look at what aliefs are supposed to be, along with how they are supposed to explain the discordancy cases.

3 Can aliefs explain discordant behaviour?

Aliefs are characterised by Gendler as "an innate or habitual propensity to respond to an apparent stimulus in a particular way" (2008b, p. 553). They are pre-doxastic mental states with associatively linked content that is (R)epresentational,

(A)ffective and (B)ehavioural, and that is "activated…by features of the subject's internal or ambient environment. Aliefs may be either occurrent or dispositional." (2008a, p. 642). So while the thrill-seeker believes that the Skywalk is safe, a deep-rooted association of heights with danger triggers an alief with the content <(R)long way down! (A)dangerous! (B)get off!> (2008a, p. 635). This content explains the belief-discordant tendencies in the visitor's emotion and behaviour. As already noted, Gendler views alief as providing a unifying explanation for all discordancy cases.

Gendler regards dispositional aliefs to have their origins in evolution or habit. Take the R–A–B content of the Skywalk alief. It served our ancestors well to associate precarious-looking places with feelings of fear and behaviours of withdrawal, hence this cluster of associations has persisted (2008a, pp. 642–643; 2008b, p. 568). The fact that aliefs are associatively triggered by certain stimuli entails a curious inflexibility. Short of changing the configuration of alief (through, for example, gradually altering one's habit or conditioned response), it is impossible to prevent the occurrent manifestation of an alief in the presence of the relevant trigger.

This leads Gendler to regard aliefs as both arational and "insensitive to the possibility that appearances may misrepresent reality" (2008b, p. 570). So if S has a dispositional R–A–B alief in relation to a particular situation, such as a precarious height, then an appearance of that situation will automatically trigger, say, a danger-related alief. But the appearance will not automatically trigger a *belief* of being in danger. Beliefs, she says, are reality-reflective states, in the sense that their norms require that they instantly change in response to the rational assessment of all-things-considered evidence (2008b, p. 570). If they don't change, then (unlike aliefs) they can be rightly criticised as being irrational or defective. This leads Gendler to regard aliefs as more evolutionarily primitive than beliefs or desires (2008b, p. 558). While the indiscriminately triggered aliefs are shared with infants and animals, beliefs, she thinks, are the result of higher cognition.

Have we independent reason to suppose that aliefs exist: reason that does *not* appeal to their role in the discordancy cases? The idea of associatively linked R–A–B clusters prefigures in the influential work of neurologist Antonio Damasio (1999). In brief, Damasio uses the term 'emotion' as a technical term to describe "[c]omplex, stereotyped patterns of [neurobiological] response" which help "assist the organism in maintaining life" by associating objects and situations, through evolutionary history and conditioning, with particular feelings and patterns of motor response (1999, p. 55, 51). These emotional responses, according to Damasio, are critical in helping to quickly direct the organism's behaviour in its approach or withdrawal from various objects and situations (1999, p. 54). A car zooms towards you, activating a feeling of fear and a readiness in motor-response: before having time to think you jump out the way. Memories of objects are stored in dispositional form, recording not only sensory aspects of an object, but also the "motor adjustments that necessarily accompanied the gathering of the sensory signals" and the "obligate emotional reaction to the object" (1999, p. 161).

Damasio provides much empirical evidence for the existence and survival value of these associative R–A–B clusters (among them, the famous 'somatic marker

hypothesis'[18]), but are they what uniformly explain the discordancy cases? We cannot deny that the Skywalker typically has an instant, uncontrollable reaction to the appearance of altitude, a reaction impervious to rational reflection. And there is good reason to suppose that evolution should viscerally caution us against venturing too close. Yet, Gendler (and for that matter, Kriegel) clearly subscribes to the judgment-based view, building norms of rationality into their concept of belief. Perhaps the Skywalkers' unendorsed reactions, including cases of phobia, are caused by recalcitrant cognitive tendencies that are *not* subject to such norms (and so cannot be deemed irrational), but are beliefs nevertheless—as advocates of an action-based or disjunctive approach might insist. Or perhaps they are unusually irrational beliefs. The visceral reaction to a zooming car may conversely be an arational belief or a component of belief that coheres with the subject's reflective endorsement. So while not denying the existence of Damasio's 'complex stereotyped patterns of responses' that are characterised by R–A–B clusters, it has yet to be shown that alief, as Mandelbaum (2012) puts it, is a 'robust' cognitive category with independent explanatory power, rather than easily 'deflated' into other categories, such as belief.

