

letters

APS Council resolution on nuclear war

I was shocked by the emotionalism of the Guest Comment by George Keyworth in May (page 8). He accused the APS Council of "arrogant action" in releasing its resolution on nuclear war. However, that resolution mainly pulls together various statements made by officials of our government, including President Reagan. For example, it asks for a reduction in nuclear weapons rather than a freeze. I doubt that Keyworth would be so upset about the APS resolution if, in fact, the Reagan people really meant what they say about arms control. I predict that not only will there be no progress in arms control during Reagan's tenure, but the present backtracking on previous policy will persist—as examples, reneging on the complete test-ban agreement, refusal to ratify SALT II and boycott of talks on banning space weapons.

The part of Keyworth's Comment I found most frightening is his reference to "potential breakthrough in arms reductions that can result from President Reagan's belief that major reductions can best be negotiated from a position of strength." And then his assertion that "the APS resolution urges, instead, that we return to the 'let's-all-be-reasonable-fellows' approach that has led nowhere for decades." Any scientist with a minimal knowledge of world affairs would know that this is just not true. The US has always insisted on negotiating from a position of strength. For example, in 1969 the Soviets seemed willing to negotiate a true nuclear freeze, but President Nixon insisted on an even stronger position of strength, and so he delayed the talks for over a year until the US had completed its MIRV testing program. But, just as our side insists on negotiating from positions of strength, so does the other side. Then the Soviets dragged their heels until they also had successfully tested MIRV. As we all know, this grave mistake on the part of Nixon and Kissinger has led to a situation in which the side that strikes first in an attack against missile silos has a great numerical advantage. Everyone, even Kissinger, now agrees that this is a far

more dangerous situation than that which would have been achieved had a freeze been agreed upon before MIRV testing.

There is a similar opportunity now in 1983. So far neither side has tested what I regard as an effective land-based anti-satellite weapon. If both sides could quickly agree to ban all anti-satellite weapons *and their tests*, the world could be saved from an exorbitant and dangerous space-weapons race. However, if the Administration refuses to negotiate on these weapons until we have tested our more sophisticated land-based anti-satellite weapon, it will be too late. The Soviets will then drag their heels until they test an improved and effective satellite weapon. Then we will insist that any treaty to ban land-based space weapons be verifiable. But the Soviets will refuse the large amount of on-site inspection that we would require. It will be the same story all over again.

It was frightening for me to read Keyworth's Comment because it served as a reminder that we are at the mercy of inexperienced and short-sighted leaders. I still find it hard to believe that both Reagan and his science adviser have said in recent statements that the space race would be a good thing for mankind because it might result in a foolproof defense against all nuclear weapons. I might expect this from a movie star, but not from a physicist.

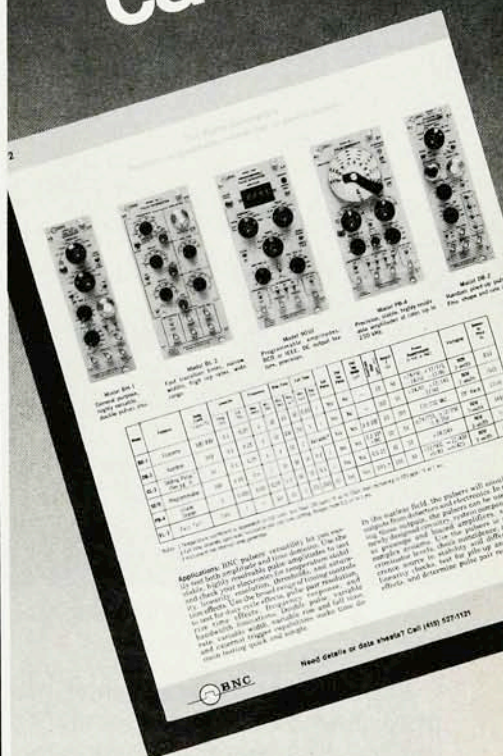
JAY OREAR
Cornell University
Ithaca, New York

5/83

The discussion between George Keyworth and Robert Marshak, concerning the Council's resolution on nuclear war, parallels a situation that I, as chairperson of the Technology and Society Division of the American Society of Mechanical Engineers, have faced with that society. In particular, my question to the society, still not resolved to my satisfaction, was "Who speaks for ASME?"

