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ACTION: USMission GENEVA TODIS 1502

INFO: USEmbassy PARIS TOPOL 25

REF DISTO 1915

1. Following talking points may be useful in dealing with subject Reftel. Believe Benjamin has available in Geneva information, with exception of Hitch letter, to expand into detailed exposition. Hitch letter pouched today. However, unless ENDC discussion focuses on overkill arguments, we question advisability major statement this subject and suggest that US arguments could probably be made more effectively in private conversations.

2. Overkill theories are fallacious on following five counts:
a. Our national policy is not to initiate war by striking first. US strategic forces must be designed, therefore, to absorb enemy first strike and survive with sufficient forces to retaliate against enemy military forces and war-making capacity in effort to limit further damage to the US and its allies. Overkill theorists seldom recognize that forces lost in absorbing first strike would not be available to inflict damage.

ACDA/WEC:IRichards:Gen. Dean
/IR:WAHayle:aow

Telegraphic transmission and
classification approved by:

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DOD/ISA-Mr. Barber
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ACDA/DD-Mr. Fisher (in draft)

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EO 13292, Sec 3.4
By *chm/g* NARA, Date 3-23-99

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b. Overkill hypothesis assumes US nuclear capability is designed only to destroy enemy cities. Based on this erroneous assumption overkill theorists compute theoretical requirements to destroy given number of cities under optimum conditions and assume that any capability beyond their computed requirement is excess. This simply not true because US strategy is based on desirability of flexible response.

c. Overkill critics, often academic strategists applying mathematical formulae, seldom recognize extent and significance of degradation factors to residual forces: malfunctions, losses to enemy defenses, inaccuracies of predicted CEPs and damage expectancy.

d. Critics of an alleged overkill capability tend to overlook need for US to design its general defense posture to meet threats from more than any one nation. Flexibility of defensive war plans must foresee availability of forces to deal with such additional target complexes depending on evolution of hostilities.

e. In private discussions with appropriate Delegations you may add that US strategy visualizes prospect that a war might be terminated short of all-out exchange of nuclear weapons by both sides. In other words, conceivable that the power emerging with clear

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superiority at end of initial nuclear exchange might be able successfully terminate hostilities without exacting further damage on enemy. Therefore, US would not salvo its entire nuclear capability against an enemy but would withhold forces for purposes of bargaining. Overkill theorists seldom acknowledge numbers required for this purpose.

3. On other hand, requirements for stated Soviet countercity strategy less affected by these factors. Large US population centers more vulnerable, easier to target, attack and destroy than smaller, protected Soviet ICBMs. Therefore, Soviets can accept smaller number missiles with larger yields to fulfill strategic requirements, thereby permitting them to devote larger proportion of military resources to development of other military means.

4. Concept of Gromyko proposal would reduce to parity, presumably in numbers, US and USSR ICBM capabilities. Unacceptable for following reasons:

a. Balance is not determined by numbers alone, but must include differences of yield, variations in target systems such as concentrations within industrial and population centers, and total numbers of targets necessary to be attacked. Refer USDel position 165th Plenary.

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b. Implicit in Soviet nuclear umbrella concept is that it seeks to consider strategic nuclear component of military power in isolation from total complex of military power. SOVDEL stated that any percentage basis for reduction is unacceptable because process of disarming must not leave big threat, presumably numbers of ICBMs, hanging over head of Soviet Union. This reasoning ignores Soviet superiority in numbers in IRBMs and MRBMs. If these weapons are considered in the balance of NDVs, percentage reduction of NDVs may not be disadvantageous to Soviet Union, and would not significantly change existing balance. Fact that Soviet IRBMs and MRBMs will not reach US is irrelevant; they are significant part of total Soviet nuclear threat to the West, and US considers security of West as indivisible.

5. Question possible difference numbers strategic delivery systems could be clarified if USSR would agree publish figures on totals its strategic delivery systems, as US has revealed publicly. If Soviets did publish their figures, would probably reveal US superiority in ICBMs, but addition of IRBMs and MRBMs to Soviet forces would probably equate to rough balance and demonstrate soundness US position favoring percentage cuts.

6. Fact that US cannot accept proposal to reduce NDVs to small

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numbers in first stage of disarmament does not mean US wishes to maintain large nuclear arsenal indefinitely. It has proposed, in Outline Treaty on General and Complete Disarmament, elimination of all offensive armaments in balanced, phased, safeguarded process. These conditions are, however, critical. An equitable disarmament proposal should envisage simultaneous reductions of all armaments, and US cannot entertain proposal that it accept principle of drastic reduction of its nuclear deterrent before even entering discussion of reduction of those forces and armaments of other powers which would then constitute major threat to world security.

7. If Soviet Union insists upon discussing its QTE nuclear umbrella UNQTE concept, it must be prepared to answer number of questions implicit in security problems posed for the West. What numbers of nuclear delivery vehicles does Soviet Union envisage as constituting QTE nuclear umbrella UNQTE ? Exactly what time phasing does Soviet Union propose? What steps would Soviet Union be prepared to take in the simultaneous reduction of other armaments in order to maintain existing balance throughout the disarmament process? What changes are they prepared to make in their GCD plan to speed the establishment of IDO and peacekeeping commensurate with accelerated

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process NDV elimination they have proposed? What degree of verification, including especially verification of remainders, would the Soviet Union be willing to accept in the event of such major disarmament?

8. Rejection of overkill arguments should not RPT not preclude serious discussion of working group on reduction of NDVs. In fact, controversy surrounding overkill arguments and foregoing questions on nuclear umbrella supports requirement for such a group.

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APR 10 1964

Mr. John T. Conway
Executive Director
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Conway:

In response to the joint request of Senator Pastore and Mr. Hollifield in their letter of February 18, 1964 to Dr. Seaborg, attached is a statement on "overkill" for your use which has been cleared by the Department of Defense and the Atomic Energy Commission.

Sincerely yours,

(signed) Delmar L. Crowson

Delmar L. Crowson
Brigadier General, USAF
Director of Military Application

Attachment:
Statement on "overkill"

2a

The U.S. Nuclear Superiority - In reporting to the Armed Services Committee in January 1962, the Secretary of Defense stated that "there is no question but that today our Strategic Retaliatory Forces are fully capable of destroying the Soviet target system, even after absorbing an initial surprise attack." Further, on August 13, 1963, before the Senate Foreign Relations Committee, the Secretary of Defense stated "that the United States has nuclear superiority. We are determined to maintain that superiority. In order to achieve it, we maintain a total number of nuclear warheads, tactical as well as strategic, in the tens of thousands." This nuclear superiority exists today and will continue to be maintained.

Since World War II the U.S. Armed Forces have developed strategic, tactical, air defense, and anti-submarine weapons systems capable of delivering the nuclear warheads. The equipping, training, and support of the Armed Forces that may be called upon to deliver the nuclear weapons has been a task of enormous complexity.

The nuclear warheads necessary to arm these systems were developed and produced by the AEC.

It is interesting to note that as a result of this combined AEC-DOD nuclear effort the question seemingly asked most frequently at this time is not "are these forces adequate to deter aggression," but rather "has the U.S. succeeded too well and has over-built and over-developed to the extent of 'overkilling' its targets."

The U.S. Nuclear Weapons Stockpile - At the heart of this matter is the U.S. stockpile of nuclear weapons. Because almost everything about that stockpile has been shrouded by secrecy, it is difficult for individuals not having access to the classified information to thoroughly understand the evolution and present status of the U.S. nuclear stockpile. For example, there is the belief that nuclear weapons are produced and simply added to the stockpile, thus ever increasing its numbers and over-all yield. This is simply not true. What has happened is that warheads and bombs have been produced to meet changing military needs. As weapons systems have been replaced their associated nuclear warheads have also been replaced. New and improved nuclear weapons have been developed and have replaced older versions. Thus, over the years new weapons have been placed into the stockpile to meet military needs and old weapons have been replaced as they become obsolete.

The exact composition of this stockpile must for purposes of National security remain classified. Nevertheless, the development and the nature of the stockpile can be discussed and this may clarify some misunderstandings that now exist.

The Early AEC Capability - First of all it must be understood that at the end of World War II, the U.S. did not have a capability to produce nuclear weapons in any quantity. What the U.S. did have was

the capability of "hand making" fission bombs. After its creation, the AEC had as its prime objective the design and building of the vast integrated industrial complex required to meet the U.S. needs for nuclear weapons.

Involved in the establishment of this industrial complex was the need to provide sources of raw materials, the construction of plants capable of producing fissionable materials and fabrication of the nuclear weapons themselves. In addition, laboratories capable of designing and developing new nuclear weapons had to be created and areas suitable for their testing made available.

The achievement of this industrial complex over the years has been a matter of National urgency. Generally speaking, about 75 per cent of the total AEC budget has in one way or another contributed to the nuclear weapons program. This percentage is considerably lower today.

During the early 50's, while this complex was being built, nuclear weapons could not be produced fast enough to meet the military needs -- the first requirement being arming of the Strategic Air Command. The U.S. possessed the strategic aircraft and hence had an early capability of delivery of nuclear bombs. By 1955 the AEC had achieved substantial increases in its nuclear materials production capability and about this time a series of significant design improvements were made which reduced

the amount of nuclear material required to be placed in the nuclear weapons. This technical development further increased the AEC's capabilities to produce nuclear weapons and the AEC was able to begin production of significant quantities of tactical weapons, as well as meet the needs of the Strategic Air Command.

The Question of Total Yield of the U.S. Stockpile - Since the first nuclear weapons were for strategic aircraft delivery, there was a rapid build-up in the total megatonnage available in the nuclear stockpile. The peak megatonnage of the U.S. stockpile was reached in 1960. After 1960 there was a rapid and significant drop-off of total megatonnage in the stockpile. This drop in total megatonnage was the result of the modernizing of the stockpile. New weapons of greater flexibility were designed and missile systems with nuclear warheads began to take their place in the American arsenal.

During the past few years, large numbers of missile systems have been activated and the AEC has made significant gains in the yields of the warheads it provides for the TITAN, POLARIS, and MINUTEMAN missiles. As a result the stockpile megatonnage is again at a somewhat high level although remaining well below the 1960 high. After 1964 current plans are for a slow, steady decrease in total yield because of planned retirements of the balance of older high yield aircraft delivered TN weapons.

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The U.S. Stockpile Currently - So one can see that over the past years the initial effort was to build the integrated complex to produce nuclear weapons, then to meet strategic needs, followed by the up dating of those required for strategic forces, and lastly, to meet the specific needs of ground support, air defense, and anti-submarine uses. This has resulted in a stockpile of tens of thousands of weapons, the vast majority for reasons of world-wide deployment and specific defense operations being low yield tactical, air defense, or anti-submarine. The total yield of the stockpile reached a peak in 1960, is much lower in 1964, and will decrease even further as older high yield aircraft delivered TN bombs continue to be retired.

The Future Outlook - The U.S. has achieved a military position in which it has numbers of nuclear weapons in its stockpile adequate to maintain its unquestioned nuclear superiority. This fact has resulted in the decisions to reduce the fissionable materials production facilities at Oak Ridge, Savannah River, and Hanford. In addition, other facilities directly relating to the fabrication of nuclear weapons will undoubtedly

be closed in the coming months. Nevertheless, it will be necessary for the AEC to continue its production of new nuclear weapons, not only because the weapons systems used to deliver the nuclear warheads change, but more importantly, because it is necessary to continue to modernize the stockpile assuring its reliability and invulnerability to enemy countermeasures.

This program would obviously give the U.S. greater flexibility in the use of weapons through certainty of some effects and elimination of undesirable side effects. Therefore, although expenditures can be expected to continue in the weapons program, the effect will be to improve and modernize the stockpile rather than significantly increasing the numbers of weapons, and, indeed, in some years there will be an overall decrease of weapons as large quantities of older weapons are retired. Furthermore, as we have stated, this will not result in any increase in the megatonnage, but, rather under the current military plans, the future will see a decrease in the total megatonnage.

