

Nature on the Attack

Unsupported allegation of funding misuse deemed "a fair account and a worthwhile story"

In a recent issue of *Nature* ([Volume 442, pp. 230-231, 20 July 2006](#)), Eugenie Samuel Reich reports S. Putterman's belief that Rusi Taleyarkhan, leader of the group that developed the [bubble fusion process](#), used DARPA funding for a particular experiment published in *Physical Review Letters*, implying, the article appears to suggest, 'misuse of federal dollars', a serious allegation. The [five points listed by Nature in support of this position](#) are consistent with a not unreasonable *alternative* to Putterman's view (see below), where the question of misuse of funds simply does not arise. This supports Taleyarkhan's assertion (quoted in the article), that Putterman's interpretation of how the work was funded is "off-base and wrong".

- Interestingly enough, Putterman has indicated (private communication) that he does not consider there has been any misuse of funds; and neither, to the best of my knowledge, is there any indication that either DARPA or Purdue have ever considered that this might have occurred.

Thus it seems that prior to the *Nature* article, while the research itself had come in for criticism in some quarters, there had never been any suggestion that research funds could have been misused. In the absence of any clear grounds on which such an allegation could have been supported, the *Nature* article did not state explicitly that funding misuse had taken place either, but its juxtaposition of the otherwise mysterious reference to misuse of federal dollars, and a box headed 'Where did the money go?', suggests nevertheless a clear intent to create in the reader's mind an impression that there had indeed been misuse of funds.

With this latest episode, *Nature's* interest in finding points with which to attack Taleyarkhan (this is by no means the first hostile article there has been in the journal) has far outstepped the bounds of credible journalism. Asked to provide justification for the serious allegations implicitly engineered in the article, the journal has come up so far only with the following non-response (**further correspondence with the journal can be found here: [link 1](#), [link 2](#)**):

"We stand by [our article] and believe it was a fair account of the matter and a worthwhile story to run -- the fate of \$250,000 of public money is clearly in the public interest".

As yet, there has been no retraction of the implicit allegation of funding misuse; seemingly, *Nature's* attitude is: "if it's a good story, who cares if there are problems with the details?". It is unusual, to say the least, for a journal such as *Nature* to take such a cavalier attitude to such matters.

Brian Josephson

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Putterman's flawed "case"

The following is the text of the published allegation and its inadequate support. The facts listed by Nature (see the following), in an accusatory box headed "Where did the money go?", do show that some people who have at some time worked on the PRL experiment (Taleyarkhan, Cho, Xu) have also at some time received DARPA funding. That would be unproblematic, and not at all the same as what Nature appears to want the reader to infer from the listed facts, viz. DARPA funding being illegitimately used for the PRL experiment.

Note also (in regard to item 4 of the list) that more than one experiment was demonstrated to the programme manager on the occasion alluded to in that item.

The DARPA grant awarded to Seth Putterman and Rusi Taleyarkhan for work on bubble fusion began in March 2005, and Taleyarkhan submitted a paper to *Physical Review Letters* (PRL) that September. Taleyarkhan insists no DARPA money was used for that work, but after checking accounts at Purdue University, where Taleyarkhan is based, Putterman believes otherwise (*Nature's list of supposedly supportive points, inadequate for the reasons indicated above, follows*):

- According to Purdue's accounts, the DARPA grant was billed for one-third of Taleyarkhan's salary from March until May 2005, all of it from June to August, and one-fifth of it from September to December.
- At least \$25,000 of the grant money was transferred to Taleyarkhan's former collaborator JaeSeon Cho at Oak Ridge National Laboratory in Tennessee. The PRL paper thanks Cho for his "in-depth advice and ongoing technical assistance and cross-checks".
- Taleyarkhan's postdoc, Yiban Xu, was a co-author on the PRL paper. The DARPA grant paid all of his salary for March and April 2005, and at least half of it from May until December. (Xu's salary was originally billed at 100% for part of this latter period, but a partial refund was made in March 2006.)
- The experiment described in the PRL paper is the same as the one Taleyarkhan demonstrated to his DARPA programme manager, William Coblenz, at a meeting on 1 March 2006 to assess progress of the DARPA-funded work.
- None of Taleyarkhan's other grants, according to a list provided by Purdue University, includes the word 'sonofusion' in the title.

