Abstract: Perhaps the most familiar notion of “consensus” involves some sort of counting – e.g., vote tallying – resulting in unanimity or a majority. But consensus is a heterogeneous category. And some important forms, as practiced, are quite different from this. I will consider a form of consensus that is more collective than aggregative; it goes by various names, referring to its various aspects: “decision by interpretation,” “apparent consensus,” “nemine contradicente,” “joint agreement.” It is not about counting, nor about unanimity or a majority. What especially concerns me here is the manner in which this form of consensus represents the epistemic state-of-play of a community of experts, without revealing differences among the community members with regard to the issues under consideration. Such apparent consensus can therefore mask considerable disagreement. I will discuss contexts and senses in which such decision procedures are, and are not, advantageous for groups of experts. I will illustrate differences between such consensus practices, and the more commonly analyzed unanimity and majority practices, with reference to the Intergovernmental Panel on Climate Change.

Keywords: consensus; disagreement; collectivity; expertise; authority; social epistemology; Intergovernmental Panel on Climate Change

Introduction

As important as consensus is, it’s not at all straightforward what we mean when we speak of it. As for its importance, it takes consensus among voters to elect lawmakers, and consensus among lawmakers to pass laws that we’re consequently obligated to
obey. It is often said that consensus among scientists obligates the rest of us to accept their conclusions (think climate change).

But what is consensus? Use of the term covers a variety of phenomena, as diverse as political consensus on the one hand, and scientific consensus on the other. However, it’s not that sort of difference that I want to emphasize here; rather, I’m concerned with differences that cut across politics, science and other activities.

We commonly associate consensus with some form of counting: vote tallying, opinion polling, adding-up the number of authors that endorse a particular position in their published papers (e.g., Cook et al. 2013, “Quantifying the consensus on anthropogenic global warming in the scientific literature”); which still leaves open the question whether the count indicates consensus in the sense of unanimity, or a majority, or something in-between (Cook et al. report 97.1% consensus on anthropogenic global warming). But even these important differences in proportion are not the ones I want to emphasize here.¹

Rather, I’m interested in a form of consensus that is less aggregative and more collective. For now, I’ll just point to the brief and somewhat (but only somewhat) exaggerated description attributed to the Israeli diplomat, Abba Eban: “A consensus means that everyone agrees to say collectively what no one believes individually.” This

¹ Nor do I have in mind the many complications with counting itself: what’s being counted as what, who’s doing the counting, etc. Environmental economist and statistician Richard Tol (2014) has criticized the methodology of the 97% paper, concluding that the proportion may well be correct, but it’s a coincidence that the authors arrived at it given their methodology. The authors of the 97% paper respond in “24 Critical Errors in Tol” (Cook et al., 2014).
sort of consensus is not just a tally of the individual viewpoints of the members of the group in question.

It helps to be aware of this non-aggregative form of consensus, so as not to assume that what initially appears to be a tallied consensus really is; for example, so as not to assume that what appears – and is perhaps designed to appear – as unanimous consent is really 100%, or anywhere near that. I say it is important to be aware of the more collective form of consensus, and yet I feel sure you’re already somewhat familiar with it, since it too is widespread. It has been described and studied in many different settings (see Steiner and Dorff 1980, and Urfalino 2007 for many examples and invaluable analyses; I discuss these authors below). Perhaps you’ve even observed it first-hand in your own social and work communities. To give you the gist, before elaborating, consider Clyde Kluckhohn and Dorothea Leighton’s study of The Navaho: “The native way of deciding an issue is to discuss it until there is unanimity of opinion or [meaning something other than unanimity of opinion] until the opposition feels it is no longer worthwhile to urge its point of view” ([1946] 1974, 160-161; my emphasis). In other words, it involves your group, including you and indeed in part because of you and your silence, subscribing to a position that you may personally reject.

This form of consensus goes by various names, referring to its various aspects: “decision by interpretation,” “apparent consensus,” “nemine contradicente,” “joint acceptance.” What especially concerns me here is the manner in which this form of
consensus represents the epistemic state-of-play of the community in question, without revealing differences between community members with regard to the issues under consideration – how it results in epistemic opacity in this regard. Such a form of consensus can therefore mask considerable disagreement. There are thus two levels of ambiguity at issue here: the first concerning what “consensus” means, and the second concerning the epistemic ambiguity associated with particular forms of consensus (see also Novak 2011, discussed below; as well as Urfalino 2007, 2014).

