

Dear Professor Roth:

We have received the re-reviews of your manuscript, "Those Who Get Hurt Aren't Always Being Heard", formerly called "Accessing Safe Drinking Water." Based on those re-reviews I think another round of revisions is appropriate for this paper. Both reviewers were thorough in their review of the paper and both have made solid recommendations to improve the quality of the paper. Both reviewers indicate that the first part of the paper should be more focused so that the reader can more clearly follow the line of argument. And, both reviewers have noted some awkward writing/typos which should be easy to take care of as they have noted it(them) for you. Thanks.

Re-review#1:

Review of "Those who get hurt aren't always being heard: scientist-resident interactions over community water," revised version of manuscript.

This paper offers a revealing case study of a community dispute over provision of mains water supply to certain residents, with interactions between residents and scientists being a feature of a political struggle that has multiple discursive dimensions. The material about the public meeting is presented effectively, preceded by a balanced overview of the case study and of scientist-citizen issues. The paper is thought-provoking, raising issues that are central to ST&HV. It is well referenced and generally well written.

This new version of the paper is a considerable improvement over the earlier one. The focus now is on the differential response to claims by scientists and by non-scientists, couched in the context of the safe water issue (i.e. the case study) and public participation in decision making, with discussion of the authors' participatory analysis nicely placed in an appendix.

While the paper is much improved, I can still suggest further improvements! The main area I see is providing a stronger connection between the general discussion (about scientists and citizens) and the specific analysis (of scientist-citizen interactions in the case study). This should not be hard to do. The first titled section of the paper, "Scientists and citizens", covers a variety of ideas about democracy and science/technology. The author(s) should crystallise the point of this survey by picking out one or two (certainly no more than three) key points or themes that will be addressed in the case study. Then, in the following case study sections, the key point(s) should be emphasised as appropriate when relevant evidence or examples are covered. The "discussion and implications" section can then summarise what has been found concerning the key point(s). Such a linking via key points will better enable the reader to follow the author(s)' line of argument and provide further cohesiveness to the article.

The author(s) are in the best position to decide on key points, but here are a couple of ideas.

* Boundary work. Thomas Gieryn has done superb work in revealing the work that demarcates science from nonscience, but mainly through historical examples. This paper shows that boundary work is ongoing and can be found in the details, such

as in the dialogue at public meetings. Furthermore, some of the key "boundary-workers", such as the chair of a meeting, may not be scientists themselves. (I haven't read Gieryn's book in enough detail to know for sure, but my impression is that this paper could serve to reveal new angles.)

* Value judgements. The paper shows that value judgements are involved in the carrying out of research and in the deployment of scientific findings as well as in certification of expertise. But even if all these are laid on the table, there are still other value judgements in making a decision about water, such as whether the central frame is development or health/safety or alternatives. There's also a value judgement in the "choice" of decision-making method: expert decision, advisory panel, referendum, etc. So a key point might be that deployment of science/expertise is not fundamentally different from deployment of other sorts of arguments (e.g. "they made a choice to move there"). Alternatively, it might be said that science/expertise is different mainly in its claimed status, not in the role it plays in practice.

Minor points

(I will give quotations rather than page numbers, since pagination in printouts can vary.)

* The paper argues that residents felt they had not been heard. Is it possible that they could feel they had been heard but still not get their way?

* The abstract should be rewritten to reflect the centrality of scientist-resident interactions.

* The phrase "in contrast to the status of experts in a society" could be omitted or better explained.

* Quite a few sentences could use polishing for accuracy of expression, such as "many residents have opted to get their water from gas stations in one of the two areas of higher concentrations".

* Instead of citing "Beder (1999)", a reference to her book *Global Spin* (1997) would be better.

* "Such an approach does not address the real issue, the pursuit of common interests." True, win-win solutions are better. But sometimes there may be no such solution, at least in the short term. Even if power and knowledge inequalities are overcome, there can still be serious disputes. This points to the importance of agreement about decision-making methods, even if not about decisions actually made (though disputes over decision-making methods sometimes serve as surrogates for disputes over the substantive issues to be decided).

* The reference "Rifkin and Martin 1997" should be "Rifkin with Martin 1997" or just "Rifkin 1997" in the text. Will Rifkin did 90% of the work.