We have reached an impasse. Advocates who allow action-based criteria to suffice for belief-ascription (especially proponents of the disjunctive view) tend to indiscriminately regard the discordant behaviours and emotions to be uniformly explained by belief; advocates favouring exclusively judgment-based criteria for belief-ascription have held discordances to be uniformly explained by non-doxastic reaction such as alief. But it is not yet clear whether the discordances should be uniformly explained by alief or by belief, or whether the explanations should, as per the contextual analysis, depend on the case at hand. Discovering the deeper story requires investigation into what (if anything) could ground a distinction between alief and belief. I begin by looking to what, from an evolutionary perspective, could underpin belief.

4 The underpinning of belief: aiming at accuracy

Watch hungry Woozsh as Joe opens the fridge at mealtime. Meowing loudly he stands up on hind legs, pawing at the can. When food is delivered he purrs and tucks in eagerly. If Joe withholds the food in sight of him, Woozsh gets frantic and then angry.

Like many animals, Woozsh's patterns of emotion and behaviour fit the action-based criteria of belief-ascription. The cat behaves and feels as one who believes that food is present would typically behave and feel if desiring food and then seeing it close by. And while lacking the rational capacity to distinguish veridical from misleading appearances, Woozsh still responds to cues in a way that shows ongoing sensitivity to his environment. This may be enough to convince many that animals have beliefs even though they cannot satisfy judgment-based criteria. But for those (like Gendler and Kriegel) who hold that beliefs must be subject to norms of

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[18] For an account of this hypothesis, see Damasio (1999, pp. 40–42).

rationality, and that this sort of behaviour is due instead to such factors as alief, further argument is needed.

It may be asked why I do not restrict my discussion of belief to human cases. The reason has just been laid out: given that animal cognition fits standard action-based criteria of belief-ascription, it is remiss to ignore animals when investigating the underpinnings of belief. If the underpinnings are shared by all thinking creatures, reflective or unreflective, it will directly bear upon how we should understand the ascription of belief to humans. On the overlap of human and animal cognition, it is worth noting that Gendler is in agreement:

> …we shouldn't be surprised that, as human animals, we share a great deal of our cognitive apparatus with other, non-human animals. Rather, it would be surprising if the opposite were the case. Much animal behaviour—both human and non-human—is the result of innate or habitual propensities to respond to apparent stimuli in particular ways [i.e., aliefs]. [2008b, p. 558].

Having established that there's a great deal in common, I now present a two-part argument for supposing that much of animal behaviour and emotion is (or is also) the result of belief. First, I argue that some animal cognitions, although arational, can be judged defective by virtue of mistaking mere appearance for reality. As aliefs cannot be judged defective for this reason, these animal cognitions cannot be aliefs but must at least be belief-like. Then, I argue that these belief-like cognitions are in fact beliefs, by virtue of the fact that they are in the same evolutionary business as human belief—responding to variation in a way that tracks accuracy. This explains the considerable overlap in the application of standard action-based criteria (of belief-ascription) to both human and animal behaviour.

In defending a judgment-based conception of belief, Gendler makes much of the fact that to play the right role in our cognitive repertoire, belief must aim at truth, such that it is:

> …normatively governed by the following constraint: belief aims to 'track truth' in the sense that belief is subject to immediate revision in the face of changes in our all-things-considered evidence. When we gain new all-things-considered evidence—either as the result of a change in our evidential relation to the world, or as a result of a change in the (wider) world itself—the norms of belief require that our beliefs change accordingly. [2008b, p. 565].