I took a similar position to Keyworth's when ASME came out in

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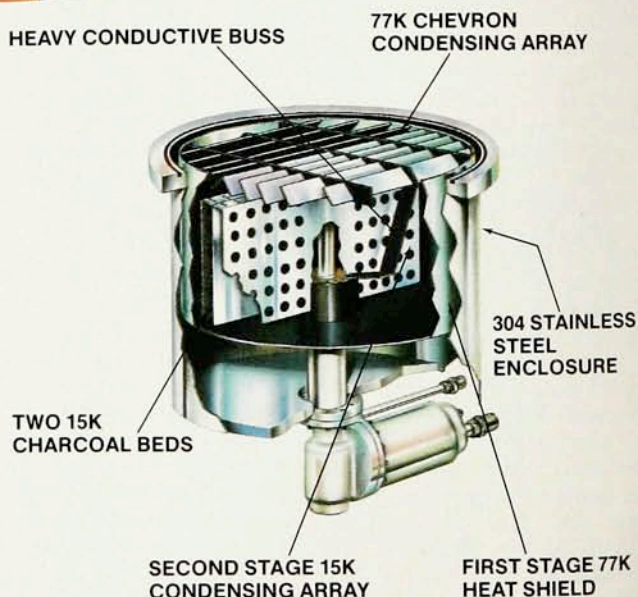
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support of Ann Gorsuch and John Hernandez for high positions within the Environmental Protection Agency. My argument at that time was that it was wrong for an organization to take a political stand unless it polled the membership and recorded its results; otherwise the position taken might only reflect the views of a select few but imply that the entire membership was in favor of this stand. As an alternative, I suggested to ASME that the authors or originators of the position would be identified in any statements made on the political statement. Incidentally, I was against the Gorsuch nomination. I felt ASME's position was not mine and the entire weight and prestige of the organization was used to support goals with which I did not agree. Perhaps ASME was influential in obtaining her nomination. At any rate, we all see what happened to both of these people supported by ASME and the results of their administration: ASME's reputation was not helped in any way by this, nor was the country by ASME's stand.

Well, I happen to agree with the APS position on nuclear arms. I get moral support in knowing that the prestige of a fine organization is also behind my point of view. Unfortunately, and this is part of Keyworth's argument, it is not the entire organization that is in support of the position. Probably many people in the Society object to the Council's stand and, conceivably, maybe this includes all but the few who drafted and supported the position. So, in this instance, to be consistent with my previous position, I strongly support Keyworth's stand—if only because the position of APS is not representative. I am a political activist and believe in taking stands on issues. I believe large organizations such as APS should indeed take stands. To do this I suggest the following: Either APS should state that the position of the drafters of the document, or the executive board, or the council and so on is such and such or say that x percent of the people polled support the position. The alternative is to remain silent. As I mentioned, I am in favor of everything but remaining silent (here I disagree with Keyworth), and I would prefer the former two options.

RICHARD J. PEPPIN
Rockville, Maryland

5/83

The Guest Comment by George Keyworth is a shocking document. Keyworth is not just another member of the APS; he is the most powerful scientist in America today. He holds the position previously held by such distinguished scientists as George Kis-

tiakowsky and Frank Press. He holds this position not as the result of any distinctive contributions to science but as a reward for his dedicated service to the Los Alamos nuclear-weapons factory. From this political position he has attacked some of America's most distinguished physicists in an insulting and threatening fashion.

Unfortunately, the phenomenon of scientists using positions of political power to attack first-rate scientists is all too common in history. The 24 February 1934 issue of *Nature* contains a letter from Johannes Stark, who had been appointed by the Nazis to be head of the Imperial Institute of Physics and Technology. The letter urges scientists to stick to research and stay out of politics. In particular, he warned physicists to avoid the controversial political issue of the changes in the German civil-service regulations. The German Physical Society followed Stark's advice, leading to the resignations of some of their leading foreign members. In his letter of resignation Sam Goudsmit wrote "I am disappointed in that the Gesellschaft has never protested as a whole against the bitter attacks upon some of its outstanding members."

The American Physical Society has the right and responsibility to speak out on the dangers of the accelerating nuclear arms race. I hope that, in spite of Keyworth's intimidation, the APS will continue to address this issue and indeed will issue more definitive statements than the present one. In spite of the increasing repression by the current administration, I urge all physicists to rally to the support of the APS and Marshak on this issue.

LINCOLN WOLFENSTEIN
Carnegie-Mellon University
Pittsburgh, Pennsylvania

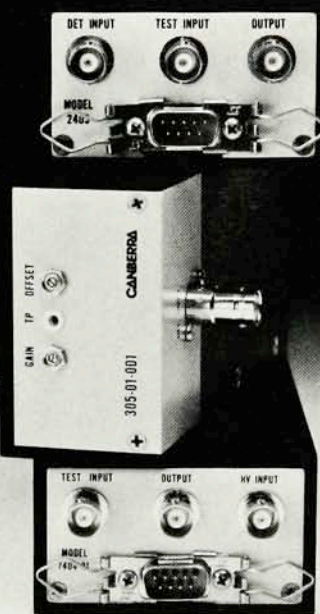
6/83

Please accept this letter as one member vote supporting the APS Council resolution on nuclear war, and supporting the Council's right to make such a resolution.

