

PHYSICS and SOCIETY

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PHYSICS AND SOCIETY EDITOR: JOHN DOWLING

PHYSICS AND SOCIETY IS A QUARTERLY NEWSLETTER OF THE FORUM ON PHYSICS AND SOCIETY, A DIVISION OF THE AMERICAN PHYSICAL SOCIETY. THE NEWSLETTER IS DISTRIBUTED FREE TO MEMBERS OF THE FORUM. IT PRESENTS NEWS OF THE FORUM AND OF THE AMERICAN PHYSICAL SOCIETY AND PROVIDES A MEDIUM FOR FORUM MEMBERS TO EXCHANGE IDEAS. PHYSICS AND SOCIETY ALSO PRESENTS ARTICLES AND LETTERS ON THE SCIENTIFIC AND ECONOMIC HEALTH OF THE PHYSICS

COMMUNITY; ON THE RELATIONS OF PHYSICS AND THE PHYSICS COMMUNITY TO GOVERNMENT AND TO SOCIETY, AND THE SOCIAL RESPONSIBILITIES OF SCIENTISTS. CONTRIBUTIONS SHOULD BE SENT TO THE EDITOR: JOHN DOWLING, PHYSICS DEPARTMENT, MANSFIELD STATE COLLEGE, MANSFIELD, PA 16933, 717-662-4275.

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"A FAREWELL AND A LOOK BACKWARDS" BY THE PREVIOUS EDITOR OF PHYSICS AND SOCIETY MARTIN L. PERL, SLAC, STANFORD, CA 94301

THIS ISSUE OF PHYSICS AND SOCIETY HAS A NEW EDITOR, JOHN DOWLING. AFTER EIGHT YEARS AS EDITOR I FELT IT WAS TIME TO PASS THIS NEWSLETTER ON TO OTHERS. I AM VERY PLEASED TO PASS THE EDITORSHIP ON TO PROFESSOR DOWLING; MY VERY BEST WISHES TO HIM FOR THE SUCCESS OF PHYSICS AND SOCIETY.

AS I THOUGHT ABOUT WRITING THIS LAST EDITORIAL I BEGAN TO COMPARE THE PRESENT WITH TEN YEARS AGO WHEN WE FIRST FOUNDED THE FORUM ON PHYSICS AND SOCIETY AND BEGAN TO THINK ABOUT THIS NEWSLETTER. I WOULD LIKE TO SHARE THIS COMPARISON WITH YOU. I WONDER IF YOUR COMPARISON WILL BE VERY DIFFERENT.

IN THE PAST TEN YEARS THERE HAVE BEEN TWO MAJOR CHANGES IN THE AREAS WITH WHICH PHYSICS AND SOCIETY AND THE FORUM ON PHYSICS AND SOCIETY HAS BEEN CONCERNED. FIRST, THE APS HAS FINALLY BECOME COMFORTABLE WITH THE CONCEPT THAT IT SHOULD BE INVOLVED WITH PHYSICS AND SOCIETY ISSUES SUCH AS THE ENVIRONMENT, ARMS CONTROL, AND THE ECONOMIC WELFARE OF PHYSICISTS. SECOND, THE ECONOMIC AND CAREER SITUATION FOR YOUNG PHYSICISTS HAS IMPROVED; MOSTLY BECAUSE STUDENTS HAVE BECOME AWARE OF THE ECONOMIC AND CAREER REALITIES IN PHYSICS. I AM PLEASED THAT PHYSICS AND SOCIETY PLAYED A PART IN ACHIEVING THESE CHANGES.

DURING THE PAST TEN YEARS THERE HAS BEEN INCREASING INTEREST IN THE ENVIRONMENT BY THE AMERICAN PEOPLE AND BY OUR LOCAL, STATE, AND FEDERAL GOVERNMENTS; ALTHOUGH ENERGY PROBLEMS ARE CERTAINLY BEGINNING TO REVERSE THAT TREND. PHYSICS AND SOCIETY AND THE FORUM HAVE CONTRIBUTED INDIRECTLY TO THE EDUCATION OF THE PUBLIC AND PUBLIC OFFICIALS ON ENVIRONMENTAL ISSUES BY

STIMULATING AND SUPPORTING THE INTERESTS OF PHYSICISTS IN THOSE ISSUES.

WE HAVE TRIED TO DO THE SAME THING IN ARMS CONTROL; BUT IN THIS AREA WE HAVE FAILED, AS HAS EVERYONE ELSE. THE DEPARTMENT OF DEFENSE BUDGET WILL SOON BE RISING; THE NUCLEAR WEAPON SYSTEMS OF TEN YEARS AGO STILL EXIST; AND NEW NUCLEAR WEAPON SYSTEMS HAVE BEEN APPROVED. I WAS MORE HOPEFUL ABOUT ARMS CONTROL TEN YEARS AGO.

CERTAINLY THE MOST UNHAPPY COMPARISON WITH TEN YEARS AGO IS IN OUR FOREIGN AFFAIRS. THEN OUR VITAL NATIONAL INTEREST WAS IN THE DEFENSE OF SOUTH VIETNAM AGAINST THE COMBINED DRIVE OF CHINA AND NORTH VIETNAM TO MAKE SOUTHEAST ASIA A COMMUNIST MONOLITH. TODAY OUR VITAL NATIONAL INTEREST IS THE PERSIAN GULF. THERE IS EVEN A NEW DOMINO THEORY: FIRST AFGHANISTAN, THEN IRAN, THEN THE SHEIKDOMS OF THE PERSIA GULF AND SAUDI ARABIA, THEN IRAQ, SYRIA...