The idea that belief aims at truth is famously defended by J. David Velleman. Velleman argues that while other cognitive attitudes (such as imagining and acceptance) are also ways of regarding P as true, only belief involves regarding P as true with the aim of accepting P only if it is true (rather than, say, for the sake of argument, 2000, pp. 250–251). While Gendler clearly interprets this as requiring the capacity to make rational judgments on all-things-considered evidence, it is not clear that such demands on rationality actually fall out of Velleman's account. His account does not require, for instance, that the subject endorse her beliefs (hence his account is not committed to a judgment-based view of belief-ascription). There is, indeed, an extensive literature on the question of what it would mean to say that belief 'aims at truth.' For our purposes, we can sidestep this debate and simply focus

on a capacity that any thinking creature, even an unreflective animal, possesses. This is what I shall call 'tracking accuracy.'

In animals, there appear to be cognitions that track accuracy by responding selectively to variation in the environment. That they track accuracy is reflected in the fact that there is room for *mis*representation, the correctness of the representation being determined in part by the proper function of their representational mechanisms. In the case of frogs, the proper function is presumably to generate (for instance) the representation <food> *only in the presence of food* rather than imitations or other false positives. That, after all, is why Gendler calls the bee-bee-triggered state (and suchlike) 'teleofunctional-discordant' (2008b, p. 571). But then this seems like an evolutionary precursor to Velleman's (more strictly conceived notion of) 'aiming at truth'—a mental state that more broadly tracks accuracy, via its proper function, by generating representations that are normatively governed by how well they map reality.

Now, recall that Gendler thinks aliefs involve mechanisms that are "wholly insensitive to the difference between seeming and being, or between appearance and reality" (2008b, p. 559n).[19] *With their thin representational content, aliefs cannot therefore be judged defective for failing to match reality in a way that goes beyond the appearances.* The frog's system of alief might indeed be considered defective if it did *not* respond to a bee-bee in that fixed way. Yet we have just seen a clear sense in which the frog has a cognition that *can* be judged defective—indeed, inaccurate—in misrepresenting the bee-bee as food. Given that the inaccurate cognition cannot be an alief, it must therefore, at least, be a belief-like state.

Even if Gendler were to agree that the inaccurate cognition is not an alief but a belief-like state (perhaps what she refers to as a 'teleofunctional analogue'), she would resist the idea that it is a belief. Mistaken animal and human cognitions, she thinks, are inaccurate for importantly different reasons. In the case of humans, beliefs are inaccurate when they fall short of the norms of rationality that (she thinks) govern truth-tracking. In animals, the analogous cognitions are inaccurate when they fall short of biological norms that govern accuracy-tracking; rationality has no purchase. Such differences in the source of inaccuracy make one a belief and the other, not.

While not denying that human beliefs and their animal analogues differ in sophistication, the substantial overlap in the application of action-based criteria, I suggest, is evidence that the difference is one of degree rather than kind. What centrally makes any such cognition a *belief* is that it is governed by norms of *tracking accuracy* when responding to variation: something that is not the case with alief. It is true that for animals, speed of response will more often than with humans override finer-grained accuracy, so false positives will be regularly in the mix; appearances will sometimes misrepresent.[20] But the cruder capacity to assess variation should not mask the fact that it is still *accuracy* that is tracked and a

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[19] This feature of alief is defended further in the next section.

[20] Note that Velleman's claim that belief aims at truth doesn't require that no other mechanisms are also at work. Hence, he acknowledges that evolution "may have given us dispositions to err on the side of caution in perceiving predators" (2000, p. 254).

measure of *accuracy* largely achieved. It is thus a mistake to conflate, as Gendler does, the general ability to respond selectively to evidence with the finer-grained ability to respond selectively in rational ways. Our ability to reflect abstractly on our own mental states as well as the world, and thereby discern misleading from veridical appearances, is something that is likely to have evolved from more basic capacities. It is an evolution of the same accuracy-tracking capacity, a development of belief rather than its introduction. Insisting that animals lack beliefs while humans have them carves nature at the wrong joint by aiming too high, failing to recognise crucial commonalities between human and animal cognition.

