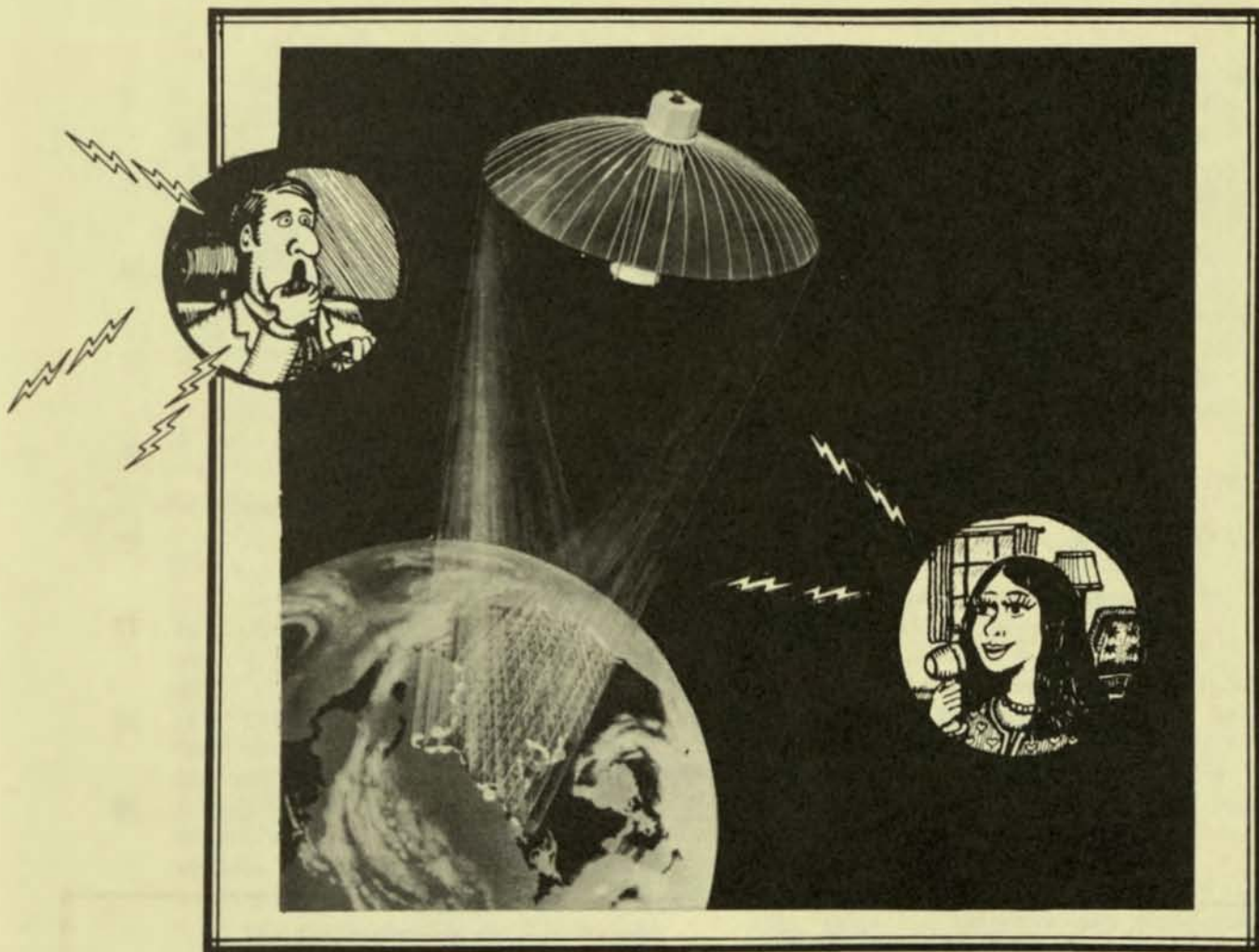# THE JOURNAL OF COMMUNITY COMMUNICATIONS

In this issue: BARTER   CB RADIO

FUTURE LIBRARIES   HOME VIDEO   RELIGION ON TV

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THE JOURNAL OF
COMMUNITY COMMUNICATIONS

The Labor Exchanges of the '30s

by Stephanie Klein

As business publications talk of the "recession of 1979" and the "decline of the dollar," many people are wondering how they will face the reality of an economic downturn. One theme that is being emphasized in community organizing circles is self reliance. As a strategy self reliance includes community control and decentralization of production, and labor and skills exchanges -- in short, anything which will heighten individuals' and communities' control over decisions that affect their lives. It's seen as a way to lessen the impact of current hard times, and as a model for a more democratic form of society.

The idea of self reliance is not new. During the Depression of the 1930s, barter organizations and labor exchanges sprang up across the United States. These organizations provided a means to distribute goods and services outside of the regular cash economy. Many of the groups were self-organized, springing up spontaneously as people were forced by necessity to take economic matters into their own hands. Others were organized as public welfare projects, but they were usually self-governed once they had been set up.

The development of the Los Angeles Labor Exchange was typical of many of the barter groups. At first, people who had labor or goods, but no cash, made individual deals with others in similar situations. Small farmers, for example, often traded food for harvest labor. Some of the deals worked out between individuals were quite complex. Bessie Mays, for example, who later organized the L.A. Exchange, kept her son in school through a three way deal. While she had no money with which to pay her son's tuition, she did have several gallons of old paint. It so happened that the school, not doing so well financially itself, had an outstanding debt to a painter. Bessie gave her paint to the painter and the school accepted the cancellation of its debt as the tuition "payment." Goods, in fact, were available. What was lacking was a mechanism of distribution.

Soon a more formal organization was formed in Los Angeles to facilitate these types of exchanges. Each member paid a fee of $1.00 and earned credits and scrip by providing labor or services to other members. The credits could then be swapped for goods or services from other members or from the swapping posts operated by the exchange. At its peak the exchange regularly offered more than 300 types of goods and provided many professional services.(1) However, one of the problems with the Exchange was that it had trouble attracting working class people. While dentistry and obstetrics were available, skills like carpentry and plumbing were in short supply.

The L.A. Exchange was more of a scrip exchange than a bartering organization and as such it had many drawbacks. Scrip exchanges were based more on transactions between individuals, rather than on a collective form of distribution. Little, if any,

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A canning cooperative.

effort was made to equip people with new skills. Rather than providing their members with a real basis for self reliance, they tended to to recreate the existing division of labor on a smaller scale. This possibly explains why non-professionals were not attracted to the L.A. Exchange. If an organization recruits only on the basis of existing skills, people may feel they have nothing to contribute or gain by participating.

On the whole, groups that based themselves on individual bartering and scrip exchange attracted fewer people to their ranks. In 1933 the twenty-five scrip exchange associations in California had 18,000 members. By comparison, organizations based purely on barter and emphasizing skills transfer and labor exchange attracted more than 340,000 members throughout the state.(2)

In 1931, another bartering association in Los Angeles had developed. William Burchfield, a member of the L.A. Veterans Association, unsuccessfully looked for work

for several months. Like Bessie Mays and others, he couldn't help but notice the continued availability of goods, especially farm produce. Finally, he sought the obvious solution to his family's economic destitution -- he went out to neighboring farms one night with a sack and collected the fruits and vegetables that would otherwise have gone to waste. Soon, he and all his friends were collecting food regularly. This activity led to the Veterans' Relief Association, which developed a system by which to arrange regular exchanges and food collections with the farmers in the area.

Other groups that operated mainly on a food collecting basis were started in the L.A. area. By 1933 they had become part of the statewide Unemployed Cooperative Relief Association (UCRA), whose members were mostly unemployed skilled and semi-skilled workers. The groups were run democratically by delegates (subject to recall) who participated in citywide councils of relief groups. The main activities of the "units" were the collection and distribution

of surplus farm produce. This income was supplemented by donations of food from private industry and government agencies.

