

When to Defer to Majority Testimony — and When Not¹

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The question illustrated

How sensitive should you be to the testimony of others? You saw the car that caused an accident going through traffic lights on the red; or so you thought. Should you revise your belief on discovering that the majority of bystanders, equally well-equipped, equally well-positioned and equally impartial, reported that it went through on the green?

Or take another case. You believe that intelligent design is the best explanation for the order of the living universe. Should you revise that belief on finding that most other people, or at least most who by your own lights are as intelligent, informed and impartial as yourself, believe that evolutionary theory offers the better account? Should you do this, in

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particular, if your own personal sense of where the evidence points — like your own vivid memory of the car going through on the red — remains firmly on the side of intelligent design?

Assume, to take a third case, that there is a matter of fact about whether abortion is right or wrong. You believe that it is wrong, having a firm picture of it as an act on a par with murder. Should you revise that belief on discovering that among those whom you regard as equally intelligent, informed and impartial, most believe that abortion is not wrong, or at least not wrong in the way that murder is wrong? Should you do this, in particular, if your own personal sense of abortion remains unchanged; it still seems to you to be a grievous wrong? Should you put aside your own sense of things as mistaken, in the way you might put aside your imagined memory of the car going through on the red, and decide to go along with the majority view?

The question regimented

The issue arising in each of these cases bears on the weight that ought to be given to testimonial against personal evidence. In all of the cases, so I shall take it, the following assumptions apply.

- You are one amongst many people who face a certain question;
- you are all equally intelligent, equally informed and equally impartial;
- you have each formed an answer to the question without deference to others;
- you, however, differ from most others in the answer you give;
- and

- you are aware that those things are true.

The issue is whether, under such assumptions, the bare testimonial evidence that you are wrong about the question on hand — the evidence that consists solely in the fact that a majority of others think otherwise — should affect what you currently believe on the basis of your own personal evidence. Should it trigger you into believing that not-p where you previously believed that p, or that p where you previously believed that not-p?

The assumptions mean that the issue to be discussed is not as general as it might be. It supposes that you are in conflict with a majority of others, not necessarily in conflict with all others, nor at variance with just one other, nor caught in a 50-50 divide. It presumes that you and others each form your views independently, adopting your own take on any common evidence. And it requires you to make a judgment between different categorical answers to the question raised; while the question raised might concern a probability — say, whether something is more likely than not — you are not allowed just to form a subjective degree of probability, or to suspend belief in response to the question, as other assumptions might allow you do (Elga 2006). But the fact that the issue is conditioned in this way does not make it too special. The question remains intriguing in its own right and it can serve to exemplify the more general question of whether it is rational to be sensitive to the bare fact of disagreement with others (Rosen 2001; Christensen 2004; Kelly 2005)

The intuitive response

The intuitive response to a case like that involving the car is that here the testimony of others should lead you to revise your belief. If almost

everyone else in a fairly large group says that the car went through on the green, you should discount your personal memory altogether and plump for the view that it did go through on the green. After all, it is possible that you were deceived by some play of light or failure of visual adjustment; and that looks more likely than that you were the only one to see things right.

This line can be defended by reference to Condorcet's jury theorem (Estlund 1994; List and Pettit 2004). Let us suppose that in the case imagined each of you in the relevant group has the same independent, greater than evens chance of being right: the same chance of tracking the facts and saying 'green' if the light was green, 'red' if it was red. In such a scenario, according to the classic version of the theorem, a majority will have a still greater chance of being right and the chance of the majority being right will approach 1, as the size of the group increases. Thus it is rational for you to defer to those others, assuming that you want your personal belief to have a higher rather than a lower chance of tracking the facts.

The Condorcet jury theorem should not be surprising. The scenario described is parallel to one where there are a number of independent, biased coins, each with a better than evens chance of coming up heads. The chance of a majority of the coins coming up heads will be greater than the chance of an individual coin coming up heads, and this chance will approach 1 as the number of coins tossed increases. All that the jury theorem does is to spell out the parallel lesson for the judgmental case. The chance of your getting the answer right corresponds to the chance of an arbitrary coin coming up heads and the logic behind the theorem corresponds to the reasoning that is more familiar in the case of the coins.