WHAT HAPPENED TO OUR VITAL NATIONAL INTEREST IN ASIA OF TEN YEARS AGO? DURING THOSE TEN YEARS CHINA AND VIETNAM HAVE HAD A BORDER WAR. AND CHINA, THE MOST POPULOUS COMMUNIST COUNTRY, BECAME FIRST OUR CULTURAL ALLY, THEN OUR POLITICAL ALLY, AND WILL SOON PROBABLY BE OUR MILITARY ALLY. THERE IS A LESSON HERE - BUT IT SEEMS TO BE TOO OBSCURE TO BE WIDELY RECOGNIZED. UNFORTUNATELY THIS IS NOT A TEXTBOOK EXERCISE FOR THE STUDENT. MILITARY BUDGETS ARE RISING, THERE IS SERIOUS TALK OF A NEW DRAFT, AND EVEN THE MILDEST ARMS CONTROL AGREEMENT IS STALEMATED.

PERHAPS THE UNCONSCIOUS REASON FOR MY PASSING ON THE EDITORSHIP IS THAT I DON'T FEEL I CAN ENERGETICALLY BEGIN AGAIN WITH THE ARGUMENTS AND ISSUES OF TEN YEARS AGO. IT IS TIME FOR NEW ENERGY TO BE PUT INTO PHYSICS AND SOCIETY.

CASPER (CARLETON COLLEGE), DIVISIONAL COUNCILLOR, WITH ROBERT N. CAHN (UNIVERSITY OF CALIFORNIA, DAVIS) AND PAUL MAXWELL (U.S. HOUSE COMMITTEE ON SCIENCE & TECHNOLOGY) ARE THE NEW MEMBERS OF THE EXECUTIVE COMMITTEE. THE QUALITY OF THE CANDIDATES WHO WON THE ELECTION AS WELL AS THOSE WHO RAN WAS OUTSTANDING. THE FORUM NEWSLETTER WHICH WAS EDITED BY MARTY PERL, (ISLAC) SINCE ITS INCEPTION WILL HAVE A NEW EDITOR JOHN DOWLING (MANSFIELD STATE COLLEGE).

WHILE THERE IS MUCH TO BE PROUD OF IN TERMS OF THE FORUM'S ACHIEVEMENTS IN THE 1970S, THIS NEXT DECADE IS STARTING OFF WITH MANY NEW CONCERNS AS WELL AS UNRESOLVED ISSUES. FOREMOST IS THE ISSUE OF NEW WEAPONS DEVELOPMENT, ARMS CONTROL AND THE INSTABILITY OF THIS NUCLEAR AGE. EVENTS IN THE PERSIAN GULF AREA ARE RE-ESTABLISHING THE MOOD OF THE COLD WAR AND RAPID INCREASES IN MILITARY EXPENDITURES. ONCE AGAIN THE MILITARY AND UNIVERSITY ARE EXAMINING THEIR RELATIONSHIP FOR THE SUPPORT OF SCIENTIFIC RESEARCH. THE ENERGY PROBLEM SEEMS CHRONIC AND NOT AMENABLE TO SIMPLE TECHNOLOGICAL OR POLITICAL SOLUTIONS. THE ENERGY ISSUE UNDERMINES THE ECONOMIC AND POLITICAL STABILITY OF THE WORLD AND MAKES ARMS CONTROL EVEN MORE URGENT. WHILE INDUSTRIAL EMPLOYMENT FOR SCIENTISTS AND ENGINEERS IS AGAIN REACHING A CYCLIC HIGH, EMPLOYMENT PROSPECTS AT UNIVERSITIES ARE QUITE BLEAK. THE DOWNTURN IN THE NUMBER OF COLLEGE AGE STUDENTS WILL HAVE A MAJOR EFFECT ON THE VIGOR OF UNIVERSITY EMPLOYMENT AND SCIENTIFIC RESEARCH. AN AGING HIGHLY TENURED FACULTY WILL BRING THREATS TO COLLEGES' QUALITY AND INTEGRITY. EQUAL ACCESS TO SCIENCE EDUCATION AND OPPORTUNITY FOR MINORITIES AND WOMEN ARE STILL IMPORTANT AND UNACHIEVED GOALS. ON THESE AND OTHER ISSUES, THE FORUM WILL INFORM THE PHYSICS COMMUNITY AS WELL AS THE SOCIETY AT LARGE ABOUT THE ISSUES AND POSSIBLE SOLUTIONS.

THE FORUM ALWAYS HAS NEED FOR INCREASED MEMBERSHIP AND ACTIVE PARTICIPANTS. PLEASE FEEL FREE TO WRITE TO ME TO VOLUNTEER YOUR IDEAS AND SERVICE. I WOULD ESPECIALLY LIKE TO INVITE THE NEW YOUNGER MEMBERS OF APS TO JOIN THE FORUM AND PARTICIPATE IN DEVELOPING NEW INITIATIVES FOR THE FUTURE.

WASHINGTON APS SESSIONS: SUBMITTED BY BRIAN SCHWARTZ

SESSION: "ARMS CONTROL AND NEW WEAPONS TECHNOLOGY", TUESDAY, 29 APRIL 1980 9:30 A.M., CHAIRPERSONS: LEO SARTORI, PHYSICAL SCIENCE AND VIGDOR TEPLITZ, PHYSICAL SCIENCE OFFICER U.S. ARMS CONTROL AND DISARMAMENT AGENCY.

