

Scepticism and contrast classes

ALEXANDER BIRD

1. Contextualism seeks to acknowledge the power of sceptical arguments while permitting to be true at least some of the assertions of knowledge and justification we commonly make. It seems to me now just as if I am in an office in Edinburgh. According to the sceptic the claim that I am in fact in an office in Edinburgh is unjustified, since there is no reason I can give for this belief that is not also consistent with (or undermined by) the alternative hypothesis that I am in fact on a beach in Hawaii being deceived by an evil demon into thinking that I am in an office in Edinburgh. Yet if I were

to phone a friend with the intention of meeting for lunch and she were to ask me where I now am, it would, we must also admit, be ridiculous to suggest that I was not justified in saying that I am in my office in Edinburgh. We can remain entitled to say that someone's everyday beliefs are justified, says the contextualist, without denying scepticism, since what is required for justification can vary from context to context. In particular it varies from *philosophical* contexts, where sceptical scenarios are relevant, to *everyday* contexts, where they are not. There are different ways of elaborating the contextualist picture. Some ways forge a direct connection between epistemic concepts and contexts. According to David Lewis it is the concept of knowledge that itself determines whether the context is a philosophical or an everyday one, i.e. whether sceptical scenarios are relevant (Lewis 1996/1999). In other versions of contextualism the link is indirect. In Walter Sinnott-Armstrong's account, contexts determine *contrast classes* of relevant propositions (Sinnott-Armstrong 1996). Epistemic concepts get to work on the contrast classes. The vexed question of which set of propositions a context determines or which sort of context a subject is in are independent of those concepts, and so their link to context is correspondingly indirect.

The direct approach has this disadvantage compared with the indirect approach, that it must regard our epistemic concepts as implausibly complex. In order to say how the concept of knowledge fixes which possibilities are relevant in a subject's context, Lewis has to add a variety of bells and whistles that make, in effect, for an analysis of the concept of knowledge that has multiple clauses and conditions. In which case one is inclined to ask, why do we regard *this* concept as so important, as opposed to a similar one with a slightly different arrangement of bells and whistles? The indirect approach can exclude this complexity from epistemic concepts, relegating such questions to some other, perhaps pragmatic, investigation. In this paper I shall argue that the indirect approach also has problems, which become apparent when we consider inferences among our beliefs. I shall take Sinnott-Armstrong's use of contrast-classes as the paradigm of this approach. According to Sinnott-Armstrong everyday justification is justification (*simpliciter*) relative to a contrast class of propositions sufficiently limited that often such justification is available. But for philosophical justification a much larger class is mandatory, one that includes sceptical scenarios and so is much less readily, perhaps never, achieved.

I will employ two parallel arguments to show that philosophical and everyday justification cannot be kept distinct. The first, longer argument operates primarily in terms of the concept of justification, while the second is probabilistic. This is rather quicker than the 'justification' argument and

does not rely on the same assumptions. It leads to a slightly weaker conclusion, that, given the possibility of everyday justification, the probability calculus rationally requires us to ascribe a higher context-independent probability to 'good' situations than to sceptical scenarios.

2. Let ' $J(pRq)$ ' signify 'S is justified in believing p rather than q ' (the contrast class for the (justified) belief p is then the set of propositions $\{p, q\}$). Let

a = S is in an office in Edinburgh;

b = S is on a beach in Hawaii;

c = S is on a beach in Hawaii and S is being deceived into believing that S is in an office in Edinburgh.

Imagine that everything appears to S as if S is in an office in Edinburgh. In order to respect the sceptic, we must say that S does not have philosophical justification:

(I) not ($J(aRc)$)

while at the same time, in order to allow for everyday justification, it is true that

(II) $J(aRb)$

3. In this section I introduce and motivate the two principles that will be used in the justification argument:

(Prob) if S knows x to be more probable than y then S is justified in believing x rather than y .

(Trans) if $J(pRq)$ and $J(qRt)$ then $J(pRt)$

The idea of (Trans) is simply that justified preference is transitive: if S is justified in believing p rather than q and q rather than t , then S is justified in believing p rather than t .