I will discuss contexts and senses in which such decision procedures are, and are not, appropriate for groups of deliberators. And I’ll raise questions about the contexts and senses in which such decision procedures are, and are not, helpful for those of us on the outside trying to look in. Finally, I will illustrate differences between such consensus practices and the more commonly recognized unanimity and majority practices with reference to the Intergovernmental Panel on Climate Change (IPCC), which, perhaps surprisingly, given the counting of experts that often accompanies the release and promotion of their reports (e.g., Fig. 1), does not take votes. Again, the IPCC does not take votes; which is hardly clear from their stated procedures.
A Form of Consensus that Doesn’t Add Up

A well-documented example of the form of consensus I have in mind comes from Jürg Steiner and Robert Dorff’s study of just under 500 disputes that took place at meetings of the Free Democratic Party in Berne, Switzerland. The authors initially expected that each of the outcomes of these disputes would fall into one of three categories: resolution by majority vote, explicit unanimous agreement, or putting off the decision. But these categories left more than a third of the disputes unaccounted for. All of these they came to regard as “decisions by interpretation,” meaning in part that “it remains uncertain whether the dissent in the group has vanished or whether it still persists” (Steiner and Dorff 1980, 3). Over and over, dissenters stopped dissenting, leaving one position
unopposed. But did that mean that the initial dissenters really came to agree with the last position standing? Determined seekers of truth that Steiner and Dorff were, they joined group members at the pub after meetings in order to see whether the debates continued in this more informal setting, regardless of having ended in the formal meeting (1980, 8). In short, the arguments did continue (I’ll return to this).

Steiner and Dorff refer to this form of consensus as “decision by interpretation” in order to emphasize the role of the chair in interpreting that a consensus position has been reached and deciding when to ask the question: “Does anyone object?” They attribute the chair’s timing to a number of considerations; for example, his or her rough assessment of the distribution of viewpoints (without taking a formal vote), the relative status of the members taking a particular position, the order in which positions were presented (later-proposed positions having a better chance of being proposed as the consensus position since they take into account earlier positions and objections), and the intensity with which positions were defended and criticized.

Still, there’s room for interpretation. Steiner and Dorff’s terminology is a good secular stand-in for what is supposed to happen at a Quaker meeting, namely that the Friends in attendance will, with the help of the clerk or convenor, “discern” the “sense of the meeting,” and know when the group has been “called” in a particular direction that some individual members may find objectionable but will no longer object to.

Unity is not to be confused with unanimity. It is not necessary for every member to fully agree with a decision, but rather for Friends to discern that as a body
they are called in a particular direction. Some Friends use the secular and more modern term “consensus” to describe Friends decision making practice, since no voting occurs, but many adhere to this older term, which emphasizes that it is a religious exercise. (Quaker Information Center 2011)

(I’ll return to Quaker meetings throughout the paper.)

Sociologist Philippe Urfalino analyzes the Steiner and Dorff study, together with a variety of others, including his own study of the Drug Approval Committee of the French Ministry of Health, and proposes the concept of what he calls “apparent consensus” to cover what Steiner and Dorff called “decision by interpretation.” It is “apparent” in two respects (Urfalino 2007, 60).² First, it is sufficiently apparent to the participants – there is a “collective recognition” – that the group has reached a point where a particular position faces no further objections. Second, it is “apparent” as opposed to real because there may be considerable reluctance in the silence that follows. Given that silence plays such a large role at the end of discussion, it may not be at all apparent in the first sense what is the proportion of support for the viewpoint being proposed as the consensus position. A large part of the problem is also that the group is continually considering revised positions, all the while not taking a vote. All that is apparent in the transparency sense is that the position faces no further vocal objection. “[T]here is no systematic expression of the preferences of the participants, no counting of their opinions, and thus there is a possible ignorance of the distribution of these opinions at the end of the process” (Urfalino 2014, 325).

² For an abridged, English version of Urfalino 2007, see Urfalino 2006.
In his more recent work, Urfalino has adopted the term “non-opposition rule,” which brings to mind the venerable form of agreement, “nemine contradicente” (without objection/contradiction). Both terms capture an important aspect of this form of consensus.

As for why the reluctant members of a deliberating group would stop pressing their personal opinions and lines of reason, leaving others in the dark as to the distribution of viewpoints among them, I’ll get to that shortly.

The philosopher Margaret Gilbert – entirely independently and using fictive but realistic everyday examples (like two parents deliberating rules for their children’s behavior; Gilbert 1996, 353) – has proposed a similar process leading to what she calls “joint acceptance.” According to Gilbert (paraphrasing slightly), “A group jointly accepts \( p \) [e.g., ‘global warming is largely due to human activities’] if and only if the individual members have openly agreed to let \( p \) stand as the position of the group” (Gilbert 1987, 194). Note that they have agreed to let \( p \) stand as the position of the group though not necessarily as their own personal position; joint acceptance of a position is consistent with considerable disagreement and ambivalence among group members.

What Gilbert’s term “joint” acceptance helpfully emphasizes is the collective vs. merely aggregative aspect of this form of decision procedure. It is irreducibly collective in two senses, the first being that it is “non-summative.” The group’s position is \( p \), but
not by virtue of all the members holding that \( p \), nor by virtue of a majority, nor any other particular proportion of the members holding that \( p \). Gilbert might well have invoked Steiner and Dorff’s findings in this regard. Of the 170 debates that were decided “by interpretation,” in 85 of these the proposal that won had been supported by the majority of the vocal discussants (not by vote count, just by the proportion of discussants, as tallied by the investigators); in 19 the proposal that won had been supported by a minority of discussants; and in the remaining 66 cases there had been equal numbers of supporters among the discussants before one position was proposed as the consensus, and its detractors did not contest it further (until they got to the pub anyway! Steiner and Dorff 1980, 7).

