The CPSR Newsletter

Volume 2 No. 3 Summer 1984

Trip Report: Germany and Finland

Alan Borning - CPSR/Seattle

Last month Alan Borning attended the Fourth Congress of the International Physicians for the Prevention of Nuclear War Conference in Helsinki as the CPSR representative. On the way he attended the founding meeting in Bonn of a West German group with goals very similar to those of CPSR. Here is a report of his trip.

The meeting in Bonn on June 2 was well attended, with about 200 computer professionals from all parts of West Germany. There has been considerable activity in West Germany already by computer professionals concerned about the arms race, and the meeting was called by two earlier groups, "Informatiker warnen vor dem programmierten Atomkrieg" and "Demokratische Verantwortung der Informatiker" (Computer Professionals Warn of Programmed Nuclear War and Democratic Responsibility of Computer Scientists).

At the June 2 meeting, following a welcome by Helga Genrich of the Gesellschaft für Mathematik und Datenverarbeitung (Bonn), there were talks by Joe Weizenbaum of MIT, by myself, and by Reinhard Keil of the Technical University of Berlin. There was then a discussion of the goals and structure of the new organization, including a lively debate on whether the group should restrict itself just to prevention of nuclear war, or whether it should also deal with other issues such as computers and privacy or automation and unemployment. The conclusion was that the group should focus primarily on the prevention of nuclear war, but that it should also be able to deal with other interactions of computers and society. After much discussion, the name "Forum Informatiker für Frieden und Gesellschaftliche Verantwortung" was chosen, which translates approximately to Computer Professionals for Peace and Social Responsibility.

A board of directors was elected, which will be in charge of building the organization and planning its activities. The members of the board are Prof. Christiana Floyd (Technical University of Berlin; chair), Mr. Hugo Fischer (Frankfurt), Ms. Helga Genrich (Gesellschaft für Mathematik und Datenverarbeitung, Bonn), Dr. Wolfgang Hesse (Munich), Prof. Peter Löhr (University of Bremen), and Prof. Hans-Wilm Wipperman (University of Kaiserslautern).

We hope to have a report from our sister group in West Germany in our next newsletter. In the meantime, persons interested in contacting the group should write to the address given in **International Contacts**.

The next day I flew to Helsinki for the IPPNW conference. On the first day, Dr. Andreas Papandreou, the Prime Minister of Greece addressed the conference. He seemed very knowledgeable and dedicated to the cause of preventing nuclear war, and reported on his recent activities in forming a Balkan nuclear-free zone.

For the next two days we split into working groups; I was in the working group on unintentional nuclear war. The chair of the group was Dr. Vladimir Aleksandrov of the Computing Center of the USSR Academy of Sciences (who incidentally also presented his work on modelling the nuclear winter effect to the Congress). There were four invited speakers at the group: Dr. Stewart Britten (U.K.), who spoke on risk assessment and on psychological factors that could enter into unintentional nuclear war; Milton Leitenberg (Sweden), an arms-control expert who talked about possible causes of war, in particular escalation from normal military operations; William Ury from the Harvard Negotiation project, who spoke on crisis control; and myself (I talked about computer system reliability and nuclear war). The group remained quite focussed; the discussions were interesting and sometimes intense, for example; one point of controversy was whether accidental nuclear war caused by human or machine error was a significant risk. There is interest in continuing the working group in some form, and perhaps in putting together a book.

The next IPPNW congress will be in Budapest in June 1985, and CPSR has been invited to attend.

Finally, while in Helsinki I had a chance to talk with our Finnish CPSR member, Jukka Rantanen, and to check out the NordData computer exhibit and convention, which happened to be at the same location as the IPPNW congress.

CPSR and "The Military"

Severo Ornstein - CPSR Chairman

As we express concern about issues like DOD funding of computer science research [see **Workshop**, *page 5], we find ourselves facing a more basic question: What should be CPSR's stance toward "the military"? For many of us it is a difficult question, because it touches on deep internal conflicts. This article illustrates one such conflict. It is thoroughly personal, and I present it here in hopes that it will provoke thoughtful comment and discussion. It documents my own progression from pure gut-level reaction (to a particular form of military promotionalism), to a more reasoned judgment concerning the underlying issues.*

It's midnight. I sit here staring at a seminar brochure from the International Defense Electronics Association, the inch-high letters screaming out at me: "BATTLEFIELD AI/ROBOTICS" - two days - $495 per person - Washington, Boston, Orlando. "Major R&D Thrusts in Battlefield Robotics and Artificial Intelligence (AI) - DARPA, Army, Navy, Air Force"; "High Payoff Applications for AI/Robotics Weapons Systems". Inside the brochure are "the Critical Questions": - "What Weapons Systems Upgrade Options will AI/Robotics Make Possible in the Next 5 Years?" - "Can/Should Man Ever be Removed Entirely from the Loop? What's Feasible Now?"

