

F. A. S. NEWSLETTER

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to provide information and to
stimulate discussion

FAS STRATEGIC WEAPONS COMMITTEE RESPONDS TO AMERICAN SECURITY COUNCIL

On October 26, at a press conference in Washington, D.C., the Strategic Weapons Committee of the Federation rebutted grossly misleading statistics on the strategic arms race that had been widely distributed by the American Security Council. The committee is chaired by Council Member Dr. Herbert Scoville, Jr., former deputy Director of CIA and Assistant Director of ACDA. Its members include Council Member Morton H. Halperin, former Deputy Assistant Secretary of Defense for Arms Control and Policy Planning and FAS Vice Chairman Marvin L. Goldberg.

The American Security Council was established in 1955 to build a blacklist of "subversive" names; later it ran a radio program and directed a research center into Communist activity. On September 17, it began mailing 1.5 million letters charging that America was "number two" in strategic weapons and providing a liberal-conservative voting index on each Congressman and Senator based on ten national security issues "key" votes. (Three of these ten involved ABM.) The Council evidently raised approximately \$200,000 with a view to defeating liberal candidates. In some instances, White House counsel Charles Colson mailed out the brochure on White House stationery.

The Federation's response to the American Security Council's statistics received wide publicity across the country in press and television. It noted that the assertions of the Council were based on the "fallacious premise" that megatonnage rather than warheads was the most relevant measure of strategic power. The FAS committee asserted that the United States was "ahead, not behind, the Soviet Union by any important measure of strategic force effectiveness." It noted that the American Security Council's calculations were based on a "double standard," counting as strategic certain Soviet weapons without counting their American counterparts. The Council's statistics had a variety of errors in them as well.

Later that week, in conjunction with the reopening of SALT, the same committee released a background paper "Issues at SALT" and expressed the view that an agreement only on numbers of offensive weapons without important restrictions as to type would be a "sham". Under a quota system on offensive weapons, each side could increase the effectiveness, and change the mode of deployment, of weapons permitted. The committee urged agreement on MIRV, noted that on-site inspection was neither necessary nor agreeable to either side, and asked the United States to take serious steps toward an agreement precluding MIRV deployment.

"GREENING OF AMERICA" RAISES QUESTIONS FOR FAS

There is a potential revolution abroad in the land — a revolution of rising social expectations waiting for its chance. In most of the world, the expectations of the young revolve about living standards, standards well in excess of their society's past experience. But in the land of affluence, a small group of offspring of the middle-class have turned their attention to social mores; they are rejecting much that is phoney and frenetic in American life.

They propose what is in effect a cultural revolution — revolution by change in individual attitudes achieved through re-education by example. The first articulate spokesman for this counter-culture is Charles A. Reich, whose "Greening of America; How the Youth Revolution is trying to make America Livable" will surely be a best seller.

Reich, a professor of law at Yale University, distinguishes three levels of "consciousness."

Consciousness I accepted "self-repression as the essential concomitant of effort." It glorified hard work for oneself rather than for society and it accepted the "rat race." It failed to notice that the scale of economic and technological activity had destroyed its world. It did not notice that the individual was competing with a "system" not with other individuals. It failed to recognize that private production was not paying its costs — as in the pollution of streams by industry. It saw the ills of industrialism as moral problems — calling, for example, for harsh penalties and individual responsibility to curb highway accidents that are inevitable in a motorized society.

Consciousness II, formed in the first half of this century, reflected the values of an organizational society, but recognized the need for continued structural reform about which it was optimistic. It saw the need to organize labor, to attack corporate giants, to clean up slums, and to improve prisons. It sought public works, minimum wage, social security laws ensuring fair competition in business, and honesty in the securities market. According to Reich, this approach, typified by the New Deal, was bitterly hated by Consciousness I because it "intruded irrevocably upon the make-believe, problem-free world in which the pursuit of business gain and self-interest was imagined to be automatically beneficial to all of mankind, requiring of them no additional responsibility whatever."