1. "NEW WEAPONS TECHNOLOGY", DR. SEYMOUR L. ZEIBERG, DEPUTY UNDERSECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING (STRATEGIC AND SPACE SYSTEMS).

2. "SALT", U.S. GOVERNMENT OFFICIAL (TO BE ANNOUNCED).

3. "NEAR TERM NEEDS AND PROSPECTS FOR ARMS CONTROL", DONALD G. BRENNAN, DIRECTOR OF NATIONAL SECURITY STUDIES, HUDSON INSTITUTE.

4. "CAN ARMS CONTROL HALT THE ARMS RACE?" BERNARD FELD, M.I.T.

SESSION: "BORN CLASSIFIED", WEDNESDAY -- 30 APRIL 1980, 9:30 A.M., CHAIRPERSON: EARL CALLEN, THE AMERICAN UNIVERSITY.

1. "THE PROGRESSIVE CASE: PENALIZING THE DISCLOSURE OF RESTRICTED MATERIAL," HONORABLE PAUL N. MCCLOSKEY, JR., CONGRESSMAN FROM CALIFORNIA.

2. "THE PROGRESSIVE CASE: THE CASE AGAINST THE GOVERNMENT," BRUCE ENNIS, LEGAL DIRECTOR, AMERICAN CIVIL LIBERTIES UNION AND CHIEF DEFENSE COUNSEL FOR THE PROGRESSIVE

MAGAZINE.

3. "SECURITY AND PUBLIC POLICY ISSUES RELATED TO NUCLEAR POWER." THOMAS B. COCHRAN. NATIONAL RESOURCES DEFENSE COUNCIL, WASHINGTON, DC.

4. "THE CENTRAL INTELLIGENCE AGENCY AND MILITARY SECURITY." MORTON HALPERIN. CENTER FOR NATIONAL SECURITY STUDIES.

SESSION: FORUM AWARD SESSION, TUESDAY, 29 APRIL 1980, 7:30 P.M.. CHAIRPERSON: PAUL HOROWITZ (BOLT, BARANEK AND NEWMAN)

1. PRESENTATION OF THE 1980 LEO SZILARD AWARD FOR PHYSICS IN THE PUBLIC INTEREST TO SIDNEY DRELL.

2. "NATIONAL SECURITY AND ARMS CONTROL", DR. SIDNEY DRELL, DEPUTY DIRECTOR, STANFORD LINEAR ACCELERATOR

3. PRESENTATION OF THE FORUM AWARD FOR PROMOTING PUBLIC UNDERSTANDING OF THE RELATION OF PHYSICS TO SOCIETY TO WILLIAM A. SHURCLIFF.

4. "PROMOTING PUBLIC UNDERSTANDING: THE SONIC BOOM; SOLAR ENERGY", DR. WILLIAM A. SHURCLIFF, HONORARY RESEARCH ASSOCIATE, HARVARD UNIVERSITY.

FUTURE FORUM SESSIONS: PLEASE SUBMIT SUGGESTIONS FOR FUTURE FORUM SESSIONS TO THE NEW PROGRAM CHAIRPERSON, KEN FORD, PRESIDENT, NEW MEXICO INSTITUTE OF MINING & TECHNOLOGY, SOCORRO, NM 87801.

NOMINATIONS FOR CANDIDATES FOR THE 1981 SZILARD AND FORUM AWARDS SHOULD BE SENT BEFORE APRIL 20 TO BRIAN SCHWARTZ. THE PREVIOUS RECIPIENTS OF THE SZILARD AWARD HAVE BEEN: DAVID R. INGLIS (1974), BERNARD FELD (1975), RICHARD GARWIN

(1976), MATTHEW MESELSON (1978), SHERWOOD POWLAND (1979), AND SIDNEY DRELL (1980). THE PREVIOUS RECIPIENTS OF THE FORUM AWARD ARE: RALPH LAPP (1974), SCIENCE NEWS AND COMMENTS STAFF (1975), HERBERT YORK (1976), FRANK VON HIPPEL AND JOEL PRIMACK (1977), THEODORE TAYLOR (1978), JEREMY STONE (1979), AND WILLIAM SHURCLIFF (1980). THE PURPOSE AND GUIDELINES FOR THE TWO AWARDS ARE GIVEN BELOW.

LEO SZILARD AWARD FOR PHYSICS IN THE PUBLIC INTEREST: TO RECOGNIZE OUTSTANDING ACCOMPLISHMENT BY A PHYSICIST IN PROMOTING THE USE OF PHYSICS FOR THE BENEFIT OF SOCIETY IN SUCH AREAS AS THE ENVIRONMENT, ARMS CONTROL, AND SCIENCE POLICY. THE AWARD CONSISTS OF \$250 AND A CERTIFICATE CITING THE CONTRIBUTIONS OF THE RECIPIENT. THIS ANNUAL AWARD IS BEING ESTABLISHED AND SUPPORTED BY THE FORUM ON PHYSICS AND SOCIETY AS A MEMORIAL TO LEO SZILARD IN RECOGNITION OF HIS CONCERN FOR THE SOCIAL CONSEQUENCES OF SCIENCE. ANY LIVING PHYSICIST IS ELIGIBLE. THE RECIPIENT WILL BE CHOSEN BY THE EXECUTIVE COMMITTEE OF THE FORUM ON PHYSICS AND SOCIETY.