Summary - Thus, for almost two decades the U.S. has maintained its nuclear weapons superiority and the objective now is to assure the continuation of that superiority. The maintenance of that superiority will not depend on ever increasing numbers of weapons or increasing stockpile yield, but on continued improvements in weapons effectiveness. Over the coming years, we will see continued expenditures in the AEC laboratories to assure the latest in technical progress. Further, AEC

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3
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*Betty -
Please file with
Disarmament Studies*

ret to Charles Johnson

A RESPONSE TO PROFESSOR MELMAN
AND "OVERKILL"

Research and Analysis Division
Office, Administrative
Assistant to the Secretary of
the Air Force
March 2, 1964

Prepared by:
Dr. Murray Green

A RESPONSE TO PROFESSOR MELMAN AND "OVERKILL"

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A RESPONSE TO PROFESSOR MELMAN AND "OVERKILL"

Summary Analysis

A. INTRODUCTION

Seymour Melman, Professor of Industrial Engineering at Columbia University, has been traveling about lecturing on national defense, as a man who has been consulted on these questions by Congressmen and high officials, including even the President. Our purpose here is not to inquire into the Professor's view of his role, but into the accuracy of the theories he has been so energetically attempting to promote.

Professor Melman argues that the U.S. possessed in early 1963 3,400 strategic delivery weapons with a yield of 22,000 MT. Even allowing for a 30%-50% attrition, he contends, the U.S. delivery capability ranges from an overkill of 125 times for every one of 2,000 major cities around the globe, to a 1,250 overkill factor for each of 140 cities in the USSR. Consequently, no further increases in strategic systems are necessary. In fact, radical force reductions can be made.

Professor Melman's thesis rests on two bases: (1) A statement by Dr. Jerome B. Wiesner in 1960 quoting "independent" Army-Navy studies supporting a minimum deterrence requirement of 200 "relatively invulnerable" missiles. Wiesner's assertion was in turn distilled from congressional testimony of General

Taylor, then Army Chief of Staff, and Admiral Burke, then CNO.

(2) Ralph Lapp's "Kill and Overkill" thesis. The physicist turned political scientist first developed the idea of multiple saturation of a target complex with a nuclear "overkill".

Melman asks whether annual defense budgets in excess of \$50 billion have any more real military meaning. Why must we research more sophisticated means of killing an enemy if this objective can be attained quite handily with present weapons?

Melman has proposed two alternative budgets: (1) To maintain the present forces by cutting \$20 billion, principally from procurement and R&D; and (2) a "Finite Deterrent" which cuts procurement from \$16.7 billion to \$1 billion and eliminates R&D. Basic research is to be assigned to the NSF, "where it belongs."

The overkill group has received polite hearings in 40 Congressional offices. Senator George McGovern has called for defense cutbacks on the floor of the Senate in words suggesting the persuasiveness of the Melman arguments. Then, there is a potential political alignment: civil rights advocates who demand Federal expenditures on housing, schools and jobs; and the overkillers who know where such monies are forthcoming.

B. OVERKILL - "MELMAN'S MATHEMATICS"

1. U. S. Strategic Forces

Melman has taken gross liberties with his sources, the Congressional Record, and a study prepared by the Institute of Strategic Studies in London. He computed for the U.S. between 900 and 940 ICBMs in early 1963 when the actual strength was more like one-third that. He failed to take into account that 600 B-47s @ 10 MT per payload (his figures) are planned to be phased out of the inventory. He made no allowances for the B-52 and B-58 force in "soft" configurations which reduced the assured second strike capability to somewhat less than half of his calculation. Moreover, he attributed to them multi-megaton payloads nowhere supported in his documentation. His Navy strategic aircraft figures appear vastly overstated because he failed to account for obvious major attritional or operational factors.

2. Soviet Strategic Capabilities

Melman's tabulation of Soviet strategic weapons shows no greater regard for facts. Moreover, he computes odd totals, e.g., a range of "2,385 to 2,485" Soviet delivery vehicles

reflecting a total yield from "23,975 to 24,075" MT. These figures imply to the casual reader some close head-counting. Instead, they are unsupported, and in some cases, insupportable.

C. OVERKILL - CONCEPTUAL

1. The "Hiroshima Equivalent"

The yardstick of 100,000 deaths per 20 KT is worthless to judge casualties in a modern nuclear war because it fails to consider that Hiroshima was not prepared for such attack, either in its physical structure or in the alert status of its citizenry.

For the equivalent to be applicable, it would be necessary to break the 22,000 MT U.S. nuclear stockpile (Melman's figures) into 1.1 million separate packages, if that many targets could be found for a like number of delivery vehicles. Melman says only one total kill is actually needed. On this basis, (using Melman's figures) the U.S. needs but 2 B-52s, each to carry one 20 MT weapon. 40 MT would dispose of 200,000,000 people (the present population of the U.S.S.R.) at the Hiroshima equivalent rate of 100,000 people per each 20 KT.

One may ask: why not the "Nagasaki equivalent"? The second atomic bomb exploded in war caused half the casualties although it was far more powerful than the Hiroshima weapon. The "Nagasaki equivalent" yardstick is equally valid, but it would cut Melman's figures by 2/3, or more.

2. vs. Technology

To assume that a finite number of Minutemen and Polaris missiles would indefinitely deter an enemy is to deny some fundamentals in the human experience. The history of mankind records a succession of military breakthroughs - the shell to pierce all armor, and the armor guaranteed to stop all shells. Some classic examples of "ultimate" weapons: Alfred Nobel's dynamite was to make war so horrible as to discourage nations from resorting to it. A decade later, Dr. J. H. McLean's "Impregnable Fortress" was to discourage war by inhibiting attack.

The deadly serious game of technological leapfrog in 1964 requires that our Communist adversaries solve the military problems posed by our mixed strategic force. Inevitably and progressively, they will solve them, just as the ICBM has in the past five years been reduced from an "ultimate" weapon to a cost-effectiveness problem.

We cannot afford to curtail R&D if only in painful recollection of Sputnik. It took a costly six-year program to catch up with the U.S.S.R. in space research. We also cannot accept a buckshot Melman assumption that the hundreds of thousands of scientists now in weapons research "are the single most dangerous technological factor on the military scene." R&D is only the servant of political leadership whose motives have a much more direct cause-and-effect relationship to

peace or war.

Much less than cutting back on R&D, Secretary McNamara recently said that technology may require major new expenditures. Over 20 percent of the Defense Department's R&D money is being spent on space research. Who can say what the military requirement in space shall be in 1970? Certainly not Professor Melman!

3. Targeting Cities

Melman's "relatively invulnerable deterrent of 200 strategic missiles" provides no margin for additional capability, if deterrence should fail. The U.S. could make no substantial response to a lesser provocation for fear that escalation would condemn our own people to death. Thus, the credibility of Melman's countervalue doctrine is like threatening to wire a stick of dynamite to the doorbell to keep the kids away on Halloween.

4. The Future of the Manned Bomber

By selected quotations Melman conveys the idea that Secretary McNamara regards SAC bombers as obsolete. He omitted the Secretary's firm conclusion cited from the testimony "that we will have a use for our manned bomber force beyond fiscal 1968."

5. Political Credibility

A countervalue force increases the doubts among our allies - e.g., de Gaulle - that we would use our nuclear force to defend Europe.

6. Economic Tradeoffs for National Defense

Melman and associates zestfully imagine uses that could be made of defense funds for urban renewal, education, hospitals, etc. To compare the cost of B-52s with the "School Lunch Program" is to convey "the sense of realism" which Melman says is lacking in defense spending. The comparison, however, is much like the man who lives in a dangerous world and must take out heavy insurance, then muses over what he would have done with the premiums if he didn't have to take out insurance.

D. DISARMAMENT

1. Industrialize The World With Freedom

If we used our reserve industrial capacity to help other nations, the U.S.S.R. would "be compelled to seek disarmament in order to compete in a peace race."

2. Plan for Joint Disarmament

This plan is centrally based on "inspection by the people". On the basis of some Gallup-type polls, people were

asked whether they would be prepared to report their own countrymen who might be violating a disarmament agreement to an international police agency. There are some curious statistics, but no one knows whether the Communist hierarchy would permit the Russian people to participate in popular inspection. Melman, intoxicated by the exuberance of his own verbosity, claims to have informed opinions that the Soviet people would welcome participation in this program if their leaders were required - he didn't say by whom - to cooperate. As a first stage of disarmament, close all military R&D establishments. Melman also says: ". . .the sooner missile production is stopped, the safer we all are." National missile arsenals should not exceed 50 ICBMs on each side.

3. Unilateral Initiatives

When the U.S.S.R. announced resumption of nuclear testing in August 1961, the U.S. should have made a response other than resumption of our own testing. We should have appealed to all governments and peoples, especially in the U.S.S.R., to call mass meetings on a Sunday noon at every town hall to "protest by silent assembly". By not calling upon the moral consciences of all peoples, the U.S. foreign policy, "long in conservative hands, has strengthened a conservative counter-reaction in Soviet society and policy. . ."

Melman expresses support of Professor Charles E. Osgood, the father of the unilateral initiatives, who "proposes a deliberate 'peace offensive' designed to induce reciprocation by an enemy. . ."

E. MELMAN - THE MILITARY ANALYST

1. The Danger of Accidental Nuclear War

Melman uses an incident involving the BMEWS network in October 1960 to recount what he describes as a near miss nuclear holocaust. This incident was officially exposed and repudiated, yet he says it could have led to the ultimate confrontation. From this springboard is launched a further speculation that there have been "about 50 accidents involving nuclear weapons in U.S. missiles and aircraft from 1945 to mid-1960." Even Ralph Lapp has conceded that there have been no accidents "involving any significant release of nuclear energy" and that our safeguards and safety mechanisms "have worked."

2. A "Policy Toward Cuba"

The Professor sharply disagreed with President Kennedy's enunciated policy of October 22, 1962, which persuaded Mr. Khrushchev to withdraw his missiles from Cuba. Melman thought the matter should have been "immediately" referred to the U.N. to send in a police unit to supervise disengagement by Soviet

and American forces. He blamed the rise of Communism in Cuba on U.S. support for the reactionary Batista regime, and urged a political exchange of Soviet missile bases in Cuba for American missiles "close to Soviet territory", in Turkey, Pakistan and West Germany.

F. PERSONAL BACKGROUND

Modest military background consisting of about 1½ years of duty in the Z.I. in 1942-43 and a medical discharge in October 1943.

G. CONCLUSION

A recent syndicated column associated Melman with "ban-the-bomb" and the "radical pacifism". Melman has in turn charged the authors with character assassination using "crude epithets" instead of "coming to grips" with his ideas. In this analysis, we have come to grips with Professor Melman's ideas. We are led to a conclusion that the offending column did hardly misrepresent the position of Melman. If the "crude epithets" fit, then the Professor must bear them.

Professor Melman, a professional economist, predicted for the military-industrial complex "peace jitter" and a sharp decline on Wall Street if we should ever reach a test ban agreement

with the USSR. This prediction was not borne out. In September 1963, the stock market actually rose while the Senate debated and ratified the agreement with the Soviet Union.

In his "State of the Union" address on January 8, 1964 President Johnson announced a cutback of production of nuclear bomb materials. Overkill theorists may well see in this decision a vindication of their concept. This is not at all the case. Stockpiling is not to be halted, nor the nuclear arsenal dismantled. It simply will not grow at the past rate. Moreover, the need for modernizing the force and a high level of R&D to insure the future penetration capability of that stockpile is as great as ever, while the basic inadequacy of Melman's "relatively invulnerable deterrent" which could be buried in the ocean or in a silo is unchanged.