One might acknowledge that a group’s affirmation that \( p \) is not reducible to its members affirming \( p \), but nonetheless point out that the group’s position does depend on their members all agreeing to something, namely to let \( p \) stand, or agreeing not to oppose nor to veto \( p \). Although, in practice, at no point do the group members verbally affirm anything; rather, again, they don’t verbally object. But even if we allow that the members individually “agree to let \( p \) stand,” that is very different from the view that the group announces, namely “\( p \).” The group’s (let’s say the IPCC’s) position is, for example, that “global warming is largely due to human activities.” The group’s position is not that “the proposition about global warming has been allowed to stand,” nor that
“the proposition about global warming has received no further vocal objections.”

Perhaps the latter should be the IPCC’s position, but it’s not; I’ll return to this.3

So the group’s position is not reducible to the positions of the individual members.

Gilbert emphasizes another collective dimension to joint acceptance: in jointly accepting \( p \), the members of the group mutually oblige themselves to take the position \( p \) when representing the group publicly. Of course, no group member would be obligated to lie and state that he or she personally accepts \( p \) when that is not the case. But any such dissent must be expressed carefully:

It is understood that when a set of persons jointly accepts that \( p \), then each of the individuals involved is personally obliged to act appropriately [in their capacity as a member of the group]. Such action consists, roughly, in not publicly denying that \( p \) or saying or doing anything which presupposes its denial. More positively, one is publicly to affirm \( p \) and to say things that presuppose that \( p \) when it is appropriate to do so. There is the escape clause . . . that if one feels bound to speak against the group view, though one is not ready to challenge its status as the group view, one must preface one’s remarks making it clear that one is speaking in propria persona. (Gilbert 1987, 194-195)

Group members are mutually and not just individually obligated, Gilbert argues, because no single one of them can rescind his or her obligation. An individual group

3 Nicholas Rescher’s (1993, esp. Chap. 9) idea of “acquiescence” is interestingly similar to no-objection forms of consensus and the idea of “letting stand.” But for now I’m struck by the differences. Rescher’s notion emphasizes differences among group members, along with “living and letting live,” and “agreeing to disagree.” The group’s position in this case seems not to be \( p \), but rather “dissensual pluralism” with respect to \( p \). Whereas I think Urfalino, Gilbert and others are focusing on situations where the group’s position is \( p \), in spite of unmentioned (or at least non-emphasized) individual disagreements concerning \( p \). But I need to think more about this and in any case encourage readers to consult Rescher’s work.
member can unilaterally violate the obligation in question, but the obligation can only be rescinded as a group by appropriately revisiting the proposal at issue.

Gilbert’s terminology of “letting stand” is reminiscent of the Quaker view that a Friend might reasonably “stand aside.” And her emphasis on the collective-normative aspects of doing so are very much in keeping with the Quaker view that the “Group as a whole is responsible for the decision, and the decision belongs to the group” (Quaker Foundations of Leadership, 1999).4

Now having argued that no-objection and let-stand decisions by a group are not reducible to tallies of the personal viewpoints of the group members, it is all the more interesting to acknowledge Stephanie Novak’s remarkable studies of the Council of the European Union, the most important legislative body within the EU (Novak 2010, 2011, 2013). There are circumstances under which a qualified majority of delegates is required

4 Having emphasized similarities between no-objection and letting-stand forms of consensus, I also acknowledge that there are interesting differences. For example, Gilbert does not emphasize – to the extent that analysts of no-objection procedures like Urfalino, and groups that adopt no-objection procedures like Quakers, do – the means by which a group’s decision is arrived at and consummated (on this specific point see Urfalino 2006, 14, note 7; and 2007, 59, note 8). In general, it seems sufficient from Gilbert’s perspective that members of the group are all aware (it is “common knowledge” among them) that each intends to let stand the proposition in question, however this common knowledge comes about. It is not necessary that one member of the group has posed the question to the rest as to whether there are indeed any further objections, nor that one of them has suggested to the rest that there seem to be no further objections. Though sometimes Gilbert describes a scenario that is otherwise very much like the final stages of a no-objection consensus. For example, speaking of a reading group’s jointly accepted interpretation of a poem, she writes:

When discussion in this vein has gone on for a while a point is usually reached where one preferred interpretation seems to be emerging. No one is voicing any objections to certain ideas about how to read the poem. Someone asks if anyone wants to say any more. One speaks up. The poem is then read out once more, stressed and phrased according to the preferred interpretation. (1987, 190)

Again (as in note 3 above), I need to think further about similarities and differences.
to support a proposal. But the President of the Council has the discretion to employ consensus in the form of no-objection in order to satisfy the majority criterion. And this turns out to be the norm in the Council’s plenary meetings. This is considered so reasonable within the Council that some delegates report to Novak – without any insincerity or attempt to deceive – that they vote all the time, even though they vote hardly at all (Novak 2010, 85-86)!