APS FORUM AWARD FOR PROMOTING PUBLIC UNDERSTANDING OF THE RELATION OF PHYSICS TO SOCIETY: TO RECOGNIZE OUTSTANDING ACCOMPLISHMENT IN THE ENDEAVOR TO PROMOTE PUBLIC UNDERSTANDING OF ISSUES INVOLVING THE INTERFACE BETWEEN PHYSICS AND SOCIETY. THE AWARD CONSISTS OF \$250 AND A CERTIFICATE CITING THE CONTRIBUTIONS OF THE RECIPIENT. THIS ANNUAL AWARD IS BEING ESTABLISHED AND SUPPORTED BY THE FORUM ON PHYSICS AND SOCIETY. TO BE ELIGIBLE FOR CONSIDERATION, WITHIN THE PAST TWO YEARS A PERSON MUST HAVE MADE SIGNIFICANT CONTRIBUTIONS TO THE PUBLIC UNDERSTANDING OF SCIENCE AND SOCIETY ISSUES THROUGH SUCH MEANS AS NEWSPAPER OR JOURNAL ARTICLES, BOOKS, FILMS, ETC. THE RECIPIENT WILL BE CHOSEN BY THE EXECUTIVE COMMITTEE OF THE FORUM ON PHYSICS AND SOCIETY.

FOLLOWING IS A RESOLUTION ADOPTED BY THE COUNCIL OF THE AAAS AT THEIR ANNUAL MEETING, JAN. 1980, IN SAN FRANCISCO. REPRINTED FROM SCIENCE 207, 870 (1980).

"NUCLEAR WEAPONS CONTROL," SUBMITTED BY RICHARD BARNET, EUGENE BELL, HELEN CALDICOTT, STEPHEN CHOROVER, JACK DENNIS, BERNARD FELD, JEROME FRANK, RUTH HUBBARD, JONATHAN KING, SALVADORE LURIA, PHILIP MORRISON, EVERETT MENDELSON, LINUS PAULING, ANNAMARIA GORINI TORRIANI, JUDITH TSIPIS, KOSTA TSIPIS, AND JOSEPH WEIZENBAUM:

WHEREAS IMPROVING THE EFFECTIVENESS OF SCIENCE IN THE PROMOTION OF HUMAN WELFARE IS AN OBJECTIVE AND A SPECIAL RESPONSIBILITY OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, AND

WHEREAS THE USE OF NUCLEAR WEAPONS THREATENS DESTRUCTION OF HUMAN LIFE AND SOCIETY, AND MAJOR DAMAGE TO THE ENTIRE ECOSYSTEM NEEDED TO SUPPORT LIFE, AND

WHEREAS THE MANUFACTURE OF URANIUM- AND PLUTONIUM-BASED WEAPONS, EVEN WITHOUT THEIR USE, IS A SOURCE OF LONG-LIVED ENVIRONMENTAL POLLUTION AND OF DAMAGE TO HUMAN HEALTH AND THE HEALTH OF FUTURE GENERATIONS,

BE IT RESOLVED THAT THE AAAS:

1. SUPPORT CONTINUED, VIGOROUS U.S. EFFORTS TO OBTAIN EFFECTIVE BILATERAL NUCLEAR ARMS LIMITATIONS.
2. SUPPORT COMPLETION OF THE COMPREHENSIVE TEST BAN TREATY.
3. OPPOSE THE DEVELOPMENT BY ANY COUNTRY OF NEW WEAPONS SYSTEMS WHICH MAKE VERIFICATION MORE DIFFICULT, OR POSE A FIRST-STRIKE THREAT.
4. SUPPORT, IN PHASE WITH PROGRESS IN ARMS CONTROL, THE DEVELOPMENT OF PLANS FOR THE STEP-BY-STEP

CONVERSION BY ALL NUCLEAR-WEAPONS-PRODUCING NATIONS OF FACILITIES FOR NUCLEAR WEAPONS PRODUCTION, RESEARCH, AND TESTING, INTO SCIENCE AND TECHNOLOGY FACILITIES FOR PEACEFUL USES.

AND BE IT FURTHER RESOLVED THAT:

1. ONE MAJOR THEME OF THE 1981 AAAS MEETING BE DIRECTING SCIENCE TOWARD PEACE.

2. THE COUNCIL OF THE AAAS ESTABLISH A WORKING GROUP TO HELP ORGANIZE AND MOBILIZE RESOURCES TOWARD NUCLEAR ARMS CONTROL.

NOTE: THE EDITOR WOULD BE INTERESTED IN HEARING FROM FORUM MEMBERS ABOUT WHETHER THE FORUM (AND/OR APS) SHOULD ALSO ADOPT SUCH A RESOLUTION.

POSSIBLE POSITION OPENINGS: PHYSICISTS WITH AN INTEREST IN ARMS CONTROL MAY WISH TO CONSIDER A ONE OR TWO YEAR APPOINTMENT WITH THE U.S. ARMS CONTROL AND DISARMAMENT AGENCY. FOR MORE INFORMATION CONTACT: DR. ROBERT ROCHLIN, U. S. ARMS CONTROL AND DISARMAMENT AGENCY, WASHINGTON, DC 20451.