The large majority of the groups allocated goods to the membership on the basis of need. In return, each family was required to put in one or two days of work per week. Four units in the L.A. area operated "honor system" commissaries, open to all members, who were allowed to take whatever they wanted. To many people's surprise, this system of allocation was "effective and satisfactory, almost never abused and conducive to the development of a spirit of cooperation."[3] Only one of the units distributed goods according to work performed.

Women were often exempt from the formal labor requirements, but they were generally highly active and performed much of the work necessary to maintaining the organizations. They ran the kitchens, repaired old clothes, and managed and staffed health and recreation programs for several of the L.A. units.

The barter units were useful in providing their members with a subsistence level of food and clothing. They weren't very effective in the areas of housing and utilities, though some interesting exceptions to this did exist. Among its units, the UCRA included a few "jungles," the tent cities that groups of homeless people had erected on vacant lots.

Other units met housing and utility problems with direct action. One Los Angeles unit was particularly active in forcibly opposing evictions and utility shut offs. A report in the March, 1933 issue of *The Voice of the Rank and File,* the publication of the City Council of the UCRA, described the group's response to an eviction. An L.A. mortgage company had evicted a pregnant woman with an 11 month old baby from her one room shack. When Unit 14 heard about it, they formed a committee to help the evicted family. They went first to the County welfare agency and, when that brought no results, a larger group of members moved the woman back into her apartment. This particular unit claimed responsibility for housing over

forty families and re-connecting the gas and water for over two hundred.

Similar groups developed throughout California and the rest of the U.S. By 1933, the UCRA in California had ninety-five local units.[4] The state group helped in soliciting funds and providing a means of communication for the smaller groups. Twenty-eight other states had similar systems. After the Federal Relief Act of 1933, which included funding for barter groups, the National Cooperative of Self Help Associations was formed to aid the activities of the hundreds of thousands of people involved in barter and self help groups.[5]

State and city governments also aided the creation of self-help groups. The Dayton Production Units, a project of the Council of Social Agencies of Dayton, Ohio, got their start with yard goods loaned by the local welfare agency. The Units paid some of their debts with shirts made from the material and kept the surplus to use or exchange for something else. This method apparently worked: soon the units had 2000 acres, sixty pigs, a Ford sedan, and they were dabbling in building construction, shoemaking, sewing and gardening.[6]
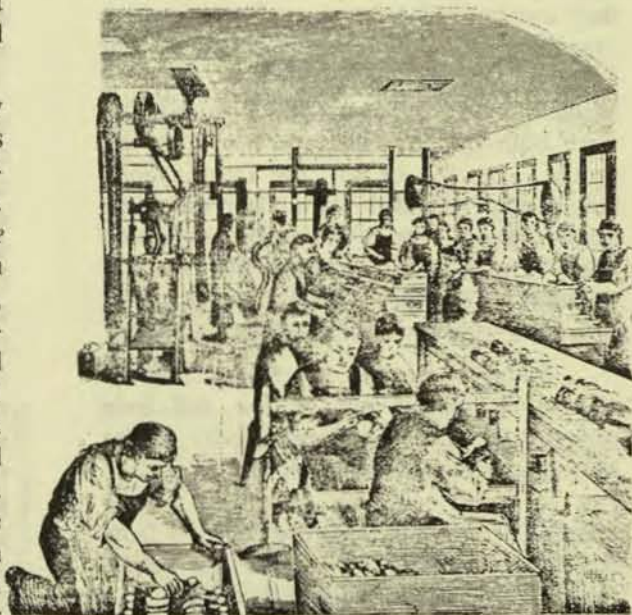
Shoemaking.

"Everything Free". A swapping post of the 1930s.

The Dayton Units were different from many of the other barter groups in that they emphasized production. The members organized into groups, each of which produced necessary products like soap or shoes. The idea was to make things that were both exchangeable and useful to the group. Like the UCRA, the Dayton units collectively decided how to distribute surplus goods, basing allocation mainly on need. The different units also tried to complement each other's production so as to provide a wide diversity of goods and skills.

Some interesting potential for social change developed out of the self help experience. Through their activity in the bartering groups people found an alternative to harsh economic conditions. They found a certain amount of protection from the business cycle in a way that helped develop individuals' skills and re-establish a sense of community. It is no wonder that many came to the conclusion that bartering

was a better way to live. More than a way to survive, the barter groups became an experiment in a different type of social and economic organization.

As the labor exchanges reached their peak in the mid 30's, many people concluded that barter would eventually replace money as a more equitable system of exchange. While this view underlined the enthusiasm of those involved in self help, it was rather short sighted. Bartering did provide a different means of exchange, but it never really escaped the pressures of the money economy. Even while facilitating the distribution of goods on an impressive scale, many groups ran into economic difficulties. Undercapitalization was one problem. The average capitalization in the private sector was from $1000 to $1500 per worker, compared to the barterers' $200 per member. Lack of investment capital restricted their activities from the start. Another problem was their inability to pro-

vide cash incomes for their members. While this was not such an acute problem for rural groups, city groups could not take care of all their members' needs through barter: people still required cash.

When the economy began to pick up again the bartering groups found that they could not compete. Economically, they couldn't make large enough returns to keep the operations running. Many members found that money provided a more efficient means of distribution when dealing in exchangeable goods. When people no longer needed barter, they left the movement. By 1940, the self help groups had virtually disappeared.

While the self help groups were undoubtedly part of the social movement that helped bring about some of the reforms of the New Deal, they were not unambiguously progressive. In periods of crisis, the prevailing social system continues to need the support of its people. The failure of established forms of social management often requires, and elicits, grass roots support in order to keep society from falling apart completely. Obviously, total social disintegration would benefit no one, but the ideology of "self help" is often used as a means to enact austerity measures "painlessly." People are usually more willing to accept a lower standard of living if they administer it themselves, which tends to de-emphasize the real social conflicts which engendered the crisis in the first place. As one organizer of the Dayton Units stated, "[Self help] tends to steady things and does not stress class consciousness." Indeed, many people in government and social services saw the labor exchanges as alternatives to the unemployed councils, whose activities often took the form of confrontations and demands on the existing power structure. However, without such confrontations, posing oneself *against* the social order, it is doubtful whether lasting social change can be achieved.

Today, as the economy enters another period of crisis, we are seeing a return of the self help theme. Current projects include skills exchanges for the elderly, neighborhood gardening plots and other more informal labor exchanges. If we are to pose a real alternative to the current social system we should keep in mind the experience of the bartering movement of the thirties. Those involved in self reliance projects should remain aware of, and lend support to, the overt protests of (for example) the unemployed or workers on strike. By combining the best aspects of self organizing with confrontation, we might see a serious challenge to the current social order.

The Unemployed

William Gropper 1930s

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The Future of Libraries
in the Electronic Age

by Nicholas Johnson

The recent White House Conference on Libraries and Information Services (WHCLIS) brought together a cross section of American librarians and public officials to discuss the future of libraries in the electronic age. The participants expressed a commitment to public access to the new communications technologies. Appropriately enough, a computer-based communications system was used in planning the conference, tracking it while it was in progress, and for collecting post-conference comments. This system, the Electronic Information Exchange System (EIES), is a computer conferencing system based at the New Jersey Institute of Technology which is now used by some 700 people in the U.S., Hawaii, and Europe.

Nicholas Johnson (1), a member of the Advisory Board of WHCLIS, was part of a planning conference held via computer on the Electronic Information Exchange System (2). The computer conference, which was open to all EIES users as well as the members of the advisory board, generated a substantial dialogue among library professionals on the future of the nation's libraries as they enter the era of electronic communications. In one of the final comments of the computer conference, Mr. Johnson reported on the fate of one resolution that emerged from WHCLIS.