One reason why a no-objection decision might be mistaken for a vote has to do with the way in which it resembles not just a vote but a unanimity vote in particular. That is, in both cases the decision is hostage to something like the veto power of a single party.

But veto power and objection power are importantly different, for to voice an objection is very different from simply voting no. An objection, in a no-objection proceeding – as generally practiced – comes with a reason. Which puts an objector in a more difficult situation than a mere naysayer. Which is in turn related to the perspective of some of those who study no-objection procedures: that they are preferred in situations where there is a strong sense that what is being sought is a judgment and not a survey of preferences, and that while voting may be fine to determine whose preferences are to be honored, it is not fine when it comes to judging, say, the common good, or how the world works. Another way that this is put is that no-objection procedures are considered more suitable when political and/or epistemic individualism...
and equality are not taken for granted. While it is crucial for all members of the group to have access to the deliberation, it is *not* considered important for everyone’s vote to be tallied and weighted equally in making the final decision. There is a sense that this would not contribute to the quality of the decision at hand (Urfalino 2007, 66; 2014, 338-339).

In these sorts of situations, there may arise a point after much back-and-forth in the discussion where dissenters realize that they have been heard by other reasonable people, but have been found unconvincing. Continued objection would not only be a waste of time, but also counter-productive for the dissenter as well as the group. As ethnologist Emmanual Terray suggests in connection with a village meeting, “anyone who continues to oppose [the emerging consensus position] proves thereby that he prefers his particular interest to the general interest” (Terray 1987-1989, 21; quoted in Urfalino 2007, 65). Or as Urfalino describes the situation of the French drug evaluation committee:

Imagine an . . . expert who has been free to object to a proposal . . . made by the [head of the committee] on whether or not to approve market sale of a given drug. His objections have already been discussed collectively; some of them have been integrated into the consensus proposal in the making, while others have been opposed on the basis of arguments that seem to have convinced the other participants. If this same expert continues to express opposition to the proposal as reformulated by the [head], using arguments similar to those that have already been refuted, he will provoke surprise and disapproval. His commitment to the decision he favors will seem excessive and possibly suspect. His stubbornness is considered inappropriate precisely because he is behaving as if his opinion were worth something as such, whereas its value is, as
explained, indexed on the strength and success of his arguments [which have so far failed]. (Urfalino 2007, 21)

Quaker procedures make explicit that members should not let personal preferences get in the way. The guidelines of the New England Yearly Meeting counsel:

Passionate devotion to a cause can lead Friends to speak from their own desires rather than from a deeper place of shared spiritual discernment. . . . Friends who have strong reservations about the action the group seems ready to take should examine their motivations to determine if the Spirit is calling on them to speak, or if stubbornness or personal preference is motivating their discomfort. (New England Yearly Meeting 2014, section on “Corporate Discernment in Meetings for Business”)

Similarly, the guidelines of the Philadelphia Yearly Meeting ask: “Have all Friends truly tried to leave behind their personal desires, the better to be led by the Spirit?” (Philadelphia Yearly Meeting 2002, section on “The Good Order Used Among Us”). The clerk or convenor is supposed to be able to “discern if one who is not uniting with the decision is acting without concern for the group or in selfish interest” (Quaker Foundations of Leadership, 1999).

Secular versions of consensus based on Quaker procedures strongly emphasize the difference between preference and judgment. For example, the organization Seeds for Change, which provides resources and training for grassroots organizers, defines “blocking,” and contrasts it with mere insistence on one’s preferences, as follows:

A block always stops a proposal from being agreed. It expresses a fundamental objection. It means that you cannot live with the proposal. This isn’t an “I don’t really like it” or “I liked the other idea better.” It means “I fundamentally object to this proposal, and here is why . . . !” (Seeds for Change, undated)
And another professional group facilitator specifies:

The following are not valid reasons to block:

• to get your way or because you prefer a different proposal, or no proposal
• to fulfill your personal moral values or how you want to live
• because the proposed action doesn’t fit your personal needs (or finances)
• because you’d have to leave the group if the proposal passed (Bressen, undated)

A requirement for reason-giving, and not just the registering of preferences, in a no-objection deliberation helps to avoid a very serious, even pernicious downside of unanimity voting. In the latter case, the veto power of a single party makes the outcome vulnerable to the errors, blinders, biases and caprice of one member. This is one of the main reasons why unanimity rules are rightly scorned in so many settings (e.g., Dahl 1989, 135–52; Beatty and Moore 2010, 203-204; Schwartzberg 2014, passim). No-objection procedures are really very different from unanimity voting in this regard.