The idea of (Prob) is this. In ordinary terms we are more justified in believing what is more probable, if this probabilistic relation is known to us. The first case I shall consider is that where y entails x but not vice versa, for instance where $y = x \ \& \ z$ and both x and z are propositions whose probabilities are neither 1 nor 0, and x does not entail z . In such a case it is a priori that x is more probable than y . And so S, who knows this, is more justified in believing x than y . 'Being more justified in believing x than y ' does not ordinarily entail 'being justified in believing x ', because the contrast class for the latter may include propositions which are much more likely than both x and y . So if John has one ticket in a fair million-ticket lottery and Jane has two, I am not justified in believing that Jane will win. For I will ordinarily have in the contrast class propositions such as

‘someone else wins’. But if we limit the contrast class to x and y , so that the only other proposition S has to consider as an alternative to x is y , then S is justified in believing x rather than y . In the lottery case, if one has to bet on one or other of ‘John will win’ and ‘Jane will win’, then one should bet on the latter.

That Sinnott-Armstrong thinks that this is the right way of understanding contrast classes is shown by his drawing a close analogy with conditional probability:

consider an office betting pool where each worker picks one out of the ten horses in a race. Four horses have already been chosen, and the remaining six include a horse named Playboy. Playboy is better in the mud than the five other remaining horses, and rain is forecast for race day. This evidence can make one justified in believing the conditional that Playboy will win if any of the remaining six horses wins. Nonetheless, if one knows nothing about the four previously chosen horses, or if one knows that one of them is an even better mudder than Playboy, then one is not evidentially justified in believing that Playboy will win out of all ten horses. (1996: 24. See also 45–6, fn. 52.)

4. In this section and the next I prove that, given (Prob) and (Trans), (I) and (II) are inconsistent. This section presents the core of my argument.

The proposition c (S is on a beach in Hawaii and S is being deceived into believing that S is in an office in Edinburgh) entails b (S is on a beach in Hawaii) but b does not entail c . Every situation in which c is true is one in which b is true, while there are circumstances in which b is true but not c . Thus, in the absence of any relevant evidence, we must attach a higher probability to b than to c . However, we do have some evidence, the evidence of how things appear to S (viz. that S is in Edinburgh). This evidence does rule out some of the situations in which b is true but not c (e.g. the situations where I am in Hawaii with my senses functioning reliably). But note that there is more than one sceptical scenario that allows S to have the experiences S has (hallucination and dreaming are standard examples). Hence these scenarios will constitute contingent situations in which b is true but not c . And so, even on the evidence, b has a higher probability than c , assuming that they both have non-zero probabilities. On the further assumption that S is familiar with the probability calculus, S knows b is more likely than c . Thus the antecedent of (Prob) is satisfied for b and c , yielding by modus ponens:

(III) $J(bRc)$

And applying (Trans) to (II) and (III) gives:

(IV) $J(aRc)$

(IV) and (I) contradict one another. Our assumptions were (I), (II), (Prob), and (Trans). Thus, given (Prob) and (Trans), Sinnott-Armstrong must drop either (I) or (II). (I) states that philosophical justification is not to be had, while (II) states that everyday justification is available. It seems then that Sinnott-Armstrong's attempt to reconcile everyday justification with the power of scepticism leads to contradiction.

5. Sinnott-Armstrong has an immediate reply to the argument just presented. Not just any set of propositions can constitute a contrast class – the account requires their members to be contraries. Propositions are being contrasted only with propositions with which they are logically incompatible. That is, the following must be satisfied:

(Cont) if $J(bRc)$, b and c must be contraries.

In the case of the last section (Cont) is not satisfied, since b and c are consistent. The argument of this section rectifies this by transforming that case into one which satisfies (Cont). Consider x and y where $y = x \ \& \ z$. Now consider y^* and $x\uparrow$ defined thus: $y^* = y \ \& \ h$ and $x\uparrow = x \ \& \ t$, where h and t are known to be equiprobable and inconsistent. For instance, h = the next toss of this coin will yield heads, and t = the next toss of this coin will yield tails. If x does not entail z and the probabilities of x and z on our evidence are known to be non-zero, then y^* is knowably less probable than $x\uparrow$, and y^* and $x\uparrow$ are inconsistent.

In the new, rectified case a coin is tossed. Let this be independent of the sceptical hypothesis (that S is being deceived). Using the same abbreviations: h = the coin will land heads uppermost; t = the coin will land tails uppermost; a = S is in an office in Edinburgh; b = S is on a beach in Hawaii; c = S is on a beach in Hawaii and S is being deceived into believing that S is in an office in Edinburgh; $a^* = a \ \& \ h$; $b\uparrow = b \ \& \ t$; $c^* = c \ \& \ h$, we have that (II) entails:

(V) $J(a^*Rb\uparrow)$ (S is justified in believing that S is in an office in Edinburgh and that the coin will land heads rather than that S is on a beach in Hawaii and that the coin will land tails.)