Scott Armstrong (Wharton School, University of Pennsylvania) for many years has studied and reviewed research on peer review. In order to encourage innovation, he recommends that referees do not make a recommendation about acceptance or rejection, but only comment on papers and how they might be

improved, leaving decisions to editors. (See for example J. S. Armstrong, "Peer review for journals: evidence on quality control, fairness, and innovation," *Science and Engineering Ethics*, Vol. 3, 1997, pp. 63-84.) I am persuaded by his arguments and hence make no formal recommendation about this paper.

As is my standard practice, I do not wish to be anonymous, and would be happy to correspond directly with the authors.

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Re-review#2:

Review of manuscript: Those who get hurt aren't always being heard: Scientist-resident interactions over community water

The authors have provided a good redrafting of the paper. I recommend publication, pending major revisions listed below. In brief, the authors need to address their methods directly in the text, and they need to add a degree of succinctness to the paper. They treat the bulk of the evidence well (i.e. sections on who speaks/who is heard, politics and public discussion section), but the authors dedicate too much detail to earlier sections, where issues could be treated more simply. A major revision is required of the introduction section altogether. As it currently reads it is very confusing and does not lay out the issues well. Lastly, the authors will want to carefully re-read their text to shorten or clarify many of their sentences. The authors have a writing style which relies too heavily on lengthy/complicated sentences. In many instances, these can be shortened. This not only improves the readability of the text, it also helps sharpen the arguments being made.

Overall review: C, pending major revisions.

Major comments:

Needs a better introduction into the issue. The beginning material of p.2 is fine. Although it isn't a common opening style for a journal paper, it captures the readers interest and provides a very brief understanding of what some of the tensions that are involved with this issue. However, starting from p.3 with "The Water Advisory Task Force - which includes..." starts to lose the reader in that there is no clear indication of what the issue really is. It provides some background and context material, relevant to the paper, but should be located elsewhere. Were it not for my familiarity with the former draft of this paper, much of what is written would be confusing. In spite of the former familiarity, the current layout is still confusing. The WATF is introduced in terms of its membership on p3, where readers are notified that its members were split on the watermain solution. The following paragraph talks of a WATF majority report recommending against a connection to the watermain (and then later talks of a minority report). The introduction of a media story in the first paragraph which talks about the watermain problem is

insufficient as a lead-in to support the entire issue, without having some clearer text from the authors. Overall, layout confusing - I don't find out until middle of p.4 what the purpose of the article is supposed to be. This should come much sooner. Too much information is provided to the reader before actually getting to the point of the article. Authors needs to structure their argument much more clearly.

1st paragraph of p.4 very confusing. Authors are attempting to layout the issues of concern, outline some of the conflicts of interest, etc, but are very unsuccessful in so doing in this current draft.

Authors should clearly indicate who the "experts" are in that first sentence of paragraph 2 on p.4 (scientific? Industry? Government? Etc? - I know it's referring to scientific experts, as authors indicate that in the third sentence, but should be stated sooner to tie into title of manuscript). Authors also need to clarify the nuances of their treatment of expert status. This is key to the authors argument, and insufficient treatment is given at this stage. Likely only 1-2 sentences required to really drive home their point.

Methods section: Only 12 newspaper articles were drawn upon or does that refer to the reports? Moreover, much of the material contained in the appendix should be located in the text of the paper. The issues the authors report in the appendix are relevant for a reader to assess the conclusions and analysis that the authors present in their paper. A reader shouldn't have to go hunting for this information. It is relevant to the argument. Therefore it should be part of the main text. Not all material contained in the appendix is necessary. Some could be treated as foot/endnotes. The whole methods paragraph should be structured more clearly to lay out the steps for the reader.

Citizens and Science section: Overall, well written and ties back to the broader literature nicely. Authors weave together the issues nicely. Some minor concerns here: p.7 authors state that scientific experts are not naturally imbued with power over the public, that power has to be explained... while I agree, I would argue, as others have (Hannigan, Gieryn, Hilgartner, etc) that scientific experts are conferred power and authority within public domains by virtue of their specialized knowledge. Publics turn to scientists for answers. Beck argues that scientists hold the power to legitimize risks by the virtue of naming. It may not be a naturally imbued power over the public, but it is one that has been socially constructed, and one in which has been highly cultivated by scientific communities to ensure its continued existence (albeit, the hegemony of science is being challenged). Authors following sentences don't really address this nuance. While this is a minor issue, what needs clarification in that section is the example by Epstein and AIDS activists. Just needs a bit more clarity. In fact, the other examples need to make an explicit tie back to the literature... just a sentence or two restating their connection. Otherwise, that section just seems to drift off with no clear point for the reader to take away. Last comment on these examples, can the authors identify the conclusions of these studies more succinctly to tie into their point? Not as much detail as is provided is necessary.