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Computer Professionals for Social Responsibility
Daniel Ingalls and Donna Osgood, editors
P.O. Box 717
Palo Alto, CA 94301

The purpose of the Newsletter is to keep members informed of relevant thought and activity in our organization. We welcome comments on the content and format of our publication. Most especially, we welcome contributions from our members. The deadline for submissions to next issue is ***September 1, 1984.***

(continued from page 1)

Thirty years - I think - thirty years of my life I've spent working in computer science - and look what it's being used for. Makes me wish I'd spent those years farming, or doing almost anything else, instead.

I think about Admiral Noel Gayler's argument that one shouldn't direct one's criticism at the military but at the real culprit, nuclear weapons. Gayler, himself a military man - former head of the Pacific Fleet, former head of NSA - now spending his time at the American Committee on East-West Accord, trying to keep the human race from blowing itself up. It's impossible not to respect him.

I try to remember the day in my childhood when, for the first time, I encountered meanness in another human being. It was on a playground and some bully was grinning and lying to me about a game we had been playing. Later I came to understand that there were people like Hitler and Stalin, and I accepted the need for military strength. And the argument that to win, our own forces needed better weapons. God help the innocent bystanders.

My eyes go back to the brochure and I try to imagine the sort of people who can exhibit such relish for the machinery of death. Are the men who dabble in this business full of the sadness of humanity - do they pursue their trade with regret that mankind is so imperfect as to require such a trade at all? As I look at the slick presentation, the catchy, high-tech phrases, the big print, the high cost - I think to myself no, this is all laid on with great enthusiasm. These are the arms purveyors - here is President Eisenhower's "military-industrial complex" - in spades. Here is unabashed enthusiasm for new technology. These pages give no hint that maiming, slaughter, and agony are what battlefields are all about.

And what is saddest of all is the realization that we may now be allowing these poeple, and the ideologues who invest them with a "mission", to dominate our society and drag us all off once again toward war. This time at least, will finish it - once and for all.

Thirty years, I think. Better I should have been a farmer.

. . .

But then I think again. Emotional negativism is perhaps as dangerous as heedless enthusiasm for it. What's the constructive thing to do?

. . .

Because of CPSR's concern about nuclear war and the form in which such concerns are typically couched, many people assume that CPSR is pacifist in nature - against more or less everything military. And indeed some of our membership may have such views. But rather than taking a position against all things military, I would propose what I believe is a more defensible position. Specifically CPSR should focus its criticism on some developments that can be questioned regardless of one's feelings about the military:

1. the belief that "superior force" is still a meaningful notion when dealing with nuclear weapons.

2. the *a priori* assumption that more sophisticated technology necessarily improves our security.

3. the tendency for weapons projects to dominate our national priorities and to be used, far too frequently, as an instrument of foreign policy.

In raising these concerns, CPSR actually has very little special expertise to bring to the table; they are problems that can be addressed by every thinking and observant person. As computer professionals, we encounter these problems when public planners and policy makers place unwarranted faith in computer systems, and when military applications preoccupy our profession. It is in these areas that we have not only a right but a responsibility to speak up.

In speaking up, we must somehow combat the seemingly irresistible tendency to draw lines that separate "them" from "us." If there is any lesson to be learned from the nuclear age it is that there are no "them"; that we are all "us." That applies not only to Americans and Soviets, but (perhaps surprisingly) to those of us both in and out of the government, in and out of the "Peace Movement," and in and out of "the military." The need to bridge this gap - to begin to try to share a common viewpoint - does not arise out of any abstract sense of purity or morality; it arises from a desperate practical need to survive. If we don't manage it, if we continue to undercut our ability to communicate by drawing we/they lines, then we might as well be spending our final days at the beach, enjoying the last of civilization.

Computer Unreliability and Nuclear War

CPSR/Madison

With this issue we start to serialize a paper prepared by CPSR/Madison entitled "Computer Unreliabiity and Nuclear War". This material was originally prepared for a workshop at a symposium on the Medical Consequences of Nuclear War that was held in Madison, Wisconsin, on October 15, 1983. The paper has four sections: Computer Use in the Military Today, Causes of Unreliability, Artificial Intelligence and the Military, and Implications. We plan to include a section in each succeeding Newsletter. In the meantime, if you wish to order a copy of the full report, please send your request, along with $1.00, to CPSR, P.O. Box 717, Palo Alto, CA 94301.