Since b is more probable than c and h and t are equiprobable and these facts can be known to S , S can know that $b\uparrow$ is more probable than c^* . So by (Prob):

(VI) $J(b\uparrow Rc^*)$ (S is justified in believing that S is on a beach in Hawaii and that the coin will land tails, rather than that S is on a beach in Hawaii, being deceived into believing that S is in an office in Edinburgh, and the coin will land heads.)

Since b^\dagger and c^* are contraries, (Cont) is not violated. By (Trans) we have

$$(VII) J(a^*Rc^*)$$

which is equivalent to

$$(VIII) J(a\&bRc\&b)$$

This, like (IV), violates claim (I) of moderate scepticism, that we respect the sceptic's argument. Where b is independent of a and c , its conjunction to those propositions makes no difference to their relative justification. We should accept an instance of the following principle:

(Redund) for any x, y, z where z is independent of x and y , if $J(x\&zRy\&z)$ then $J(xRy)$

((Redund) is the analogue of the principle for conditional probabilities that for any x, y, z if z is independent of x and y and $P([x \& z] \mid [[x \& z] \vee [y \& z]]) > P([y \& z] \mid [[x \& z] \vee [y \& z]])$ then $P(x \mid [x \vee y]) > P(y \mid [x \vee y])$, which is straightforwardly provable.)

From (Redund) and (VIII), (IV) immediately follows and we are back where we were at the end of the previous section, with either both everyday justification and philosophical justification being available, or neither.

6. (Cont) supplied one condition on allowable contrast classes. In this section I shall consider whether Sinnott-Armstrong's position might supply further conditions that would restrict contrast classes so as to invalidate my argument. As we saw in §1 Sinnott-Armstrong's view is a version of contextualism. The pressing concern is that the artificial device employed to satisfy (Cont) has required us to consider a supposed contrast class – $\{b^\dagger, c^*\} = \{S \text{ is on a beach in Hawaii and the coin will land tails; } S \text{ is on a beach in Hawaii being deceived by a demon etc., and the coin will land heads}\}$ – that looks as if it could not be generated by any plausible context. Contexts must have a kind of social reality.

To this defence I have two responses. The first asks where the burden of proof lies. For my case there needs to exist just one context that generates the class $\{b^\dagger, c^*\}$; correspondingly Sinnott-Armstrong needs to rule out the possibility of any such context. Furthermore, this contrived class was devised in order to make contraries out of the members of the less contrived class $\{S \text{ is on a beach in Hawaii; } S \text{ is on a beach in Hawaii being deceived by a demon etc.}\}$ so that the first of the contraries is a priori more probable than the second. Perhaps there are less contrived ways of doing this for which reasonably natural contexts can be found. It is difficult to say – because his account is indirect Sinnott-Armstrong does not need to say

much about how contexts determine which contrast classes are relevant (1996: 23). I suggest that it will be difficult to come up with an account of contexts and contrast classes that rules out the sort of class I have used.

The second response raises a broader and more difficult problem for this reply to my argument, and seems to cut through the matter of contexts. Syntactically the sentences ‘ $J(b \uparrow R c^*)$ ’ and its informal English counterpart are well-formed, expressing propositions. If we assume classical logic the propositions are either true or false. For my argument they need to be true; to deny my argument one must hold that they are false. For all the reasons given, it is at best deeply counter-intuitive that the sentence, ‘S is justified in believing that S is on a beach in Hawaii and that the coin will land tails, rather than that S is on a beach in Hawaii, is being deceived into believing that S is in an office in Edinburgh, and the coin will land heads’ is false. So we should accept that it is true. What has happened to our belief that contrast classes should be generated by contexts? Contrast classes are just that – classes of propositions, and so abstract entities. They are not brought into existence by contexts. Rather, the context tells us which contrast class is to be deemed relevant when someone uses ‘justified’ in a categorical manner, as in ‘S is justified in believing that p ’. This is the significance of the contrast-class account being an indirect version of contextualism. Indeed the need for contexts drops out once we specify the contrast class by talking of relative justification: ‘S is justified in believing p rather than q , r , or s ’. How might Sinnott-Armstrong evade my response? First, he could just bite the bullet and say that ‘ $J(b \uparrow R c^*)$ ’ is false, despite one’s intuitions, precisely because $\{b \uparrow, c^*\}$ is an unrealistic contrast class. But I think we could reasonably ask for more explanation. In cases where the contrasted propositions are unnatural but verifiable we could easily make a book, taking bets on the propositions. So one could justifiably believe one such proposition to be more likely than another. Why then would it not be possible to be justified in believing one rather than the other? Secondly, he might deny that ‘S is justified in believing p rather than q , r , or s ’ expresses a proposition unless $\{p, q, r, s\}$ is such a contrast class as would be relevant in some possible context. This introduces a consideration usually regarded as foreign to syntax. Thirdly, if that sentence expresses a proposition, then Sinnott-Armstrong might deny that the law of the excluded middle applies here. Justification is indeterminate in such cases. None of these replies is unprecedented, but they do entail significant consequences that go beyond the scope of this discussion. Lastly, of course, he might abandon the indirect version of contextualism. Thus justification would *not* be considered as relative to contrast classes but rather to the contexts themselves, although the contrast classes might still have a role to play in determining the truth-conditions of epistemic statements.