A Proposal for Free Public Access to Federal Data Bases

The WHCLIS Conference (Washington, D.C., November 15 - 19, 1979) considered many aspects of the future of libraries, including the problem of public access to electronic data bases. One proposal that emerged from the National Citizens Committee for New Broadcasting Technology recognizes the public's right to training and access to computer terminals.

They have proposed a national telecommunications network, with terminals and training available to the public, to give free access to government material. The rationale is that at the very least, information gathered and processed by the federal government at the taxpayers' expense should be made available at no cost. The incremental cost to the government would be little more than that involved in printing one additional copy of a book once the author and the printer had been paid for setting it up. So the principal cost of providing free access to electronic data bases -- the cost of gathering and processing the information in the first place -- has already been borne by the public.

In fact, the "national telecommunications network" already exists. But FTS, the federal telecommunications system, is literally a "don't call us, we'll call you" system. Federal employees can call out for free, but the public must pay to call in. Many agencies have already responded to this fundamental inequity by creating the equivalent of "800" numbers for free incoming calls.

"Access to terminals" would not be very meaningful without the training and skills needed to operate them. But public training need be nothing more elaborate than one-page sheets like those used with the Library of Congress "Scorpio" system, with occasional questions to librarians possible.

Nor is the cost of terminals a major barrier. "Dumb terminals" for 25,000 to 50,000 public libraries at about $500 each would not be a major cost however it is allocated. If precedents are needed, recall that the federal government already underwrites 90% of highway costs so that we can have a national transportation system.

The text of the proposal is as follows:

Whereas free public access to information has been considered essential to the functioning of America's democratic society since its beginnings, and

Whereas the information traditionally found freely available in library books is increasingly found in electronic data bases accessed by telecommunications,

Now, therefore, be it resolved that:

Programs be undertaken to ensure that every American have the right of access, at no charge, to the training and equipment necessary to the use of a national electronic data base of all information developed and stored by the federal government.

Epilogue:

The resolution was not adopted. Everyone seemed to favor "public access," but some were less courageous about taking a stand supporting the "details" necessary to make it a reality.
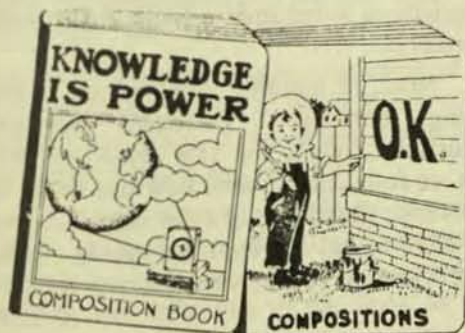
Random Thoughts on Libraries

In earlier conference comments, Mr. Johnson reiterated his concern for public access to information and the library's role in assuring and broadening such access. These comments have been excerpted from the conference as a whole, and are gathered under appropriate subject headings.

The Library as Organism

Alfred Korzybski in *Science and Society* speaks of humankind as "time binders." Books enable us to package a point in time for others to consider later. But the conventional library (i.e., becoming an author) does this exceedingly slowly -- like over the course of lifetimes. And most library users never become authors; never get to put books *into* the library instead of just checking them out. So libraries end up being more like the totalitarian communications systems we associate with television (from a handful to the masses, one way.)

Dr. Vernon Price was my high school experimental geometry teacher in Iowa City. Rather than teach us from a prepared text, he had us write our own, getting us to be curious and develop the theorems as we went. (You would have thought Euclid had studied with Dr. Price as well, so much like our theorems were his, I discovered much later in life.)

In that class, we were engaged in a process not unlike the one we are using, albeit with electronic means, in this EIES conference: shared intelligence, a single organism of many human components, writing a "book." EIES merely enables us to bind space as well as time -- we don't all have to gather in a schoolroom by the Iowa River to write our book.

We could, of course, use the public mail service to do the "same" thing, but for the fact that it wouldn't be the same because it would be so much slower. The conventional public library becomes slower still because it takes years and lifetimes rather than the days or weeks of the mail service. It becomes something different in kind as well as in degree from a mail service, let alone an EIES "book."

The library has assumed some of the responsibilities of the school (as well as some of whatever responsibilities parents and church may still possess.) Now, if EIES becomes a library, we will simply move the kids from one CRT to another -- from NBC to EIES, from Freddy Silverman to Murray Turoff. In other words, we unplug them from the totalitarian, one-way, from a handful of hucksters to the masses communications, and plug them into "the library" -- an interactive participatory, democratic involving, evolving, educational, exploratory, adventuresome organism.

Terminal Training

Before long, children will need terminal training as well as "terlet" training. Is this a function for the library, the school, church, parents, others? And by what age? On the one hand, the earlier the better. But Marie Winn argues in *The Plug-in Drug* that children under eight are impeded intellectually, aesthetically, physically and emotionally by exposure to television. Are computer terminals or electronic data bases any different?

Libraries as Information Centers

Some "libraries" are already developing as information centers. This is an extension of the conventional reference desk that you can call by phone for the answers to simple questions. Could the library develop more along these lines? What if the library became *the* place to go to find out *anything?* Books and terminals would then be incidental. It would be like going to a service bureau to have your data processing done rather than writing your own programs and running data through your own computers. The Japanese have neighborhood "worries centers." Could neighborhood libraries provide these kinds of services?

Library Economics

The ruling class has always welcomed the exclusive possession of knowledge, since before the church owned all the manuscripts. In this country, libraries have been revolutionary institutions: information has been available to all, regardless of wealth, ancestry or power. Many people can't afford to buy books, let alone computer terminals. In the age of electronic information, how will we deal, politically, with this economic problem?

Costs for library usage include the capital costs for buildings, book acquisition, cataloguing, checking out, and so forth. We *could* assess every borrower whatever it costs to take out a book. But we don't. We can more easily compute and assess each library terminal user for line and search charges, plus allocated terminal capital costs. Will we? Why or why not? If the function of the library is truly to equalize the citizens' of a democratic society in their access to the knowledge necessary to intelligent citizenship, why do we not make terminal access available free?

What about the use of printers? We now charge for machine copiers in libraries. Under what rationale? Today's "book library" user has the option of free check out privileges. Tomorrow's "electronic data base library" user won't. It will be "print out or do without."

What are the prospects for mounting a massive national effort to build the necessary system? We often do it in transportation: early railroads, the multi-billion dollar interstate highway system, the Army Corps of Engineers' maintenance of navigable rivers, DOD development of jet plane technology, space exploration, and so on. Why not do the same with communications, especially as it becomes a tradeoff for transportation?

Note, in humility, that few of us are paying our own personal, non-tax-deductible dollars for this EIES service. Can we fully comprehend how our usage of electronic libraries might be altered if we did have to pay for them personally -- and were living on 10% of what we now earn?

Creative Compensation

Somebody better be giving a lot of thought to how we are going to compensate the creator, the author. The electronic "publishers", creators of commercial computerized data bases, seem to be taking care of themselves -- getting free public information from the government and selling it back to the public that paid to create it in the first place. The problem for authors is similar to that for actors, directors, and producers of films and video material now under electronic assault -- having been paid "Atlanta rates" for a TV performance, they suddenly find the Atlanta TV station sending the program via satellite to North Platte, Nebraska, where it is shown over a cable TV system with no additional payment to the creators. There will be very little worth retrieving on electronic information systems if we don't find some way to compensate the Mark Twains of the 1980s.