Consciousness II believed in planning, rationality and control in the management of Government. In personal relations, it believed in a meritocracy of ability and accomplishment in which utility to the technological society was central to status. And its social activities, hobbies, eating

habits and conversation were guided by accepted notions of accepted "roles". Competent and knowledgeable, Consciousness II is sophisticated.

Consciousness III began in the mid-sixties produced by affluence and a "discrepancy between what could be and what is." Characterizing a fraternity of young people Consciousness III reflects revolt against the failures of liberal democratic reform and against the various social attitudes correlated with the previous two Consciousnesses. Consciousness III rejects status based on "excellence and comparative merit" and the subtle signs of deference and mastery that are associated with it; it emphasizes the "absolute worth" of "every self". Consciousness III takes a personal responsibility, and feels a personal concern, for others individually and for the social problems with which they are grappling. Deeply suspicious of logic, rationality, analysis and principles, it believes that "all experience has value." It rejects the rat race. It has noticed that most people "hate their work" and are trapped in a cycle of consuming for status's sake and working ever harder to get the wherewithal to do so.

Reich predicts and proposes "revolution by consciousness." On the one hand he sees us turning into two nations "the nation of the peace marchers and the nation of the headlights." Each will feed on the other to swell its ranks. How might the future ease these strains? People will begin to realize, he argues, that the Corporate State "possesses no mind" — its control is held by nobody. If individuals changed their attitudes toward the state, the state would be changed. Thus if consumers will not buy chrome, chrome cannot continue to be produced. If the employee turns his back on the standard institutional rewards, he will be freed to voice discontent about the goals of the institution in which he works. If the consumers become more interested in conservation than in technological programs, they can change the attitudes of their elected officials as well.

What is to be made of this? The cultural patterns of the counter-culture Reich describes, and the existence of this culture, pose both threat and promise. There is threat in the fact that the rate of growth of the counterculture is quite out of anyone's control. It was born in the disillusionment of Vietnam, and in the psychic liberation of a waning cold war. Any one of several serious shocks to our society could rapidly multiply the ranks of the counter-culture. The effect of such a revolution by consciousness would be quite unpredictable. Even Reich admits that Consciousness III is still, one might say, a point of view looking for a set of attitudes. It is evolving and, at the moment, reacting to its predecessors just as Consciousness II reacted to the simplistic perceptions of Consciousness I. Would most Consciousness III people want to work a little, or a lot, or as normal in a changed psychic environment or what? No one really knows. Would national repression result from — and be, in turn, the mid-wife of — expansion in numbers of Consciousness III? We don't know. And while we are rich and secure, we are not so rich and secure that everyone can stop minding the store.

On the other hand, there is promise in the spread of certain aspects of the Consciousness III vision. Urban Americans especially, are overly "uptight" — one does not have to be for a drug culture to want to stop it. The dissidents, and the blacks, are upstaged by society throughout their everyday life. One does not have to wear his hair long, although it may help, to see this. There is a feeling of alienation when close neighbors do not know each other, when cries for help go unheeded, and when whites flee to the suburbs, that

impoverishes our social life. We *have* stopped looking closely at one another.

Reich is right that those concerned with improving American society have focused with too great emphasis upon ills that can be cured by reforming political structure. We have begun to talk of the "quality of life" but even this formula refers usually to pollution of air and water and of the rest of the physical environment. America is sicker from loneliness than from filth.

Reich is right in noting that many of the ills which we do attack might be better resolved without attempting changes in structure or law. This is nothing wrong with the political and economic structure of this country that could not be fixed if its institutions stopped operating in such a mindless way. Corporations can be run in the public interest rather than in the narrow economic interest; they *would* be if the individuals running them felt that this was what was expected of them. Why not begin to expect it of them? Such expectations are far more effective than law and they may be easier to generate.