But though we may intuitively think that it would be right to defer to a majority of others in the case of the accident, the parallel lesson is not intuitive in cases like the other two; and this, notwithstanding the fact that the jury theorem may continue to apply. It would be objectionably self-abasing to revise your belief on matters like intelligent design or the wrongness of abortion just in virtue of finding that others whom you respect take a different view. Or so most of us think. To migrate towards the views of others, even under the sorts of assumptions given, would seem to be an abdication of epistemic responsibility: a failure to take seriously the evidence as it presents itself to your own mind. When you adjust in the accident case, you put aside the remembered image, however firm, as of the car going through on the red. But while that seems to be unobjectionable — we do it whenever we decide that our perceptual takings are mistaken — the counterpart move in the other cases would, by intuitive lights, reveal an inappropriate degree of epistemic timidity, even servility.

An argument for the intuitive response

Can we justify this asymmetrical attitude to testimonial deference? I believe we can. The difference between the first case and the other two is that the belief under pressure in that case is not deeply embedded in your Quinean web of belief, whereas the beliefs in the other cases are. You can come to think that the car went through on the green without revising any of your other beliefs, except perhaps the belief, if you did indeed hold that belief, that there was nothing unusual about the way your eyesight was working on the occasion of the accident. This lack of embedding is a typical if not inevitable feature of perceptual beliefs. But you cannot come to think that intelligent design is false, or that abortion is not grievously

wrong, without a range of adjustments in other matters of belief; not, at least, if you are like the normal run of epistemic beings.

There is a good argument for thinking that with embedded beliefs like these it is inappropriate to defer to majority testimony in the way in which this may be appropriate with a non-embedded belief like that involving the car. I first spell out the argument in dot points. Then I comment on some of the individual steps. And finally I consider whether it is inappropriate in the same way to defer to supermajoritarian testimony.

Here in sketch outline is the argument.

- There are three salient strategies available to you if you revise an embedded belief on the simple basis of the testimony of a majority of others: that is, on the basis of forming no new belief other than the belief that that majority differs from you on the matter in question.
- The local revision strategy. Revise just the testimonially challenged belief and no other. Problem: this strategy will leave the revised belief disconnected from the rest of your beliefs; it will not cohere with others in the way the unrevised, embedded belief did so. The lesson is that if you revise on the basis of testimony, you should do so systematically, and this is what the other two strategies attempt.
- The global revision strategy. Take every belief that is testimonially challenged in the manner of the original belief by a majority of others in the group; revise each of those beliefs on a pure testimonial basis; and then allow the revisions to contribute equally to the minimal revision required in other beliefs.

Problem: this strategy will expose you to the possibility of having to embrace an inconsistent set of beliefs.

- The local-to-global revision strategy. Revise the belief that was testimonially challenged in the first place — give it a privileged place — and then allow revision of that belief to dictate the minimal revisions required among connected beliefs until the coherence of your web of belief is restored. Problem: this strategy will expose you to a problem of path-dependence; you may be led to a different pattern of revision from the patterns to which you would have been led had you begun with other testimonially challenged beliefs.
- Conclusion. Since each of these strategies is problematic, there is reason to limit deference to majoritarian testimony in the case of embedded beliefs. The intuitive response stands.

Against local revision

Not much needs to be said about the problem with the first strategy of local revision. It is fairly clear what is unattractive about forming a new belief that does not cohere well with your other beliefs, standing in direct contradiction to them, or at least in rational tension with them. The new belief will be in tension with how you continue to take the world, given that this is going to be determined by connected, collateral beliefs; it will not just be in tension with a perceptual appearance that you can discount and insulate from your beliefs. Thus the new belief will induce a sort of double vision, representing things to be a way that does not fit with how more generally they are taken to be.

Against global revision

The problem that bedevils global revision derives from the unsurprising but rarely noted fact that in any group it is possible for a majority of individually consistent, sincere believers to support each of a number of inconsistent propositions. Generalizing a result in law and economics (Kornhauser and Sager 1993), I have elsewhere described this as a discursive dilemma (Pettit 2001b; 2001a). Take three people, A, B and C, and consider how the majority judgments might go on three simple propositions, p , q , and $p \& q$. A and B may support p , with C against; B and C may support q , with A against; and so, if they are individually rational, A and C will reject $p \& q$, with only B in favour. A majority will support p , a majority q , and a majority not- $p \& q$. A majority will support a semantically inconsistent set of propositions. And this will be so, despite the fact that each of the members of the group has a perfectly consistent set of beliefs.