New Technologies and the Motivation of Users

From time to time stories appear of studies demonstrating that large proportions of our population cannot read well enough to fill out their tax returns, or do math well enough to balance checkbooks and compare prices in a supermarket. The latest such report is in the AFL-CIO News for October 20, 1979.

This suggests a very real problem to which we have not addressed as much attention in this conference as perhaps we should. It can be expressed in a number of ways: (1) What evidence is there that the public really wants more/faster access to more information? (2) How can users be motivated to use what is currently available? (which presumes, as most of us do, that information is "good for you",... and it is our job to persuade and cajole others to this wisdom and lifestyle).

It's not clear that choices are really sought, or used once available. Individuals with large public (and even private) libraries may subscribe to the Book of the

Month Club (or other book club) and read whatever comes in the mail. Those who subscribe to magazines, rather than carrying them with them, may end up reading whatever the dentist (or airline) makes available. Record collectors often come home, turn on the radio, and listen to whatever some disk jockey has selected. Those with access to films or tapes, or with their own video recorders, may just watch what the networks offer on TV when the networks choose to offer it.

Let us suppose for a moment that every small town and rural library in this country was (let us say, at Federal expense) put on an electronic data base system enabling its users to access bibliographies containing every publication in the world. Let us further assume that large portions of those publications could, then, be accessed, also by remote terminal. Does anyone care to predict who would rush out to use this system? Who would they be? What uses would they put it to? Would it attract to libraries persons not now using them?

My experience in the transportation business (Maritime Administrator) led me to the realization that usage often increases well beyond any projections to fill whatever channels are made available: a barge canal dredged deeper, a new superhighway, and so forth. My assumption as FCC Commissioner was that communication would follow the same pattern: if we made "public access" channels available on cable television they would be filled with users. They weren't. We needed more in the way of training, encouragement, school programs.

As a caveat to my own enthusiasm, this problem concerns me. What if we bend ourselves out of shape to make sure these new, wondrous, expensive, ways of accessing information are available to the poor and disadvantaged, and then they choose not to use them? Won't that be used as an argument that there was no point in our making the effort? What can we do to anticipate and avoid that response? Don't we have to "sell" folks first on the advantages of information generally? Or can the machines help the sales pitch?

Living with Guilt

by Father Miles O'B. Riley

A recent article in the New York Times stated that one of the 24 channels on the new RCA communications satellite will be devoted 24 hours a day to distributing religious broadcasts to stations and cable systems around the nation. There are now some 1,400 radio stations, 30 television stations and 66 cable systems in the United States that specialize in religious broadcasts, and their numbers are increasing rapidly. In fact, religious broadcasting is one of the fastest growing sectors in communications, with revenues often estimated to exceed $500 million a year. The fastest growth is among paid religious broadcasting, mostly done by fundamentalist and evangelical Christian ministries who solicit funds and pay for prime local time. This "electronic church" is causing consternation among some established religious leaders who feel that the electronic preachers are mostly "pitchmen" who raise money but fail to establish any real contact with their far-flung audiences. Father Miles O'B. Riley, Communications Advisor for the Archdiocese of San Francisco, here satirizes religious broadcasting in a fictional interview with the Reverend E.E. Plastikandle.

"Put one hand on your tuning knob and one hand in a bucket of holy water -- and feel that spirit moving through your body! Feels goood!"

That's the way E.E. Plastikandle talks. He always adds an "o" to good -- and subtracts an "o" from God, which becomes Gawd.

You feel goood because he feels good -- and good, like happy, rubs off. And feeling's the name of the game. And Gawd sees that it is good.

The first thing *you* see is the smile. It's not real big. Just omni-present. And exuding professional confidence. Like the finalists on a Dick Clark Dance-a-thon.

If the smile is a touch saccharine at least it's sugarless, which fits into the suit.

Now that's a story, that suit! You have to say suit singular because you know it's the only one. Nobody would go out and buy four or five identical suits, right? Besides, a single suit is a sign of gospel poverty.

Of course, the fact that it is obviously a $500 immaculate original screams class. And that after all is the bottom line. Poverty may be a legitimate means to the end -- at least for the poor. But the end is success. That's it: the suit and the story -- success.

At the same time, Plastikandle knows how crucial it is to balance that sartorial semblance of Godly glitter with a touch of rustic, rural plain talk or "soft-speech." The unenlightened and the just-pure-jealous call it "soft-sell." They miss the point. The down-home drawl, the elisions and contractions, the grammatical devil-may-care nonchalance bespeak a "we're all in this together" concern, the urgent idiom of the American working man. You might say that Plastikandle's elocution is to language what hush-puppies and leisure suits are to clothing.

Plastikandle has the common touch. He talks to people where they live. He's not afraid to get dirty, to get involved with the deepest problems of human existence:

suffering, loneliness, hunger, oppression, powerlessness, fear, alienation, disease, drugs, despair, death. He talks about them all. He is especially fond of talking about problems that begin with the same letter.

Plastikandle avoids talking about problems with political overtones or strong lobbies: e.g., abortion, (economic) wars, pollution, housing, welfare, tax bills, (government) subsidies, homosexuality, multinationals, unions, divorce, (extramarital) intercourse, alcohol, nicotine and TV commercials. He states his position clearly, forcefully: "Particulars divide people. I have come to bring harmony -- whenever possible, three-part!"

Plastikandle likes to get to the bottom of things -- to Evil and Sin. Now, while definitions can also be divisive and pretty superfluous when you're holding a Moroccan bound King James in the hand closest to the microphone, a definition or two at this point will help draw out the message behind the man.

"God's law," Plastikandle reiterates, "is written in our hearts and the heart of His creation." This natural law has been distilled in the Constitution, Bill of Rights, and Red Cross Handbook of the United States (promised land of the New Testament.) Therefore, evil may be seen simply as civil disobedience. Sin, of course, is crime.

The problem of evil, succinctly summarized by Plastikandle in his mini-series of twelve sermonettes, derives ultimately from Eve's tease in the garden and Adam's subsequent unwillingness to turn over a new leaf. "The woman made me do it" continues to account for some not very original sin. But most important are the corollaries. If evil is civil disobedience, then good is obedience to the laws of God and man, government and state, supreme court and city hall. To put it plainly, good means not hurting anybody and not getting caught.

Likewise, if sin is crime, then virtue is law enforcement -- especially when it comes to private property, over $10 in value, which belongs to an individual (as opposed to Macy's, Safeway, or the company you work for.) Other obvious
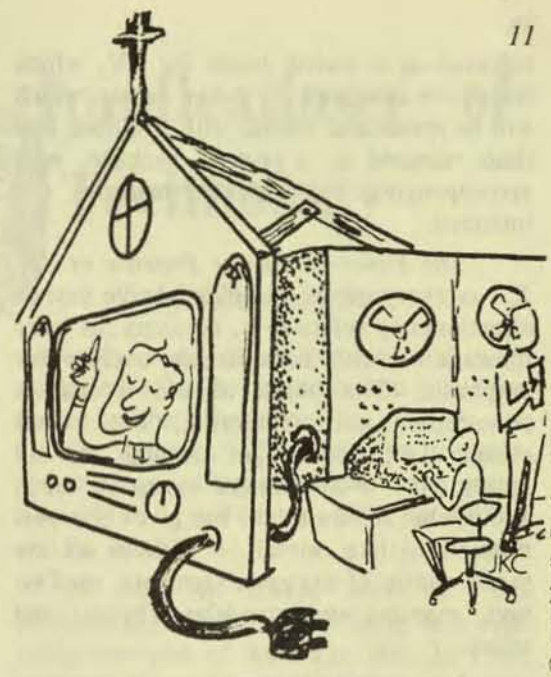
exceptions to absolute law enforcement include the Internal Revenue Service, the State Highway Patrol, and people who disagree with you or don't believe in God or are obnoxious.