1. Computer Use in the Military Today

James Greuel, Greg Brewster

Computer use in the military, as in other areas, is widespread and growing at a dramatic rate. It is estimated that in 1982 approximately 20% of the programmers in the United States were writing software for military appications. This Section describes the extent to which current defense department policies are dependent upon computer technology.

1.1 Computerized Weapons

We first consider the direct use of computers in U.S. weapon systems. A prime example is a category of weapons called *Precision Guided Munitions*, or *PGMs*. These devices depend on computerized guidance systems to home in on their targets. The cruise missile, for example, can be programmed with a digitized map of the surface over which it is to fly. During flight, micro-electronic sensors scan the terrain, comparing it to the map. If the two views disagree, appropriate flight adjustments are made. The sensors also scan ahead for obstructions, allowing the missile to fly very low and avoid radar detection. The cruise missile has been tested successfully, though small changes in terrain appearance do cause problems for the guidance system. For example, the amount of change in light and dark terrain features introduced by a snowfall can require a change in the digitized map. In the event of a war, any craters from previous explosions in the missile path could certainly cause navigational difficulties.

Currently under development are missiles that will use on-board

computers to "recognize" their targets. These missiles can be fired in a general direction and allowed to search for an appropriate target. Prototypes have had difficulties, however, in finding camouflaged targets. They have also had difficulty in distinguishing between objects with similar visual features: for example, between tanks and large boulders.

Computers are often used to assist human beings in the operation of sophisticated weapons systems. The F-15 fighter jet has 45 micro-computers on board. These are designed to improve maneuverability, locate targets at up to 100 miles, and aim missiles at those targets. The Air Force has had considerable difficulty keeping the F-15 airborne. Field repairs require skilled technicians and computerized diagnostic equipment. There is currently a proposal under consideration to build large maintenance centers on the East and West coasts solely for the purpose of maintaining F-15s.

Computerized weapons are all susceptible to tactics known as *Electronic Counter-Measures*, or *ECMs*. These are steps taken to confuse or disrupt enemy computer and radar systems. They can be as simple as a pilot dropping strips of aluminum (called *chaff*) to "foil" enemy radar, or they can be as sophisticated as the electronic equipment one finds aboard such aircraft as the stealth bomber. This equipment attempts to fool enemy radar into indicating that the plane is somewhere other than where it really is.

1.2 Weapons Design

A second use of computers in the military is in the design of weapons. An example is the development of *self-forging fragments* - disks of metal inside a bomb that are shaped into conical, armor-piercing projectiles by the force of the explosion. The idea for such weapons grew out of computer analysis of the kinetic processes that take place inside a detonating warhead. Similar work led to the development of *area munitions*, including so-called *fuel-air explosives*, which precisely distribute and ignite enough explosive gas to level a full city block.

1.3 Simulations

A third use of military computers is in the area of simulation. Computers have been used not only to model conventional warfare, such as dogfights between jet fighters, but to simulate nuclear combat as well. For example, computers have been used to predict the effects of a nuclear exchange under various scenarios and to calculate the remaining war-making capabilities of each side. The results of these programs, which are highly susceptible to programmer error and user bias, have in part formed the basis of the government's claims of Soviet nuclear superiority.

1.4 Command, Control, Communications, and Intelligence

The fourth use of computer technology in the military is more vulnerable to computer error and ECMs than any other. An intricate system of computers, satellites, telephone lines, radar facilities, surveillance planes, and air-borne and underground control rooms constitutes the eyes, ears, and, in a frightening sense, the very brains of our national defense. This system is called *Command, Control, Communication, and Intelligence*, or *C3I* (pronounced "C-cubed-I").

In the context of nuclear war, the purpose of C3I is two-fold:

(1) To provide information to the right people quickly enough during a surprise nuclear attack for the "right" decisions to be made.

(2) To maintain a system of command, control, and communication once nuclear war begins.

Among other things, C3I monitors the world's air space; observes Soviet tests and launchings; provides navigational assistance to our missiles, air-craft, and submarines; controls the position and orientation of military satellites; and collects and analyzes the results of the military's electronic intelligence-gathering operations. There are currently proposals before Congress to add artificial intelligence capabilities to many computers in the C3I system, allowing it to make recommendations and, perhaps, eventually decisions on the firing of missiles when there is too little time for human decision-making.