7. Perhaps (Prob) can be doubted. One line of thought is that the probabilities of b and c are so low as for (Prob) not to apply. But this should make no difference. Beliefs can have probabilistic justification: if S knows that N has 99.9% of the lottery tickets then S can be justified in believing that N will win. Now imagine that out of 1 million tickets M has 999 tickets and P has one ticket. Let $m = M$ will win the lottery, and $p = P$ will win the lottery. If one is willing to allow the former probabilistic justification (concerning N), one should be willing to allow that one can be justified in believing that M will win as opposed to P : i.e. $J(mRp)$. Indeed, this should be the case however many lottery tickets have been sold. The reason for this is that possibilities outside the contrast class are simply not to be considered. It is as if we have been told they are false – as remarked above, Sinnott-Armstrong allows that we may conditionalize our beliefs on the falsehood of propositions excluded from the contrast class. In the context of moral scepticism, Sinnott-Armstrong says:

My claim is ... that S is everyday justified in believing p if and only if S is philosophically justified in believing the conditional: if nihilism and other extreme positions are false, then p . (1996: 45–6, fn. 52)

So in considering the belief that M will win as opposed to P we can ignore the possibility of anyone else winning, in which case it does not matter how many other tickets have been sold. In the lottery with a million tickets, M 's chances of winning are just under one in a thousand and P 's are one in a million. And if the size of the lottery may be increased indefinitely these chances may be decreased as low as one likes; so long as they remain in the ratio 999:1, it will remain the case that $J(mRp)$.

Consider the proposition c , that S is on a beach in Hawaii and S is being deceived into thinking that S is in an office in Edinburgh. (Remember that it appears to S that S is in Edinburgh.) Assume, as scepticism must, that its probability is non-zero. Let it be e . By enlarging the lottery we can reduce the probability that M (among all the possessors of tickets) will win the lottery to well below e and still retain $J(mRp)$. Why we should be willing to admit $J(mRp)$ on probabilistic grounds but not $J(bRc)$ even though the probability of m is less than that of b ? It is irrelevant that we cannot put a figure on e . In any case, it seems very odd to say the least, to argue that to defend the sceptic, one must suggest that the probability of his demon hypothesis is too low to be conceivable.

8. Sinnott-Armstrong does not provide us with sufficient information about the nature of contrast classes to allow the construction of a proof of (Trans). Nonetheless, there are reasons for thinking that a full account that permits (Trans) to be false would be unsatisfactory. First, simple examples elicit our intuitions in favour of (Trans). For example, consider a race

between three horses, Pegasus, Achilles, and Tortoise. Background information tells me that, if either Pegasus or Achilles wins, then Pegasus will be the winner, and similarly that, if Pegasus does not win, then Achilles will win, beating Tortoise; i.e. $J(\langle \text{Pegasus will win} \rangle R \langle \text{Achilles will win} \rangle)$, $J(\langle \text{Achilles will win} \rangle R \langle \text{Tortoise will win} \rangle)$. Now imagine that one has the information that Achilles will not win. In such a situation, one has on the basis of these antecedent justified preferences justification for preferring Pegasus to Tortoise, i.e. $J(\langle \text{Pegasus will win} \rangle R \langle \text{Tortoise will win} \rangle)$. Secondly, the analogy with conditional probabilities supports (Trans). The analogue is: if $P(x \mid [x \vee y]) > P(y \mid [x \vee y])$ and $P(y \mid [y \vee z]) > P(z \mid [y \vee z])$, then $P(x \mid [x \vee z]) > P(z \mid [x \vee z])$, which is straightforwardly provable. ($P(x \mid [x \vee y]) > P(y \mid [x \vee y])$ is equivalent to: $(P(x \ \& \ [x \vee y])/P(x \vee y)) > (P(y \ \& \ [x \vee y])/P(x \vee y))$ and so to: $P(x) > P(y)$). Hence the analogue of (Trans) is equivalent to $P(x) > P(y) \ \& \ P(y) > P(z) \Rightarrow P(x) > P(z)$.)