5 A functional distinction between alief and belief

I have argued that beliefs are cognitions shared by both humans and animals, and that what makes a cognition a belief is that it is regulated for accuracy. I therefore suggest that we construe *tracking accuracy* as the unifying evolutionary function of belief. How might the function of tracking accuracy be implemented so as to best procure advantage to a creature? By pairing with desire in a way that disposes the individual to *act* to satisfy the desire in the presence of suitable stimuli. This would tie the function of belief to the sort of advantages that accrue from acting in the world, as well as account for the standard action-based criteria that explains action-guiding behaviour in terms of belief-desire pairs.

   In keeping with Damasio's theory, I suggest that the function of alief, by contrast, is not so much to *act* as to *react*: to associate representational stimuli with affective and behavioral proclivities such that when combined with an action-driving belief, the action will be greatly accelerated. As it is not the function of an alief by itself to track accuracy, it is not architecturally connected to the sort of action-guiding behavioral executions that go with tracking accuracy (although it *links up* with them via the belief system). Aliefs are not in the business of carrying the 'B' part of the 'R–A–B' response to executive level in such a way that associated desires are disposed to get acted upon whenever a representation is triggered.[21] Aliefs rather implement a *readiness* to act, through the partial activation of motor routines and affective response patterns. Or as Gendler puts it: "Aliefs typically activate behavioral proclivities (though these may not translate into full-blown actions)" (2008b, p. 558). The aliefic responses are then 'taken seriously'—or not—by the belief system.[22] When taken seriously, the belief-system extends the emotional and behavioral reach of the alief to a level that disposes the subject to immediately act in the presence of a suitable desire (and to feel negative emotion if the desire is frustrated, positive emotion when it is fulfilled). When the alief is not taken

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[21] This directly conflicts with how Kriegel views alief. At the heart of his position is the idea that aliefs, unlike beliefs, are intrinsically motivational and hence, "*architecturally* connected to action" such that they "govern behaviour as it freely unfolds in the normal go of things, where explicit deliberation is not called for" (2012, pp. 479, 478). His mistake, on my view, is to conflate an architectural connection to behavioral proclivities (which aliefs have) with an architectural connection to actionguiding behavior.

[22] I do not discuss how aliefs might interact with other cognitive states such as imagination.

seriously, the affective and motor response stays at the level of partial activation, the belief driving behaviour and emotion in a different overall direction.

How might aliefs, on this analysis, show up in action? The partially activated affective and motor routines will typically reveal themselves in a way best described as *modulating* the belief-desire driven arc of behaviour and emotion. Their most obvious influence will be in the discordant cases. They will come out, for example, as the shakiness in stepping onto the Skywalk, in the butterflies that flit through the gut feeling of safety. In concordant cases, aliefs will exert their less noticeable but vitally important influence in the instant flashes of associative recognition that facilitate speedy movement towards or away from an object.[23]

Some examples may help further illustrate how, on my theory, aliefs and beliefs interact to produce behaviour. Consider a belief-concordant behaviour. A representation is triggered, in hungry Sally, of an apple close by. The alief rapidly associates the representation of the apple with pleasant taste and behavioral responses that ready her to pick it up. If no countervailing evidence is present, the belief-system seamlessly responds to the aliefic content by treating the appearance as veridical, eliciting motor routines that (in combination with her prevailing desire) extend the reach of her alief to executive level. In a flash, she picks up the apple and takes a bite.[24]

Consider a belief-discordant case: a representation triggered of the Skywalk close by. The representation of height is co-activated with residual feelings of fear and a readiness to withdraw. But countervailing evidence has formed in the agent a rational belief about the structure's safety. The aliefic representation of danger is cognitively integrated with this belief: fed, as it were, through the 'all-things-considered' circuitry.[25] The alief is not taken seriously. The resultant belief (combined with desire) elicits the overarching behaviour of staying put and perhaps of stepping onto the platform. The contrary alief—viz., the partial activation of motor and affective response—shows up in behaviour through the veins of the action-guiding belief, in the hesitancy of stepping, the trembling and butterflies.