This divinely revealed legal foundation is important for Plastikandle, because he will build on it. Oh, will he build! Envious outsiders have accused him of having an "Edifice" complex. He is always "sharing dreams" for a new complex: a hospital, church, university, museum, center, gallery, monument, or television studio.

He builds not out of need but out of "vision." With a unique blend of Saul Alinsky and Karl Marx, Plastikandle repeats, "Nothing brings people together like a common collection." You can't deny the impact of his structures. Even agnostic tourists have been known to glance at a Plastikandle creation and exclaim with true spontaneity: "Jesus Christ!"

It's not just buildings. Plastikandle wants people involved with advanced adult religious education and home bible study. Two of his fastest moving pamphlets are "Metanoia Through Myth" and "The Superstitions of Evolution." But his biggest -- referred to in the trade as a platinum "monster" -- is the best-selling hard-cover *The Power of Positive Pretense,* soon to be

released as a movie made for TV, which will serve as a pilot for a new series, which will be syndicated abroad with subtitles, and then reissued as a cassette package, with accompanying study guide, batteries not included.

The Power of Positive Pretense or "P-3," as everyone on the Plastikandle payroll affectionately refers to it, contains his basic message -- with considerable overlap for emphasis. The object of life is neither penetration nor withdrawal, but rather escape: i.e., not to get through it, but around it! "P-3" doesn't worry so much about what others think, but gives one permission to like oneself -- without all the razzle-dazzle of exercise, seminars, meditation, mantras and mandalas, rhymes and relics.

You may have already noticed a subtle similarity to the early gospels. At this point Plastikandle parts company with the original. He prefers his christianity cultural and comfortable. Naturally, no one chooses a steady diet of cotton candy and chocolate chip cookies -- but for a weekend pick-me-up or a transcendental transfusion, a shot of supernatural sweetness can be mighty energizing.

Besides, Plastikandle likes it comfy. The world may know him as the "mass media minister with much more music in his message," but close associates call him "Painless Plastikandle" or "P-2." He keeps the problems far enough away (like the evening news) to be somebody else's problem, and numerous enough (like the evening news) to be an overwhelming turn-off: "There's just too much to be done. We're gonna hafta put God in charge here. Now let's see if we can get Him to make a housecall. . . "

Hey, don't misunderstand! Plastikandle's got nothing against churches -- even if they do smell funny and have a lot of hypocrites kneeling around. It's just that, if everyone went to church, then there would be no one watching TV, listening to the radio, or going to the ballparks and drive-in theatres where Plastikandle does his number.

The main thing Plastikandle calls crowds to is comfortable conversion, a kind of instant total rehab, a jiffy insert-a-god, in keeping with the accelerated expectations of our age -- nothing more embarrassing or painful than raising your hand to go to the bathroom or walking to the pencil sharpener at the front of the class.

Of course, he has expenses. Hey, this is the real world. And it costs money to make money or save money or save souls. So you go ahead and send for that free statue that glows in the dark and sticks to the dashboard and prevents accidents and traffic tickets, and the computer coughs up contribution requests for the next three months or four telethons, whichever comes first.

But people don't really mind a little air mail second collection, especially if an attractive self-addressed stamped envelope is enclosed. Americans are not only the most generous and gullible people in the wired world, they also instinctively distrust anything that's free or even too cheap.

Plastikandle has realized something that the rest of the country has been missing. It's not the sex game shows and the violence of soap operas and the passivity-producing news and the love-for-sale commercials that are destroying the fabric of the American home, family, marriage. It's the fact that TV football, four out of seven days a week (if you count Howard and the Cheergirls on Monday nights) provides multiple orgasms that no wife of longer than two and a half years can compete with.

Americans are not only ready to live vicariously, they are ready to put someone else in charge. This was Plastikandle's overpowering insight. People want to delegate both the virtue and the act of faith: to a born-again president or the morning horoscope -- to someone, something else, to do their believing and risking and suffering and changing for them. Watching TV means never having to say you're sorry. The world was ripe and ready for an electronic evangelist.

E.E. Plastikandle was up to the challenge. He saw, he got seen, he conquered. He's one hell of a preacher, that Pastor Plastikandle!

The Social Implications of Videocassette Technology

by Glen Spain

Television, today the helpless captive of the big corporate advertisers, may one day be freed by the new videocassette television technology. Home videocassette recorders (VCR's), which are rapidly becoming popular and inexpensive, show promise of doing just that.

Commercial television is by far the most important single source of information and culture in the advanced industrial world. The average 1978 U.S. high school graduate had watched television for a total of 15,000 hours but had been exposed to school, teachers, homework, reading matter of any kind, or parental teaching, for less than 10,000 hours. Total viewing time increases from this average as you go down the socio-economic scale.

Nicholas Johnson, a former member of the Federal Communications Commission, has said that the business of the television networks is to sell pre-packaged audiences to the advertisers. TV programs are merely a means to create the audience.

Network television is so expensive that it simply could not exist without advertising revenues from major corporations. As a result, the entire American television industry is financially -- and therefore politically and culturally -- dominated by the 100 biggest industrial and financial concerns. The implications of this corporate media imperialism should be obvious. Whatever the corporations refuse to support does not get seen on television. On whatever they do support, they spend tens of millions of dollars each year. Their own policies and their own views are con-

tinuously aired in a massive and well-organized effort to convince the television audience that these policies are in the "public interest." Expenditures for corporate *image* advertising alone have grown from $149.5 million in 1970 to $292.7 million in 1976 (1).

It has not always been so. The phenomenon of Big Advertising is a relatively new part of American life. In 1946, for instance, only some $3 billion was spent annually on advertising in the U.S. Today that figure has skyrocketed to over $20 billion, and shows no signs of slowing down. The amount spent every year on advertising is more than the whole country's budget for aid to education. And the great majority of advertising money is spent by a few large companies on television time.

In his 1978 book *Four Arguments for the Elimination of Television,* Jerry Mander, a vocal critic of the commercial television industry, cites with alarm the incredibly concentrated power that top industrial advertisers hold over the television media. For instance, he points out, since 1960 the 100 largest television advertisers in the U.S. accounted for some 80% to 85% of all network television advertising, and the top 25% of these accounted for some 65% of that 85%, or over 55% of all network advertising. These large advertisers also account for 40% to 60% of all local television advertising, depending on the market.

This industrial concentration pervades the entire national economy as more small companies merge into giant multinational corporations (2).

1. For excellent documentation of the growth of corporate image advertising, see *Sourcebook on Corporate Image and Corporate Advocacy Advertising,* compiled by the Subcommittee on Administrative Practice and Procedure, Committee on the Judiciary, U.S. Senate (1978), available from the U.S. Government Printing Office.

2. See *Mergers and Industrial Concentration,* Hearings before the Subcommittee on Antitrust and Monopoly, Committee on the Judiciary, U.S. Senate, 1978, available from the U.S. Government Printing Office.

The so-called "public television" stations do not escape corporate domination either. Some 40% of all public television programming is paid for by donations from commercial TV's 100 top advertisers, with a good deal of the remainder coming from foundations which in turn are supported by these advertisers.

If the corporate advertisers had their way, television advertising would take over a larger and larger share of viewing time. There are several proposals in Congress right now that would virtually eliminate current controls over the amount of commercial time allowed per viewing hour. For example, the law that created the Federal Communications Commission (FCC) is now being rewritten. One proposal being heavily lobbied eliminates not only these controls, but also the "equal time doctrine" and the requirements that stations make free time available for public service announcements.