A RESPONSE TO PROFESSOR MELMAN AND "OVERKILL"

A. INTRODUCTION

1. The Problem

On December 4, 1963, a persistent Professor from Columbia University gained entree to the White House. Seymour Melman has been traveling about lecturing on national defense, as a man who has been consulted on these questions by Congressmen and high officials, including even the President. Our purpose here is not to inquire into the Professor's view of his role, but into the accuracy of the theories he has been so energetically attempting to promote. For example, he has held out to President Johnson engaging possibilities of fulfilling long-neglected social needs with the money to be pruned from the Army, Navy, Air Force and A.E.C. budgets.¹

Seymour Melman, an Associate Professor of industrial economics, has for the past year argued on every public forum that would pay him heed that our military capability has gone "beyond all reasonable levels." In his latest book, he purports to show that the U.S. Air Force and U.S. Navy can muster about 3,400 major nuclear weapons delivery vehicles competent to deliver the equivalent of 22 billion tons of TNT. On the basis of this capability:

¹Rowland Evans and Robert Novak, New York Herald Tribune, December 18, 1963

a) Even allowing for a 30 percent attrition of delivery systems, the U.S. has an overkill capacity of 125 times for each of 2,000 major cities in the entire world;

b) Within the Sino-Soviet bloc, allowing for the same 30 percent attrition of delivery systems, the U.S. has an overkill capacity for each of the 370 major cities behind the Iron and Bamboo Curtains by a factor of 500 times;

c) Within the U.S.S.R. itself, even allowing for a more generous attrition of 50 percent of the carriers, the overkill capacity is 1,250 times for each of 140 major cities having populations in excess of 100,000.¹

Why does the U.S. continue to spend over \$50 billion each year for national defense since "addition to overkill is no gain?" Proliferation of nuclear weapons, Professor Melman believes, "can be understood as one aspect of a technological race that is run for its own sake in the spirit of an international sporting event."

Two Melman alternatives to the Administration's budget in FY 1964 would have sharply cut back on military

¹There is some difference of opinion and substantial difference in computation among supporters of overkill. Dr. Linus C. Pauling estimates the U.S. nuclear stockpile at 240,000 megatons, but says it only adds up to a "twelve fold degree of overkill capacity." (The Minority of One, November 1963, published in Passaic, New Jersey)

procurement and drastically reduced the R&D budget on the grounds that it is absurd to research and mass-produce more sophisticated weapons when you can kill your enemy quite handily with present weapons:

a) "Maintenance-of-Present-Forces" budget of \$34 billion - a decrease by nearly \$20 billion - which reduces procurement from \$16.7 billion to \$6.7 billion. R&D would have been emasculated by 97 percent - down from \$7.2 billion to \$200 million.

b) "Finite deterrent" budget - would have reduced expenditures by some \$40 billion to \$9.2 billion each year. Procurement would have been cut back from \$16.7 billion to \$1 billion, while R&D was to be eliminated. Professor Melman accepted the need for "basic scientific research", but it "should be assigned where it belongs" - under the National Science Foundation.

2. The Background

In 1959, a military strategy variously identified as a "Minimum Deterrent", "Finite Deterrent" or "Flexible Deterrent" received attention and official support. In February 1959, General Maxwell Taylor, then Army Chief of Staff, testified: "When I add together all those vehicles

capable of delivering the atomic retaliatory attack, in my judgment the aggregate is excessive to requirements."¹

Admiral Arleigh Burke, then CNO, said at another Subcommittee session: "I think we do have too much retaliatory power and I think that we should put more money into limited war capability."²

In an analytical commentary, the New York Times noted the preoccupation of the JCS with "excessive nuclear retaliatory power" which was "expected to figure increasingly in public discussions of defense." The issue was joined in the JCS as to whether the U.S. "must keep building its nuclear counterforce to blunt every conceivable Soviet threat, or whether the Russians can be deterred by the knowledge that this country can obliterate a 'finite' number of targets." The analyst noted that Army and Navy spokesmen had argued that it is necessary only to be able to destroy a certain minimum number of targets and anything more would be extravagant "overkill".³

¹Excerpts of Testimony, House Appropriations Subcommittee, published in New York Times, March 31, 1959

²Ibid

³Jack Raymond, "Arms Chiefs Say U.S. Atomic Might In Excess of Need", New York Times, March 31, 1959

General Taylor wrote a book in 1959 in which he said: "In view of the tremendous growth in the destructive power of megaton hydrogen weapons, we have today an excessive number of delivery vehicles in the combination of aircraft and missiles now in the strategic deterrent forces."¹

The Taylor-Burke argument showed up in a statement by Dr. Jerome B. Wiesner at the 6th Pugwash Conference in Moscow. In November 1960 the scientist who was shortly to become chief advisor to President-elect Kennedy in this field noted that studies made independently by U.S. Army and Navy researchers indicated that, "even in the absence of agreement limiting force size and permitting inspection, 200 relatively secure missiles would provide an adequate deterrent."²

That statement, by Dr. Wiesner became one of two cornerstones supporting the "overkill" concept developed by Professor Seymour Melman which is now haunting the Pentagon. The other ideological base is a book written by Dr. Ralph

¹General Maxwell D. Taylor, The Uncertain Trumpet (New York: Harper Bros., 1959), pp. 97, 99

²Quoted in Arms Control, Disarmament and National Security, (edited by Donald G. Brennan, New York: George Braziller, 1961, p. 220)

E. Lapp, the well-known nuclear physicist turned political scientist, which in 1962 attracted attention to the concept of multiple saturation of a target complex in a general war with nuclear weapons.¹

3. The Rise of "Overkill"

"Overkill" received strong, fresh emphasis in February 1963 when Professor Melman appeared on David Susskind's "Open End" TV panel show and proceeded to overwhelm the other panel members and the TV audience with his ubiquitous charts and tabulations.

The program generated public and Congressional interest. To follow up, Professor Melman "and six other academicians" published in April 1963 a 27-page tract, "A Strategy for American Security",² financial support for which was provided "in part by a New York businessman, who wishes to remain anonymous."³

¹Dr. Ralph E. Lapp, Kill and Overkill (New York: Basic Books, 1962)

²A Strategy for American Security: An Alternative To The 1964 Military Budget (Edited by Seymour Melman: other authors include Terence McCarthy, Otto Feinstein, Edwin Lieuwen, John E. Ullmann, William Vickrey and Benjamin Spock, MD) (New York: Lee Offset Press, April 1963)

³Jerry Landauer, Wall Street Journal, September 17, 1963

On May 4, 1963, the Melman study received nationwide circulation and respectability when it was republished in condensed form in the Saturday Review.¹

Capitol Hill sat up and took notice. Within a few months, the Professor has "received respectful hearing in some 40 Congressional offices."² In the course of "knocking on Washington doors", Melman has also presented a case to Chairman Carl Vinson of the House Armed Services Committee in favor of canceling out the TFX fighter as unnecessary.³

"Overkill" showed up as a side-effect of the test ban treaty debate in July and August 1963. In convincing the Congress and public opinion that the U.S. was so far ahead in nuclear weaponry that it could prudently relinquish the legal right to test nuclear devices in the atmosphere, in space, and underwater, the Administration gave a strong, although inadvertent boost to the defense budget cutters. President Kennedy addressed the nation to marshal public

¹Norman Cousins, editor of Saturday Review, has for many years been keenly interested in disarmament schemes, and has written extensively and lucidly in this area.

²Jerry Landauer, Wall Street Journal, September 17, 1963

³Editorial, "Cutting Up the Arms Budget", Nation magazine, January 6, 1964

opinion in support of Senate ratification saying that "a full scale nuclear exchange, lasting less than 60 minutes, with the weapons now in existence, could wipe out more than 300 million Americans, Europeans and Russians, as well as untold numbers elsewhere."¹

A few weeks later, Secretary McNamara told a Senate Committee that "we maintain a total number of warheads, tactical as well as strategic, in the tens of thousands, and that the U.S. nuclear force "is manifestly superior to the Soviet Union's."²

On August 2, 1963, Senator George McGovern (Dem., S.D.) delivered a major address from the floor of the Senate urging a \$5 billion cut in defense spending "without reducing the security of the Nation."³ While the Senator's speech did not support Professor Melman's extreme arguments, it indicated general sympathy with the "overkill" thesis. The McGovern motion was turned down by an overwhelming vote but the Senator indicated that he would be back.

¹Radio-TV Address, July 26, 1963

²"Nuclear Test Ban Treaty", Senate Foreign Relations Committee Hearings, pp. 98, 100

³Washington Star, August 2, 1963

"Overkill" may well emerge in 1964 as a principal issue confronting the Congress when it begins consideration of the Administration FY 1965 budget request. A syndicated column has argued that there is political mileage in any election year alignment of the civil-righters who want Uncle Sam to underwrite housing, education and training for underprivileged minorities with the "overkillers" who claim to know where some hard-to-come-by billions may be obtained. Such an alliance could pose a problem for the Defense Department, especially for the U.S. Air Force, the principal target of the "overkill" philosophy.¹

Professor Melman exposed a rather thin-skinned hide to criticism. He wrote an indignant letter-to-the-editor claiming that Evans-Novak "misrepresent responsible efforts to treat the problems of our country's security and well-being," impugning his character instead of "coming to grips with my ideas"² It is about time to come to grips with Professor Melman's ideas.

¹Rowland Evans and Robert Novak, New York Herald Tribune, December 18, 1963

²Letter-to-the-Editor, Washington Post, December 22, 1963

B. OVERKILL - "MELMAN'S MATHEMATICS"

Susskind's "Open End" served as a sort of a trial run for the Melman thesis and a successful one it was. None of the other panelists, including General White, General S.L.A. Marshall, the syndicated columnist, Jack Raymond, military correspondent for the New York Times, or Arthur Waskow, senior staff member of the "Peace Research Institute" offered effective rebuttal to his arguments.¹

1. U.S. Strategic Forces

Two key statistics in A Strategy for American Security provide the essential support for the Melman thesis

¹Waskow is least likely to offer such rebuttal. In July 1962, he wrote a paper urging that the U.S. Air Force be split into three segments: the military space effort should be offered to the U.N. Secretariat, or, if it refuses, to Sweden or India; the thermonuclear bomber-and-missile effort should be dismantled and all land-based missile systems of SAC be closed down upon completion of a minimum deterrent 40 submarine Polaris fleet; leave to the USAF the remaining tactical air support of the ground forces.

alleging 1,250 overkills of the total large city population of the Soviet Union. He says the U.S. has 3,390 strategic vehicles with a total delivery capability of 21,970 MT. Melman's documentary sources include the "Congressional Record, January 16, 1963, pp. 393-416". The referenced pages of the Congressional Record for January 16, 1963, cover a lengthy presentation by Senator Wayne Morse including his insertion into the Record of the entire report of the Institute of Strategic Studies, London. Melman never once mentions that he is quoting from Senator Morse. Instead, he equivocally refers

STRATEGIC NUCLEAR WEAPON SYSTEMS
Operational in 1963

United States Weapon System	Total Yield (megatons)	Yield per Vehicle (megatons)	Number of Delivery Vehicles
B 47 bombers	6,000	10	600
B 52 bombers	12,000	20	600
B 58 bombers	2,000	20	100
Atlas missiles	120	(1) est.	120
Titan 1 missiles	50	(1) "	50
Titan 2 missiles	30	(1) "	30
Minuteman missiles	500	(1) "	500
Skyhawk A-4D Navy aircraft	1,000	(1) "	1,000
Skywarrior A-3D Navy aircraft	150	(1) "	150
Polaris submarines (15 with 16 missiles each)	120	0.5	240
Totals	21,970	—	3,390

Note: Table does not include smaller planes, intermediate and short-range missiles, torpedoes, mines, cannon, tactical rocket launchers ("Davy Crockett").

Source: Congressional Record, Jan. 16, 1963, pp. 393-416, report of study by Institute of Strategic Studies, London.

either to the Record or to the Institute study (I.S.S.).¹

Let's take a closer look at his statistics, per page 2 of A Strategy for American Security.