Another reason why a no-objection decision might be mistaken for a vote – and again a unanimity or near-unanimity vote in particular – has to do with the similar authorizing functions they serve; the ways in which they command respect. Novak (2013) argues that one of the main reasons why the Council of the European Union allows and encourages no-objection agreements is to avoid the non-compliance of member states whose delegates are on record as voting against a law. The authority of a group of scientific experts can also be undermined by a visible split in the group. For better or worse, disagreement among them undermines their entitlement to the
deference of non-experts. Alfred Moore and I have argued elsewhere that it shouldn’t (Beatty and Moore 2010); and I’ll come back to this. But who doubts that it does? When experts render a split decision, others have, or feel they have, or claim they have less reason to defer to it. Which of the two sides is right, or righter? To which side should I defer? And so on.

Is there, after all, a more important or more common role for consensus statements, in governance or in science, than that of winning deference to the consensus position? I’d even suggest that that function is bound up with the very meaning of “consensus statement”; here I’m building on the work of rhetorician Jean Goodwin (1998, 2001, unpublished). My take on her position is that a consensus statement reports some form of consensus within a group to outsiders in order to morally compel (impel) their deference to the agreed-upon position. In the case of scientific consensus statements, the moral compulsion works by communicating the idea that failure to defer is imprudent (Goodwin 1998, 273; 2001; unpublished, 3). Surely this is the point of the “97%” infographics produced in connection with the Cook et al. “Consensus Project” (e.g., Fig. 2). As political psychologist Daniel Kahan remarks, the point of these messages is to challenge the intransigent with: “Do you get it yet, moron?” (Kahan 2015, 19). Or as he puts it in an interview concerning the 97% message, “It’s a bumper sticker and it says ‘fuck you’ on it” (Vaidyanathan, 2014).
To the extent that no-objection procedures lead to quality judgments and not just an accurate survey of preferences, then we have all the more reason to defer to them. But they would serve to compel deference in a very different way than a unanimous or nearly unanimous vote, namely by affirming not that all or most of the deliberators support the consensus position, but only that none of them continued to voice an objection.

The question is whether a no-objection consensus compels deference precisely by obscuring the epistemic state of play within the deliberating group, rather than clarifying it.⁵ Or worse: recall Urfalino’s characterization of such a consensus as

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⁵ I discuss a case study of joint acceptance for the purposes of masking disagreement and preserving authority in Beatty 2006.
“apparent,” in the sense of “not real.” The question then is whether a no-objection consensus compels deference precisely by masquerading as unanimous agreement. What if we could take the “apparent” out of apparent consensus and make it more transparent to its intended audience? What if the audience were to be carefully schooled on the meaning of such a claim, and were to reflect on the possibility that there was not only a minority silently opposed to it, but maybe even a sizeable minority? Would the consensus still command the same respect?

Probably not, unless reasons were also given for adopting such a procedure in the first place: reasons for viewing individual dissent combined with joint acceptance in a positive rather than only a negative light. For example, the case might be made that lingering dissent can be a strength rather than a weakness. As Moore and I suggested (in a nutshell):

What better way to inspire confidence in a deliberative outcome than to show that 1) the position in question had been tested against a worthy alternative; 2) the minority felt that they had been heard . . . ; and 3) having been heard, even the minority agreed to let the position in question stand as the group’s. (Beatty and Moore 2010, 209)

Nonetheless, one might still ask, why not take a vote at this point? Why not report the proportion of deliberators who personally reject the consensus position even though they are willing to let it stand? Hopefully the answer to the question would not simply be: in order to compel deference in a situation where a vote would undermine it. There are, to be sure, other reasons not to vote. For example, to promote group
solidarity. Majority/minority voting is divisive; it underscores the difference between the winners and the losers. No-objection procedures, on the other hand, offer dissenters a share in the group decision by virtue of their having played an important part in testing it up to the point where no further objections were raised and where it was then allowed to stand. Urfalino sometimes refers to no-objection procedures as “deciding without dividing” to emphasize this difference (2014, 333-334; see also Krick 2015). Deciding without dividing may be especially important for non-ephemeral groups that need to keep working together on issues beyond the one at hand.

Okay then, are there reasons other than solidarity, and other than concerns about undermining deference (concerns that might arise even without a vote, if the audience is fully informed as to the nature of a no-objection consensus) for not voting in this situation?

Consensus within the Intergovernmental Panel on Climate Change

I mentioned at the outset my concern to distinguish more collective forms of consensus from more aggregative forms that they might be mistaken for. And to this end it’s worth considering the case of the United Nations Intergovernmental Panel on Climate Change (IPCC), whose results are often communicated via numbers like those in Fig. 1, which pertains to the IPCC’s Fourth Assessment Report, or the following characterization of the Fifth (most recent) Report:
Written by over 800 scientists from 80 countries, and assessing over 30,000 scientific papers, the Fifth Assessment Report tells policymakers what the scientific community knows about the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation. (IPCC Press Release 18 March 2015, [https://www.ipcc.ch/news_and_events/docs/ar5/150318_SYR_final_publication_pr.pdf](https://www.ipcc.ch/news_and_events/docs/ar5/150318_SYR_final_publication_pr.pdf))