The high cost of network television means that to be financially viable, every program must attract an audience in the millions. The more viewers, the more potential customers for a sponsor's product, therefore the more financial support by the top advertisers. Thus the scramble for "ratings" to justify the program to the sponsors has come to pervade the entire television industry.

Ratings, of course, have nothing at all to do with the quality or social utility of the program, but are only an indication of mass audience appeal. Thus the more gimmicky 'pop' culture shows which concentrate on bland general interest at the sacrifice of information or controversy usually prevail over high quality, informative or educational programs because these only appeal to a narrow and specialized audience -- and therefore no advertiser would touch them.

The end result, of course, is that American culture is being systematically manipulated and redesigned to fit the economic and political interests of these multinational corporations. Public attitudes and basic drives are created and shaped by the most sophisticated techniques available.
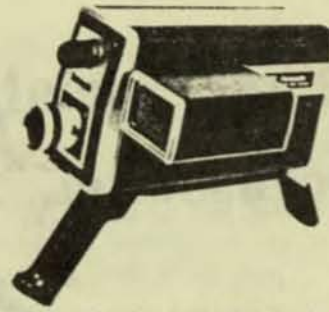
Loosening the Stranglehold: Home Video

Money is the key to everything in television. The built-in cost of producing a program for broadcast is astronomical -- for example, a one-hour prime time show on network television can easily cost $700,000 to produce and air, while special events productions can run several times that. Not until the cost of television production and distribution is substantially cut can the dependence of the media on advertising revenues be loosened.

Unfortunately, with the use of ordinary broadcast technology there is simply no easy way of distributing this production cost to the ultimate consumer. Through advertising, the link is indirect and imprecise, and the product consumer winds up paying for advertising regardless of whether he or she was reached by the advertising or saw the program. Furthermore, there is no direct feedback to the sponsor about the program, so consumers have no input into the type or quality of programming by means of their buying habits. The viewer is stuck with the program like it or not, and is powerless to change it.

The various "pay TV" experiments attempt to charge the cost of production directly to the viewer by the use of subscription fees. However, we have become so accustomed to free TV at the flick of a switch that there is very little willingness to pay except in areas where ordinary TV reception is physically impossible. Then too, the additional high cost of establishing and maintaining a closed-circuit network (to limit access to subscribers) boosts the overall costs of production, making such systems even more dependent on outside financial underwriting -- which means they too are stuck with advertising.

Additionally, no cable system to date has had enough money to produce a significant amount of its own programming internally, because of the costs of studio and production facilities. So the cable systems are relegated to virtual repeater-station status and merely re-run network or regional programming, complete with commercials. The systems are financed through broadcast hookup fees to the networks and local stations, who in turn look to advertisers for support.

Enter the videocassette recorder. These handy little devices were originally designed to augment commercial television by allowing viewers to record their favorite programs and play them back at more convenient times. But lo and behold, they can also be made to play any other item on suitable cassette tape, and can be made to duplicate tapes from one to the other almost indefinitely. With a minimum of equipment, tapes can also be edited to remove the commercials.

Suddenly there developed an active fringe market of pirate tapes of all kinds, without commercials. Then it occurred to the networks that they no longer had any control over what VCR owners were watching or when they were watching it, and what was worse, that there was virtually no way to assure advertising time on those cassettes. Attempts to introduce ads into the tapes just resulted in competitors' editing them out (3).

In an effort to stop the importation of VCR's into this country the movie industry even brought suit against the leading maker of VCR's, seeking an injunction and claiming that the use of VCR's in private homes violated their copyrights over taped material. Thus far this suit has been unsuccessful.

All this videocassette hoopla could be seen merely as a temporary aberration, except for a few interesting facts: 1) there have already been over a million VCR's sold in this country since Sony's "Betamax" appeared on the consumer market about five years ago; 2) according to industry estimates, between five and ten million more will be sold in the U.S. by 1985; 3) VCR's are already priced so low (about $1000) that most middle-class families can afford them, and the price is expected to drop; 4) the total cost of distributing a large number of videocassettes is only a small fraction of the historic cost of broadcast time; and 5) since the consumer can be charged *directly* for the tapes, the whole cost of the production system can be passed on directly to the ultimate viewer and spread out over the whole universe of consumers. In other words, the entire system can be made user-financed for the first time.

What this potentially means is that a whole new secondary television delivery system will develop which is so inexpensive that corporate advertising is no longer needed to support it. Once a program is aired, tapes of it will be so readily available that there will be no effective way to control their use or distribution -- and naturally the commercials will be edited out. Reruns of programs may virtually disappear, and the networks will have to produce new and hopefully innovative material on a continuous basis.

However, programming will still be in the hands of the television networks (and their sponsors) unless the cost of production itself can be freed of the need for corporate advertising support. But the cost of production is already being brought down by new technology. For example, commercial TV studio cameras used to cost about

3. *Universal City Studies, Inc. et. al.* vs. *Sony Corporation of America et. al.*, filed in the U.S. District Court, Central District of California, #CV-76-3520 F. The District Court ruled on October 2, 1979 that it is legal and not an infringement of copyright for private citizens to videotape programs in their homes for their own use. The ruling is now being appealed to the Federal Court of Appeals, Ninth Circuit. The District Court decision is considered a landmark victory for the VCR industry.

$300,000 to $600,000 *each* -- a bit out of the hobbyist's budget. Fully equipped broadcast studios would cost five million dollars and up. But now, thanks to mass production and electronic miniaturization, a broadcast quality color videocassette camera will start at about $25,000, less than 10% of the former price. A usable hobbyist camera can be bought for as little as $3000, or about 1% of the previous cost.

Suddenly any moderate-sized community can support the costs of a fairly decent videocassette production studio, and such a studio -- for the very first time -- can be financed primarily by the studio users themselves on a fee-for-services basis. A good quality production and broadcast-quality videocassette studio can now be set up for less than $500,000, with an estimated useful lifetime of five years. If the studio can be used an average of 40 hours per week for 45 weeks per year, the cost of services required to support the studio would be only $56 per hour. This figure is trivial by industry standards, and is well within the range of most community groups. Given a community large enough to create the demand, there is no reason why such a videocassette production studio could not be entirely self-supporting.
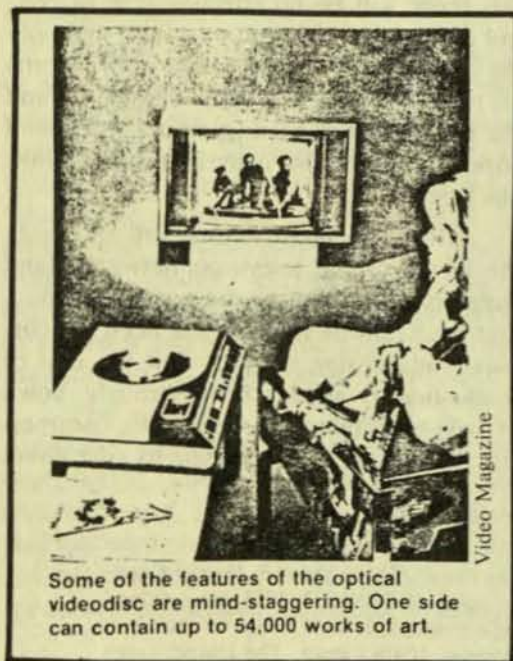
Some of the features of the optical videodisc are mind-staggering. One side can contain up to 54,000 works of art.

With production equipment gradually easing down in price over the next few years, and becoming increasingly sophisticated with the use of computerization, the means to produce video information will become more and more accessible to the general public. With overhead reduced, productions aimed at relatively smaller and more selected audiences of a few thousand, or even a few hundred, will be possible, thus making way for great diversification and programming of a much higher quality than national mass media could produce even if they wanted to.