The figure "3,390" Delivery Vehicles is unsupported in the Institute report which credited the "Western Alliances", as

¹Institute of Strategic Studies, "The Communist Bloc and the Western Alliances: The Military Balance, 1962-63" which can be purchased on the open market, "Price 5 shillings (one dollar) Post free"

of "Early 1963", with a total of 450 to 500 ICBMs.¹ Professor Melman's statistics show 120 Atlas, 50 Titan-I, 30 Titan-II and 500 Minuteman as "Operational in 1963", for a total of 700 ICBMs. In a Congressional presentation on May 25, 1963 Melman publicly stated there were "about 900 ICBM's" in place in the course of arguing that an additional 800 Minutemen then on order were unnecessary.²

Six months later, in November 1963, Secretary McNamara announced the U.S. force had over 500 operational long range ballistic missiles.³

Melman's error is anachronistic as well as statistical. His computation of "about 900" ICBMs was made about 150 days before Secretary McNamara's statement. During 1963 the Air Force announced it was adding to the operational ICBM force at the rate of one-a-day. Thus, in the Spring of 1963, the operational force (including Polaris) probably numbered closer to 350 ICBMs.

¹I.S.S. Report, p. 26

²Professor Melman's Briefing at Invitation of Representative Kastenmeier (Wisconsin), House Office Building, May 27, 1963

³Secretary McNamara, Speech before Economic Club of New York, November 18, 1963

This sharply revised ICBM total must be trimmed further based on a criterion of reliability which recently became a political issue. Without getting into classified data, there are indications that 30 percent of the operational strength should be subtracted from the force.¹

The Professor tosses about some other statistics. I.S.S. showed 1,630 medium range bombers (over 2,000 mile range, including major carrier-based aircraft) and 190 operational RAF Valiants and Vulcans. Melman's chart totals 1,650 U.S. medium bombers, omitting the RAF. His figure is 20 medium bombers in excess of his quoted source.

Far more significant, is another error of omission. Melman's table shows 600 B-47s. If we accept this figure for "Early 1963" it gets progressively out of date during 1963. Secretary McNamara discussed the phaseout of the B-47 at some length on January 30, 1963. During 1963, the U.S. Air Force announced phasing out of 2 B-47 bases in the U.K. and 3 other bases in Morocco. On January 8, 1964, the DOD announced plans to close the B-47 base in Zaragoza,

¹Richard Fryklund, "Data Puts ICBM Reliability at 70%, Experts Indicate", Washington Star, January 10, 1964

Spain, as a prelude to further consolidation of B-47 operations overseas. The B-47 is scheduled to be completely out of the operational inventory within the next 18 to 24 months. In this case, Melman's "Total Yield" of 21,970 MT will be reduced by 6,000 MT, or 28 percent. Based on his attributed yield of 10 MT to each B-47, the Department of Defense could choose to supplant the B-47s with a combination of 6,000 Polaris and Minuteman (at a 1 MT yield, according to Melman), to make his statistics stand up. This prospect, however, would probably horrify the Professor.

Incidentally, the attributed 10-Megaton payload for the B-47 appears in no source cited by Melman.

His tabulation shows a total of 600 B-52's in the strategic delivery force, reasonably accurate based on Secretary McNamara's statement. But Melman does not take into account that the Stratofortress is a "soft" target. A serious attrition rate for the B-52s must be allowed on the basis of the U.S. planning assumption that the Soviet Union makes the first strike. For this reason, SAC has planned on a ground alert of up to 50 percent of the manned

bomber force.¹ Under optimum conditions, we can count on "about half the B-52's and B-58's shown in Professor Melman's table."² Now, if we crank into the equation Professor Melman's 30 percent attrition of delivery systems³ there is a further reduction by 90 more B-52s, leaving 210 flying onto their targets. Thus, Melman's 12,000 MT credited to the B-52 force is down to 4,200 MT, a little better than one-third the force.

This figure may not be wide of operational planning bench marks. General LeMay testified in rebuttal of the "overkill" thesis: "Can you guarantee me that in any future war I will deliver one-third of the U.S. weapons on target", he asked?⁴

The 20 MT as the B-52 payload is unsupported by any sources Melman quotes. There is, in fact, qualifying unclassified data to suggest a smaller payload, at least for

¹Charles Hitch, ASD, Speech in Hawaii, May 24, 1963

²Letter, ASD Hitch to Representative William F. Ryan, April 11, 1963, published in Congressional Record, June 20, 1963

³Professor Melman, "A Strategy for American Security", summarized in Saturday Review, May 4, 1963

⁴General LeMay, DOD Appropriations for FY 1964, Hearings before House Appropriations Subcommittee, Part II, p. 589

some types of Stratofortresses. I.S.S. stated that some B-52s "will still carry only multi-megaton free falling bombs, but the B-52Gs (which have been in service for a year) carry - alternatively or additionally - two apiece of the Hound Dog missiles which can deliver 4 megaton warheads over 600 miles". The Report is itself equivocal in this matter, failing to make clear whether either or both Hound Dogs carry 4 MT payloads.¹

Professor Melman generously credited SAC with 100 B-58's although his documentary source shows "two wings of B-58 aircraft, with 45 aircraft in each . . . in position by December 1962."² All B-58 production had ceased by October 1962, so there is no likelihood of Melman's having anticipated the correct number. Moreover, he failed to take into consideration that only half the B-58's can be counted on. That leaves 45 Hustlers to get off the ground in an assured second strike. Therefore, delete from Melman's gross calculation of 100 B-58's, a total of 55 B-58's X 20 MT = 1,100 MT.

In sum, the Air Force manned aircraft portion of the assured second strike capability is reduced by about 14,000

¹I.S.S. Report, p. 9

²Ibid

megatons, from 20,000 to 6,000 MT, and the number of strategic aircraft from 1,300 to 300 - a reduction in the neighborhood of 70 percent for both carriers and megatonnage.

Now look at the serious errors in computing the U.S. Navy's capability. The Professor shows 1,000 A-4D and 150 A-3D bombers in his strategic operational inventory. His main source states that "nearly half" of the 2,000 U.S. Navy aircraft which could theoretically deliver a thermonuclear strike "are designed primarily for air defense [of the aircraft carrier task force] and would presumably be used in that role in general war." The I.S.S. carries 1,500 A-4D Skyhawks and 150 A-3D Skywarriors "in service," but it does not say that they are in service aboard aircraft carriers. If we reasonably assume the Skyhawks and Skywarriors are apportioned to the fleet to carry out a variety of duties on ship and shore, in the Z.I. and on advanced stations, then "nearly half" the 1,650 planes would not be available for strike assignments.¹

If the Professor had more than a casual acquaintance with the U.S. Navy's operation, he would know that the combat force is divided into four fleets. Of the 17 CVAs

¹I.S.S. Report, p. 10

(attack carriers) in the U.S. Fleet, only 6 are on combat stations, 3 with the Seventh Fleet in the Western Pacific, and 3 with the 6th Fleet in the Mediterranean. The First Fleet in the Eastern Pacific, and the Second Fleet in the Western Atlantic would normally be out of position to strike during the early hours or even days of a general war, unless an extended period of warning prior to the start of hostilities permitted a buildup of naval forces. To illustrate this point, sudden hostilities in Korea on June 25, 1950, found Navy carrier task forces far from the scene of battle. The U.S.S. Valley Forge reached the operating area on July 3, 1950, launching its first strike eight days after the war began. A modern nuclear engagement is likely to be all but concluded in eight days. For this principal reason, carrier task forces are now regarded as "general purpose" forces rather than strategic retaliatory forces under Secretary McNamara's "program packaging" concept. "Although the targeting of these forces is coordinated with that of the strategic forces," Secretary McNamara testified last year, "they are not taken into account in computing the requirements for the latter. . . ."1

¹Secretary McNamara, DOD Appropriations for FY 1964, Part I, p. 110

The 1,150 megatons Melman allotted to 1,150 Naval strike aircraft are only 5 percent of his total, but obviously the number of these aircraft available for strategic strike in the early hours of a general war would be far less.

Professor Melman shows 15 Polaris submarines in the inventory with a complement of 16 missiles each, or 240 total. However, only an average of 10 would be on patrol. Among the 160 missiles they bear, other percentages would be out of commission due to maintenance and "reliability".

Besides, the Professor's totals were anticipatory. Just one year after he showed 15 operational Polaris submarines, Navy Secretary Nitze reported 11 in the force, with a planned figure of 15 by July 1, 1964.¹

The recent Goldwater-McNamara dialogue over "reliability" developed an unofficial estimate that "right now, the United States could expect about 436 missiles - 360 land-based and 76 Polaris - to strike their target if total war broke out."²

This figure plus the 500 strategic bombers Secretary McNamara has announced are on alert would place the assured second strike force at just under 1,000 delivery vehicles

¹ Letter, Secretary Nitze to Rep. George H. Mahon, Chairman, House Subcommittee on Defense Appropriations, February 29, 1964 (as reported in New York Times, March 3, 1964)

² Charles W. Corddry, UPI, January 10, 1964

vs. Melman's 3,390 vehicles. Moreover, his specific numbers - 3,390 vehicles delivering 21,970 Megatons - which he repeats in every public appearance, tend to suggest to the casual reader careful research, perhaps even a head count of vehicles and weapons.

2. Soviet Strategic Forces

Professor Melman's research into this area matches his disregard for accuracy in assessing U.S. capabilities.

(Extract: Strategy for American Security, p. 2)

STRATEGIC NUCLEAR WEAPON SYSTEMS Operational in 1963

Soviet Union (estimated) Weapon System	Total Yield (megatons)	Yield per Vehicle (megatons)	Number of Delivery Vehicles
Intercontinental missiles	1,875	25	75
Long-range bombers	4,000	20	200
Submarines (10-12 est. carrying 10 missiles each)	100-200	1	100-200
Medium-range missiles	3,500	5	700
Medium-range bombers	14,000	10	1,400
Super-intercontinental missiles	500	50	10 (est.)
Totals	23,975-24,075	-	2,485-2,585

This adds up to approximately 2,500 delivery vehicles carrying 24.0 billion tons of TNT equivalent, and breaks down to:

Long range: 485 delivery vehicles carrying 6.5 billion tons TNT equivalent.

Medium range: 2,100 delivery vehicles carrying 17.5 billion tons TNT equivalent.

Note: Medium range missiles and bombers are included in estimate of Soviet strategic weapons (though not in the U. S. estimate) because the shorter-range Soviet weapons could be directed to European cities and other areas adjacent to USSR.

Source: *Congressional Record*, Jan. 16, 1963, pp. 410-412.
New York Times, January 19, 1961.

Once again,
the specific numbers, "2,485 - 2,585"¹ delivery vehicles reflecting a total yield of from "23,975 to 24,075" megatons suggest some more close counting by Professor Melman.

Examination

¹The printed totals shown are "2,395 - 2,495", obviously an error in arithmetic

of the bases of these calculations shows nothing of the sort.

We have mentioned the Congressional Record for January 16, 1963, and that it includes material inserted by Senator Wayne Morse and otherwise not substantiated. A second quoted source for the Soviet statistics "New York Times, January 19, 1961", is curious. We examined this newspaper minutely. On January 19, 1961, the day before President Kennedy took office, Hanson W. Baldwin wrote a long article, entitled "A New Military Era?" including a rundown of estimated strength on both sides. These figures are hopelessly out of date for any current use, especially a chart which Professor Melman has sub-headed "Operational in 1963". Baldwin's figures are unrelated to any statistics which purport to document Melman's chart "Strategic Nuclear Weapon Systems (Soviet Union)".

That chart shows 485 "Long Range" delivery vehicles carrying, in round figures, 6.5 billion tons of TNT equivalent, or as simple addition tells us, 6,575 MT.¹

¹The Melman report shows only 435 long range delivery vehicles. This may be a misprint.

