

Michael Pritchard's Commentary on "Beyond Expertise: One Person's Science, Another Person's Policy"

Commentary On

Beyond Expertise: One Person's Science, Another Person's Policy

Given the high level of toxicity of the oxidized form of jekyllhydium and its many industrial uses, it should not surprise Dr. Reams that the EPA is concerned about appropriate levels of human exposure to this heavy metal. Also, since her published research focuses on oxidation and reduction reactions of jekyllhydium, she should not be surprised that the EPA would seek her assistance in amending current regulatory limits.

It seems that, as an environmental chemist, Reams should at least be willing to meet with EPA officials to discuss their concerns. The case does not indicate whether Reams believes that there are others who are more expert than she in jekyllhydium research. If she does believe that, then perhaps she could decline the EPA's request by referring the agency to someone more expert. However, if she believes her expertise matches or exceeds that of others, a strong case can be made for concluding that she should agree to advise the EPA. That does not necessarily mean that she should recommend that allowable limits for the total concentration of jekyllhydium be lowered. That is precisely the issue under consideration by the EPA. In effect, by refusing to offer her expertise to the EPA, she is leaving matters in the hands of those who know less than she does about an important area of public health.

Perhaps Reams was reasoning this way: "Our present state of knowledge about safe levels of exposure to jekyllhydium is insufficient to warrant any regulatory changes at this time. Therefore, I do not wish to involve myself in the EPA's attempt to rewrite the regulations." If so, it seems that she should have advised the EPA accordingly. Instead, she simply told the EPA that its task was "beyond the scope of her data and her expertise," that she could not make confident predictions.

In assessing her reluctance to get involved with the EPA, Reams might have asked herself this question: "What if all jekyllhydium researchers refuse to assist the EPA?" Then, obviously, the EPA would act without having access to anything but the published results of their research, and without the advantage of any of these researchers helping them interpret the significance of that research. Is Reams, as an environmental chemist, willing to accept that outcome? If she is not, and if she believes her expertise matches or exceeds that of others, then it seems that she should be willing to assist the EPA. She might not be comfortable being cast into the role of adviser to a policy-making agency, but neither should she be comfortable leaving matters totally in the hands of nonexperts.

Reams's rationale for declining the EPA's invitation raises important questions about standards of acceptable risk. She says she cannot confidently predict the extent of the oxidation reaction in diverse environmental conditions. Does that mean that acceptable concentration levels should not be lowered unless one can make confident predictions? That is the apparent stance taken in the asbestos industry in the early 1920s, and sustained for decades while workers were exposed to high levels of harmful asbestos fibers. The problem with this position was that asbestosis and related forms of lung cancer take 20 or 30 years to develop. Waiting for compelling evidence of the harmful effects of exposure was, in that case, fatal. Similarly, delayed response to the accidental mixing of cattle feed and fire retardant in Michigan in the mid 1970s resulted in enormous costs to farmers and widespread consumer fears of meat contamination.

These two examples do not warrant an alarmist response to risks of toxicity. But they do raise fundamental questions about the rationality of waiting to act until highly confident levels of predictability are obtained. Two good sources in this difficult area are Carl F. Cranor, *Regulating Toxic Substances* (New York: Oxford Press, 1993) and Wade L. Robison, *Decisions of Doubt* (Hanover, N.H.: University Press of New England, 1994). In areas where certainty is unobtainable but the stakes are high if things do go badly, both policy makers and their advisers may need to risk erring in the direction of caution.

Finally, we are not told anything about Reams's place of employment. If she works in private industry, she may fear that she will undermine her employer by assisting the EPA. But that assumes that she will be advising the EPA to lower the acceptable level of concentration of jekyllhydium. She apparently is convinced that the evidence is insufficient to warrant that step. It is not clear why her employer would be upset if

that were the advice given to the EPA. On the other hand, should Reams become convinced that the regulations should be changed, that is what she should advise the EPA. Furthermore, as our recent history of litigation suggests, it may be in the interests of the industry she represents to change its practices as well. In any case, Reams needs to consider not only her obligations to her employee, but also to the public at large.

If Reams is a university researcher, then there is even less reason for her to be reluctant to share her expertise with the EPA, as her obligations to public health and welfare are more direct. Again, that is not to prejudge the substance of her recommendations. It is only to affirm that one of higher education's functions is to serve the public interest, particularly in areas of public health where it may have expertise that others lack.

As it turns out, the EPA used Reams's expertise through her publications. However, Reams is concerned that her work was misused. The antidote, it seems, would have been for her to be there to assist the EPA in properly understanding her work.

An alternative scenario has Reams agreeing to work with the EPA, but her work is still misapplied. Here there is good reason for Reams to continue working with the EPA, trying to help the agency understand the greater complexity of the relevant chemistry. Precisely because of this complexity, her continuing research may reveal further evidence that will assist the EPA in its regulatory functions.

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