I consider it inappropriate for George Keyworth to label the scientific-social problem of nuclear war as political and then to declare it off-limits to scientists on the basis of his definition. Can you name a problem or area of activity that does not have a political dimension to it? A difficulty with our society is that although we live in a holistic gray world, cultural indoctrination compels us to polarize situations. We want things to be black or white, right or wrong, hawkish or dovish.

Many of us do not look upon the APS Council resolution on nuclear war, the call for a nuclear freeze and similar proclamations as prescriptions for peace or for arms reduction; they are notifications to our leaders that we

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would like to see serious negotiating. They are starting points.

The US has led in many weapon developments. These developments—the atomic bomb, the hydrogen bomb, MIRVed missiles and strategic cruise missiles—have not led to the Soviets rushing to the bargaining table; instead the Soviets rushed to their science laboratories and designed weapons to counter our leads. The neutron bomb, the MX and the exotic ABM proposals will also drive the Soviets to new weapon development with arms control as distant as ever.

I agree that we can only negotiate from a position of strength, but negotiations are more likely to occur under conditions of approximately equal strengths. We are unlikely to get meaningful negotiations from a position of superior strength. In the latter case, we will either not attain the superior strength, or we will not reach worthwhile negotiations.

FRANCIS J. JANKOWSKI
Wright State University
Dayton, Ohio

5/83

Even though I sympathize with the intent of the APS Council's resolution on nuclear war, I am dismayed by the Council's presumption of taking a clearly political stand, APS president Robert Marshak's protestations notwithstanding.

The stand taken in the resolution is political because it endorses a *particular* approach to disarmament. In my view, this approach can only postpone, and in no way expedite, meaningful disarmament. On the basis of bitter personal experience with two totalitarian regimes (the Nazi and the Soviet), I have come to realize that dictatorships understand only one language: that of resolute strength. In my view, significant disarmament can be achieved only when Soviet leaders realize that the arms race is no longer in their interest. I hold that they can be so convinced only by a steadfast stand on the part of the Free World. A spirit of Munich is a road to disaster, as it was in 1938. Mine is clearly a political stand to which I am entitled in this free country. Members of APS are entitled to their political views, and so are the Council members. However, the different segments of the APS membership cannot and should not expect to see their political views promulgated by APS.

For the human race to survive, each one of us has the moral obligation to do all we can to prevent nuclear war. I am sure the Council members acted in this spirit. Unfortunately, their approach, I strongly feel, is nearsighted. I agree with Academician Andrei Sakharov—

who, after all, knows the Soviet totalitarian intentions better than the APS Council—that the long-term solution for a stable and peaceful world lies in the spiritual and defensive strength of the West. Therefore I opt, as do most of my colleagues who know and understand dictatorships well, for a political approach different from that embodied in the Resolution. Let me stress that the ultimate aim is the same: *a peaceful world free of nuclear weapons*. But there is a genuine difference of opinion of how best to achieve it. In democratic societies such things are decided in the political arena and not on the forum of professional societies. This is why I view the one-sided political action taken by the APS Council as a presumptuous breach of confidence.

O. M. BILANIUK

5/83

Swarthmore, Pennsylvania

I disagree vehemently with the statement by George Keyworth.

I consider the issue of nuclear war the single most important problem the world has ever faced. The survival of mankind at large is at stake. It is ourselves, physicists and researchers, who have developed the nuclear weapons. It is ourselves, the scientists to whom the people in general look for guidance and advancement in the quality of life, who have condoned what the politicians have done with the discovery of the power of the atom. It has been long overdue for us to speak out and put life in proper perspective with our achievements and what has become of them.

The knowledge that has led to the development of modern nuclear weapons has not been applied to the advancement of life; it has rather put it in jeopardy. It is more than justified that we now profess this error and use our influence to correct the situation—and even if this is in contradiction to a membership poll way back in 1968!

Albert Einstein said in 1945, "The unleashed power of the atom has changed everything save our modes of thinking, and thus we drift toward unparalleled catastrophe." The APS Council resolution on nuclear war is a step in the direction toward the new mode of thinking Einstein talked about. More needs to come. If the "think tank" of the world can come to unity on the idea that war is obsolete, there is hope for a future of our planet.