Cases of absent-mindedness may be explained as a hybrid of concordant and discordant cases. Consider the errant light-switcher who believes the bulb to have broken and yet flips the switch. A representation (of lightswitch) triggers an alief <lightswitch, light is good, flip switch> that has been habitually actioned in a belief-concordant way. In moments of absent-mindedness, where the content of the new belief slips from one's attention, I surmise that the lightswitch-alief fails to be fed through the 'all-things-considered' circuitry. The aliefic response, via habit-worn mechanisms of the default belief-system, is momentarily taken seriously: the switch is flipped.

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[23] Are aliefs restricted to sensory representation, or can they also attach to concepts? Mandelbaum (2012, online) has recently pointed to evidence suggesting that concepts are associated with subtle affective resonances ('microvalences') and motor responses. It would indeed be strange if, in creatures capable of abstract thought, aliefs did *not* attach to concepts.

[24] In the case of animals, aliefs and belief will usually work together in a concordant way, except without the 'all-things-considered' circuitry that permits a contrary response to countervailing evidence. As with the case of Sally and the apple, the images will immediately trigger an alief, which is then readily actioned by the accuracy-aiming belief-system.

[25] This 'all-things-considered circuitry' is likely to involve the more rational, higher level of dual-process cognition. For a recent discussion of dual-process cognition, see Frankish (2009) and Kriegel (2012).

Two matters of significance have emerged. First, the functionally specified grounds for the alief/belief distinction suggest a strategy (shortly explained) for arbitrating on the discordancy cases: for telling if discordant behaviour is explained centrally by belief or just alief.[26] Previously, it was not clear whether conforming to action-based criteria, such as a belief-desire analysis, could not also be shared by aliefs. But as beliefs (paired with desire) are supposed to guide the behaviour, with aliefs simply modulating it, we can now be confident that if a pattern of discordant emotion and behaviour conforms to action-based criteria, then it *will* indicate a belief; if not, it is likely to indicate an alief. In keeping with the contextual analysis, neither the pro-judgment nor the contradictory belief analysis will thus have universal application. And with both judgment-based *and* action-based criteria now each sufficing for the ascription of belief, the disjunctive view of belief ascription—on which rests the contextual analysis—is finally vindicated. The second matter of significance is that arriving at such a strategy has also, en route, yielded grounds for justifying alief as an independent cognitive category. The "complex stereotyped patterns of response" Damasio alludes to, while cognitively integrating with belief in the execution of action, will not themselves be reduced (for instance) to a type of stubborn belief. For their defining function will always be to speed up reaction-time rather than track accuracy.

Here is the strategy.

Step one: Describe the discordancy case in terms of its conflicting 'P' and 'not-P' strains. What is P? What is not-P? Step two: Ask whether either of the tendencies towards P and not-P fit the judgment-based criteria for belief. Applying the judgment-based criteria—let us suppose they favour P—should be relatively straightforward. But how do we tell whether the not-P-ish tendencies are due primarily to alief or belief? This brings us to step three. Ask the counterfactual question: Reflective behavior aside, if S were, on action-based criteria, to believe not-P, how would S be typically disposed to act and feel, given her prevailing desires? If the description of the not-P-ish tendencies matches the answer to this question, then the tendencies are likely due to a belief that not-P. If the description of the not-P-ish tendencies does *not* match the answer to this question, but rather fits that of modulating an integrated (judgment-based and action-based) belief that P with a not-P-ish cast, then the tendencies are likely due to alief.

6 Application and concluding defence of the contextual analysis

I conclude my defence of the contextual analysis by applying the strategy to a range of commonly cited discordancy cases.