Melman credited the Soviets with 75 ICBMs. However, the I.S.S. indicated for them only a "10-Megaton warhead". Elsewhere, Melman's source noted that "in theory, at least, they [the Soviet ICBMs] have the lift to boost the 50-megaton warheads which have been tested, and perhaps larger ones, into a ballistic trajectory, though short of intercontinental range."¹

Professor Melman cannot have it both ways. Only the lighter 10-MT warhead can reach intercontinental targets. Therefore, the total yield for 75 ICBM's is more like:

$$75 \times 10 \text{ MT} = 750 \text{ MT}$$

than

$$75 \times 25 \text{ MT} = 1,875 \text{ MT}$$

The same criticism must apply to the 10 Soviet "super intercontinental missiles" which he says can carry the 50 MT weapon for a total yield of 500 MT. We note also the use of "(est)" alongside of this number only which again encourages a misleading inference that the other figures are firm, not estimates.

Professor Melman also chooses to ignore another source reference to "a second generation ICBM" which the

¹Senator Morse, Congressional Record, January 16, 1963, p. 410 (Underscoring added)

Report says the Soviets have developed "with a warhead of between 1 and 5 MT". This ICBM, "may be expected to be deployed during 1963."¹ Obviously, such a sharply reduced megatonnage would play havoc with Melman's Soviet ICBM megatonnage so precisely computed at from 23,975 to 24,075 MT.

Melman rounds out the Soviet bomber force at 200 although his source shows a total of 70 turbo-prop Bears - of relatively slower speed and of marginal use - plus 120 jet Bisons. Even in a most favorable combat situation, I.S.S. estimates the Soviet Union could muster only 190 long range bombers.² This involves a further error in Melman's computation of from 10 to 80 Soviet carriers, and from 200 to 1,600 MT.

The submarine statistics are also interesting. Melman shows 10 to 12 submarines carrying 10 missiles each. Simple arithmetic reflects a range of estimates from 100 to 120, not 100 to 200, as he states. Moreover, only a portion of these submarines would be on station at any given time. In any event, even the lower figure is insupportable. As

¹I.S.S. Report, p. 4

²Ibid

of "early 1963", his source shows 12 Soviet nuclear submarines, but saying it "includes both missile and hunter submarines."¹ I.S.S. adds a further qualification, saying there is no indication that a true Polaris-type missile submarine is operational or can fire missiles any fair distance. The two known missile-firing Soviet submarine types in operation can launch only from the surface, one about 100 miles; the other, about 400 miles. In view of the acknowledged U.S. naval superiority in surface vessels, especially near our shores, the "intercontinental" threat which these Soviet submarines pose is modest compared to that presented to the Soviet defenses by our Polaris submarine. Incidentally, the Melman yield of "1 MT" for Soviet launched missiles is derived from no source he quoted.

We do not mean to derogate the long term Soviet submarine threat. The U.S. has not solved the defense problem associated with submarine-launched ballistic missiles.²

¹Ibid, p. 26

²ASD Charles Hitch, Speech in Hawaii, May 24, 1963

Professor Melman pinpoints the Soviet strategic capability at 2,485 - 2,585 delivery vehicles carrying 23,975 to 24,075 MT. Like his counting 3,390 U.S. vehicles carrying 21,970 MT, the figures rest upon the same statistical quicksand. This jerry-built structure supports the multiple "overkill" concept, the basis of the "Hiroshima equivalents" which we now propose to show is also spurious.

C. OVERKILL - CONCEPTUAL

1. The "Hiroshima Equivalent"

One Melman estimate of 1,250 overkills for each of 140 heavily-populated cities in the Soviet Union is based on a projection of an original computation that it took 20 KT to cause 100,000 deaths in Hiroshima.

The "Hiroshima equivalent" is worthless as a yardstick of modern nuclear warfare because:

a) The city of Hiroshima was in no way prepared for atomic attack. According to an official report, the dwellings were of wood construction and there were no masonry division walls. "The type of construction, coupled with antiquated fire-fighting equipment and inadequately trained personnel, afforded even in peacetime a high possibility of conflagration." In Nagasaki, better construction and the

uneven terrain reduced the casualties to less than half of those at Hiroshima.¹ Significantly, the Nagasaki bomb was more powerful than the Hiroshima bomb.²

b) Even the most elemental civil defense measures had not been taken in Hiroshima. An official account reveals that the 0815 detonation found many workers enroute to their jobs. The attack came 45 minutes after a previous "all clear" had been sounded. "Because of the lack of warning, and the populace's indifference to small groups of planes," according to this report, "the explosion came as an almost complete surprise, and the people had not taken shelter."³

In a modern nuclear attack situation, 10 to 15 minutes warning might well reduce the ratio of casualties below 100,000 deaths per 20 KT of explosive power.

c) Even if it were applicable, we would have to break the nuclear stockpile into individual 20 KT packages. According to Dr. Lapp, philosophic mentor of Melman, a 20

¹U.S. Strategic Bombing Survey, "The Effects of the Atomic Bombs on Hiroshima & Nagasaki", (Washington; GPO, 1946), p. 5

²Ibid, p. 36

³Ibid, p. 5

MT explosion - 1,000 times the power of the Hiroshima bomb, raises the radius of bomb damage by a factor of ten, and the area of destruction only by a factor of 100. Thus it might be said that the 20 MT bomb delivers only 1/10 as much destructive force as 1,000 Hiroshima bombs dropped separately, although they are theoretical nuclear equivalents.¹ Melman's extrapolation of 100,000 deaths per each 20 KT weapon is mathematically based on the assumption that a 40 KT weapon dropped on Hiroshima would have caused 200,000 deaths, etc. If the thesis is carried to a logical conclusion, it would be necessary to break down the attributed U.S. stockpile of 22,000 MT into 1.1 million separate weapons, each of 20 KT explosive power, then drop them on separate targets, assuming we could find that many targets.

General LeMay exposed this shortcoming of the Melman thesis by asking in his testimony on February 28, 1963: "Why do we not buy one rifle bullet for every man on the opposing side and let it go at that? The answer is obvious, of course. You are not going to kill a man with every rifle bullet. You are going to have a lot of misses and

¹Ralph E. Lapp, "The Strategy of Overkill", Bulletin Of Atomic Scientists, April 1963

a lot of bullets that will not be in a position to get into battle."¹

The Melman thesis can be reduced to absurdity.

One could establish an "overkill" case for airpower during World War II. The combined U.S. AAF and the RAF dropped over 1,400,000 tons of TNT on Germany alone during World War II, according to the U.S. Strategic Bombing Survey.

Based on an authoritative (World Almanac) count of the German population in 1939, given as 60 million total, it could be said the AAF-RAF dropped nearly 50 lbs of TNT upon every inhabitant in Nazi Germany. That much TNT should have comfortably disposed of the German nation and obviated the necessity for Operation OVERLORD and several other costly engagements. In the other direction, a similar parallel could be constructed to apply to the weight of Allied artillery fire directed at German targets to argue the ability of the ground forces to have accomplished the mission without any airpower support. Somehow, all the combined arms were quite necessary to the final victory. Even then, the verdict could well have gone the

¹General LeMay, DOD Appropriations for FY 1964, hearings before House Appropriations Subcommittee, Part II, pp. 588-9

other way had the Germans advanced development of their V-1, V-2 and jet fighters by six months.

There is still another way to puncture the "Hiroshima equivalent". Melman has been making speeches around the country saying: "In the presence of overkill capability of a factor of 100 times or more, the ability to defend even with the efficiency of 99 percent leaves a residual incoming offensive power of at least one overkill factor or more. This means at least one total kill. No more is required, or is indeed meaningful".¹

If only one total kill is required, the U.S. needs just 2 B-52's and no other strategic forces. At 20 MT per payload, 40 MT will dispose of 200 million people (the present population of the U.S.S.R.) at Melman's accepted ratio of 20 KT per 100,000 deaths.

And why is the "Hiroshima equivalent" more valid than a "Nagasaki equivalent"? To use the latter involving a more powerful weapon causing less than half the deaths

¹Melman speech, 17th General Assembly, World Federalists, Inc., Boston, Massachusetts, May 25, 1963. An organization called the "World Peace Broadcasting Foundation" has been advertising nation-wide a canned speech by Melman for distribution in tape recorded form

would reduce Melman's overkills by about 2/3 without considering another single factor.

2. vs. Technology

A cogent rebuttal to "overkill" arises out of the total failure of the Melman school to understand some fundamentals in the human experience. He now assumes that the Minuteman and Polaris missiles will indefinitely provide a "finite deterrent" to attack. The history of mankind records a succession of military breakthroughs. On one hand, there is the shell that will pierce all armor; on the other there is the armor guaranteed to stop all shells.

This deadly serious game of technological leap-frog has never stopped. A few years ago when Professor Melman was enchanted with the possibility of converting the Arms Race into "The Peace Race", he urged top priority in the sequence of disarmament moves to eliminate military R&D. "Hundreds of thousands" of scientists and technicians doing weapons research, he said, "are the single most dangerous technological factor on the military scene." Research & development, Professor Melman argued, "causes a constant escalation of the level of the arms race by making obsolete the distinctive capabilities of existing

weapons." He urged that priority inspection should be given to "a well designed sampling process of former military technicians to ensure that their current activities were along peaceful lines."¹

That "well designed sampling process" foundered on the rock of Russian intransigence. Since 1946 the Soviet Union has opposed any system of inspection under U.N. or other outside auspices to determine whether Soviet science and technology were properly oriented towards peace.

By 1963, Professor Melman had apparently given up on that visionary approach to disarmament in favor of a unilateral abandonment of R&D by the United States, a policy implicit in finite deterrence. Melman now claims official support, as we have pointed out,² in protesting against a force of 940 strategic missiles in place in 1963 which "are far in excess of the 200 units postulated by Dr. Wiesner."³

¹Seymour Melman, The Peace Race (New York: Braziller, 1961) p. 108

²See page 5 of this report

³A Strategy for American Security, op. cit., p. 5

This assertion is faulty:

a) Secretary McNamara announced in November 1963 that "over 500" strategic missiles were operational. That would place the precise number at, let us say, between 500 and 600.

b) Wiesner made no such postulation. In fact, he prefaced his reference to the Army-Navy support of a 200-missile minimum deterrent with this comment: "I deliberately avoid making firm proposals for force levels because they should result from a detailed study."¹ Melman saw no good reason to mention that qualification by Dr. Wiesner.

The concept of 200 Polaris and/or Minuteman supported by Melman's radical "finite deterrent" budget of \$9.2 billion each year in turn rests on an assumption that these weapons of tremendous destructiveness represent some absolute quantity in a never-changing, perpetually effective state. Such an assumption is faulty - historically and technologically. There have been "ultimate" weapons before. Each was thought to have such terrible military powers as to make war unthinkable. Without going too far

¹Quoted in Arms Control, Disarmament and National Security, (edited by Donald G. Brennan, New York: George Braziller, 1961), p. 220

back in history, remember Alfred Nobel, the Swedish manufacturer who longed to turn out a substance or a machine of such capacity for mass annihilation that wars would become altogether impossible. Nobel thought he had achieved this goal in 1864 when he developed dynamite. Just seven years later, the new dynamite bombs were hurled at opposing sides during the Franco-Prussian War with no apparent or lasting contribution to world peace.¹

In 1880, less than a decade after that bloody war ended, there was an idealistic industrialist from St. Louis, Dr. James H. McLean, whose "Wonderful Peace-Makers" would compel every nation, great and small, "to refrain from invasion, perfect their defenses, preserve their own integrity, and submit all differences to international arbitration." On offense he invented the "Annihilator", a breech-loading, repeating cannon which he announced "will perfect warfare, the perfection being to prevent war by making it terrible." On defense he developed an "impregnable fortress . . . designed to sustain a siege for an indefinite

¹William H. Honan, "The Peaceful Use of Terror", The New Republic, April 27, 1963

number of years, and . . . inflict dreadful punishment upon any fleet that dare approach . . ."¹

Dr. McLean's inventions probably did make war more terrible, but not unthinkable, or impossible, as two subsequent World Wars would attest.

