Socially Responsible Computing I:
A Call to Action Following the L.A. Riots

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"The real question before us lies here: do these instruments
further life and enhance its values, or not?"
Lewis Mumford, *Technics and Civilization*, 1934, p. 318

The smoke and fire of the Los Angeles riots (April 30 - May 2, 1992) were Mayday warnings from a desperate community. To ignore this signal would be tragic and unconscionable, but finding a meaningful response is a challenge for computing professionals. Silicon Valley seems a long way from South Central Los Angeles and the computing industry has been largely distant from the problems of the urban underclass.

Many computer professionals are sympathetic to the struggles of the poor, disadvantaged, and minorities, but have rarely thought about how their professional skills might be applied to serve those who need help. Could a Technology Peace Corps apply software to provide skills training, improve community communication, and support entrepreneurs? Could a Strategic Education Initiative improve basic education, reduce illiteracy, and engage young people in constructive projects?

On May 5th, three hundred concerned attendees of the ACM CHI'92 (Association for Computing Machinery Computer-Human Interaction) conference in Monterey, CA made time to explore appropriate ways to apply their expertise to the problems of urban poor, minorities, the handicapped, the elderly, and other disadvantaged communities. This rapidly-convened special session revealed a wide range of existing model projects and offered hope that much more could be done.

The CHI'92 conference chairs, Jim Miller and Scooter Morris, quickly made room for this special session in response to a series of events that typify the emerging electronic global village. Dr. Chris Borgman, an associate professor in the Graduate School of Library and Information Science at UCLA had written an electronic mail message describing events in LA on Thursday, April 30:

> "From our living room we are watching smoke billow nearby, perhaps a half-mile, in our neighborhood mini-malls and shopping centers. Helicopters have been a constant background noise for 24 hours already. Looters have raced down our street with their booty from the nearby shopping center.
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> The entire social infrastructure seems to have collapsed. Last night in south central LA was horrible, but we thought it was over by morning. We were very wrong. Business as usual ceased by early afternoon today, sending people home as the violence built. UCLA closed its museums and galleries early in the day due to bomb threats. The streets were gridlocked with people heading home. The phone lines are jammed; it is difficult to get a dialtone, and then one reaches an "all circuits busy, please try later" message. I lived through the 1967 riots in Detroit as a teenager and some of our neighbors are veterans of the 1965 Watts riots. We all agree that this is much worse.
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> People are very, very angry. It has built up from too many years of minorities easing further into poverty, of the wealth being concentrated in fewer and fewer people, escalating unemployment, the dreams of home ownership and prosperity slipping further away, and deeply embedded racism on top of it all."

I was one of the recipients of her note on Friday and was moved by her personal and powerful descriptions. I replied by electronic mail, seeking some way in which to deal with my sadness and frustration. It took only a few minutes to formulate a plan to engage the ACM SIGCHI (Special Interest Group on Computer-Human Interaction) community. The suggestion to hold a special session was dispatched to the SIGCHI leadership and the conference organizing committee. Within hours the conference organizers agreed and I received suggestions from people already in Monterey and others who were planning to arrive soon.

Jeff Johnson, Chairman of Computer Professionals for Social Responsibility (CPSR), helped form goals and plan the Tuesday morning session. In addition to having people speak out about their reactions and offer suggestions, we wanted to collect information on existing projects and to create a list of people who might participate in future activities.

One by one individuals came forward to describe projects they had done personally, such as teaching adults to read, offering free or low-cost computer education courses in local libraries, working with neighborhood schools to apply computers effectively, and offering mailing list maintenance services to community groups. Others reported on larger projects to promote science education in inner city schools, support school districts with innovative computing facilities, provide access to information resources for handicapped and elderly users, and improve fund-raising for charitable organizations. More than 110 of the attendees filled out forms describing existing projects and offering their assistance. The information will be compiled and made available by the CPSR.

This was a successful first step, but CPSR, ACM, SIGCHI, and other organizations must maintain a clear focus of attention over time. Projects must be initiated which make a significant difference to communities and which have enduring support. We must find support in local, state and federal agencies and obtain contributions from foundations, corporations, and

individuals. Successful projects will be identified by measurable economic and social benefits that justify expansion. These are high expectations but as computer professionals we must take bold positive actions so that when our children ask us what we did in response to the social turmoil of our time we can reply proudly.

Socially Responsible Computing II: First Steps on the Path to Positive Contributions

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> "Never doubt that a small group of thoughtful,
> committed citizens can change the world.
> Indeed it's the only thing that ever has."
> Margaret Mead

Now that we are past the initial emotional responses to the LA riots, maybe we can use these tragic events as a stimulus for innovative and constructive efforts. Computing professionals have been active in social causes on an individual basis and in some large projects, but with the growing maturity of our industry we can promote larger initiatives and accept greater responsibility.