6.1 The hesitant Skywalker (movie-goer, elderly priming…)

Let P be *the Skywalk is safe* and not-P be *the Skywalk is dangerous*. Sally clearly believes, on judgment-based grounds, that the structure is safe. But is she hampered by

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[26] By this, I don't suggest that alief is not present in all the discordances—it may well be.

opposing aliefs or beliefs? Supposing her prevailing desire is to be safe, it is clear that she is *not* behaving and feeling as she would typically behave and feel if she really believed, on action-based criteria, that she were in danger. If she really believed that stepping on the structure would put her in danger, the action-based criteria would predict a far more cautious reaction. If someone were to place her on the structure, her experience would be far more potent than that of butterflies, sweaty palms and a big 'I did it!' grin. She would feel terrified, and do her best to get off; no companies would indeed make a living from such a device. Her unendorsed response to the Skywalk is hence much better explained as an alief modulating her guiding belief with not-P-ish tendencies; the pro-judgment analysis works best here. This analysis also works best for the example of the moviegoer who startles at the shark coming towards him (if he were really afraid for his safety he would not stay put, gripping the seat, but would flee).[27] It also works for subjects in Rozin's experiments who, after being primed with words to do with the elderly, walk more slowly to the elevator (Gendler 2008a, pp. 658–659). Their behaviour and emotions, while largely aligned with a ready disposition to reflectively endorse their non-elderly status, betray a greyish tinge.

6.2 The phobic (conflicted determinist…)

Let P and not-P be as in the Skywalk example above. Height-phobic Fiona believes, by judgment-based criteria, that the Skywalk is safe. Aside from behaviors around her intellectual conviction, it seems clear that Fiona is behaving and feeling exactly as she would if the structure were terribly unsafe. Unlike in the case of Sally, she feels her life is at risk if she stays on the structure. So Fiona both believes that the Skywalk is safe and believes it unsafe. The contradictory belief analysis applies best here.[28] This analysis also applies to the case of a committed determinist who agonises over his decisions. His agony lies in the feeling that the decision originates from him: he feels and behaves as if determinism were false. This concords well with what Peter Van Inwagen has written on the subject:

> ...to reject [libertarian] free will [as the determinist does] is to condemn oneself to a life of perpetual logical inconsistency. Anyone who rejects free will adopts a general theory about human beings that he contradicts with every deliberate word and act [1983, p. 160].

6.3 The racist

Suppose that someone is sincere in her anti-racist convictions, such that she believes, on judgment-based criteria, that P, where P is (say) 'all races are of equal intellectual

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[27] What about cases where one really dislikes the feelings of fear and exits the Skywalk or movie-theatre? Would such emotion and behavior be caused by a belief that the structure is unsafe or that one is in danger from the shark? Not necessarily. The emotions (and accompanying thought-patterns), even if unpleasant, may not be as they typically would be if one really believed oneself to be in danger.

[28] I agree with Gertler (2011, pp. 139–141) (and against Schwitzgebel, 2010a, p. 544), that there is no especial problem with a person having dispositional beliefs that contradict each other. Further defence of this must however be deferred to another occasion.

ability'. Reflective behaviour aside, how would she be disposed to act and feel if she were to believe the opposite to be the case? Exactly in the manner of Schwitzgebel's racist professor 'Juliet'(2010a, p. 532). Despite her anti-racist proclamations, Juliet paints the picture of a text-book racist, automatically regarding the contribution of black students with greater scepticism, consistently finding herself more surprised when a black student asks a smart question (in spite of contrary evidence), and so forth. Described this way, Juliet has contradictory beliefs with regard to her attitudes towards race. But racist responses don't always merit a contradictory belief analysis. It may indeed be more common to suppose that a person's overall behaviour and emotions are overtly in keeping with their conscious stance against racism, with psychological tests revealing what Gendler refers to as "*unconscious* or *quasi-conscious* stereotypical responses" (2008b, p. 575). For example, when American white subjects are primed with images of black faces, they "tend to be faster to identify an ambiguous image as a gun" (2008b, p. 574).[29] I think that these cases are better described as racist aliefs modulating an integrated non-racist belief: the pro-judgment analysis applies here.