In an otherwise analytic essay on climate change reporting, the prominent science writer Cristine Russell simply reports that the Fourth Assessment “represent[s] a consensus from some 800 climate experts around the world who are commissioned to review the latest scientific evidence” ([Columbia Journalism Review](http://www.cjr.org/the_observatory/ipcc_coverage.php)). Similarly, concerning the Fourth Report, the accomplished science writer John Upton informs his readers:

> More than 800 climate scientists serve as authors and review editors in the three working groups. They come from 85 countries, with 301 of them from developing countries. These scientists call on hundreds more scientists for assistance. Together, they diligently mull reams of peer-reviewed climate science. ([Grist](http://grist.org/climate-energy/wtf-is-the-ipcc/))

I conducted an altogether unscientific survey of neighbors at my local coffee shop and pub to see what they made of these numbers and how they are reported (“written by over 800,” “consensus,” “800 . . . together, they diligently mull”). Those who had an opinion believed that this many people and this number of countries affirmed the conclusions of the IPCC reports in question. Although my neighbors are extraordinary (awesome actually), I suspect they’re ordinary in this regard.

It’s worth discussing how far from reality this perception is.
I want to stress two points. I’ll just state them now and then elaborate. The most important point for this paper is that whatever these numbers are supposed to reflect, they do not reflect affirmative votes. There is no voting in the IPCC; or at least none mandated or recommended. Second, there is no meaningful consensus of any sort involving all of the authors and reviewers involved in an IPCC assessment, nor even all of the authors involved in one of its component reports.

First I should briefly describe – or remind you of – some very basic information about IPCC Assessment Reports, the first of which was released in 1990, and the fifth and most recent in 2014. (There have been important changes in the procedures; unless I specify otherwise, I’ll be talking about how things are done now. An excellent, brief introduction to the IPCC and how its procedures as well as conclusions have been challenged and have changed over time is Arthur Petersen’s *Simulating Nature*, 2012).

An IPCC Assessment Report consists minimally of the reports of three “Working Groups” that focus on different issues, and a fourth report, the so-called “Summary for Policy Makers,” which includes the most noteworthy results from each of the three working group reports in language that is accessible to a broader audience. The three working groups are: WG I “The Physical Science Basis,” WG II “Impacts, Adaptation, and Vulnerability,” and WG III “Mitigation of Climate Change.”

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6 The most recent reports are available at https://www.ipcc.ch/report/ar5/.
As for the IPCC’s “procedures,” the first item under that heading in the “Principles Governing IPCC Work” (IPCC 2013a) reads: “In taking decisions, and approving, adopting and accepting reports, the Panel, its Working Groups and any Task Forces shall use all best endeavours to reach consensus.” As for the procedures and outcomes that would count as consensus, there is no elaboration, except for the references to “approval,” “adoption” and “acceptance.” I’ll only discuss approval and acceptance. According to the “PROCEDURES FOR THE PREPARATION, REVIEW, ACCEPTANCE, ADOPTION, APPROVAL AND PUBLICATION OF IPCC REPORTS” (IPCC 2013b), “acceptance” pertains to working groups and their reports; it “signifies that the [accepted] material has not been subject to line by line discussion and agreement, but nevertheless presents a comprehensive, objective and balanced view of the subject matter.” “Approval” pertains to the IPCC Plenary and in particular to the Summary for Policy Makers; it “signifies that the material has been subject to detailed, line by line discussion and agreement.” However in neither case is it specified whether a vote is taken or some other record of the distribution of viewpoints, or whether some sort of no-objection procedure is to be employed, or what.

As for the participants, working group members are appointed from a pool of nominees. There are four kinds of members. “Lead authors” have the expertise to take

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7 With regard to this aim, I recommend Alfred Moore’s discussion of the important difference between aiming for truth, with consensus as a possible result, vs. aiming for consensus, in connection with the IPCC. See the chapter on “Consensus” in his forthcoming book, Critical Elitism: Deliberation, Democracy, and the Politics of Expertise.
charge of particular topics that will be represented by chapters in the group’s report, while “coordinating lead authors” oversee the entire working group’s report. There are also “contributing authors” for each topic/chapter; they fill-in areas of expertise not covered by the lead authors. The contributing authors do not participate in “accepting” the report. The fourth category of members is “review editors,” and I’ll get to their role shortly.

Each working group’s report goes through three drafts, the first of which is made available to invited and self-registered expert reviewers, and the second of which is available again to expert reviewers as well as governmental delegations. The third draft is final. One of the many remarkable aspects of the two-step review process has to do with the review editors whom I mentioned, who do not contribute to the writing of the report and whose sole task is to ensure that reviewers’ comments/suggestions/criticisms are satisfactorily responded to. This is clearly a quality issue, but what I want to emphasize here is the transparency aspect of this: the first and second drafts and all of the comments and replies are made available online for public scrutiny.8

I stress the remarkable transparency of this partly because it contrasts so strikingly with the opacity of the IPCC in other respects that concern me here. In particular, I can find no discussion in the IPCC procedures that describes how deliberations should be brought to a close. Nor is there very much in the literature about

8 For example, in connection with the most recent WG2 report see https://ipcc-wg2.gov/AR5/report/review-comments-disclaimer.
the IPCC. Mike Hulme points out that the IPCC’s decision-making mode is “non-summative” and “deliberative,” which sounds something like the no-objection procedures discussed above. I asked my colleague William Cheung, a recent lead author (Pörtner et al. 2014), who confirmed that the deliberations of his Working Group (II) were basically of the no-objection form. The lead and contributing authors of a chapter revise their drafts with the expert reviewer’s comments in mind, and also having to satisfy each other in the process. No votes are taken. There are no yeas and nays. The closest thing to a nay is an objection, which has to come with a reason. As my colleague explained to me, “It is not a formal process. We discussed and debated, and incrementally revised the text . . . until everyone [was] happy with it.” I’ll come back to the “happy” part.