Reich is right in charging that the Consciousness II person has too long disclaimed personal responsibility for what his organization does or for what his society does. For scientists and engineers like ourselves, it is especially important to recognize that support for our causes is not enough. Whatever answers we may individually reach, each must constantly cultivate a conscience, and a sense of responsibility, that permits that conscience to function.

To those in less fortunate countries, this concern with our society must seem hypochondriac. The richest and freest large society on Earth, inhabited by individuals renowned for easy-going friendliness, is grappling with the need for future improvements.

But it is entirely in accord with our history, and our aspirations for America, to pioneer in establishing new freedoms from state power. A generation that grew up in the easy presumption that other nations were less moral than America, was largely humbled by Vietnam. There could be both renewed self-esteem, and renewed faith in country, to be gained from progress in a new direction.

Professor Reich's book challenges the Federation to put on its agenda the relation of man to himself, the relation of man to others, and the relation of man to his institution. For those concerned with the impact of science on society, these questions will take on a special, and an interesting, meaning. Write the Federation your views both on these issues and our responsibility to deal with them.

Jeremy J. Stone

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FEDERATION OCTOBER 26 STATEMENT ON AMERICAN SECURITY COUNCIL

The United States is ahead, not behind, the Soviet Union by any important measure of strategic force effectiveness. American strategic forces have never been stronger and they are rapidly increasing in capability at the present time.

The United States is not in any sense following a policy of "unilateral disarmament" — as charged by the American Security Council. "Operation Alert" says that "Since the Cuban missile crisis in 1962, the United States has been unilaterally disarming by cutting back on both numbers of strategic weapons systems and on deliverable megatonnage". In fact, we have today more than twice the number of strategic weapons systems we had in 1962.

That U.S. security is dependent on total megatonnage is basic to the American Security Council fears. This outmoded concept was discarded by U.S. military leaders many years ago. Numbers of warheads and bombs and their invulnerability, penetrability, and accuracy are much more significant criteria. In order to increase its overall effectiveness, the Strategic Air Command replaced its large multi-megaton bombs with several smaller bombs whose overall yield was less. Does the American Security Council charge the Strategic Air Command with "unilateral disarmament"?

The Joint Chiefs of Staff, as well as Secretary of Defense Laird and his two predecessors, have insisted on the replacement of single high yield warheads by multiple independently targetable warheads (MIRVs), whose overall yield decreased the gross megatonnage of our strategic force. As a direct result of these decisions, the United States is in process of increasing the total number of its deliverable warheads from about 2,000 to 7,000 by the mid 70's. The yield of each of these warheads will be at least several times as large as the bomb that destroyed Hiroshima. As then Deputy Secretary of Defense Paul H. Nitz testified in 1967, the introduction of these multiple warheads provide "much more effective" payloads by "every relevant criterion" of military effectiveness despite their overall lower megatonnage. Indeed, MIRVs increase strategic effectiveness so substantially that they are widely considered to have destabilizing effects. Limitations on MIRVs are a prime objective of arms control, and the Federation of American Scientists has supported this goal.

Contrary to the American Security Council statements, MIRVs do change the strategic balance and both sides are *not* "roughly comparable numberwise". Statements by Secretary Laird and Dr. John Foster confirm that the Soviet MIRV program lags far behind that of the United States — and it is getting further behind every day.

Not only is the American Security Council position built upon a fallacious premise — that more megatonnage means more security — but its information is frequently in error, is misleading, and is often based on a double standard. It appears designed primarily to scare or stampede the American public. For example, by listing Soviet delivery vehicles which cannot be used, or are not designed, for strategic attack on the United States and by failing to include at the same time similar U.S. delivery vehicles, such as those based on carriers or in Europe that can attack Soviet allies (and in many cases, Russia itself), the American Security Council Table gives a delivery vehicle lead to the U.S.S.R. In fact, the U.S. has an appreciable advantage (of about 2,260 to 1,668, as the attached table shows) in truly strategic delivery vehicles, i.e. those capable of attacking continental U.S. and Russia.