9. In this section I present the probabilistic argument. We may do without (Prob) and (Trans) and maintain the argument purely at the level of probabilities. If S believes p rather than q , then S must rationally attach a higher probability to p than to q . In the context of contrast classes, if S believes that p rather than q where p and q exhaust the relevant contrast class, then the conditional probability S attaches to p , given p or q , must be greater than the probability attached to q , given p or q . That is,

(Bel) If $J(pRq)$ then the probabilities S rationally assigns on the basis of the evidence must be such that $P(p \mid [p \vee q]) > P(q \mid [p \vee q])$.

Applying (Bel) to (V) gives us:

(IX) $P(a^* \mid [a^* \vee b^\dagger]) > P(b^\dagger \mid [a^* \vee b^\dagger])$

while the facts that b entails c and that h and t are independent of b and c yield:

(X) $P(b^\dagger \mid [b^\dagger \vee c^*]) > P(c^* \mid [b^\dagger \vee c^*])$

(IX) is equivalent to:

(XI) $P(a^*)/P(a^* \vee b^\dagger) > P(b^\dagger)/P(a^* \vee b^\dagger)$

and likewise (X) is equivalent to:

(XII) $P(b^\dagger)/P(b^\dagger \vee c^*) > P(c^*)/P(b^\dagger \vee c^*)$

From (XI) and (XII) it follows immediately that:

(XIII) $P(a^*) > P(c^*)$

and so:

(XIV) $P(a) > P(c)$

Hence, even without (Prob) and (Trans) we can show that the concession to ‘everyday’ justification rationally requires us to attach higher probabilities to the ‘good’ situation (i.e. where things are as they appear to be) than to individual ‘bad’ situations (i.e. sceptical scenarios). (In effect, the move from (IX) and (X) to (XIII) is equivalent to an application of the analogue of (Trans).) While this does not directly contradict the sceptical element (I) of the moderate sceptic position, it certainly puts it under pressure, if we are rationally required to regard sceptical scenarios as less likely. Sceptical arguments (such as Hume’s) are generally thought to undermine even probabilistically expressed epistemic preferences for the good over the bad.

10. (Prob) and (Trans) together with (Redund) ensure that (I) and (II) cannot both be true. So either there is no ‘everyday’ justification: (II) is false. Or (I) is false, in which case strong scepticism is fully refuted and ‘everyday’ justification and ‘philosophical’ justification are equivalent. Either way, contrast classes do not allow us to reconcile the strength of scepticism with the possibility of the justification of ordinary beliefs. I have explained why I think (Prob) and (Trans) are true. Nonetheless, we may use (Bel) to turn ‘everyday’ justification into a rational assignment of conditional probabilities. The probability calculus straightforwardly tells us that we should assign a higher probability to those beliefs that are ‘everyday’ justified than to sceptical scenarios. One cannot have one’s cake and eat it. The most promising line of response demands restriction of permissible contrast classes in a way that relates to genuinely possible contexts. Perhaps such a restriction would provably rule out the sort of case I have in mind, but that seems optimistic. Anyway, going down this road incurs costs: either Sinnott-Armstrong must explain why the lack of a realistic contrast class makes certain sentences of the form ‘S is justified in believing p rather than q ’ false, even though it is rationally possible to bet on p against q ; or he must provide us with an unusually complicated syntax for such sentences, one depending on the availability of a realistic context for the contrast class $\{p, q\}$, and which shows that such sentences do not express propositions; or he must give up classical logic. Ultimately he may be forced to retreat to direct rather than indirect contextualism.¹

*The University of Edinburgh
Edinburgh EH8 9JX, UK
alexander.bird@ed.ac.uk*

¹ I am grateful to Walter Sinnott-Armstrong and Timothy Williamson for helpful discussion.

References

- Lewis, D. 1996. Elusive knowledge. *Australasian Journal of Philosophy* 74. Reprinted in his *Papers in Metaphysics and Epistemology*, 1999, 418–45. Cambridge: Cambridge University Press.
- Sinnott-Armstrong, W. 1996. Moral scepticism and justification. In *Moral Knowledge?* ed. W. Sinnott-Armstrong and M. Timmons, 3–48. Oxford: Oxford University Press.