The heart of C3I is a collection of Honeywell H6000 computers located at various sites across the country. These computers were built in the early 70's on the basis of designs created in the 60's. As many people know, any computer that old may be likened in a sense to an early horseless carriage. It would be easy to spend several billions of dollars to update those machines. The result might be able to accomplish more tasks more quickly than before, but it would not be more reliable: the sources of computer errors described in the remainder of this paper apply not only to obsolete computers, but to "state-of-the-art" machines as well. What we discuss are *inherent* sources of unreliability in *all* computer systems. No amount of money will change the fact that computers make mistakes. Only sensible *human* policies will keep those mistakes from starting World War III.

References

C. Simpson, "Computers in Combat," Science Digest, October 1982.

R. R. Everett, "Yesterday, Today, and Tomorrow in Command, Control, and Communications," Technology Review, January 1982

"Command, Control Capability Upgraded." Aviation Week and Space Technology, 3 January 1983

"An Upheaval in U.S. Strategic Thought." Science, 2 April 1982.

R. T. Smith, "They Have More EMT Than We," Science, 2 April 1982.

A. D. Frank, "Hello, Central, Give Me Bomb Control," Forbes, 23 November 1981.

W. Arkin and P. Pringle, "C3I : Command Post for Armageddon." Nation, 9 April 1983.

"The Conventional Weapons Fallacy," Nation, 9 April 1983.

L. Siegel, "Space Wars," The Progressive, June 1982

Chapter News

As space allows, we will continue to reprint brief news from our chapters. Chapter secretaries are encouraged to send contributions to the address on page 1.

Boston: CPSR/Boston's last meeting dealt with two main topics: a report on the recent IECC (International Economic Conversion Conference) and discussion of the Battlefield AI/Robotics seminar to be held in Boston at the end of July. Among other things we plan to write an Op-Ed article for the Boston Globe about this matter.

Los Angeles: CPSR/LA is collecting short descriptions of ethical problems faced in working with computers. This could

involve employer versus public interests, e.g. being asked to do something that is not good for the public, employer/employee conflicts, e.g. being forced to give unreasonable estimates on schedules, conflicts with property rights, e.g. proprietary software. We welcome accounts of such problems, with anonymous names if you wish, the ethical considerations you faced, and what you did. We will try to get these topics introduced in computer science courses.

Madison: The Madison chapter has been focusing its energies on doing workshops and maintaining a speakers' bureau on "Computer Unreliability and High-Risk Applications". We've given such a workshop about ten times now: in a local high school, at a PSR sponsored conference, for a social work seminar, and for our colleagues in our own department. We also had the pleasure of a visit by Severo Ornstein and Laura Gould recently at a brutally early breakfast meeting.

Seattle: The Seattle chapter meets on the last Tuesday of the month in members' homes. (In August, we'll be having a picnic instead.) Recent chapter activities have included discussion of the CPSR response to the DARPA Strategic Computing proposal, and we recently had a booth at a career fair at a local high school. Our speakers' bureau continues to receive requests: one member addressed the Puget Sound Artificial Intelligence Society on the DARPA Strategic Computing proposal, and another participated in a debate on High Frontier and space weapons.

Chapter Contacts

As an aid to internal communication, we list below the mailing addresses of our chapters along with meeting schedules.

Berkeley: Bruce Joffe
P.O. Box 9026
Berkeley, CA 94709
(415) 654-5263 (home)
(415) 768-0288 (work)

CPSR/Berkeley meets regularly every other Thursday at 7:30 for an agenda meeting, followed at 8:00 with a general meeting. The location is the Berkwood Hedge School at Bancroft and McKinley in Berkeley. There will be no meetings during August.

Boston: Steve Berlin
Box 962
Kendall Station
Cambridge, MA 02142
(617) 253-6018 (work)

We will henceforth meet monthly instead of quarterly. Meetings will take place on the second Wednesday of each month at a place to be announced.

Los Angeles: Rodney Hoffman
P.O. Box 66038
Los Angeles, CA 90066
(213) 747-3219

CPSR/LA now meets monthly at the Sears Savings Bank, 8800 Sepulveda Blvd., at La Tijera, just north of LAX in Westchester. Our next three meetings will be on Tuesdays: July 17, September 11, and October 9, all at 7:30 pm. There will be no meeting in August.

