Nuclear waste management

SIR—Robert Walgate (*Nature* **314**, 396; 1985) drew attention to work conducted by the University of Surrey on the public's attitudes towards the management of nuclear waste. However, there were some understandable misinterpretations in his report (which was derived from an oral presentation) concerning the issue of compensation. This advance note of some of our results should set the record straight.

Compensation may be seen as one possible mechanism for reducing the social inequity that is inevitable when a local community is required to host a nuclear waste repository to meet a national need (or to conform with national policy).

Our national survey asked 1,511 people "Do you think it would be right to give some form of compensation to people living in an area where nuclear waste is to be buried?", to which 66 per cent replied "yes".

They were asked subsequently whether the compensation should be directed towards the community as a whole or to individuals. Respondents were able to select one or other or both of these suggestions — 48 per cent endorsed personal and 36 per cent community-directed compensation — so it was incorrect to sum these and imply 84 per cent of the public in our survey "could be bought off".

Additional data can put these particular findings into context. People were asked their reactions to proposals to build a range of facilities within two or three miles of their home:

Facility	% Who would move away (if they could)	% Who would actually oppose
Radioactive waste	79	73
Nuclear power station	66	59
Airport	51	32
Prison	47	32
Army barracks	32	16
Motorway	30	17
Industrial estate	21	11

People were also asked about the likelihood of something going seriously wrong at a radioactive waste site:

Likelihood of accident	% Within 5 years	% Within 50 years
Very likely	10	26
Likely	12	20
Possible	38	28
Unlikely	17	9
Very unlikely	12	6
Don't know	12	12

Finally, respondents picked out those issues that ought to be addressed by a public inquiry. The rank order is as follows:

Rank	Public inquiry issues
1.	Health effect
2.	Long-term reliability
3.	Effects on nature
4.	Suitability of geology
5.	Local opinion
6.	Transport routes and distance
7.	National interest
8.	Land use
9.	Comparative costs of alternative sites
10.	Local employment
11.	Compensation for local community

These findings indicate that radioactive sites are indeed problematic and that from this national sample, health issues are paramount.

Other findings indicate that the sites are likely to generate anxiety not only at the level of "personal safety", but also at the "future character of society" level. Sites are seen as the environmental intrusion most likely to predispose people to move away or protest. However, for many there is neither the luxury to be able to move nor the time or skills to participate actively in the decision process. Compensation is one possible form of mitigation and was certainly not seen as bribery by the majority of our respondents.

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Old hat

SIR—P. W. Hawkes, in his review of J. W. Goodman's *Statistical Optics* (*Nature* 15 August, p.584), states that books on the subject have only recently begun to appear. However, the text *Introduction to Statistical Optics* by Edward L. O'Neill (Addison-Wesley) appeared in 1963. I was a student of Dr O'Neill's at Boston University at about that time, and found his presentation of the ideas of statistical optics fascinating. I would like him to be recognized as one of the early authors in this field.

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Values in science

SIR—The recent debate about values in science in your columns has surprisingly reached one point of consensus — that values should be made as explicit as possible in scientific procedures. One side of the debate would then exorcise them as far as possible, the other would change them or even introduce others. Since the point of agreement transcends both views, it is itself an example of something as value-independent as possible in this context.

One could derive a semiquantitative figure for the degree to which some experimental result or interpretation is value-independent: perhaps it should be inversely proportional to the number of researchers with antithetical philosophical, social and religious views able to agree on it. On that basis, science has been surprisingly value-independent. Hence, ironically, at a higher level, it is often intensely valued because such consensus is rare.

Total exorcism of values from science? The demons may always lurk beyond our consensus or even in it. But I thought the consensus principle meant we should exclude such demons as far as possible from the charmed circle — and then deliberately invoke them afterwards from its relative safety?

To paraphrase St Augustine, love consensus, then do as you will.

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Selenium-enriched?

SIR—A recent US Geological Survey report (S.J. Deverell *et al.* USGS Water Resources Investigations Report 84-4319, Sacramento, California, November 1984) listed concentrations of selenium found in farm irrigation drain sumps in the San Luis Drain service area on the Panoche Fan. These showed concentrations of selenium as high as 3,800 micrograms per litre.

On 26 July 1985 I filmed tomatoes being harvested in the same area. I am not Paracelsus but I would rather Thomas Jukes (*Nature* 22 August, p.673) ate them than I did.

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Chauvinism in the air

SIR—The first sentence in your unsigned Opinion column of 15 August (p. 566) entitled "Geostationary blues" reads: "A World Administrative Radio Conference of the International Telecommunication Union must rank with anything on the subject of Canada as the surest way for newspapers to lose readers". This rather disingenuous statement seems surprising in the pages of the self-proclaimed "International Weekly Journal of Science". More so, since *Nature* has its headquarters in London: one might interpret the aside as the jealous rejoinder of the failing parent to the thriving child.

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