APS COUNCIL REPORT BY EARL CALLEN, AMERICAN UNIVERSITY, WASHINGTON, DC 20016, FEB., 1980:

APS MEMBERSHIP IS 30448; UP 460 OVER PREVIOUS YEAR (FISCAL YEAR - JUNE 30). FORUM MEMBERSHIP IS 2143; UP 23 (2613 AS OF FEB. 1980). THE LARGEST DIVISION IS CONDENSED MATTER (3873). FIVE DIVISIONS (CHEMICAL PHYSICS, NUCLEAR, PARTICLES AND FIELDS, PLASMA, FORUM) ARE > 2000. ELECTRON AND ATOMIC PHYSICS HAS 1660, AND BIOLOGICAL, COSMIC RAYS, FLUID DYNAMICS AND HIGH POLYMER HAVE < 1000 MEMBERS EACH.

A NEW APS DIVISION - HISTORY OF PHYSICS. PEOPLE IN THE FIELD NEED

AN APS PLATFORM: THEIR TALKS ARE TOO TECHNICAL FOR THE REST OF THE HISTORIANS.

APS FISCAL 1980 BUDGET SURPLUS (NET REVENUE) WILL BE ABOUT \$380,000. MOSTLY TRANSFERRED TO EQUIPMENT AND BUILDING RESERVES. I DO NOT THINK ONE SHOULD THINK OF WAYS TO SPEND MONEY BECAUSE IT IS THERE. BUT I DO THINK THAT IF WE COME FORWARD WITH WORTHY PROJECTS, THEY HAVE A GOOD CHANCE OF GETTING SUPPORTED. DON'T WE HAVE ANY GOOD IDEAS ANYMORE? (MORE ON THIS LATER.)

POPA HAS A PROPOSAL (JOHN ALLRED) TO STUDY SAFETY ASPECTS OF FAST BREEDER REACTORS. NRC MAY BE INTERESTED. IT'S MOVING FORWARD.

DOE MAY BE WILLING TO SUPPORT A POPA FOLLOWUP STUDY ON ENERGY CONSERVATION.

THERE WILL ALMOST CERTAINLY BE A POPA STUDY ON COAL UTILIZATION (PROBABLY UNDER BARRY COOPER).

GERTRUDE GOLDHABER IS FORMULATING A STUDY ON THE CAUSES AND REMEDIES OF THE IGNORANCE OF BASIC PHYSICS AMONG THE PUBLIC.

SIDNEY BOROWITZ IS PUTTING IDEAS TOGETHER FOR A STUDY ON HOW TO MAKE PHYSICS GRADUATE EDUCATION MORE RELEVANT TO EMPLOYMENT IN INDUSTRY.

CIFS (COMMITTEE ON INTERNATIONAL FREEDOM OF SCIENTISTS) WILL COME OUT FROM UNDER POPA AND WILL BE A COMMITTEE OF COUNCIL UNTIL THE BY-LAWS CAN BE CHANGED TO MAKE CIFS A STANDING COMMITTEE OF THE SOCIETY. COUNCIL GAVE CIFS A \$6000 BUDGET. ALONG WITH OTHER MAJOR APS COMMITTEES (WOMEN, MINORITIES, OPPORTUNITIES, APPLICATIONS, EDUCATION).

THERE WILL BE A NEW POPA SUBCOMMITTEE TO AID PHYSICS IN DEVELOPING COUNTRIES. BILL COLGLAZIER, MIKE MORAVCSIK AND LEWIS ROSEN WERE INSTRUMENTAL IN LAUNCHING

THIS. THERE IS PLENTY TO BE DONE - SENDING JOURNALS. SENDING PEOPLE (TEACHERS AS MUCH AS RESEARCHERS). ADVISING ON CURRICULUM. BRINGING UDC TEACHERS HERE FOR UPDATING AND UDC STUDENTS HERE FOR QUALITY EDUCATION. COLLABORATIVE RESEARCH RELEVANT TO UDC'S. (INDONESIA AND IPAN HAVE LESS THAN 50 PHYSICS PHD'S EACH. INDONESIA HAS 125 MILLION PEOPLE. IRAN 35 MILLION.)

THIS IS MY LAST REPORT AS FORUM COUNCILLOR. MIKE CASPER, A FINE CHOICE, IS MY REPLACEMENT. I'VE REALLY ENJOYED THE JOB, AND I'VE ENJOYED WRITING THESE REPORTS. BUT I'M NOT HAPPY ABOUT THE CURRENT STATE OF THE FORUM. WE ARE NOT THE CUTTING EDGE OF CHANGE ANYMORE. THE NEW IDEAS ARE NOT COMING FROM US. WHY IS CIFS A COMMITTEE OF POPA, WHERE IT DIDN'T BELONG (POPA IS SUPPOSED TO ORGANIZE STUDIES ON PROBLEMS WITH A MAJOR TECHNICAL COMPONENT) AND NOT A COMMITTEE OF THE FORUM? WHY IS THE NEW COMMITTEE ON INTERNATIONAL DEVELOPMENT BEING STARTED UP IN POPA, AND NOT IN THE FORUM? WE ORGANIZE STIMULATING SESSIONS AT MEETINGS -- REGULARLY THE BEST ATTENDED SESSIONS AT THE MEETINGS -- AND WE GIVE SYMPATHETIC SUPPORT, ON COUNCIL AND IN OUR NEWSLETTER, TO A LOT OF OTHER COMMITTEES, AND THOSE THINGS ARE FINE. BUT THERE WAS A TIME WHEN THE FORUM DID A LOT MORE THAN PROVIDE PLATFORMS AND VOTE "RIGHT".