Madison: Jeffrey D. Myers
Dept. of Computer Sciences
University of Wisconsin - Madison
1210 West Dayton St.
Madison, WI 53706
(608) 255-6336 (home)
(608) 263-6830 (work)

CPSR/Madison meets monthly, the first Wednesday of the month at 4:00 pm. Call to confirm location.

New York: David Bellin
P.O. Box 929
Flushing, NY 11354-0929
212-539-6500 (home)

CPSR/New York's next meeting will be in late September. Please contact the chapter for details.

Palo Alto: David Caulkins
437 Mundel Way
Los Altos, CA 94022
(415) 948-5753 (home)

CPSR/Palo Alto meets on the 2nd Wednesday of every month at the First Presbyterian Church at Cowper and Lincoln in Palo Alto. An open steering committee meeting begins at 6 pm, followed by the general meeting at 7:30.

Pittsburgh: Mike Kazar
Dept. of Computer Science
Carnegie Mellon University
Pittsburgh, PA 15213
(412) 578-3065 (Mike Kazar)
(412) 422-1623 (Ruth Deutsch, Sec.)

CPSR/Pittsburgh has just formed and their meeting schedule has yet to be determined.

San Jose: Jack Kroll
PO Box 53197
San Jose, CA 95153-0197
(408) 739-2729 (home)

CPSR/San Jose meets on the first Monday of the month at 7 pm, in the Campbell Public Library, 70 N. Central Ave., Campbell.

Santa Cruz: Kate Kelly
147 S. River Suite 205
Santa Cruz, CA 95060
(408) 425-8523 (work)

CPSR/Santa Cruz meets on the first day of every month - unless it is a Friday, weekend or holiday, in which case the next suitable day is chosen. Meetings take place in the training room at 7 pm at AHA!, 109 S. River St., Santa Cruz.

Seattle: Jon Jacky
PO Box 85481
Seattle, WA 98105

CPSR/Seattle's July meeting will be held at 7:30 pm on July 31 at the home of Andrew and Gloria Black, 2039 NE 98th St., Seattle. Please contact them for further information.

Potential Chapters

No formal chapters yet exist in the following places but interested people should contact:

Chicago: Ken Perlow
214 N. Center Street
Naperville, IL 60540
312-357-8569 (home)
312-979-7261 (work)

New Haven: Jonathan Young
Computer Science Dept.
Yale University
Box 2158
Yale Station, CT 06520

Washington: Steve Sanazaro
1650 Harvard St. #218
Washington, DC 20009
202-462-5903 (home)

International Contacts

We are happy to include in this issue a brief summary of related organizations in other countries. Please pass this information on to any colleagues who might be interested.

Computing and Social Responsibility (CSR)
c/o Jane Hesketh
Edinburgh, EH8 9NB
Scotland

Computer People for the Prevention of Nuclear War (CPPNW)
c/o Barbara Leonard
25 Ramahana Rd.
Christchurch 2, New Zealand

Forum Informatiker für Frieden und
Gesellschaftliche Verantwortung
per Adresse Helga Genrich
Im Spicher Garten #3
5330 Konigswinter 21
Federal Republic of Germany

A Threat Against Human Beings

Jonathan Jacky · CPSR/Seattle

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Regarding DARPA's Strategic Computing program (February, News in Perspective, p. 48), thanks for informing us of this important project. I was very disappointed that most of the industry people you quoted seem to regard the plan as nothing more than a needed shot in the arm for artificial intelligence research. I have read the whole proposal and I am writing to tell you it is much more dangerous than that. Many of us have become so inured to exaggerated military claims in computer science funding proposals that we forget how bizarre they must appear to the average person. Who really thinks it would be a good idea to place "complete reliance" on computers with "humanlike, intelligent cpabilities of planning and reasoning" to guide weapons "with little human intervention, or even with complete autonomy"?

I think the most important points about the Strategic Computing project are these: it proposes to build instruments for waging nuclear war, it recommends replacing human decision-makers with machines, and it suggests that a military project is an appropriate response to such commercial challenges as Japan's fifth generation' computer effort.