Steps to Media Independence

Is the Golden Age upon us at last? Well, not quite -- there is still one major barrier to television independence, and that is distribution.

Creating adequate distribution from videocassette producer to viewer is no easy task. For the viewer, it will never be as simple or as cheap as turning on a TV set -- it will take some positive effort to acquire the desired cassettes. Fortunately, however, the videocassette distributor does not face the huge broadcasting cost of commercial television.

Cassettes now are no more expensive than many books, and once the new "videodisk" technology is available in 1980, these disks will be even cheaper and will compete in price with the average phonograph record.

Video cassettes are magnetic tape cassettes similar to very large audio cassettes. They are *sequential* only, so it is difficult to stop on a given frame selected at random. Video disks, which look very much like phonograph albums, are *nonsequential*, allowing one to jump to any frame quickly and easily. Video disks are also similar to phonograph records in that they can be mass-produced by a stamping process, which will make them very cheap.

Cassettes and disks can both be sent by mail to virtually any place in the world, and are already being deposited in public

and college libraries in every community in the United States.

Once distribution bugs are ironed out, an entire media counterculture could develop, wholly independent of the big broadcasters and their financial business counterparts. Then finally, television technology might come of age.
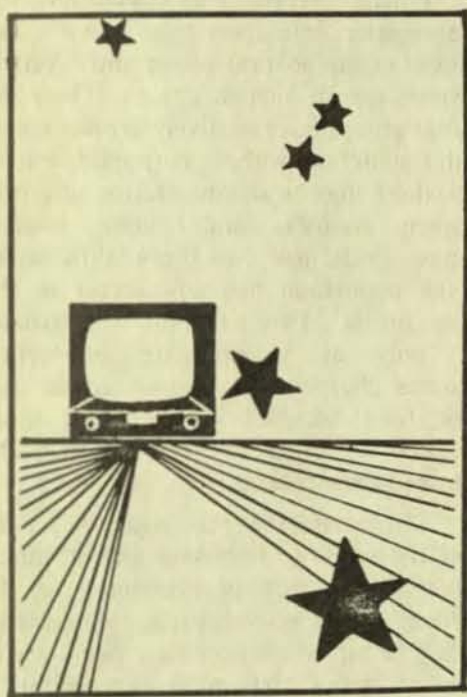
Televisions / A. Molella

Some Implications of Media Independence

It may well be that over the next 20 years, as video and studio production technology become cheaper and more flexible, the corporate stranglehold over the sources of information in our society can be loosened. If not, we should at least see an increase in the quality and variety of network productions, since they will be facing the first real competition they have ever had.

The networks are particularly worried about the videodisk move into the film industry, which could restore the full-length movie to its former place of media prominence. The movie industry has provided most of the development capital for videodisks to date, and is marketing full-length feature films on videodisk in several areas of the country right now, with plans to expand nationwide in 1980.

Once everyone can make real choices as to what to watch and when, and once any group anywhere with information to present can get access to the facilities to produce and distribute it -- then we may see a renaissance of information, with a forum for everyone's ideas, popular or unpopular.

One implication of this cheap new technology is that there will be much less need for programming which appeals only to a mass audience. Groups as small as a few thousand nationwide could support a videocassette production, and this support could be amortized over several years rather than on one broadcast night. Thus programs of much higher quality and more specific information will be possible, and a new type of video education will become feasible. The "video university" may well arise as a viable and cost-effective alternative to traditional education through the use of educational material on videocassette.

Many colleges are already putting class lectures and demonstrations on videocassette and some have their own studios to allow them to do so cheaply and quickly. Some educators are even talking about "video universities" -- schools in which the students are never actually present on the campus, but attend lectures by videocassette, learning at their own pace in their own homes on their own schedules.

The video university may be able to overcome some of the problems that plague our current university system, which is 1) not cost effective, 2) weighted down with useless and poor teachers who cannot be removed because they have tenure, and 3) unable to appeal to or educate any but a very narrow sector of society -- delayed-adolescent, predominantly white, upper class kids. (VA benefits and student loans have allowed some other types of students in, but both of these programs are now being phased out.)

Videodisk technology promises to be particularly useful in education, since the disk can combine video signal as well as coded computer programming on the same disk for the ultimate in programmed learning.

The idea of a "video university" is not at all farfetched. As conservative and august a body as the Carnegie Commission has stated:

"One solution to today's problems lies in improving educational technology. We are still basically operating at the same technological levels as the medieval universities, and improvements in this area could cut costs and improve quality . . . [I]t is not too far-fetched to foresee a video university which would operate entirely through the medium of video cassettes attached to television sets, thus dispensing entirely with the need for campus and faculty." (4)

Ease of access and ease of finance will mean literally thousands of small studios springing up all over the country -- studios to which community groups will have access. The more the better, since the more programming available, the better able to support itself the medium will become.

The big professional productions will still cost a great deal of money, however. There is a limit to how much production costs can be cut merely through reduction in equipment prices, since a major cost is not equipment but labor. Ironically, it may be that the group most threatened by the new technology are not the networks but the unions. Thus there may be a joint effort between the unions and the corporate advertisers to slow down or reverse the impact of VCR technology on the media, although eventually both advertisers and unions will have to come to terms with the cheaper and more democratized amateur producers.

Finally, carried to its conclusion, the videocassette revolution may make major changes in the political power and diversity of small special interest groups. Once the smaller groups have relatively greater access to the public ear without corporate censorship, there may be an equalization of power between business and public interest groups. In the past only the wealthy sector of the population had any access to the major media. This situation will change, not only as videocassette production becomes cheaper, but also as actual network time becomes cheaper and more accessible in order to keep up with the increased competition.

Ultimately, the real issue is access. Effective access to television and all media should be the right of everyone, not the privilege of the powerful few. When large outlays of capital are no longer necessary in order to get a podium in the forum of ideas, when dialogue comes from a multitude of voices and not just a few . . . well, I for one am quite curious to see what role "people's television" will finally play.

4. Sponsored Research of the Carnegie Commission on Higher Education, 1975.

Glen Spain is an attorney who is currently working with Scott Hall Production, a broadcast-quality video production studio which is part of the California University for Advanced Studies in San Anselmo, California.

Participatory Broadcasting:
the Community Radio Network

by Marcy Darnovsky
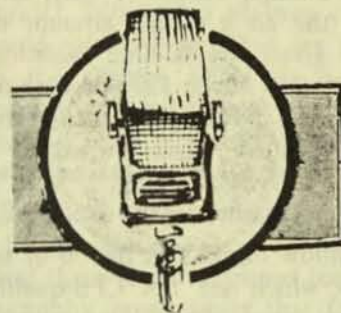
"Beginning in 1980, Pacifica will steal some of the new technological fire and bring it back to earth, using satellite to deliver a truly alternative newscast to a nationwide audience," reads a prospectus of the Pacifica Foundation, founder of listener-sponsored radio. Pacifica's five stations, and dozens of other community radio stations that have sprung up across the country in the past ten years, are in the process of putting together a new network of stations and a nightly newscast that will initially reach half a million people.

The technology that will make this possible is a Westar communications satellite already in orbit. The social context that has nourished this venture is the proliferation of community and non-commercial radio stations and their organization into the National Federation of Community Broadcasters (NFCB.) The point, according to Alan Snitow, news director of Pacifica's Berkeley station (KPFA), is to create "a network that will provide, for the first time, a progressive arena for news. It will be competing with both commercial radio and National Public Radio, in part by providing much more access for minorities, labor, women -- constituencies that are under-represented and have no voice."