Situating water problem section: maybe a timeline would help or a summary table, that way, authors could tighten up this

section?? Moreover, this section spells out the issue far more clearly than what the authors attempt to do in the introduction of the paper. Perhaps the authors can remove much of what is stated in the introduction?

Contested fields section: What is being said the in the first sentence? I get the issue that it is health and safety vs development fears, but the text is incoherent. The whole paragraph could be written more clearly and more succinctly.

Scientists and residents: divergent views of health subsection: Some evidence (e.g. interview data, etc.) to substantiate statements made in first paragraph.

Community politics: preventing development subsection: Source of first quote, Magee... shouldn't it be WATF member?? Other minor issue, to be consistent, wouldn't it be easier if authors just refer to interview data as "interview data" instead of adding dates for some, but not for others? Again, issues of pseudonyms.

Authors state at the beginning of paper that names are pseudonyms. Yet, they include considerable information at times that can serve as identifiers. For example, p. 19 Fowler, resident of the area and president of the Oceanside West Voters' Association. Why use names in these situations? Why not "area resident, interview data"?

Scientific experts and citizens: politics of public discussion section: Overall... well done. Authors tie instances of who has the power to speak with the literature well. Minor question: the use of personal communication (with Jacques Desautels) implies that anyone could speak to him to get the same information. Was this an informal interview? More major comment: in who gets heard subsection... the authors treat the material very well. However, on p.25 they refer to issues when the wells do not meet the Canadian drinking water guidelines for parameters on taste, color, hardness, chloride, iron and manganese. My own recollection indicates that these are not part of the "health" parameters listed by the guidelines. Moreover, the guidelines are just that. It is up to each province to determine what level gets established, and whether or not they will be more relaxed in the application of these. Furthermore, many provinces devolve these responsibilities to the municipalities. This is not in disagreement with the point the authors are trying to make (i.e. that the Lavin report provides some justification or legitimation of the community resident's psychosocial impacts). However, the way in which is it currently stated implies a violation of the guidelines without recognizing that the guidelines are not legally enforceable standards. Such nuances should be addressed. Minor comment: the sentence "this report supports the claims made by the residents, the community has not made...." is unclear. It is really two thoughts that should be separated.

Discussion and implications section. Well written. Ties the issues together well.

Minor comments:

- Punctuation of parenthetical referencing should always follow the reference, as the reference itself is part of the sentence. - P2, bottom paragraph, "Some of these experts..., which vary and even disappear..." should read "which can vary or even disappear" - P.2, last line bottom paragraph, "but that the water

IS safe" not "was" - Any reference which indicates a direct quote, should also list a page number (e.g. OAGBC, 1999 quote on p.3 - P.3, paragraph 2, sentence 1: incoherent sentence... particularly from "and although...")

- Should give a year for the Walkerton situation. Not everyone, particularly those in the USA and elsewhere would not appreciate the timeliness of the concerns raised in the authors paper without some connection to how recently this situation has taken place. - P.5, first line... shouldn't it be "environmental" group? - P.5, sentence "These include reports to Council by the..." should read "these data sources include..." in order for sentence to be complete. - P.6m 2nd para: "It does not surprise then ..." should be "It is not surprising that..." - P.7, 2nd para: should be "equitable ways" not way. - Last sentence, 2nd para, p.7 unclear (sentence with Brown and Michael reference)

- 2nd para, p.8: use of "underlying knowledge underlying them" becomes redundant. Remove one "underlying"

- last line, first para, p11, should "under" be "currently"? - p.12, is it necessary to indicate that the report was presented by the law professor, if so, then indicate the connection. This also holds for the chemist. Obviously the authors are trying to make a point with these descriptors, but the point is lost. Second, "heavily relied" should be "relied heavily". And what do the authors mean when they say "three of the four members would not be connected to the watermain"... are they referring to 3 of the 4 members of the majority group wouldn't be connected? Unclear, and what is the relevance. Again, the authors are making a point which isn't as obvious as they think.

- Why does the font size change at bottom of p12? - P.27, "through its organ, the Oceanside West Voters..." do you really mean organ?