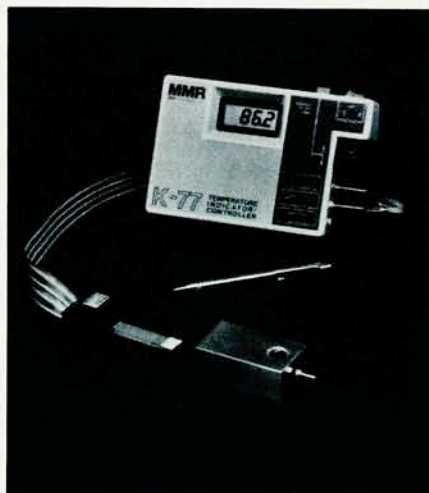
KLAUS HEINEMANN
Eloret Institute
Sunnyvale, California

5/83

George Keyworth makes much ado about the APS council venturing into the "political arena." I submit he is, to

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say the least, politically motivated himself in his "shocked" response. He makes, as so many do, statements that require sweeping assumptions to be stated as truths, for example, "... the Council's decision to endorse the resolution has moved APS directly into the political arena in direct contradiction to the membership's desire to maintain APS as a nonpolitical organization." First, APS has *not* moved directly into the political arena because taking a stand on a moral/technical/survival/political issue does not automatically make one a politician in the political arena. Second, there is no basis, as Robert Marshak points out in his response to the Keyworth Guest Comment, for the assumption that this resolution is in direct contradiction to the membership's desire to maintain APS as a non-political organization. The true situation appears, actually, to be the opposite of Keyworth's statement.

As for his statement concerning, "... this arrogant action of the council . . .," I submit that such characterization of a well-thought-out, nay, agonized-over, piece of work like the subject APS council resolution on nuclear war, is in itself indicative of his total lack of objectivity and thereby makes negligible the significance or worth of his opinion. It is unfortunate that President Reagan's science adviser is so completely a "company man" that all understanding of what the APS Council's resolution is trying to say is blatantly excluded from his comments.

The time is now for a clear, unbiased, intellectually honest approach to solving the problem of future survival of the human race. I have no assurance that such an effort now exists or will exist in the future; as Keyworth's comments demonstrate, politics get in the way.

ROBERT S. FLUM SR
Potomac, Maryland

6/83

George Keyworth writes that he was "shocked" to learn that the APS Council endorsed nuclear arms control. He was also, apparently, outraged that such a resolution was issued by the Council without the manifest sanction of the APS membership. Keyworth charges that the Council's action was "arrogant" and inappropriate inasmuch as it was *political*. My reading of the resolution, on the contrary, is that it proceeded from *moral*, *ethical* and *rational* imperatives that have well established historical roots in the physics community and that transcend any occasional politicization of the issues. As a member of APS, I wish to express

my vote of approval of the Council's action, and I wish to thank Robert Marshak for a calm and reasoned response to Keyworth's charges. I wish also to commend PHYSICS TODAY and the contributing authors for a most informative and valuable series of articles in the March issue on nuclear arms and warfare.

J. A. CAPE
San Rafael, California

6/83

I was very pleased to see the APS Council resolution on nuclear war. I very much appreciate the initiative of the APS leadership in this very important matter. The resolution, in my view, is entirely appropriate.

On the other hand, I was distressed to read the comment by George Keyworth, telling us about "the potential breakthroughs in arms reductions that can result from President Reagan's belief that major reductions can best be negotiated from a position of strength."

Please Mr. Keyworth, we've heard enough of that old crap!

JAMES W. DEER
Beaverton, Oregon

5/83

DOE enrichment plans

Because your news story "DOE selects separation process" (November, page 70) was kind enough to mention my name, the following comments may be of interest:

"No one we spoke to at DOE was able to tell us why ERAB's suggestions were not taken." I don't know either, but one possibility is that the distinguished panel had hopelessly damaged its own credibility by basing its conclusions on half a dozen tables of "Enrichment Strategies available to DOE" (quoted in *extenso* in *Nuclear Fuel*, November 1980). These tables assume that by the year 2000 DOE will be supplying enrichment services for either 250 GWe or 350 GWe of nuclear electric capacity. Those familiar with the arithmetic of nuclear power will know that these levels of capacity require levels of enrichment capacity of 25 and 35 million SWU/yr, respectively, or perhaps slightly more, depending on details. It is therefore a considerable surprise to find the panel using levels of enrichment capacity generally twice as large. In the first of their tables, for instance "Strategy favored by DOE advisers" for the more realistic 250 GWe case, end-of-the-century production reaches 47.8 million SWU/yr. This is an egregious error, and the other cases are also wrong, some worse, some not so far from reality. By using wrong arithmetic to inflate demand, the panel was able to justify a policy of continuing to