Robert Socolow alludes to the IPCC’s no-objection practices (I hesitate to call them “procedures” when they are nowhere outlined) in a very interesting way: by appealing to the IPCC for more “explicit guidelines about silence. It is never easy to decide when to communicate and when to remain silent” (Socolow 2011, 785). 9 Having some sense regarding when it’s appropriate to keep raising objections, and when to remain silent, is indeed crucial to a no-objection form of decision making. Recall the guidance offered to Friends participating in Quaker meetings, and to participants in consensus processes inspired by the Quakers.

9 He is referring specifically to silence concerning the degree of likelihood associated with a conclusion; I discuss this later in the main text.
Back to debating and revising until everyone is “happy.” One wonders whether working group deliberations that end in a meeting room might continue at the pub, as in Steiner and Dorff’s study. Everyone’s happiness in the end might signal that, persistent individual disagreement aside, dissents were happy to stand aside, having been heard, and perhaps taking into account that they might not be the best judges after all. But to raise the question again, if everyone is indeed “happy,” then why not take a vote at this point, or otherwise survey and report the distribution of viewpoints within the group? This question has been raised on numerous occasions by thoughtful commentators on the process. Judith Curry and Peter Webster summarize some of this literature in their essay “Climate Change: No Consensus on Consensus,” where they argue for “more transparency about dissent and disagreement” (2013; see also Curry 2011). Michael Oppenheimer, Brian O’Neill, Mort Webster and Shardul Agrawala recommend “increased transparency, including a thorough narrative report on the range of views expressed by panel members, emphasizing areas of disagreement that arose during the assessment” (2007, 1506). Gary Yohe and Oppenheimer agree with those who argue that,

the value added from an assessment is in displaying the range of views. The most complete way to do so would be to present not only the range of views in the community, but also the range of views within the assessment group and perhaps even consider ripping off the mask of anonymity that cloaks our deliberations. (2011, 635)
Jeroen van der Sluijs, Rinie van Est and Monique Riphagen discuss what they consider “the main weakness with the consensus approach,” namely “the underexposure of both scientific and political dissent” (van der Sluijs et al. 2011).

To clarify the concerns of those just cited: the problem is not exactly that the conclusions of a working group are presented as certain. Increasingly, the working groups’ conclusions are qualified with varying degrees of “confidence” or “likelihood.” For example, from the last Working Group II report:

> By the mid-21st century, the spatial shifts of marine species will cause species richness to increase at mid- and high latitudes (high confidence) and to decrease at tropical latitudes (medium confidence), resulting in global redistribution of catch potential for fishes and invertebrates, with implications for food security (medium confidence). (Pörtner et al. 2014, 414)

What concerns commentators like those cited above is the reduction of the range of viewpoints to single claims with single uncertainties, like the claims just quoted. My limited concern here is with the no-objection process by which these claims, together with their assigned degrees of confidence or likelihood, are arrived at.

There is also the concern that the distribution of viewpoints of a wider community of researchers – as well as the distribution of viewpoints of the much smaller group of authors who are chosen to represent that community – is collapsed into one. (This concern is even greater considering how very small is the group of authors who are in a position to object with reason in a no-objection process; I consider

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10 Instructions for estimating these values are provided by the “Guidance note for lead authors of the IPCC Fifth Assessment Report on consistent treatment of uncertainties” (Mastrandrea et al. 2010).
this problem below.) But again, my limited concern here is with the way in which a no-objection process leads to a single viewpoint among the IPCC authors themselves.

Might the main reason for not reporting the differences remaining at the end of deliberation be the concern that outsiders would hesitate to defer to the conclusions publicized? Hulme notes the remarks of John Houghton, Co-Chair of the First Assessment, in the forward to the WG I report, namely that there had been a “minority of opinions that we have not been able to accommodate.” Hulme wonders whether the minority views were set aside and not (otherwise) reported out of concern for the perceived authority of the report and whether it would be deferred to if there was a perception of serious disagreement (Hulme 2013, 144).