It would be crazy to take your testimonial cue from the majority in a case like this. And the possibility that the case will be like this under any scenario where global revision is employed shows how ill-supported the strategy is (see List 2006 on the probability of its being like this). Being responsive to majoritarian testimony within any group of people, even a group you regard as suitably intelligent, informed and impartial, will be a hazardous policy. Majorities are not persons and, not being responsive to the demands of consistency and the like, they may make for rotten advisors. It may sometimes be rational to live with an inconsistency, insulating it from an impact on other beliefs, but it would be miraculous if all the cases where global revision would lead to inconsistency were like this.

Against local-to-global revision

Under the local-to-global strategy, you avoid this problem by letting the force of testimony impact only at one local point — only on the issue that happens to arise in the case on hand — and by revising in accordance with that single change; you let that locally generated revision propagate through your system of belief until coherence reigns. Imagine, for example, that the majority believes that p , that q and that $\text{not-}p\&q$, as in the case mentioned earlier; that you disagree with the majority in holding that $\text{not-}p$ and $\text{not-}q$, while agreeing that $\text{not-}p\&q$; and that the case on which you are testimonially challenged — the case that happens to be prioritized — is the issue of whether or not p , rather than the issue of whether or not q . You will be required by the strategy to revise your belief that $\text{not-}p$, and then to let that revision force any other revisions it requires. In fact no further revisions are required, so that you will believe that p , that $\text{not-}q$, and that $\text{not-}p\&q$.

This strategy will lead you to hold a pattern of beliefs on which you are in disagreement with the majority, not about whether p , but about whether q : the majority believes, inconsistently, that p , that q and that $\text{not-}p\&q$, and you will differ from them in holding by p , $\text{not-}q$, and $\text{not-}p\&q$. The problem that this reveals, however, is that if you had started by revising q rather than p , then you would have been led to a different pattern of beliefs: $\text{not-}p$, q , $\text{not-}p\&q$. The strategy will produce one pattern of revised beliefs if applied at one point and a different pattern of revised beliefs if applied at another. It is sensitive to the arbitrary matter of which path happens to lead you towards the task of belief revision (see List 2004 on path-dependence and inconsistency).

Global supermajoritarian deference

This argument shows fairly decisively, I think, that deferring to a majority, even under the assumptions given, is not going to be a sensible epistemic strategy with deeply embedded beliefs. I assumed that deferring to the majority may be alright as a policy with the perceptual belief in the car accident case but that is only because that particular perceptual belief is not deeply embedded. The lesson may not apply in that case but it will apply to any embedded beliefs, perceptual or not.

Are there more sensible testimonial strategies available? One candidate might be to discriminate amongst your beliefs between those for which you think the evidence is strong and those for which it is relatively weaker and to expose only the more weakly supported beliefs to majoritarian revision. But that is not guaranteed to work either. It may still be the case that the majority holds inconsistent views on any set of propositions that you expose to majoritarian challenge. And so there will be the same sort of problem in implementing any of the strategies rehearsed with respect to those propositions. There is another sort of approach that will do better, however. This is not to allow just any majoritarian challenge to reverse a belief but to allow only a certain sort of supermajoritarian challenge to do so. This would amount to a policy of global supermajoritarian revision.

In order to see why this approach need not involve the same problems as the majoritarian counterpart, imagine that you are prepared to defer only to a supermajority of 70%, and to every such supermajority. And suppose that, as before, you are confronted by a situation in which a majority of others hold that p , that q , and that $\text{not-}p \& q$, where you hold that $\text{not-}p$, $\text{not-}q$ and $\text{not-}p \& q$. Suppose in particular that 70% hold by p and that 70% hold by q , giving you a reason to defer to the group on those issues. Will such

supermajoritarian deference raise a problem? No, as it happens, it won't. You will be led to adopt the majority view that p, and the majority view that q, since each proposition commands the requisite supermajority of 70%. But you will also be allowed to revise your belief that not-p&q, thereby ensuring that your beliefs are consistent. You will not be forced, inconsistently, to hold by the majority view that not-p&q, since this will not be supported by a majority of 70%.