More recently, the ICBM has gone through an interesting evolution. In 1959, it was widely heralded as the ultimate weapon.²

Five years later, in 1964, defense against the ballistic missile is reduced to a problem of cost-effectiveness. The question at the present level of R&D is: do we want to spend enough money to intercept every ICBM? And the answer in 1964 is "No", for we can spend available funds more profitably in other areas. Will the answer continue to be "No" in the year 1968? We don't know, and, if we accept the Melman budget concept, we shall never find out, because he would cut off all military R&D, the seed-corn of national defense in the 1970-80 period.

¹Dr. J. H. McLean's Peace-Makers, (New York: Baker & Godwin, printers, 1880), pp. 13, 26, 135

²By the Army and Navy strategists, particularly, who were desirous of leveling off appropriations apportioned to the strategic retaliatory forces.

Looking towards the next research leap, the USAF is working on the Advanced Ballistic Reentry System (ABRES) to improve the penetration profile of our ICBMs as a hedge against the Soviet perfection of an ABM which could conceivably neutralize the 1,700 Atlas, Titan, Minuteman and Polaris force we shall have in the operational force by 1966.¹

Once a military power has fallen behind technologically, it is painfully difficult to catch up regardless of the resources thrown into the chase. The most notable case in point is space exploration. The latest edition of Jane's All the World's Aircraft, published in mid-December 1963, includes a new estimate by John W. R. Taylor who wrote that the U.S. "has finally cut down" Russia's lead in space exploration to "a measure of equality." Taylor noted the U.S. effort in space reflects "a long, tough, expensive, but brilliant comeback from the shock of the first Russian sputnik in 1957."²

¹Secretary McNamara, Economic Club of New York, November 18, 1963

²Washington Post, December 19, 1963; Assistant Secretary of Defense Hitch also covered the dangers of relaxing our R&D in a letter to Representative William Fitts Ryan, dated April 11, 1963, published in the Congressional Record on June 20, 1963

A measure of the magnitude of that catching-up effort was conveyed by Secretary McNamara a year ago. He testified that over 20 percent of the total R&D money, the largest single item in this category, even exceeding that being spent for strategic weapon research, was going into military space research.¹ Who can say what the military requirement in space will be in 1970? Certainly not Professor Melman!

In another area of research, Professor Melman recommended a reduction of \$2 billion in the A.E.C. budget for FY 1964. Such a cutback would have left \$893 million. Inasmuch as nearly 25 percent (in excess of \$700 million) of the atomic energy budget is spent upon fixed long term commitments to mine and process uranium concentrates which in turn require vast amounts of electricity, a drastic cutback would virtually force cancellation of the entire military program. It would also curtail the development of small, portable reactors for producing electric power, reactors for ship propulsion, and a number of other

¹Secretary McNamara, House Armed Services Committee "Posture Hearings", January 30, 1963, p. 483

programs unrelated to warhead development and production.¹

Warhead research is absolutely essential, in the absence of a general nuclear disarmament, to assure the ability of existing munitions to penetrate to target. While nuclear warheads cause damage in geometric proportions compared to conventional weapons, they are not immune to technological adversity. The struggle to keep a pace or two ahead of obsolescence is constant until the entire weapon system is itself overtaken by a new breakthrough.

Much less than cutting back on R&D, Secretary McNamara recently noted that research now in progress on possible new technological developments, including the useful ballistic missile defenses, will require major new expenditures . . ."²

3. Targeting Cities

Fundamental to the Melman thesis is an assumption that we would be interested only in attacking the enemy's cities. Actually our principal initial targets in the

¹Letter, Assistant Secretary of Defense Hitch to Representative William Fitts Ryan, April 11, 1963, published in Congressional Record, June 20, 1963

²Secretary McNamara, Economic Club of New York, November 18, 1963

event of an attack upon this country would be the remaining strategic forces available to the attacker so as to minimize further damage to ourselves. For this purpose, we need many more weapons than would be required simply to destroy Soviet cities.¹

At Ann Arbor in June 1962, Secretary McNamara proposed that "principal military objectives, in the event of a nuclear war stemming from a major attack on the Alliance, should be the destruction of the enemy's military forces, not of his civilian population." In stressing the military power residing in the West to destroy an enemy society, if driven to it, Mr. McNamara said, "we are giving a possible opponent the strongest imaginable incentive to refrain from striking our own cities."²

A "relatively invulnerable deterrent" of 200 strategic missiles is essentially inadequate. It provides for deterrence only, with little additional capability to defend the country if that deterrence should fail. There is no margin for achieving victory, and there is no long-term

¹Letter, Assistant Secretary of Defense Hitch to Representative William Fitts Ryan, April 11, 1963, published in the Congressional Record, June 20, 1963

²Text of Speech, New York Times, June 17, 1963

guarantee against defeat. Even Melman recognized this in 1961, before he discovered "overkill" as preferable to unilateral initiatives as an alternative to the arms race.

He then wrote:

" . . . every weapon system can be made vulnerable. The history of weaponry proves this. For example, the Polaris submarine has been heralded as an invulnerable missile launcher. But new developments in undersea sound detection will create a network of undersea mechanical ears that will show the location and direction of the submarine, making it vulnerable. . . ."¹

The U.S. would be unable to make any substantial response to a lesser provocation at any point along the spectrum of aggression for fear that escalation of hostilities would be condemning to death our own people, economy and government. Thus, the credibility of Melman's counter-value doctrine (i.e., attacking the enemy's cities only) may be compared to threatening to wire a stick of dynamite to the doorbell to keep the kids away on Halloween.

Secretary McNamara's program packaging concept for the Fiscal Years 1964 to 1968 has planned a retaliatory force of "sufficient flexibility to permit a choice of strategies", particularly an ability to strike back at the

¹Melman, The Peace Race, p. 21

entire Soviet target system simultaneously, or as an alternative, to strike back at Soviet bomber and missile bases associated with their long range forces so as "to reduce the power of any follow-on attack." If necessary, the Secretary testified, we could strike back at the Soviet urban and industrial complex "in a controlled and deliberate way."¹

Publicly, the Soviet Union responded unfavorably to the McNamara "no cities" suggestion. Premier Khrushchev announced that there would be no difference between front and rear in a nuclear situation. "Our hand will not falter to strike the blow", he warned.²

The Soviets may protest too much against limited nuclear war. Their public vehemence may be related to:

- a) the need to maintain a solid front of propaganda for prohibition of all nuclear weapons; and
- b) the knowledge that a war restricted to limited use of nuclear arms could deny to the Soviets a redressing of the balance of power in Europe. For the Soviets to

¹Secretary McNamara, House Armed Service Committee "Posture Hearings", January 30, 1963, p. 309

²Khrushchev, quoted in Pravda, August 12, 1962

accept the possibility of limited nuclear war is to remove any likelihood of a war in which both sides withhold their cataclysmic weapons. In a conventional European war, the Red Army would give the Soviet Union an overwhelming advantage. Presently programmed U.S. and NATO forces there would not be able to contain an all-out conventional Soviet attack without using nuclear weapons.

The Soviets take a public position that they would strike at the entire complex of our nation. "If they were to do so," Secretary McNamara testified, "we would, of course, have no alternative but to retaliate in kind. But we have no way of knowing whether they would actually do so."¹

By building flexibility into the U.S. strategic force, Secretary McNamara hopes to provide an incentive for the Soviet Union to spare our cities, if they should decide to begin hostilities. The U. S. strategic capability has changed in three years. When President Kennedy came into office, he was a prisoner of a military apparatus which gave him two choices in the event of aggression - "go" or "no go". Secretary McNamara called this a "spasm response". As our capability broadened to include a mixed bomber and missile strategic force plus tactical nuclear

¹Secretary McNamara, supra (Underscoring supplied)

and conventional capabilities. President Johnson now can make a "controlled response" which gives him a series of choices of "how go" or "where go".

4. The Future of the Manned Bomber

Professor Melman finds that the Soviet leaders "have decided not to compete with us in numbers of weapons". While we built over 1,600 heavy bombers, he says "they chose to build less than 200". While we are building "close to 2,000 ICBMs", the Soviets have built only 75 ICBMs, "and will probably replace rather than add to these."¹

The mixed force of bombers and missiles costs the American taxpayer unnecessary billions each year, Professor Melman avers. Are the bombers necessary to the defense of this nation? He thinks not, supporting this conclusion with selected quotations from a McNamara colloquy with Rep. Gerald Ford (Rep., Michigan). Mr. Ford had asked what percentage of the force that goes into the U.S.S.R. would be delivered by bombers? Secretary McNamara, in Melman's

¹Professor Melman's Briefing at Invitation of Representative Kastenmeier (Wisconsin), House Office Building, May 27, 1963, p. 5

words replied: "The answer to that is a very, very low percentage." Actually, the Secretary was responding to a prior question about the percentage of the whole strike force represented by bombers "that would detonate over the target within the first hour after the command to launch is given. In that case," Mr. McNamara testified, "the bomber provides zero percent of the strategic force." As to what portion of the whole would detonate over the target in the first 12 hours? Mr. McNamara responded: "In that case, the bomber provides quite a different percentage"¹

Professor Melman distorted another fragment of testimony. "Everything you have said in the last 5 or 10 minutes," Rep. Ford stated, "leads me to the absolute conclusion that after 1968, under the plans and programs that must follow from your comments, the manned aircraft will have little or no part in the strategic retaliatory force.

"No, sir", replied Secretary McNamara. "I do not believe that is a fair conclusion. Certainly it is not my conclusion. I say this because the manned bombers

¹Hearings, House Appropriations Subcommittee, DOD Appropriations for 1964, Part I, pp. 317-8

have certain characteristics that make them useful against certain types of targets, specifically, against very hard targets precisely located . . . I personally believe that we will have a use for our manned bomber force beyond fiscal 1968."¹

Professor Melman excised that McNamara response from his tract in order to arrive at this conclusion: "Only one conclusion can be drawn from this exchange: that beyond 1968 the manned bomber - that is, the SAC system - will be obsolete, and its usefulness today depends on the highly dubious assumption that a bomber could get to the Soviet Union. . . ."²

5. Political Credibility

The analogy of the dynamite-in-the-doorbell applies particularly to the credibility of the U.S. deterrent to our allies overseas. We are a great power on the world scene. We participate in coalitions of nations in Europe, Asia, and elsewhere. NATO and SEATO have a common purpose to deter aggression, to maintain the national integrity of the individual partners through collective security.

¹Ibid, pp. 318-9

²Melman Briefing, op. cit., p. 7

For us to rely totally upon a countervalue deterrent (as Melman suggests) is to respond only with a destruction of Soviet urban areas, and inevitably to invite a corresponding attack upon U.S. city complexes. Would we call upon that force to act in any but an extreme situation? Those who doubt it cite as a principal justification for de Gaulle's force de frappe the eroding of confidence in the U.S. willingness to defend Europe at the nuclear moment of truth.

6. Economic Tradeoffs for National Defense

One zestful task undertaken by Melman and his associates has been to apportion the \$22 billion they proposed to cut from the FY 1964 national defense budget to a variety of unfulfilled social needs. An article by his associate, Professor John E. Ullmann,¹ suggested \$5 billion as a starter to raise the national level of education; \$10 billion for urban renewal; \$4 billion for reclamation; \$1.5 billion for public health.²

¹Professor of Management, Hofstra University, who is a professional engineer and consultant in urban planning and industrial development

²John E. Ullmann, "Civilian Markets for U.S. Military Industry", A Strategy for American Security (New York: Lee Offset, Inc., April 1963), pp. 16-17

Professor Ullmann expounded on "A Neglected Home Market - 38 Million Americans in Poverty." He generously provided statistics about "blighted" areas that critically need attention. "Diversion of Military Spending Would Spur Solution", one subhead reads.¹

Melman claims that discussions of defense spending "somehow lack the sense of realism that we have when thinking about concrete things". To provide such realism, he compares the costs of an ICBM base in Omaha, Nebraska, costing \$250 million with a proposed 1½ mile-long dam in Dallas, Oregon, to improve navigation in the Northwest, and add the power of 1.7 million KW for irrigation.