Software applications can easily be an aid to improving education, providing skills training, reducing adult illiteracy, improving community organizations, supporting entrepreneurs, and much more. It is dangerous to suggest that computing technology can cure the many complex and profound social problems, but we can make a difference in many direct ways. In addition, by our example of commitment we can inspire other professionals in medicine, law, social services, education, etc. to take similar actions. In harmony with other national projects, appropriate computing-related initiatives could be taken on an individual basis, by small groups, regional consortia, and national organizations.

For computing professionals, individual efforts can begin with one person teaching another how to use software packages for small businesses, community groups, or individual initiatives. The satisfaction of helping is important for many people and the personal relationship and mutual exchange may be the most valuable and enduring outcome. Many people learn more about themselves and about the world when they try to teach others, especially others who are very different from themselves. Individuals can also be effective in serving larger groups by offering more organized courses in cooperation with local libraries, schools, colleges, community centers,

or companies. Innovative curriculum plans and materials could be disseminated nationally by the Computer Professional for Social Responsibility or other organizations.

Community groups are close to the source of need and are excellent leverage points. Computer applications can improve community efforts by desktop publishing of newsletters, maintaining mailing lists, and fundraising. Community projects might include: food or babysitting co-op organizing, volunteer skills database, neighborhood patrol scheduling, community bulletin board, neighborhood yellow pages with references, local crime log, landlord complaint database, index of government service offices, consumer price monitoring, etc.

Computer professionals can also become involved by offering their skills to existing institutions such as schools, community mental health centers, soup kitchens, and medical clinics. These larger institutions can apply computers to improve their services and manage their resources.

While individual initiatives are valuable, many potential contributors are more likely to become involved if there are established mechanisms through respected national organizations. Could professional societies such as the Association for Computing Machinery (ACM) or the IEEE become involved in these educational and volunteer efforts? I hope that they could be the homebases for thinking globally and acting locally.

The Agriculture Extension Service might act as a model for community service. Already, the State of Maryland offers a Technology Extension Service to provide companies with technical assistance with business problems. Could a Technology Peace Corps extend this notion to giving assistance to community groups, social service agencies, and charitable institutions? A national effort might inspire many young and older citizens to contribute in a safe and supervised manner.

Since education is fundamental to economic development and community building, a second national effort might be mounted for a Strategic Education Initiative. It is quite reasonable to consider spending $100 billion over five years to make a major improvement in education, in part, by widespread application of computing technology. The Edison Project, proposed by the Whittle Communications Company, is a system of private schools with a strong computing emphasis. But why not pursue a similar plan for all students in public schools?

Computers are not a substitute for inspiring teachers, but putting ten million computers in schools would restructure education by providing access to creative tools, information resources, and communication networks. Of course meaningful missions, teacher control, parental involvement, new measures of accomplishment, and student teamwork have to be considered, but the achievable goal of making computing accessible can be a useful stimulant to other good works. This proposal is explored in greater depth in "Education by Engagement and Construction: A Strategic Education Initiative for a Multimedia Renewal of American Education" (In, Barrett, Ed (Editor), *The Social Creation of Knowledge: Multimedia and Information Technologies in the University*, MIT Press, Cambridge, MA, 1992).

Once computers are in schools, these facilities could also be used for job skills training for adults. Some participants in the Technology Peace Corps could offer instruction and job

placement services could facilitate movement into the workforce. These ideas may be useful as a starting point, but refinements, extensions and alternatives are needed. Technology alone will not be sufficient, but it may provide a focus of attention that can engage the many competent and concerned computing professionals.

I believe that computer professionals working in cooperation with others can make the future better: enabling teachers to help children learn, supporting doctors and nurses in providing better medical care, providing community groups with the tools to organize, and assisting individuals in their business or personal initiatives. "Computer Power to the People" is a phrase reminiscent of the 1960's, but it can become a theme for the year 2000 and beyond.

(Further discussion of ways of changing society is in my Keynote address, "Human values and future of technology: A Declaration of Responsibility," *Proc. ACM SIGCAS Conference of Computers and the Quality of Life*- Sept 1990; reprinted in *ACM SIGCHI Bulletin*, January 1991)

(General discussion of computers and their impact on society is in the Afterword to: *Designing the User Interface: Strategies for Effective Human-Computer Interaction: Second Edition*, Addison-Wesley Publ. Co., Reading, MA (1992), 592 pages.)