In order to see why not-p&q cannot have a majority of 70% in support, consider the following. If there is 70% support in the group for p and 70% support for q, then there has to be an overlap between the two majorities of at least 40% of the group. That 40% will be joined by one subgroup of 30% to support p, and by a disjoint subgroup of 40% to support q. But if the overlap involves 40% of the group, so that 40% will be disposed to judge that p&q, then the majority that supports not-p&q cannot be larger than 60%. Thus there will be no pressure on you to adopt that view and, as you would do under global revision, adopt an inconsistent belief-set.

This shows that supermajoritarian deference is less hazardous than majoritarian but it does not imply that supermajoritarian deference is absolutely free of hazard. For any number of issues there will be a supermajoritarian threshold beyond which the danger of inconsistency does not arise, as our example illustrates. But equally, for any number of issues, the danger of inconsistency will remain so long as the supermajority required falls below that threshold. Thus in the sort of example just given, there will be a problem if the supermajority required is 60% and if just 60% of the group believe that p, just 60% that q. You will have to revise your belief that not-p, accepting that p, and that not-q, accepting that q. What

about your belief that not-p&q? Here you will be forced to keep it, under deference to a supermajority of 60%. For given that just 60% vote for p, and just 60% for q, there will be support of 20% for p&q and support of 80% for not-p&q. Thus, under global supermajoritarian deference, you will be forced to keep your belief on that issue, and to embrace the inconsistent triad: p, q, not-p&q (on the general pattern here see List 2004).

Conclusion

The upshot is clear. With beliefs that are more or less deeply embedded in your credal web it would be hazardous to espouse a policy of testimonial deference to a majority, if not to a supermajority. The policy of majoritarian deference may work perfectly well with beliefs like the perceptual belief that the car went through on the red, which are relatively disconnected from the web of your collateral commitments. But it is not likely to work satisfactorily with beliefs like the belief in intelligent design or the belief in the wrongness of abortion. In such cases, whether you like it or not, you are on your own. You should not be prepared to shift your ground, just because a majority of those you regard as equally intelligent, informed and impartial take a different view. Shift your ground and you may find yourself with nowhere defensible to stand.

Appendix: a comment on supermajoritarian deference

This concludes the main argument of the paper but it may be worth commenting further, and with reference to some technical results, on the claim about the supermajoritarian case. Recent impossibility results on judgment-aggregation show, not just that taking a majority vote on each of a set of interconnected issues may lead to inconsistency, but that similar

trouble looms even if this policy is softened. Employing any voting procedure that treats members of a group equally, and that lets each issue be determined by member judgments, may generate an inconsistent set of judgments; and this, whether the procedure is majoritarian or not (List and Pettit 2002; Pauly and Van Hees forthcoming). And varying this approach by varying the procedure employed from issue to issue — employing a majoritarian procedure with some issues, for example, and other procedures with other issues — is no good either; it too can lead to inconsistency (Dietrich and List forthcoming). Shouldn't these results make trouble for the supermajoritarian policy of deference on a par with the trouble made for majoritarian?

No, they need not. When you go along with the majority vote on a set of interconnected issues, then in effect you let the group determine each of your judgments over those issues, where we can think of the group judgment as that which the majority supports; I abstract from the possibility of a group that is evenly divided. Where the majority supports a different view, you adopt theirs; and where the majority supports the same view, you stay put, which is equivalent to adopting theirs. Thus, adopting a policy of majoritarian deference is akin to letting the majority determine all of your views, or all of your views prior to whatever revisions you may seek in the name of restoring coherence. Since majority voting can generate an inconsistent set of output-judgments from consistent input-sets, therefore, it should be no surprise then that deference to a majority can have the same effect.

But things are different with supermajoritarian deference. The impossibility theorems show that if a group supports a set of judgments on

the basis of any voting procedure, majoritarian or otherwise, then it may support inconsistent judgments. But deferring to a supermajority, unlike deferring to a majority, is not tantamount to adopting the output of such a voting procedure. When you defer to a supermajority, you revise any judgments on issues where a supermajority of the group takes a different view from you and you stay put on other questions. Staying put on other questions, however, is not equivalent in this case to adopting the judgments of the group. The group may believe that p under the procedure but you will stick with the belief that $\text{not-}p$ in any case where there is not a supermajority of the group behind p . Not all your judgments will be generated, then, as by the voting procedure that we imagine the group using, and so they need not be subject to the same threat of inconsistency.¹

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