Another comparison pits 14 B-52G's @ \$8 million each, or 8 Atlas ICBMs @ \$13.7 million each - total cost between \$112 vs. \$119.6 million against the "School Lunch Program" which could feed 14,000,000 children at a cost of \$110 million.²

Who in his right mind would prefer spending so much money on a missile which has a life of but 30 minutes and offers only destructive utility? To raise this question is to ask also whether Melman is posing true alternatives? Is

¹Ibid, pp. 18-19

²Seymour Melman, The Peace Race, pp. 87-8

the comparison much like the man who works in a most hazardous environment and who must carry heavy life insurance to protect his family? That protection is afforded at the expense of some luxuries and perhaps a few other necessities the family could have enjoyed. The insurance premiums, like the ICBMs, bring no tangible return unless the main clause of the policy is actuated.

Who is to blame for America's having missed out on social advances like schools and hospitals? Certainly not the defense insurance company, but the dangerous environment that required that policy. Sir John Slessor stated the issue in these terms: "It is customary in democratic countries to deplore expenditure on armaments as conflicting with the requirements of the social services. There is a tendency to forget that the most important social service that a government can do for its people is to keep them alive and free."¹

If Melman is looking for scapegoats, he ought to seek out appropriate targets in the Kremlin and Peking, not in the Pentagon.

D. DISARMAMENT

Professor Melman has written three books and edited a fourth. His first two books are rather technical and are

¹Sir John Slessor, Strategy For The West (New York: Morrow & Co., 1954), p. 75

of no special interest to us. In 1958 he edited a book, Inspection for Disarmament, which first indicated his strong, awakening concern for universal disarmament. He was shaken by the decision of the two major world powers in 1961 to resume nuclear testing, and warned that the arms race with the Soviet Union can mean "the end of Western civilization, no less than Russia, in war." His book, The Peace Race, calls for "an alternative to either war or surrender in the world contest with the Soviet system," and thereby develops some extremely interesting viewpoints:¹

1. Industrialize The World With Freedom

Professor Melman's earnest desire for peace is strained through his training as an industrial engineer. The United States has a considerable unused industrial capacity, he points out. We can produce for peacetime as well as wartime, while the U.S.S.R. cannot. The Soviet Union has no reserves of production capacity and suffers shortages in housing, food, and consumer goods. This is the price of Russia's participation in the arms race. If the U.S. were to try to "industrialize the world with freedom", in Professor Melman's words, the Soviet Union would "be compelled to seek disarmament in order to compete in a peace race."²

¹Melman, The Peace Race, p. 1

²Ibid, pp. 65-6

This argument assumes that the Kremlin hierarchy is directly responsive to Soviet public opinion. For decades, Stalin continually deferred satisfaction of consumer wants while he pushed his successive 7-year Plans. It is true that Khrushchev has somewhat softened the Kremlin line in recent months, but one may doubt that it indicates official sensitivity to public opinion so much as it reflects an increased confidence in a stabilized long term relationship with the West and a proportionate requirement to compensate for the estrangement with Red China.

Melman believes that moral suasion can help to introduce industrial democracy within the U.S.S.R. "Winning" the peace race, he believes, "includes efforts to press Soviet society in the direction of loosening monopoly political power and introducing the right of independent organization and allied democratic methods." Professor Melman believes that "such changes in Soviet society will only come as a result of pressure from the inside."

International disarmament agreements "will remove a major justification for internal police systems and for holding down the level of living" in the U.S.S.R. Such disarmament moves "would be an incentive for Soviet workers to press for elements of self-rule in their company unions."

Melman foresees that this kind of pressure "would have major effects throughout Soviet society by cracking the monopoly of decision-power that is held by the managerial elite." He foresees these pressures against the Kremlin as "a major restraint on the Soviet managerial elite, against the use of war as a major policy instrument."¹

And how does Melman propose to exert pressure internally on the Soviet leadership? By organizing large scale international trade union contacts with the Soviet working classes. He believes the Russian workers should have full knowledge about how U.S. workers practice decision-making in their autonomous trade unions. This information should be disseminated by broadcasts and "detailed, day-by-day accounts of strike actions," for Professor Melman has "reason to believe that Soviet citizens are deeply impressed by the idea of organizing in groups independent of management and independent of government."²

We do not ever learn what the Soviet worker should do after he tries to convert his company union into an independent organization and receives the dread, nocturnal knock-on-his-door.

¹Ibid, p. 136

²Ibid, p. 138

Nor does Melman come to grips with the problem or even acknowledge the existence of Soviet jamming of foreign broadcasts which may contain useful tips about how peoples in the West go about their daily chores, including organizing independent labor unions.

The problem in essence: how do we get better information to Soviet citizens if their leaders do not wish them to have it, i.e., the same leaders who unilaterally resumed nuclear testing in 1961?

As Melman has stated the problem, we need an international disarmament agreement first which will remove the reason for the internal police system which in turn prevents the attainment of industrial democracy. Let us turn to first things first.

2. Plan for Joint Disarmament

(a) "A Fresh Approach"

Inspection of a disarming process "is a far easier task than any attempt to control large, presumably stable, military forces", Melman writes. "The. . . difference lies in the fact that secret methods of operation are a regular and essential part of military organization". The very existence of a large military organization "invites continued research and development of new weapons and new methods for their secret disposition." While these conditions also apply

to smaller military organizations, the political incentives or the physical opportunities are not there.

Melman proposed "a fresh approach". Instead of trying to achieve equality of forces throughout the disarming period, both sides should incapacitate very rapidly the forces to be disarmed. For example, he wrote, if both sides were to be reduced from 2 million each to 1/2 million each within three years, the 1.5 million to be disarmed should "quickly be made useless as a military threat". How? "Removing the wheels from airplanes, the carburetors from tanks, collecting the elaborate communication equipment of a modern army and assembling key officers and technicians would make the remaining men inoperative as a modern military force."¹

One historical note: the Reichswehr in the early 1930's was drastically limited to 100,000 men by the Versailles Treaty while the German General Staff surreptitiously planned military conquest. Rocket research intensified when Hitler came to power in January 1933. At that point, the peaceful VfR² was officially dissolved, and the rocket scientists began to work in secret for the German Army.³

¹Ibid, pp. 101-2

²Verein für Raumschiffahrt, the "Society for Space Travel"

³George P. Sutton, Rocket Propulsion Elements (New York: John Wiley & Sons, 1949), p. 27

Obviously, the political intent of the leadership rather than the mere size of armies is more responsible for furtive R&D. Melman does not think so: "I regard the existence of groups of able, technically trained men, with readiness to use their knowledge for large scale destruction as the hard core danger of the arms race."¹

(b) Inspection By the People

This idea was first proposed by Melman in 1958 when he wrestled with what he thought were the two weaknesses of a systematic disarmament program. First, he identified the inadequate inspection techniques traceable to the ability of a nation to produce clandestine armaments; and, second, he recognized that there were technological alternatives - e.g., biological weapons vice nuclear weapons - to accomplishing a military result. To cope with these weaknesses, he proposed inspection by the people as an adjunct to a randomly distributed network of inspection.²

By 1961, he had decided that international prohibition of production of military aircraft and missiles "could be readily controlled by close inspection of the major assembly plants," Melman writes. "The factories that contribute components could be controlled by sampling inspections. This

¹ Melman, op.cit., p.123

² Inspection For Disarmament, pp. 38-9

method makes possible a reliable check of the operation of many thousands of factories in an industrial complex as large as the U.S."¹

Of course, all we then had to do was to get the Soviet Union to agree to a fool-proof inspection plan. He must have been aware that the Kremlin had, since 1946 balked at inspection - sampling or otherwise - of Soviet factories by foreigners.

Melman does not discuss this issue or how he proposed to resolve it. We must conclude that "inspection by the people" had by 1961 advanced from an adjunct inspection tool to a principal one. He simply said that inspection by the people "can be put into operation quickly since no elaborate technical preparation is required."²

Melman becomes progressively intoxicated with the exuberance of his own verbosity. "Inspection By the People" merits a whole chapter - No. 11 - in The Peace Race. One interest provision "is the requirement that a wide section of the public be prepared to report their own countrymen in the interest of protecting a disarmament agreement. . . ." ³

¹The Peace Race, p. 105-6

²Ibid, p. 109

³Ibid, p. 121

What is the Vox Populi on the issue of reporting infractions by one's own countrymen? It seems that a poll was taken in 1958 and that 70 percent of the U.S. segment replied favorably to "setting up a worldwide organization which would make sure, by regular inspection, that no nation, including Russia and the United States, makes hydrogen bombs, atom bombs, and missiles."¹

This poll was farcical. It was based on such sample sizes of 200 people in Japan, 250 in India, 282 in West Germany and 1,610 people in the U.S. There are 3,072 counties in the United States. Therefore, the Melman "Gallup" poll selected one individual from alternate counties. This is truly a random sampling.²

Another of the curiosities of this poll showed that a larger percentage of Americans - 73 percent - were said to favor making it each person's duty to report any attempt secretly to make bombs or missiles, and 80 percent favored reporting someone in his own country who violates the agreement. In other words, it appears that more Americans are willing to report surreptitious violations of the disarmament agreement to an international agency as are in favor of setting

¹Seymour Melman, "General Report", Inspection for Disarmament, (N.Y., 1958), p. 42

²William M. Evan, "Public Opinion Poll", in Ibid, p. 233

up that agency.

But still more curious is Melman's optimism that the Soviet people would be permitted by their government to vote for and participate in a spying operation against the Communist Party. At the time the poll was taken in 1958, his associate who prepared the chapter on public opinion was painfully aware of the shortcoming of that survey: "Especially regrettable", he wrote, "is the omission of the Soviet Union and its allied countries in Eastern Europe and Asia, due primarily to the problem of inaccessibility of the peoples of these countries."¹

By 1961, the problem was of considerably less concern to Professor Melman. He recalls that "many persons who are knowledgeable about Soviet society, and several well-informed citizens (not government officials), have indicated to me that there is high probability the Soviet population would welcome participation in inspection by the people for disarmament. Such participation would be especially forthcoming if Soviet leaders were required [Ed: by whom?] and did urge the population to cooperate."²

¹Evan, op. cit., p. 247

²Melman, The Peace Race, p. 122

(c) The First Stage in Disarmament

Major actions Melman wishes to be taken by each side during the first stage of disarmament:

- (1) Reduce the level of the armed forces to not more than 500,000 with levels in other countries proportionately lower;
- (2) Ban on all nuclear weapon testing;
- (3) Close all military R&D establishments;
- (4) Halt production of missiles with the exception of those made for use under international control for scientific purposes;
- (5) All major weapons production should halt, "the sooner missile production is stopped, the safer we all are."
- (6) No more than 50 ICBMs should be allowed to any side.¹

3. Unilateral Initiatives

The U.S. should turn the other cheek. In Melman's words, American foreign policy, "long in conservative hands, has strengthened a conservative counter-reaction in Soviet society and policy, and vice versa." Meaning: When the Soviet Union announced on August 31, 1961, that it would resume nuclear bomb testing, President Kennedy also announced a few days later that the U.S. would "have no choice" but to follow suit. "The Peace Race", Melman writes, "suggests a