Before moving on it is also worth saying more about the “Summary for Policymakers” in light of the consensus practices of the IPCC. As I mentioned above, the Summary requires “approval” “on a line by line basis.” It is deliberated at a plenary session of the IPCC with national delegations participating in addition to representatives from the various working group author teams. But again no votes are taken. This was confirmed by Arthur Petersen, cited above, who was a longtime member of the Dutch delegation. He explained that the closest thing to a nay vote is an objection that comes with a reason, and this is particularly important in the Plenary, composed in part of national delegations, where there is the temptation to aim for a summary that would be preferred by one’s country. But political preferences are not
acceptable grounds for objection; the national delegates must object on grounds having
to do with the “comprehensive, objective and balanced” criteria. The chairman of the
plenary is always a distinguished climate scientist, and he or she judges whether an
objection is relevant. Again, this accords with the idea that no-objection procedures are
better suited to issues of judgment vs. preference. Also, somewhat similarly to the case
of the Council of the European Union, no-objection procedures might help avoid the
non-deference of member states whose delegates are on record as voting against a
particular conclusion.

To summarize my first point, not only does the IPCC not take votes, it does not
specify what consensus procedure(s) it employs instead. So there are the two levels of
opacity that I referred to at the beginning; the first concerning what “consensus” means
in the case of the IPCC, and the second concerning the epistemic ambiguity associated
with that form of consensus.

My second point about IPCC decision procedures is that there is no meaningful
consensus of any kind involving the sorts of numbers that so commonly accompany the
release and promotion of IPCC assessments. In this regard let me quote Hulme, who
served as an author in the second and third assessments, and his co-author Martin
Mahoney:

Without a careful explanation about what it means, this drive for consensus can
leave the IPCC vulnerable to outside criticism. Claims such as “2,500 of the
world’s leading scientists have reached a consensus that human activities are
having a significant influence on the climate” are disingenuous. That particular
consensus judgement, as are many others in the IPCC reports, is reached by only a few dozen experts in the specific field of detection and attribution studies. (Hulme and Mahoney 2010, 711)

What could that mean? How could that be? They were referring to the number of authors of the chapter concerning “Detection and Attribution of Climate Change” in the Working Group I, “Physical Sciences” report. These are the experts in detection and attribution studies. As the quotation continues, “other IPCC authors are experts in other fields.” My colleague William Cheung was responsible for the chapter on “Ocean Systems” in the Working Group II, “Impacts, Adaptation, and Vulnerability” report of 2014. Authors of that working group do not “accept” the Working Group I report, in which the attribution and detection chapter appears. Only authors of Working Group I participate in “accepting” that group’s report.

Moreover, often/usually the authors of one chapter in a working group report are not in a position to object with reason to the conclusions of the authors of another chapter in the same report. On what strong grounds could a lead author of the “Ocean Systems” chapter object to the conclusions of the “Terrestrial and Inland Water Systems” chapter of his or her working group’s report, much less the “Urban Areas” chapter? My colleague explained to me that deference to areas of expertise plays a significant role in the deliberations of working groups. Which again fits with the idea that no-objection procedures are most appropriate when epistemic equality is by no means assumed.
The kind of complete or nearly complete deference that an urban areas expert
would pay (apparently does pay) to a marine fisheries expert is not well captured by
saying that the former finds nothing objectionable in the latter’s conclusions.

To summarize my second point: 1) there are not large numbers of experts
affirming IPCC reports; 2) moreover, there are not large numbers of experts in a position
to object with reason to each other’s positions; 3) nor even to reasonably find each
other’s positions unobjectionable.

Conclusion

I’ve been concerned to point out that consensus is not always equivalent to individual
affirmation and in fact can be consistent with an unknown and possibly considerable
amount of individual disagreement. In these cases, consensus is not aggregative – it
“does not add up.” In these cases, consensus is importantly collective.

Such forms of consensus building have the epistemological drawback that they
leave opaque the range of viewpoints within the group of deliberators. On the other
hand, they seem, at least to many of those who practice and study them, to have
epistemological virtues that voting alone does not have.

Of course, one could combine the procedures to aim for a no-objection form of
consensus and then proceed to a vote, or some sort of survey of the distribution of
individual viewpoints, for the sake of epistemological transparency.
The IPCC is quite concerned about transparency. Why then are the IPCC’s procedures, which strongly emphasize consensus as the goal, as opaque as they are with regard to how consensus is to be arrived at?

There are two levels of opacity here. First, opacity with respect to the consensus procedure. And outsiders would not be remiss for thinking that something more like individual affirmation, by large numbers of experts, was the actual practice. Second, there’s the opacity that no-objection procedures result in, regarding the distribution of viewpoints among the participants. If we’re supposed to listen to the voice of the whole and not to the voices of the members, then please direct our attention accordingly. Though we may still wonder – well wonder – where the members stand.

I end with a question. Say the IPCC continues to operate by some sort of non-aggregative, no-objection consensus process. What would happen if, for the sake of transparency, the organization announced its findings in something like the following manner: “Resolved *nemine contradicente* that . . .”? Of course, many people would wonder, “what in the world does *that* mean?!? Anticipating as much, the IPCC procedures might make clear that a no-objection decision is very different from unanimous affirmation, and indeed implies no particular proportion of individual consent.

What would be the upsides and downsides of that?
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