6.4 Errant lightswitcher (and other absent-minded cases)

Let P *be the light-bulb is broken*; not-P be *the light-bulb is not broken*. Assume that Ben believes P on judgment-based grounds. What about his errant behaviour? If he really believed the bulb to not be broken, and had a prevailing desire for light, how would he be disposed to behave? In proximity of the light-switch, he would of course flip the switch—which is exactly what Ben does. So on the face it, Ben both believes that the bulb has broken and that it has not broken. But I do not think that this is quite the right analysis. For one thing, the not-P-ish behaviour is very short-lived—he is disposed to alter his behaviour-arc from the moment he realises his mistake. If he were to consciously attend to the inference 'the bulb has blown, so that switch won't work' he would not be inclined to press the switch. And if someone were to hand Ben a new bulb, he would be disposed to set about fixing the broken light (he may have indeed flipped the switch on the way to fixing it).

So while the contrary not-P-ish behaviour is consistent with an action-based analysis of someone who believes the bulb to be unbroken, it is not coming from a robust enough disposition to count as a (contradictory) belief. (Compare this to the phobic, inveterate racist or free-willed determinist, whose judgment-based reflections barely dent the manifestation of their contrary dispositions). Yet Ben's errant behaviour is still due to more than just an alief; it is more than a partial activation of the motor responses. During the lapse of attention, part of the older, animal belief-system brings the action to fruition—part of the same mechanisms that, in concordant situations, take the alief seriously by generating an automatic, unreflective belief that the light is working. Hence I think that the pro-judgment analysis applies here, where instead of the discordant behaviour being explained by just an alief, it is explained by an in-between belief. A variant of this analysis would apply to all such cases of absentmindedness, such as someone who routinely 'forgets' the new location of the trashcan, the person who sets their watch five minute fast, etc.

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[29] Gendler discusses racist alief at length in 2008b, pp. 574–578.

6.5 Frog snapping at bee-bee

The frog is incapable of sustaining a judgment-based belief that not-P: that food is not present. The frog is moreover behaving and feeling exactly as it would if P—there is food present—so it has an action-based belief that food is present. To call the associated belief-concordant alief *norm*-discordant (as Gendler does) would be misleading, as the alief is not in any way defective; it is doing exactly what it is supposed to do—quickly associate the look of small, dark, fast-moving objects with positive affect and snapping behaviour. It is the job of the belief-system to seek accuracy, and in this case the belief is misrepresenting its target as food. It is just as if a drunkard were to mistake a lamppost for a person. His persistent calling out to the post is caused by an error of judgment, a false belief, rather than a norm-discordant alief. With no discordances present, none of the analyses apply.

6.6 Puppy batting at mirror

Assuming the lack of any (true) judgment-based belief, does the puppy believe, like the frog with the bee-bee, that there is another dog present? That depends. If it acts and feels exactly as it would in the presence of another dog, then yes, it believes another dog is present. But I think it quite likely that the puppy does not display the full range of typical emotions and behaviours because it lacks some vital cues, such as smell. This case may then resemble that of the errant light-switcher. The stimulus (via the alief) activates part of the belief-system that, in normal circumstances, would contribute to a concordant action-guiding belief. But lacking the full set of cues, not all the relevant parts of the belief-system are triggered, so it is an in-between belief—although with no discordances present, the in-between *analysis* does not apply. None of the analyses apply.

7 Conclusion

Different discordancy cases can merit different treatment. In defending a contextual approach to belief ascription, I have focused on examples that analyse the discordant strands as aliefs, in-between beliefs, or beliefs, which in turn justify pro-judgment or contradictory belief analyses. This by no means covers the field. I have not discussed applications of the anti-judgment or shifting belief, or in-between views. I speculate that an in-between analysis may fit some cases of clinical delusion where normal dispositions around belief break down on both sides. Anti-judgment analyses may capture some cases of self-deception where the judging arises from a defective judgment-based disposition—making it an in-between belief—while the unendorsed behaviour and affect nevertheless fit action-based criteria. Short of (perhaps) radical personality disorders, scenarios fitting the shifting belief analysis are probably the least common to be realised. Regardless of how these latter cases turn out, it is hoped that the main goal of this paper has succeeded: to show that when it comes to analysing discordancy cases, one size does not fit all.

Taking a contextual approach seriously has major implications for understanding the ascription of belief in a far more nuanced way.

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