First, it proposes to build instruments for waging nuclear war. The proposed integrated circuit technologies are supposed to be hardened to 50 million rads (Strategic Computing Proposal, p. 29). (By the way, the fatal dose to a human is about 500 rads). This is far more than needed for a spacecraft; the devices are clearly intended for use near nuclear explosions. The intention is explicitly spelled out: "Commanders remain particularly concerned about the role autonomous systems would play during the transition from peace to hostilities when rules of engagement may be altered quickly. An extremely stressing example is the projected defense against strategic nuclear missiles, where systems must react so rapidly that it is likely almost complete reliance will 'have to be placed on automated systems" (SCP, p. 4). This statement seems to allude to various ballistic missile defense proposals, but also endorses the same principal as "launch on warning." The implication is that these systems can eventually be made so reliable that we may entrust them with the ability to commit acts of war without human intervention. The underlying assumption seems to be that refinements and elaborations of the technology with warning and launch systems can replace human observers and decision-makers, whose judgment presently does not depend completely on the correctness and reliability of the technology. This is a fundamental misconception, potentially a mortally dangerous one.

The theme of replacing human decision-makers occurs in other contexts as well. In the context of military staff work (or "battle management" as the report terms it) there are worries that the speed and complexity of future conflicts will overwhelm staff people (SCP, pp 4-5). In the context of the robot copilot (or pilot's associate), there is concern that the complexity of the modern cockpit can be overwhelming (in the words of the report, it "outpaces our skill at intelligently interfacing the pilot") (SCP, pp 24-25). It is notable that in these examples, machines are envisioned as replacing the judgment of highly skilled people rather than automating routine tasks. The wisdom of this is certainly arguable, even from the point of view of traditional military values. The idea is almost a parody of the attitudes implied by the phrase "battle management."

These and other ideas reveal an underlying theme that is really quite repugnant: although warfare is becoming increasingly hazardous and impractical, the miracles of computer technology will enable us to continue to use it as a rational instrument of national policy.

Turning from the moral to the pragmatic, it is specious to suggest that a military project like this one is an appropriate response to such commercial challenges as the Japanese fifth generation computer effort. Instead, this plan is likely to retard our nation's contribution to this developing market. As the report admits, the project is intended to "pull" a sizable fraction of our national talent into a number of exotic military applications (SCP, pp 14-16, 64, 69), thus displacing it from more practical and marketable projects where it would otherwise be occupied. Despite vague promises of spin-offs and technology transfer, performing this work in a military context will prevent much of it from becoming available for other applications; the military's recent penchant for retrospectively declaring its contractors' work to be classified or otherwise subject to export limitations is well known. Meanwhle, our competitors will not be waiting for spin-offs to provide what the market demands.

Possible CPSR Workshop to be Held Next Winter

It is a little known fact that the world's first mini-computer was developed under funding from the National Institutes of Health (NIH). Last December, in honoring the twentieth anniversary of that event, the Secretary of Health and Human Services voiced the hope that similar programs might in future arise under the sponsorship of NIH. This hope seems unlikely to be fulfilled under present government funding arrangements.

It is proposed that CPSR conduct a workshop to explore the possibilities for broader government funding of computer science research in the United States. The workshop would address the question: "If government funding for computer science research were not so heavily dominated by the DoD, but were instead handled by a non-mission-oriented agency, what societal needs that are not presently being met might then be addressed, and how would that alter the direction and nature of computer research?" Ultimately we hope to see the funding of basic research in computer science in this country restructured so that it is no longer controlled so completely by military considerations. DARPA has dominated the scene for so many years now that it seems important to understand the impact of this domination both on the research itself and on the society in general. How has the nature of the research been affected? Would other areas of application be more advanced under a broader funding arrangement? Is the National Science Foundation a suitable agency to undertake such a task? What other segments of society (e.g. Transportation, Education, Industry, Agriculture, Health, Energy, the Sciences, the Arts, Housing, Government) might benefit from computer research directed in their areas of concern? As a reflection of our national priorities, does the present

arrangement match the interests and concerns of U.S. citizens? Does it match the interests and concerns of professionals in the computer science field?

One goal for such a workshop would be to produce a detailed set of exciting nonmilitary projects related to current research issues in computer science. We leave as an open question whether or not basic research can or should be "pulled" by applications: rather we seek a match between the current issues in computer research and the outstanding problems of society. We do not question the importance of the government's role in supporting research; rather we seek to broaden that support from projects justified principally on military grounds to those with potential for social and economic benefit in other areas as well.

The theme of this conference would thus be something like "Matching the needs of society to research issues in Computer Science." The speakers and attendees would be drawn from the computer profession as well as from the various areas of potential application such as those mentioned above. We would hope to bring these together with administrators who could judge the workability of various alternative funding arrangements.

Discussions regarding this workshop are in a preliminary stage. Please contact the national office to register your suggestions and offers of assistance.

CPSR and The Law

CPSR's legal advisor, Paul C. Valentine of LANAC, has prepared a statement regarding what is suitable activity under IRS ruling, which we excerpt here for general information.