ONE SERVICE I HOPE WE CAN PROVIDE IS TO GIVE FORUM MEMBERS A SENSE OF THE POLITICS OF WHO THEY ARE VOTING FOR IN COUNCIL ELECTIONS. WE CAN DO THIS BY GETTING STATEMENTS FROM CANDIDATES, INTERVIEWS, AND BY REPORTING ON WHO VOTES WHICH WAY IN COUNCIL VOTES. THAT WOULD REQUIRE ROLL CALL VOTES, BUT WHY NOT? I THINK THE FORUM COUNCILLOR SHOULD ASK FOR ROLL CALL VOTES ON ISSUES LIKE ERA, HUMAN RIGHTS, AND SOME POPA STUDIES. I THINK A LOT OF MEMBERS WOULD BE AMAZED BY THE VOTING RECORDS OF SOME OF THE PEOPLE THEY HAVE ELECTED.

1. GIVING PUBLICITY TO EXISTING PROGRAMS, SUCH AS THE TRIESTE PROJECT FOR SENDING DONATED BOOKS AND BACK ISSUES OF JOURNALS TO LDC'S (LESS DEVELOPED COUNTRIES) AND THE PHYSICS INTERVIEWING PROJECT WHICH SENDS U.S. PHYSICISTS TO INTERVIEW LDC STUDENTS WHO ARE APPLYING FOR ADMISSION TO U.S. GRADUATE SCHOOLS.

2. KEEPING REGISTRIES OF BOTH AMERICAN PHYSICISTS WHO WILL BE TRAVELLING NEAR LDC'S AND LDC PHYSICISTS WHO WILL BE TRAVELLING IN THE U.S. IN ORDER TO FACILITATE VISITS AND SEMINARS.

3. ORGANIZING OCCASIONAL SESSIONS AT APS MEETINGS ON THE NEEDS AND CONCERNS OF LDC PHYSICS STUDENTS BEING EDUCATED IN THE U.S.

4. KEEPING A LIST OF VOLUNTEERS FOR REFEREEING LDC JOURNALS AND FOR EVALUATING PROPOSALS AND COMPLETED RESEARCH SENT TO OR SPONSORED BY LDC SCIENTIFIC INSTITUTIONS.

5. KEEPING A REGISTRY OF SHORT-TERM JOBS IN LDC'S FOR AMERICAN PHYSICISTS ON SABBATICAL.

6. RECOMMENDING LDC SCIENTISTS TO RECEIVE COMPLIMENTARY SUBSCRIPTIONS TO PHYSICAL REVIEW ABSTRACTS.

7. PROVIDING INFORMATION TO U.S. PHYSICS DEPARTMENTS IN ORDER FOR THEM TO UPGRADE THEIR PROFESSIONAL ADVISING TO LDC STUDENTS.

MORE EXPENSIVE PROJECTS, FOR WHICH THE SUBCOMMITTEE WOULD HAVE TO RAISE ADDITIONAL FUNDS, COULD INCLUDE THE FOLLOWING:

1. SENDING COMPLIMENTARY APS JOURNAL SUBSCRIPTIONS TO SOME SELECTED LDC INSTITUTIONS.

2. SPONSORING A SUMMER SEMINAR FOR LDC STUDENTS BEING EDUCATED IN U.S. GRADUATE SCHOOLS ON PROFESSIONAL NEEDS AND CONCERNS WHICH THEY MAY HAVE TO CONFRONT IN THEIR HOME COUNTRIES (E.G., NATIONAL SCIENCE

POLICY; SETTING UP DEPARTMENTS, JOURNALS, PROFESSIONAL SOCIETIES, ETC.).

3. EVALUATING A QUESTIONNAIRE SENT TO LDC PHYSICISTS EDUCATED IN THE U.S. BUT WHO HAVE RETURNED HOME IN ORDER TO HAVE A BETTER ASSESSMENT OF THE RELEVANCE OF THEIR EDUCATION (AND THEN DISTRIBUTING THAT INFORMATION TO U.S. GRADUATE SCHOOLS).

4. MAKING ARRANGEMENTS FOR PRACTICAL INDUSTRIAL EXPERIENCE IN THE SUMMER FOR LDC GRADUATE STUDENTS BEING EDUCATED IN THE U.S.

WE RECOMMEND THAT THE SUBCOMMITTEE SERIOUSLY CONSIDER RAISING ADDITIONAL FUNDS TO SPONSOR MORE EXPENSIVE PROJECTS. TWO METHODS OF RAISING FUNDS ARE VOLUNTARY CONTRIBUTIONS ON THE ANNUAL APS DUES STATEMENT AND FORMAL PROPOSALS TO AGENCIES OR FOUNDATIONS.

WE DO NOT RECOMMEND ANY CHANGES AT THIS TIME IN THE POLICY FOR PAGE CHARGES FOR APS JOURNALS. THE CURRENT POLICY DOES PROVIDE FOR THE PUBLICATION OF ARTICLES WHEN PAGE CHARGES CANNOT BE HONORED.

WE ALSO CONSIDERED, BUT IN LESS DETAIL, TWO OTHER AREAS OF CURRENT OR PROSPECTIVE APS INTERNATIONAL ACTIVITIES. THE FIRST WAS THE LONG-STANDING COMMITMENT AND EFFORTS BY THE APS ON BEHALF OF THE HUMAN RIGHTS OF SCIENTISTS. THERE WE SUPPORT THE PROPOSAL THAT CIFS BE MADE A SEPARATE STANDING COMMITTEE OF THE APS, REPORTING DIRECTLY TO COUNCIL. THE NEW POPA SUBCOMMITTEE FOR COLLABORATING WITH PHYSICS IN DEVELOPING COUNTRIES SHOULD BE CREATED IRRESPECTIVE OF THE FUTURE ORGANIZATIONAL STATUS OF CIFS.