Even with regard to gross megatonnage, upon which the American Security Council erroneously puts such emphasis, the United States would be even or ahead if bomber payloads were included. The American Security Council total bypasses this fact by referring to bomber payloads as "variable".

As an example of attempts to scare the public, the American Security Council table gives the Soviets credit for having developed and probably deployed very high yield orbital bombardment systems; in fact they have never even tested such a system.

We have attached an authoritative table of U.S. and Soviet strategic forces that is based on Defense Department officially released information which may be used in place of the Operation Alert chart. A point by point analysis of the American Security Council paper is also appended. Normally the Defense Department would answer queries on such material. As far as we know, the Defense Department has refrained from comment upon Operation Alert. For this reason, the Federation of American Scientists is making this material available as a public service.

FEDERATION NOVEMBER 2 STATEMENT ON SALT

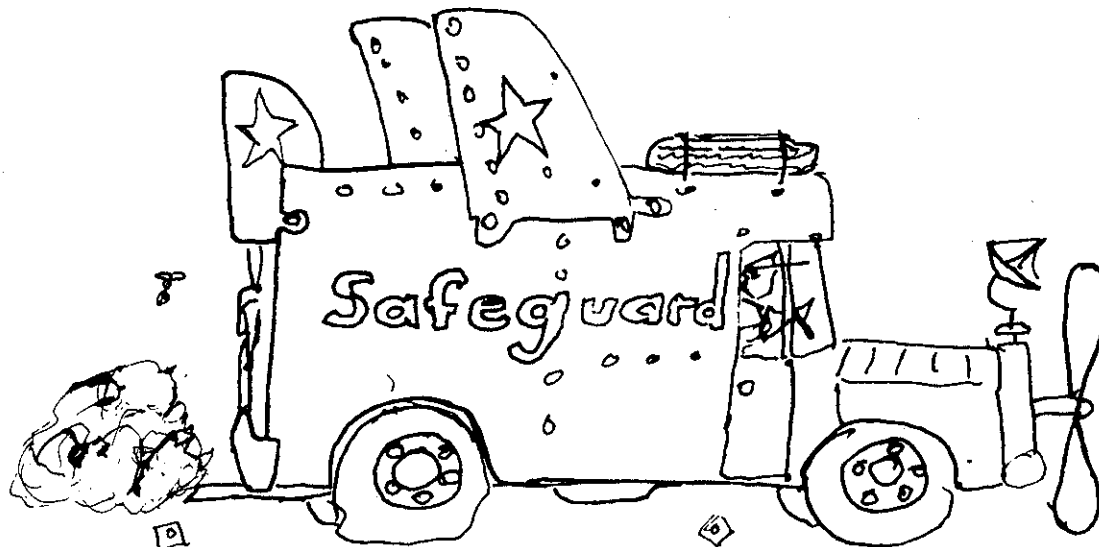
We are concerned that the Strategic Arms Limitations Talks (SALT) may produce a sham. Unless the talks succeed in halting the present de-stabilizing Russian and American build-ups, both nations will incur serious risks and suffer enormous waste of scarce resources. But as the talks reopen in Helsinki this week, there is reason to fear that they may become only an umbrella under which further expansion of both U.S. and Soviet strategic forces continue.

We support the Administration in seeking a complete ban on ABMs since this would stabilize the strategic arms race and conserve scarce U.S. resources. But we note reports that limitations on offensive systems might take the form only of an agreed ceiling on total numbers of missiles, or even on total numbers of missiles and aircraft combined, with few if any restrictions on the replacement of existing weapons by new and different models. Such an agreement would be a sham. It would legalize an accelerated arms race directed toward qualitative improvements and the deployment of ever more dangerous weapons. We consider it essential that any agreement include restrictions which effectively freeze the existing forces of both nations. Such an agreement might, for example, permit only such changes in weapons as did not affect the external configuration of the weapon or launcher.