Tax-exempt Status

The primary mission of CPSR is to educate all segments of our community - scientific, educational, business, religious and political - about the nature of computer science as it pertains to the nuclear arms race. CPSR could lose its tax-exempt status as an educational organization, if members violate Treasury or Internal Revenue Service regulations governing organizations' actions. Our tax exemption is vital - it not only encourages individual contributions but is essential in obtaining foundation grants.

Treasury regulations provide that to be tax-exempt, an organization must be both organized and operated exclusively for religious, scientific, educational or charitable purposes. An organization that engages in substantial lobbying or participates in political campaigns may lose its exemption. The issue, then, is to define those activities which CPSR may undertake without undue risk to the tax-exempt status of the organization.

CPSR's Articles of Incorporation state: "No substantial part of the activities of this Corporation shall consist of the carrying on of propaganda or otherwise attempting to influence legislation, nor shall this Corporation participate in, or intervene in (including the publishing or distributing of statements), any political campaign on behalf of any candidate for political office." (Articles of Incorporation, Six (b).)

Organizations are not considered to be "influencing legislation" when they:

- make available the result of non-partisan analyses, studies or research;
- provide technical advice or assistance in response to a request by a governmental body; or
- lobby in "self-defense" - appear before or communicate to a legislative body with respect to a possible decision of that body which might affect the existence of the organization, its powers and duties, its tax-exempt status, or the deduction of contributions to the organization.

What is "Educational" Activity?

Treasury regulations provide that the term "educational" as used in this context means the "instruction of the public on subjects useful to the individual and beneficial to the community." One example of education given in the regulations refers to "...an organization whose activities consist of presenting public discussion groups, forums, panels, lectures or other similar programs. Such programs may be on radio or television." Similarly, an educational organization may be "an organization which presents a course of instruction by means of correspondence or through the utilization of television or radio."

Timing

Timing is significant in determining what can and what should not be done in contacting elected representatives and their staffs:

1. When There is No Campaign.

Internal Revenue codes do not preclude communicating our views to elected officials and their staffs. It is entirely appropriate for members of CPSR to express their views to elected officials and their staffs, and to urge the public officials to support their position. It is not appropriate, however, for a person to ask a legislative official either to introduce, support, or oppose any specific legislation having to do with issues of concern to us. CPSR as an organization does not have a position on any specific legislation.

2. When There is a Campaign.

What is permissible at other times may not be permissible during a campaign. Once an individual identifies him/herself as a candidate for public office, different rules apply. Members may express CPSR's concerns to *all* candidates, but should not take a candidate's statement of support and either distribute the statement to other persons or let it be known that Candidate X supports their view. Neither would it be appropriate during a campaign to publish a voting record of an incumbent official on any issue.

Who Speaks for CPSR?

CPSR statements are a publication of principle by the organization, which will be articulated by officers, directors and volunteers on behalf of CPSR. These officers, directors and volunteers, however, also have the right to express individual opinions on legislative matters. When the spokesperson is a volunteer who would not likely be recognized by the public as a representative of CPSR, the member should express a personal view on a legislative matter as an individual without difficulty. However, if the spokesperson is closely associated with CPSR (for example, an officer, director, or relatively public figure) then, if that person speaks to influence legislation, he or she should state clearly that the view expressed is a personal view, and does not represent the views of CPSR.

From the Secretary's Desk

Laura Gould - CPSR Secretary

Since our last Newsletter we have received four more grants - one from the Tides Foundation for $5,000, one from the Rockefeller Family Members for $15,000, one from the Columbia Foundation for $10,000, and one from the Max and Anna Levinson Foundation for $15,000. The last of these is conditional on our raising a total of $90,000; our present total is $66,000.

Meanwhile we have hired our first full-time employee, Marylyn Genovese, to be the CPSR Office Manager. We are continuing our search for a suitable Executive Director, have met some excellent candidates recently, and have a growing file of interesting resumes.

Severo and I recently attended a meeting in Washington jointly sponsored by PICA (Public Interest Computing Association) and the ACLU to discuss the impact of modern communication technology on privacy legislation. Severo gave a short introductory overview of computer communications and that produced further invitations - to join an OTA (Office of Technology Assessment) panel and to participate in a roundtable discussion in Chicago on privacy issues sponsored by the American Bar Association.