REGARDING RELATIONSHIPS WITH OTHER PROFESSIONAL SOCIETIES, WE RECOMMEND THAT SERIOUS CONSIDERATION BE GIVEN TO JOINT SPONSORSHIP OF OCASIONAL MEETINGS WITH FOREIGN PROFESSIONAL SOCIETIES IF A SUITABLE OPPORTUNITY

ARISES. HOWEVER, THE COORDINATION OF A JOINTLY SPONSORED MEETING COULD BE QUITE COMPLEX AND COULD NOT BE UNDERTAKEN WITHOUT CAREFUL STUDY.

WE WOULD BE HAPPY TO ANSWER ANY QUESTIONS THAT YOU MAY HAVE CONCERNING OUR RECOMMENDATIONS.

SINCERELY,

WILLIAM COLGLAZIER, MICHAEL MORACVSIX, LOUIS ROSEN

LETTER TO THE EDITOR:

NOVEMBER 5, 1979

IT IS TRULY ABSURD TO PUSH 21 SOVIET CITIZENS FOR EMPLOYMENT IN THE UNITED STATES (FORUM ON PHYSICS AND SOCIETY, VOL. 8, NO. 3, SEPTEMBER 1979) WHERE UNEMPLOYMENT EXISTS FOR OUR OWN CITIZENS WHO CANNOT FIND WORK.

I BELIEVE THAT AN APPROPRIATE COURSE OF ACTION FOR THE FORUM WOULD BE TO ENSURE THAT THE DEPARTMENT OF LABOR CERTIFIES PHYSICS AS A DISCIPLINE IN WHICH NO IMMIGRATION VISAS MAY BE ISSUED SO LONG AS THE UNEMPLOYMENT SITUATION CONTINUES.

IT WOULD BE VERY INTERESTING TO FIND OUT WHAT AMOUNTS OF MONEY ARE BEING SPENT BY CIFS FOR INTERVENING ABROAD IN MATTERS WHICH ARE OF LITTLE CONCERN TO AMERICANS AND WHERE ARE THESE FUNDS COMING FROM.

THE FORUM SHOULD CONCENTRATE ON DOMESTIC PROBLEMS OF WHICH THERE ARE PLENTY. SUCH AS, FOR INSTANCE, THE RECENT ENDORSEMENT OF PRIOR GOVERNMENT CENSORSHIP OF PUBLICATIONS MADE BY THE ELEVEN MEMBERS OF THE AAAS WHO MAKE UP ITS "COMMITTEE ON SCIENTIFIC FREEDOM AND RESPONSIBILITY" REPORTED IN THE PROGRESSIVE, MAY 1979, P 32.

WHY DON'T YOU PRINT A LETTER LIKE THIS FOR A CHANGE INSTEAD OF

THE DRIVEL BY CALLEN AND KOHN.

VLADISLAV BEVC

SYNERGY RESEARCH INSTITUTE, BOX 561, SAN RANSON, CA 94583

FILM REVIEW:

A IS FOR ATOM, B IS FOR BOMB: A PORTRAIT OF DR. EDWARD TELLER

PRODUCED BY BRIAN KAUFMAN FOR NOVA. WGBH EDUCATIONAL FOUNDATION, 125 WESTERN AVENUE, BOSTON, MA 02134. 3/4" VIDEOCASSETTE, COLOR, 60 MIN., 1980. INQUIRE FOR PURCHASE.

(REVIEWED BY DIETRICH SCHROEER, PHYSICS DEPT., UNIVERSITY OF NORTH CAROLINA, CHAPEL HILL, NC 27514.)

A IS FOR ATOM, B IS FOR BOMB: IS A BIOGRAPHY OF EDWARD TELLER. IT IS ALSO A HISTORY OF THE RELATIONSHIP BETWEEN SCIENTISTS AND NUCLEAR WEAPONS. IT IS A WIDE-RANGING PROGRAM: IT OPENS WITH NURSERY RHYMES ABOUT NUCLEAR WEAPONS, SHOWS SCIENTIFIC GENIUSES AT WORK AND AT WAR WITH EACH OTHER, AND ENDS WITH A SURREALISTIC IMAGE OF HUMANKIND'S SELF-DESTRUCTION. IT IS WELL DONE, ENTERTAINS IN SPITE OF THE UNDERLYING TERROR OF THE HYDPOGEN BOMB, AND APPEARS SATISFACTORILY CORRECT AND EVEN-HANDED IN LETTING THE PARTICIPANTS SPEAK FOR THEMSELVES. BUT THE ARGUMENTS GIVEN, AND THE MOTIVATIONS REVEALED ARE OFTEN VERY SURTLE.

THIS BIOGRAPHY OF TELLER IS AN EXCELLENT VEHICLE FOR TALKING ABOUT SCIENTISTS AND NUCLEAR WEAPONS. TELLER PLAYED A MAJOR ROLF IN ESTABLISHING AND PERPETUATING THIS RELATIONSHIP. HE HAS BEEN THE SCIENTIFIC SPOKESPERSON FOR THOSE WHO HOLD A HAWKISH VIEW. FINALLY, HIS INVOLVEMENT SHOWS WHAT IS WRONG WITH THIS WHOLE SCIENCE-MILITARY CONNECTION.