¹Melman, The Peace Race, pp. 107-9

different sort of response." We missed an opportunity to "score a major political advance by dramatic action and by our refusal to follow the U.S.S.R." The U.S. should have organized a worldwide pressure on the Soviets "to desist from this deadly move" by a formal appeal to all Governments and to all peoples, "especially the Soviet" to proclaim "a world-wide massing of populations at the center of every town and city on an early Sunday noon to discuss and protest the renewed arms race." Then, Melman said, we should "call for a protest by silent assembly in every Soviet city at the same time and place." In conclusion, he urged in a message to President Kennedy: "Let us act as the conscience of mankind rather than as automatic followers of deadly moves."¹

How does Melman know that the Soviet Government would have permitted a mass meeting in the center of every town and city in Russia to protest official policy? We never find out except by inference: "If negotiation for multilateral disarmament should be stymied by the Soviets, the United States should still initiate disarmament moves." And here we find a short, but revealing testimonial to Professor Charles E. Osgood, the father of the unilateral initiatives program, who, in Melman's words, "proposes a deliberate 'peace offensive' designed to induce reciprocation by an enemy. . . ."²

¹Ibid, pp. 131-2; Message published in N.Y. Times, September 3, 1961

²Ibid, pp. 140-4

E. MELMAN - THE MILITARY ANALYST

1. The Danger of Accidental Nuclear War

Chapter 2: "Failures of People and Machines" and the danger that they could precipitate a general war warrants a whole chapter of discussion, with an account of an incident alleged to have occurred at NORAD headquarters in Colorado Springs on October 5, 1960, involving the Ballistic Missile Early Warning System installation at Thule, Greenland, just completed four days before. Three prominent U.S. businessmen were being given an orientation tour of NORAD headquarters when the BMEWS warning devices began to signal a contact. Canadian Air Marshal C. Roy Slemon, Deputy Commander in Chief of NORAD, was in charge at Colorado Springs in the absence of General Laurence S. Kuter, his Chief.¹

Within 60 seconds of the time the alert flashed, Air Marshal Slemon had contacted Thule. He learned that the rising moon - which had not yet been taken into account in the brand new BMEWS - had caused the false radar response. By open line to his Colorado headquarters, Air Marshal Slemon was informed that BMEWS was not functioning properly. There was never an issue about launching a SAC counterattack. Even if there were, Slemon had no authority to launch one. Only the President of the United States can do so.

¹Melman, op.cit., p. 8

An account of the incident was released by the "Canadian Press" (a Canadian wire service) crediting Air Marshal Slemon with "quick thinking that headed off a North American missile scare", because he "refused to be panicked by radar information which made it appear that long range missiles had been launched against North America."¹

The entire account, including some imaginative details concerning the reactions of the American businessmen waiting through 20 minutes of "absolute terror", was accepted fullface by Professor Melman when he must have known - his book was written a year later - that the wire service story had been officially denied and publicly repudiated. He apparently overlooked some editorial soul-searching over the irresponsible press accounts which had inflamed public passions.

One respected example suffices:

"The performance of some of the news agencies over the detection of the moon by the new ballistic missile early warning station early in October suggests that we may be in for a series of war scares such as we have never had before. . . . It is time the publicity men took more account of the effect of this kind of thing on the world beyond the United

¹New York Times, December 23, 1960

States and even, perhaps, on many Americans. The facts in this case are that no one would have taken seriously an alert given by a completely new radar system which only had been working for a few days; that within a minute the single contact which had been obtained was identified as the moon; that a single contact would never in any case cause a major alert; and that American commanders have made it quite clear in their Congressional testimony and elsewhere that they have no intention of firing missiles on the basis of radar information alone, even if this shows a substantial attack."¹

In his book, Professor Melman accepts perhaps the most extreme account of the BMEWS incident² as fact. Had it occurred under conditions of airborne alert, he speculates, the incident could have triggered a succession of Soviet, then U.S., moves escalating to the ultimate nuclear confrontation, and "there would be no assurance that men would respond rationally rather than from terror."³

This account serves as an appetizer to a further speculative comment about the growing dangers of accidental war. "Human error, equipment failure and faulty judgment could result in a nuclear war", Melman has concluded.⁴ There have been "about fifty accidents involving nuclear weapons in U.S. missiles and aircraft from 1945 to mid-1960." As an example,

¹ Editorial, Manchester Guardian, December 29, 1960

² As appearing in the Boston Traveler, December 13, 1960

³ Melman, op. cit., pp. 16-17

⁴ Ibid, p. 10

Melman cites the destruction in flight of two Polaris missiles, as reported in the New York Times of August 8, 1960, and January 15, 1961.¹

To say the least, these examples are inappropriate. In both instances, test Polaris vehicles with dummy warheads were fired down the Atlantic Missile Range. As publicly announced, there was no nuclear material involved. In fact, no strategic missile, test or otherwise, has ever been fired from either Cape Kennedy or Vandenberg AFB with a nuclear warhead.

The source of Melman's "about 50" nuclear accidents is an unpublished study produced at Ohio State University.² Close reading reveals a significant disparity between Melman's interpretation and the Phelps study which estimated that "approximately a dozen major incidents or accidents involving U.S. nuclear weapons are known or reliably believed to have occurred, mostly in plane crashes," including some overseas. Note that the "number of accidents involving nuclear weapons in United States aircraft or missiles" (in Melman's phrase) is down from 50 to approximately 12.

¹ Ibid, p. 11

² John B. Phelps and others, Accidental War: Some Dangers in the 1960's, Mershon National Security Program, Ohio State University (June 28, 1960)

The probable basis of "50" is another statement in the report, as follows: "Many lesser accidents involved in the maintenance, transportation, modernization, etc., of actual nuclear weapons are known to have occurred. One informed estimate places the number of these at about 50, for U.S. weapons since World War II."¹

The Phelps group provides no documentation of "one informed estimate," (rather shoddy research) while admitting that among the alleged accidents, there have been no nuclear explosions. This point is also acknowledged by Ralph Lapp who has written that "our strategic striking forces have had no accidents involving any significant release of nuclear energy. In other words", he acknowledged, "U.S. safeguards and safety mechanisms have worked."²

2. A "Policy Toward Cuba"

On October 22, 1962, President Kennedy delivered an historic address. He warned the Soviet Union that the transformation of Cuba into a strategic base by the "sudden, clandestine decision" to station long range offensive missiles on the island "constitutes an explicit threat" to peace and

¹Phelps, et al, op. cit., p. 8

²Ralph E. Lapp, "The Strategy of Overkill", Bulletin of Atomic Scientists, April 1963

security and to the United States. Mr. Khrushchev forthwith withdrew his "offensive" missiles and made other significant concessions to avoid a direct confrontation.

Professor Melman took strong exception to the U.S. Government's decision to force Soviet withdrawal by military power. He said it was "in the dangerous tradition of playing 'chicken'." These views were expressed in a letter published a few days later in the New York Times. Melman warned that the strategy undertaken by President Kennedy "multiplies by some large factor the possibility of war by accident due to failure of equipment, or the miscalculation of leaders. . ."

"Immediately", Professor Melman urged, the U.S. Government should request the U.N. "to supervise a military disengagement by Soviet and American forces. . . This disengagement should be supervised by a United Nations police unit and should be sustained, pending a report to the United Nations by a United Nations committee of investigation."¹

The United States Government did not take his advice. For one reason, to have called for a U.N. investigation and a report, very likely would have been confronted by the U.S. in a matter of days, or perhaps a week or two, with operational,

¹Letter-to-the-Editor of the New York Times, "Policy Toward Cuba", by Seymour Melman, published October 28, 1962

emplaced Soviet strategic missiles, and a fait accompli in Cuba.

Professor Melman was not quite through. He blamed the rise of the Communist element in Cuba upon the traditional support given Batista and other reactionary elements by the U.S. It was not yet too late, he wrote, to "mount a basically different policy toward Cuba and other countries." Instead of abandoning them to ideological and economic dependence on the Soviets, Melman wrote, "the United States could make possible industrialization with freedom by mounting a peace race,¹ using America's unemployed industrial capacity and manpower to make possible rapid industrialization with freedom in society."

"We have an opportunity to negotiate with the Soviets," Melman wrote, pointing out the possibility of "political exchanges over Cuban missile bases", that is, Cuban missile bases in exchange for "American missiles close to Soviet territory". "The reasoning which President Kennedy applies to Cuba-based missiles similarly applies to United States missiles in Turkey, (emphasis supplied) or Pakistan, or West Germany," he concluded.

¹Mr. Melman was not one to pass up such an opportunity to plug his book.

F. PERSONAL BACKGROUND

Professor Melman's background in the field of military analysis is rather modest. He was brought up in the New York area and graduated from the College of the City of New York in 1939. After graduation, he received a travel fellowship and spent 1939-40 traveling in Europe and Palestine. Upon returning to the U.S., he served for two years as Secretary of the Student Zionist Federation.¹

Melman was drafted into the Army in January 1942 and subsequently applied for OCS. He was commissioned a 2nd Lieutenant in the Coast Artillery Corps in July 1942 and received a medical discharge in October 1943.

"After demobilization", according to his official biography, Melman worked with the National Industrial Conference Board. He became a graduate student at Columbia University in 1945. He received his Ph.D in June 1949, having majored in Industrial

¹Seymour Melman, The Peace Race, p. 150

Economics and Industrial Engineering. He has taught courses at the University in these fields since 1948,¹ and as we have mentioned in some detail, has written or edited four books.

G. CONCLUSION

Professor Melman wrote a letter-to-the-editor of a Washington newspaper objecting to a syndicated column by Rowland Evans and Robert Novak who had charged that his "doctrine of meat-axe cuts in defense spending amounts to nothing less than unilateral disarmament." Evans-Novak said Melman "belongs in the ranks of the radical pacifists". In his response, Professor Melman charged that Evans and Novak had impugned his character with "crude epithets", and said he would take responsibility for what he had written in his books.²

Our documented analysis of Professor Melman's written and spoken words has met him on his own terms. It has "come to grips" with his ideas based principally on his books, The Peace Race and A Strategy for American Security. We do not

¹Ibid

²Rowland Evans-Robert Novak, Washington Post, December 18, 1963; Seymour Melman, Letter-to-the-Editor, Washington Post, December 22, 1963

think Evans-Novak misrepresented the position of Professor Melman. If the "crude epithets" fit, then the Professor must bear them.

Professor Melman is a trained economist. He has pointed to the special interest of the military-industrial complex in defense contracts, wondering out loud how that complex would be affected by a ban on nuclear testing. "Inevitably", he has written, "the agreement to ban bomb testing. . . would serve as a signal to investors in war industry, and we are likely to see an even more dramatic repetition of the sharp decline on the New York Stock Exchange than the one that appeared on August 10, 1959." He recalled the "peace jitter" on Wall Street at that time among traders who feared that an Eisenhower-Khrushchev agreement might result in a military spending cutback. "A test-ban agreement", he predicted, "can very well be another signal of that sort."¹

This dire prediction was not borne out at all. The Stock Exchange even moved upward during September 1963 when the Senate debated and ratified the nuclear test ban treaty.

¹Melman, The Peace Race, p. 97

In his "State of the Union" address on January 8, 1964 President Johnson announced a cutback of production of nuclear bomb materials. Overkill theorists may well see in this decision a vindication of their concept. This is not at all the case. Stockpiling is not to be halted, nor the nuclear arsenal dismantled. It simply will not grow at the past rate. Moreover, the need for modernizing the force and a high level of R&D to insure the future penetration capability of that stockpile is as great as ever, while the basic inadequacy of Melman's "relatively invulnerable deterrent" which could be buried in the ocean or in a silo is unchanged.

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DEPARTMENT OF THE AIR FORCE
OFFICE OF THE SECRETARY

MEMORANDUM

1 April 1964

Mr. Charles E. Johnson
Room 368
Executive Office Building

Dear Mr. Johnson:

Enclosed is one copy of our
study for your interest. We are
a little tight on supply right
now.

Murray Green

DR. MURRAY GREEN
Associate Chief
Research & Analysis Div., SAFAA

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