CURRENT COMMENTS

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The Computer: Practical Tool, Ultimate Toy

Also see reprint by M.E.D. Koenig on p.367, Essays, Vol:3

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At this time of year, many adults find themselves reminiscing about the toys they wanted or received during the holiday seasons of their childhood. If you have any doubt about this, just watch parents in a toy store as they choose gifts for their children. Their attitude often seems to be,"I only had a wooden toy car you had to push around; my child is going to have an electric racer." For many adults, childhood frustrations are relieved by "hobbies" which gratify their desire to play with elaborate gadgets. Thus the electric racer often turns into a remote-control airplane not particularly appropriate for a six-year-old.

In the article reprinted on pages 8-12,[1] Mike Koenig, ISI® 's Director of Development, sees a dark side to our fondness for toys. He theorizes that we like to produce, own, and use high technology devices for the fun of it. These gadgets satisfy the unfulfilled desires of childhood.

Certainly in America, many homes are littered with machines. A new home is often an investment in gadgets more than mortar and wood. We use electric can openers and toothbrushes. We buy elaborate stereophonic equipment and power tools. Many of us won't accept simply any machine; we want the newest, most powerful, most advanced model—whether lawnmower or automobile. The energy crisis has accentuated the contradictions in our predilection for power. Why do our cars have speedometers which measure up to 100 miles per hour? The speed limit in most states is 55 miles per hour.

Koenig observes that "playing with toys" is not a socially acceptable end in itself. In consequence, we have rationalized a purpose—national defense—for developing bigger and better toys. We have built a military establishment where technophiles may produce and play with enormously expensive new devices.

The danger is that these toys may

eventually be used for their avowed purpose. So Koenig suggests how the military's domination of super-toys may be diminished. He thinks we should recognize weapons for the toys they are. And the manipulation of toys should be made socially acceptable. At the same time, the entire population should be given access to toys as sophisticated as anything the military has to offer—but not as dangerous.

The one toy which now fills this need, Koenig claims, is the computer. Academia and industry already have computer systems as complex as the military's, and computers in the home are only a few years away.[2] Americans—who can't buy larger stereo speakers for fear of cracking plaster and may not legally drive their cars as fast as they will go—*can* put computers through their paces, making them perform any task that can be programmed.

I have no doubt that at least a few computer systems have been installed as a result of an inherent desire to possess the latest toy. At ISI, however, the computer has never been a frill. It is the central production tool which makes many of our services practical. Without the computer it would be much more difficult to produce six Weekly Subject Indexes for *Current Contents®* . And economic production of the *Science Citation Index®* would be almost impossible.[3] But I take great pride in the fact that our ASCA® system can still be operated, if necessary, with second-generation computers.[4]

In recent years ISI has begun to use computers for administrative records. This is the purpose to which they are most often put by organizations—hence the ubiquity of punched cards, which I discussed recently.[5] Perhaps because ISI has had more experience with and understanding of computers, our use of the computer in administration has been less dramatic but more successful than that in other organizations. Of special interest are the effects of the on-line, interactive system in our subscriptions department. New subscribers are now mailed their first issue of *CC®* within days after receipt of their orders. Address changes are processed just as promptly. Similarly, subscription payments are applied to accounts within 48 hours after receipt.

The use of computers throughout ISI has led to a healthy and balanced appreciation of them among our staff. This includes many who might still consider themselves technophobes. They certainly are not technophiles. They know that *people* make most of the mistakes attributed to computers.[6] If Koenig's proposed "Toy Access Department" ever comes into

being, it won't receive many calls from ISI people. They have enough contact with computers at work to want to avoid them in leisure time.

Whether Koenig's highly speculative theory holds up in real life is problematic. It is somewhat simplistic to think that the solution to an entrenched military-technology establishment is merely to substitute computers for atomic weapons. The defense establishment has been playing with computers from the earliest days. You can't change the military mentality simply by sending generals to programming classes. If only the problem were that simple!

The "toy theory" certainly is not the first behavioral approach to the eternal problem of worldwide conflict resolution. But at this time of year it is especially fitting that individuals and nations reflect on these questions. While others might regard scientific competition as childish, I am naive enough to believe that worldwide commitment to basic research is crucial in helping to preserve peace on earth.

Have a happy new year!

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