In Washington we also met with Admiral Noel Gayler, former commander of the Pacific Fleet and head of NSA, who is now devoting full time to George Kennan's excellent American Committee for East-West Accord. This organization strikes directly at the heart of the nuclear problem and includes an impressive array of dignitaries. Gayler (not surprisingly) expressed concern about CPSR's "anti-military" flavor, and emphasized how important he felt it was to keep one's eye on the real problem of nuclear weapons and the threat of nuclear war. That discussion led to the article **CPSR and "The Military"** that appears in this Newsletter.

We met with a nucleus of people interested in forming a Washington chapter. It was clear that such a chapter would have a special significance because of its proximity to our government. We also visited the Madison chapter *en route* and attended an introductory meeting of a nascent, sizeable and enthusiastic Pittsburgh chapter. People are also forming chapters in New Haven, and Chicago. Please see the section **Chapter Contacts** for appropriate names and addresses, and pass this information along to your friends in these areas.

CPSR in the News

We maintain a record of all articles about CPSR that occur in the public press of which we are aware. Please send copies of such articles, and descriptions of TV coverage, to Librarian, CPSR, P.O. Box 717, Palo Alto, CA 94301.

May 10 - The British magazine Computing published a long article entitled "Taking a moral stand over the nuclear circus." Much of this article consists of interviews with Severo Ornstein, chairman of CPSR, and Alan Borning, president of CPSR/Seattle.

June - The CACM Forum section published a long letter by Jonathan Jacky, secretary of CPSR/Seattle, entitled "The Use and Misuse of New Technologies." This letter responds to the former president of the ACM David Brandin's negative review of War Games. The letter points out the film's important lessons, and also discusses the DARPA Strategic Computing Plan.

June 5 - The Salient, the student newspaper of Victoria University, Wellington, New Zealand, published an early version of CPSR's assessment of DARPA's Strategic Computing Plan.

June 15 - Datamation published another letter by Jonathan Jacky, secretary of CPSR/Seattle [see **Threat**, page 5]

June 18 - The New York Times published a story by staff writer David Burnham entitled "Debate on Pentagon Computer Plan Focusses on Military's Effect on Society." This story contains several short quotes from CPSR's assessment of DARPA's Strategic Computing Plan.

July - Nuclear Times wrote a cover story entitled "High-Tech Dissent" which gave a lot of coverage to CPSR and included pictures of Al Beebe of CPSR/LA and of Severo Ornstein, Laura Gould, and Terry Winograd of CPSR's executive committee.

Forthcoming Events

CPSR has been invited to attend a week-long "Roundtable" discussion at Harvard in late August on "Security, the War System, and Peace Mobilization". The purpose is to put together newcomers to the "anti-nuclear" movement with a collection of the leadership in arms control thinking. The meeting is sponsored by the Nation Institute.

The ACM National Meeting will be held in San Francisco, October 8-10. There will be a session on the "Social Dimensions of New Computing Technologies," two panels of which will be chaired by CPSR members. One, led by Terry Winograd, will explore the role of ethics in computing and the other, led by Severo Ornstein, will explore concerns about reliability in critical systems.

The first **CPSR General Meeting** will be held in San Francisco on the afternoon of Sunday, October 7, 1984. It will be followed by an open Board of Directors meeting in the evening. Details will be sent to the chapters. We hope to have representation from all over the country so mark your calendars and start making plans now.

New Zealand Treaty Proposal Regarding Short Warning Times

Computer People for the Prevention of Nuclear War (CPPNW) was formed in late 1983 in New Zealand. The group's primary aim is to educate and inform the public of the risk of accidental nuclear war through malfunction of computer systems. It recently proposed a treaty to reduce the risk of accidental nuclear war by banning the deployment of any nuclear weapon system whose use would give less than twenty minutes warning of a first strike attack. This treaty has been sent to all Members of the New Zealand Parliament, asking them to make it a New Zealand initiative.

Contact Barbara Leonard [see **International Contacts**] for further information about the treaty proposal or CPPNW

Recommended Reading

This column brings to your attention several recent publications of interest. We welcome further recommendations from our readers.

The Day after World War III, by Edward Zuckerman. An enthusiastic review of this book included the following very quotable quote:

"If we fail to come up with crisis relocation plans to match those of the Russians, FEMA says, then the Russians might think they have an edge - thus making war more likely. 'So, if we had crisis relocation plans, we would never need to use them. We would only need them if we didn't have them. So we needed them.'"

Defense Sense, the Search for a Rational Military Policy. This is a paperback book of collected pieces from hearings conducted by Congressman Ron Dellums. The chapter by Seymour Melman entitled Military Spending and Domestic Bankruptcy is of particular interest.