

Examples of Data Analysis

Claim: The first part of the public hearing constructed the scientists and engineers present as the ‘experts’.

Data: Each expert was provided with the opportunity to elaborate key issues in the reports that they had produced, and took the amount of time they deemed necessary. There was no attempt to shorten or curtail any of the presenters—as this would happen in the subsequent parts of the meeting.

Claim: The experts were constructed as such also by their and the moderators description of positions, titles, or degrees they held.

Data: Thus, individuals were variously introduced as ‘professional engineer and a professional geologist’, ‘Public Health Engineer serving the regional district’, ‘Environmental Health Officer for the Oceanside area... [he] has a Masters of Science degree, and has significant experience with water quality issues and he has been involved extensively in both reports in the sampling episodes’ or ‘Chief Environmental Health Officer for our Health Region’.

Disagreement among scientific experts: Beyond rigid body language

Our research in the community, particularly in public meetings, shows that ordinary citizens often feel disenfranchised by scientists who talk in decontextualised ways about the issues at hand, which often deeply affect residents life (presence of a high-power radio emitter, access to water main). In our community, as elsewhere, scientists ‘bludgeon publics with “certain facts,” often ignoring the public’s own culturally embedded understandings: in sum, they practice a rigid body language that quickly alienates and disillusion their lay audiences’ (Brown and Michael 2001: 18).

The first part of the public hearing constructed the scientists and engineers present as the ‘experts’. Each expert was provided with the opportunity to elaborate key issues in the reports that they had produced, and took the amount of time they deemed necessary. There was no attempt to shorten or curtail any of the presenters—as this would happen in the subsequent parts of the meeting. The experts were constructed as such also by their and the moderators description of positions, titles, or degrees they held. Thus, individuals were variously introduced as ‘professional engineer and a professional geologist’, ‘Public Health Engineer serving the regional district’, ‘Environmental Health Officer for the Oceanside area... [he] has a Masters of Science degree, and has significant experience with water quality issues and he has been involved extensively in both reports in the sampling episodes’ or ‘Chief Environmental Health Officer for our Health Region’.

All of these presenters had considerable time to make their presentations—something that is significant when held against the attempt by the moderator to limit questions and contributions of other participants. The independent consultant Lowell, an engineer and hydro-geologist provided a report in which there was no uncertainty left about his methodology of data collection and the facts that resulted from them.

Example 2

In schools, science is (generally) taught as if it and its results were value free. This, as much research in the sociology of science showed (e.g., Latour 1992), is not the case. The citizens in this community in general (e.g., in a case of the application for a high-power microwave emitter) and in this public hearing more specifically realised that scientific and technological testing could not be thought independently of the uses that are being made.

The following episode began with a statement about the ripple effect that Lowell's report has had. It first influenced (heavily) the (majority) report by the Water Advisory Task Force, here represented by Magoo, which itself—as other speakers also pointed out—heavily influenced the decision by the town council.

- Naught: Well it seems to me that the report is relying.... Mr. Magoo's report is relying on very heavily on your information, which would suggest that it doesn't matter what the problem is with water, it can be treated. And I would beg to differ on that because I think that when you do something to the water, you affect it regardless of what the treatment is and where the treatment occurs. And that it affects the water in another fashion. So therefore this business of treating water is only a marginal thing with respect to water qualities.
- Bisgrove: We are straying sort of into the area of public opinion and your comments...
- Naught: He's an expert he just told us...
- Magoo: Well, I'd like to make one comment on this...
- Naught: I'm addressing, I'm addressing...
- Magoo: You're looking for technical... This is supposed to be a technical discussion and I think...
- Naught: No I'm talking to Mr. Lowell. I'm not talking to you, I don't think...
- Several: [Hands clapping] Yeah, we wanna hear.
- Bisgrove: Mr. Naught, I'm sorry but you're really not. If we can keep to a specific question you certainly able to ask questions if we're going somewhere with it but I don't want to get in to a detailed bit by bit tearing something apart.
- Naught: Why? I mean, I'm asking
- Bisgrove: Because, because...
- Naught: This is our only chance to talk to this man who has made a report that influences our lives.
- Bisgrove: Yeah, but it doesn't directly influence your life to the extent that everything is going to hinge on his report. It's merely one bit of information and we've got lots of information back and forth. Other people are presenting as well...
- Naught: Well, I disagree with you.
- Bisgrove: Can I ask... Sorry, can I ask you if there is a specific question that you wish to ask of Dan [Lowell] specifically?
- Naught: Well, I'll ask him another question.

In this episode, Naught attempted to generalise the earlier issue of downstream treatment by claiming that any water treatment constituted an (undesirable) change. This comment was never elaborated because Bisgrove intervened, followed by an exchange that also included Magoo who had spoken in favour of local treatment solutions. Magoo attempted to enter the exchange, insinuating that Naught was inappropriate for this part of the hearing devoted to 'technical discussions' ('This is supposed to be a technical discussion'). However, Naught reclaimed the floor by suggesting that he was talking to Lowell rather than to Magoo, thereby contesting Magoo's claim to the floor. Importantly, several individuals present clapped and loudly voiced the desire to hear more from Naught. The choreography of the hearing then involved Naught and Bisgrove, the former wanting to continue the latter attempting to limit Naught's questioning. Most importantly,

Bisgrove who had earlier asked Naught not to ask specific questions now reminded him to ask *more* specific questions. That is, the nature of the specificity of permissible questions is also open for contention.

The point is that scientific literacy is enacted, involving listeners and applauding audiences as much as speakers and the public demonstration that the expertise of an individual present is more limited than it first appeared.