We therefore urge the Administration to make vigorous efforts to achieve a comprehensive freeze agreement that precludes the wholesale replacement of existing weapons with more advanced versions. Such an agreement would be consonant with the Administration program of "negotiation not confrontation". The U.S. Senate has already expressed widespread bipartisan support for an agreement of this kind.

In particular, we urge both the United States and the Soviet Union to spare no efforts to reach agreement preventing the production, testing and deployment of MIRVs. While the Soviets have not yet tested MIRVs, continued Soviet deployment of SS-9s (and other offensive weapons) and U.S. progress in deployment of MIRV constitute an alarming escalation of the arms race. In seeking agreement on MIRV, we believe that U.S. demands for on-site inspection of MIRV deployment would be a disturbing indication of lack of serious intent. This is because any inspection procedures that could conceivably be agreed on *either* side would not materially assist in verifying such a ban and such procedures are not needed to protect U.S. security so long as MIRV testing is also halted.

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"Let me pose an analogy. Suppose we desperately need to fly. Should we build a truck because we have the parts on hand and it is the best we can do right now? Or should we design an airplane?"

Dr. Donald F. Hornig, The Presidential Science Adviser to President Johnson
 Commenting on the Safeguard ABM Before the Committee on Armed Services, May 19, 1970

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DADDARIO SCIENCE SUBCOMMITTEE RELEASES SCIENCE HEARINGS SUMMARY

The House of Representatives Subcommittee on Science, Research, and Development released a summary of its hearings from over 60 witnesses on science policy. The forthcoming newsletter will discuss these hearings in greater detail after they are released.

The Committee's fundamental recommendation was to urge the Administration and Congress to formulate a science policy. It urged a special task force to draft the policy. It suggested that the Office of Science and Technology could, with certain changes, become the focal point for coordinating Government science and technology activities. It proposed inaugurating a National Institutes of Research and Advanced Studies and an Office of Technology Assessment. It urged a "stable funding" procedure upon the Office of Management and Budget and five year projections of relevant trends.

Recommendations were made to insure better and more timely information upon which to base science policy and the responsibility for this information was to be housed in the Smithsonian Institute. The National Academies of Sciences and Engineering were to function as liaison between the national Government and the public in explaining the role of science and technology in promoting solutions for major problems of the day.

COMMITTEE ON PHYSICS SURPLUS PREPARES REPORT

An Economic Concerns Committee of the American Physical Society, chaired by Physics Professor Lee Grodzins of MIT will present the following conclusions to the American Physical Society Council.

The committee noted that a) weaker members of the society had lost positions b) that younger, less expensive members had been hired rather than more experienced ones c) that scientific groups had operated on a lower dollar per man expenditure and d) that as the downturn deepens, there have been wholesale layoffs. While Universities continue to expand their use of physicists at lower rates than heretofore, the non-university sector continues to contract their use; 100 to 300 fewer PhD physicists were employed last year. The employment position of new and experienced PhDs will

probably worsen and is not expected to improve in 1971.

Of 1,300 PhDs graduated since January 1970, 70 to 75% were absorbed, 10-15% were employed outside of physics, 10-15% left the country, 2% joined the armed services, and 3-5% are unemployed. The report warned that faculties of the most prestigious schools do not sufficiently appreciate the problems that their new PhDs will have "three to ten years later when trying to squeeze into a secure, long term position". Many of their graduates are in "post doctoral holding patterns".

The Economic Concerns Committee estimated that 700 to 1,000 experienced physicists had left the physics community as the new PhDs entered. Of these 200 each had left for the following three reasons: death and retirement; leaving the U.S.; and leaving physics. About 100 were unemployed and the situation of about 400 was unknown.

It was suggested that a growth in post-doctorals had rescued the new PhD situation but that inhouse research programs could not "long continue" to take up this burden. The faculty population in PhD granting institutions appeared to be "reaching a plateau". Areas such as high energy physics and nuclear physics are "both overstocked and not expanding". Research positions in industry are not expected to return to 1967 levels for some time.

