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 computing technology 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 fund-raising. Community projects might include: food or baby-sitting 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 of 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 the 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,' Proceedings of the 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.)