THE PROGRAM IS INTERESTING, INFORMATIVE, AND EVEN AMUSING. WE LEARN DETAILS ABOUT A FASCINATING ASPECT OF OUR HISTORY AND GET TO SEE THE POSTURING OF SOME OF OUR FAVORITE SCIENTIST HEROES AND VILLAINS. BUT THE PROGRAM TELLS US SOMETHING MORE, SOMETHING THAT IS PROFOUNDLY DISTURBING, IF ONLY WE LISTEN CAREFULLY ENOUGH. IT TELLS US WHAT IS WRONG WITH THE WHOLE RELATIONSHIP BETWEEN SCIENTISTS AND NUCLEAR WEAPONRY, AND WHY THE PUBLIC HAS BEEN UNABLE TO COME TO GRIPS WITH THE CONTROL OF SUCH WEAPONRY.

HOW ONE DESCRIBES TELLER'S WORK MATTERS A GREAT DEAL WHEN WE TRY TO UNDERSTAND HIS JUSTIFICATION FOR LIMITING THE WEAPONS SCIENTISTS' SOCIAL RESPONSIBILITY FOR THEIR WORK. TELLER SAYS, "THE RESPONSIBILITY OF THE SCIENTIST IS TO MAKE SCIENCE. IF HE DOESN'T, NOBODY WILL." WE NOW UNDERSTAND THAT HE HAS FAILED THIS FIRST RESPONSIBILITY, ONCE WE APPRECIATE THAT HIS WEAPONS WORK IS NOT AT ALL SCIENCE. "IF HE WANTS TO, HE SHOULD APPLY IT. KNOWING THAT IT MAY BE USED FOR GOOD OR EVIL PURPOSES AND ONE CAN NEVER KNOW." TELLER INDEED APPLIED SCIENCE. BUT HE DID KNOW THE PURPOSES FOR WHICH THE APPLICATIONS WOULD BE USED. THE PURPOSES OF THE H-BOMB ARE OBVIOUS, HE IN FACT HELPED PROMOTE THE POLITICAL DECISIONS ON THEIR USE. "...HE HAS ONE LAST RESPONSIBILITY, TO EXPLAIN WHAT HE HAS LEARNED AND WHAT HE HAS CONSTRUCTED." TELLER HAS WANTED TO GIVE SUCH EXPLANATIONS, BUT THE SECRECY CONDITIONS HAVE MADE ONLY AN ELITE ELIGIBLE TO UNDERSTAND FULLY HIS ADVICE. CAN TRUE SCIENTISTS EXERCISE THIS RESPONSIBILITY IF THEY ACCEPT SECRET WORK? "...IN A DEMOCRACY...THE RESPONSIBILITY STOPS AT THIS POINT." BUT THIS IS NOT TRUE FOR THE RESPONSIBILITY OF WEAPONS ENGINEERS. THEY MUST ACCEPT THE CONSEQUENCES OF DESIGNING SUCH WEAPONS AND ARE RESPONSIBLE FOR THE USES TO WHICH THEY ARE PUT. TELLER PERSUADED THE GOVERNMENT NOT ONLY TO STUDY, BUT

ALSO TO DEVELOP AND THEN DEPLOY THE H-BOMB. THE SUBTERFUGE OF CALLING THIS SCIENCE CANNOT BE USED TO COVER UP THIS PERSONAL RESPONSIBILITY OF TELLER (AND OF ALL WEAPONS "SCIENTISTS") FOR THE EXISTENCE OF H-BOMBS AND FOR WHATEVER THREATS AND STABILITIES THEY REPRESENT FOR THE U.S. AND FOR HUMANKIND.

(EDITOR'S NOTE: THE ABOVE IS ABSTRACTED FROM SCHPOEER'S LONGER REVIEW TO BE PUBLISHED IN THE BULLETIN OF THE ATOMIC SCIENTISTS.)

MEMBERSHIP IN THE FORUM ON PHYSICS AND SOCIETY: ANY APS MEMBER MAY JOIN THE FORUM SIMPLY BY WRITING THE FORUM SECRETARY-TREASURER, DIETRICH SCHROEER, DEPT. OF PHYSICS & ASTRONOMY, U. OF NORTH CAROLINA, CHAPEL HILL, NC 27514. THERE ARE NO FORUM DUES FOR APS MEMBERS THIS YEAR.

FUTURE FORUM SESSIONS: PLEASE SUBMIT SUGGESTIONS FOR FUTURE FORUM SESSIONS TO THE NEW PROGRAM CHAIRPERSON, KEN FORD, PRESIDENT, NEW MEXICO INSTITUTE OF MINING & TECHNOLOGY, SOCCORRO, NM 87801.

NOTE TO READERS: THIS ISSUE OF THE NEWSLETTER IS BEING OFFSET DIRECTLY FROM A COMPUTER PRINTOUT. THIS PROCESS HAS THE ADVANTAGES OF BEING CHEAP, LEAST TIME-CONSUMING, EASILY EDITED, COMPOSED AND CORRECTED. THE DISADVANTAGES ARE THAT IT LOOKS LIKE A COMPUTER, WE HAVE ONLY UPPER CASE LETTERS, AND THE TYPE TAKES UP A LOT OF ROOM. THE EDITOR WOULD APPRECIATE YOUR COMMENTS ON WHETHER OR NOT THE ADVANTAGES OUTWEIGH THE DISADVANTAGES.