The report noted that we "must" turn to traditional and new industries as well as to the 700 B.S. and M.S. colleges for new positions since the staffs of universities and national labs are saturated. While it could not estimate whether quality of new students was increasing or not, the number of entering physics graduate students was dropping.

The placement situation was called "demeaning" and "ineffective". The older PhDs especially were disadvantaged by the absence of an effective placement method.

The Committee concluded that there was a PhD surplus at this time, possibly would be one for "some time to come". But it was not persuaded that there are "yet too many PhDs for a more normal economy". While educational institutions and many individual disciplines are saturating, the Committee felt that there would not be an oversupply of PhD physicists if constant dollar funding for science had been increasing by 4% a year.

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FAS, founded in 1946, is a national organization of natural and behavioral scientists, engineers and non-scientists concerned with the impact of science on national and world affairs.

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Symposium on:

The PhD SURPLUS

"TRENDS FOR THE 1970's"

Dr. ALLAN M. CARTER
CANCELLOR, NEW YORK UNIVERSITY

PANEL DISCUSSION

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ANN MEETING
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PRIVACY AND FEDERAL QUESTIONNAIRES

A review of recently released hearings on Federal questionnaires by Senator Sam J. Ervin, Jr., (D-North Carolina), Chairman of the Senate subcommittee on Constitutional Rights, suggests at least one important principle. The right of individuals to know whether Government forms sent to them are "mandatory" or "voluntary" is being ludicrously abused by the Government. The following testimony is revealing:

Senator Ervin. The Census Bureau sends out forms that are not required to be answered. . . . It does not advise the people to whom the questionnaire is sent that it is voluntary and does not have to be answered. In addition to giving them no warning about that, it sends a certified letter, sometimes two certified letters; then it has these people in some cases called up by telephone. Now, is that not a species of coercion when you get down to fundamental principles?

Mr. Chartener. . . . The wording deliberately has been rather subtle in its form. We never use the word "mandatory" on a questionnaire. Instead, people will be told that "your answer is required by law." In other cases they may be told that a survey is authorized by law or it is important to your Government or something of that sort.

Now, the followup procedure, the certified letter is used not for purposes of coercion but rather in order to verify the correctness of an address. . . .

Senator Ervin: Well, do you not agree with me that such a procedure is designed to implant in the mind of the recipient of these questionnaires the impression that he is required by law to answer them?

Mr. Chartener. If it is a questionnaire that he is required by law, if it is a mandatory questionnaire, that would be the case. In other instances the repeated mailings which may go up to five or may involve telephone calls or even a personal call are simply a means of emphasizing the importance that the Government feels in getting this response.

[pg. 250-251; Privacy, the Census, and Federal Questionnaires, Hearings before Senate Subcommittee on Constitutional Rights, April, 1969]

Mr. William H. Chartener, Assistant Secretary of Commerce for Economic Affairs emphasized that the Bureau of the Census had only prosecuted two persons for non-compliance.

But it is evident that large numbers of persons have filled out questionnaires under the complete misapprehension that the forms were mandatory.

As a matter of public policy, it seems that citizens should be left in no uncertainty about their rights. The Government should not follow a policy of systematically misleading citizens about their legal obligations. Questionnaires of sufficient importance, and whose data requirements make it necessary, could be labeled "mandatory" and the rest could be clearly labeled "voluntary".

The Federation would welcome comments from members on this conclusion with a view to establishing an FAS position that might be communicated to the relevant Government officials.

PRESIDENT PROPOSES INTERNATIONAL DEVELOPMENT INSTITUTE

On September 15, the President proposed to Congress a complete "overhaul" of U.S. foreign assistance operation emphasizing multilateral institutions and the creation of two new institutions: a U.S. International Development Corporation and a U.S. International Development Institute. The latter is proposed to "bring U.S. science and technology to bear on problems of development." FAS will watch this proposal with interest.

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