Many smaller stations cannot afford decent coverage of national and international news. Those that do such broadcasts are duplicating each other's efforts and taking time away from work that could go into producing more local news, more live news, and more background interviews. Though there have been a few misgivings about a centrally-produced newscast, Snitow believes that "the only way to make any kind of advance is to take that step of creating a division of labor. The benefits are obvious to people who have thought about networking before, but I've been talking about it for several years and it's only now beginning to catch on really fast. It's now being accepted as something that could be used by local stations without being a threat to local autonomy."

Each station could choose whether to use the national newscast whole or edit it and insert portions into their own news program. "At KPFA, we'd take it whole hog," says Snitow. "It would make it possible for us not to be chained to a Reuters machine, which is what happens now."

The money behind the satellite access is coming from the Corporation for Public Broadcasting, the government funding

agency through which congressionally-appropriated funds flow to the Public Broadcasting System (television), National Public Radio (NPR) and a few other radio stations. CPB has leased four channels on the Westar satellite and by the middle of next year will have paid for and installed receiving dishes for 204 radio stations and 16 uplink units which will be shared by clusters of stations.

Only "qualified" stations (those with a large enough budget or staff, and which are on the air a certain amount of time) will be given the satellite facilities. With the exception of the Pacifica stations, all of them are in NPR. "Originally, there was some question about whether Pacifica would receive anything," said Snitow. "But they couldn't legally exclude us."

Snitow thinks that the 50 or so NFCB stations which are not CPB-qualified will work out ways of obtaining access to the satellite. "Probably not this coming year, but within the next two years, the technology will be cheap enough and it will be an important enough means of distribution that they'll find the money." (The receiving dishes now cost $50,000, but they could be down to $10,000 in a year.)

Satellite broadcasting transforms what is possible for radio. A phone line, with a 3 KC band width, transmits sound that is too low-quality for lengthy air use. The satellite band width is 15 KC, so a half-hour long newscast could be broadcast with minimum degradation. In addition to the planned news program, a community radio network could send out other material on a daily basis: news interpretation, features, background material, could all be cut up and used by receiving stations however they wished. The best programs produced by community radio could be transmitted simultaneously across the country.

Another idea being kicked around is to use the satellite broadcasts as an electronic classroom -- a producer of a show could explain how and why it was done in that particular way. Pacifica is also planning a major training effort as part of the national newscast project, to help community stations that haven't been able to afford news departments set them up.

A national network of community and/or "progressive" radio stations could also make links with alternative media outlets in other parts of the world. For example, there is an international news service called Interpress that started in Latin America in the 60's and has now spread to Africa, Europe, Asia and the Caribbean. Before Interpress, information services in the Third World had been limited to UPI, AP, Tass, Agence France Presse and Reuters. There had been no way for one Third World country to communicate directly with another, and very little coverage of Third World issues. Now, correspondents send in news stories and analyses to a central office in Rome which sifts through them, translates the selected stories, and broadcasts them in Spanish, English, Arabic, and soon in French and Italian.

Recently, an Interpress broadcast of an article from *Mother Jones* on chemical dumping by U.S. corporations in the Third World created shock waves. Many of the affected countries had been completely unaware of the dumping practices or the chemicals' effects. To Interpress and to alternative media workers in this country, this incident illustrated the benefits of regularizing channels to share information and to put together fragments that otherwise would remain meaningless.

"There's an official U.S. that's represented by the commercial and NPR stations, and then there's the unofficial U.S. that has had no access and no voice," commented Snitow.

Food Conspiracy / cpf

It is hoped that the satellite-supported network of community radio stations will change that, giving the "unofficial U.S." a communications link with the rest of the world as well as with each other. Although the satellite uplink facilities will be managed by NPR, Snitow feels that they will be relatively accessible to other users. An NPR scheduling office will take requests for satellite time and make arrangements with the station that hosts the transmitter. In the San Francisco Bay Area, the uplink unit has been given to KQED, which will charge about $40 per hour for its use. This charge will vary from city to city in a somewhat arbitrary way, but there is no charge at all for *receiving* satellite broadcasts. Any radio station can receive as many channels at a time as it has demodulation equipment to get. CPB is giving most stations four demodulators.

The technology itself is well-suited to Pacifica's plans. But Snitow is wary that "the opening is right now -- and it will be brief. In the not-too-distant future, IBM, AT&T and so forth will have divvied up the market and will make it very difficult for community organizations that haven't already gotten access to the new technology."

In 1978, the NFCB prepared a set of proposals for a major Federal Communications Commission review of noncommercial radio. The FCC wound up adopting many of these recommendations, recognizing that the NFCB represents a growing constituency that can't be ignored. The FCC actions may make it more difficult for policy makers to claim that corporate programming can satisfy the needs to which community radio speaks.

A feasibility study on the national nightly newscast has already been completed. Fundraising is under way, and most NFCB stations have indicated that they will use the newcast in one form or another. The organizational structure of the project is being hammered out now. "There's recently been a series of round robins, with staff going around the country with documents and meeting with people from all the different stations," Snitow said. "And we're going to have a meeting of news directors in the next couple of months from as many stations as possible to talk about what kind of structure they want."

The logic of the project dictates that there will be a national production center for the newscast, probably in Washington or New York. Beyond that, many issues have yet to be resolved. What kind of feedback and input structure should there be? If there is an editorial board, who should be on it? What other advisory committees should exist? How often are people around the country going to meet? And how extensively should -- or can -- an editorial board control what will obviously be a high-pressure day-to-day operation?

At KPFA and many similar stations, there is no formal structure for accountability at all. But there is a widespread feeling among community broadcasters that for a national project like this one, some method to allow group editorial decisions on major issues is crucial. (For example, how much time and money should be spent on coverage of national elections?)
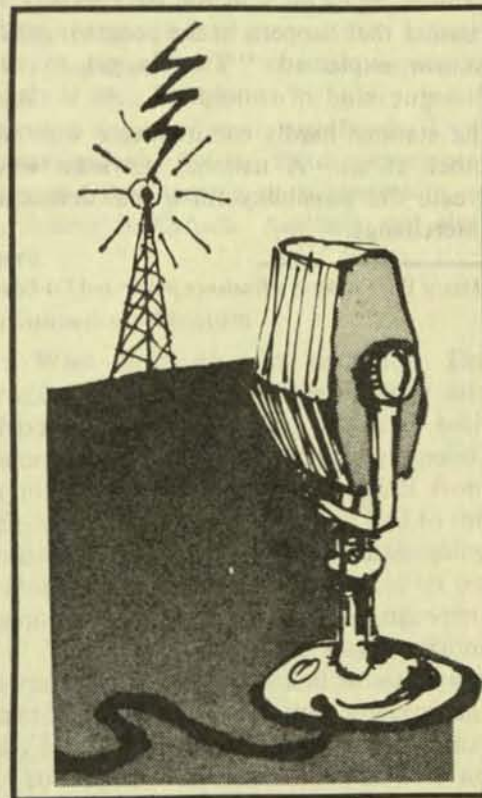
KPFA Folio

Snitow also anticipates some policy questions that will have to be resolved by the group as a whole. "When we put a newscast up in the air, it will be available to everybody who gets the satellite," he explains. "A lot of those are not community radio stations, yet they might be interested in our newscast. Now, are they going to be part of the editorial structure? They might then swamp the community stations, which we view as our real constituency."

Even among the self-designated "community radio stations," there are broad and sometimes slippery differences. Richard Mahler, news director at KPFK, Pacifica in Los Angeles, writes that community radio's "programming recipe is a soup-to-nuts menu of all things musical and audible, from rococo to punk rock, guarani to gamelan, Big Band to bluegrass, communist commentary to Chamber of Commerce pep talk."

At least some of these divergencies will be reflected and expressed in the national newscast. "It will have to be a discussion that happens in the program itself," Snitow explained. "There's got to be a dialogue kind of conception. As it stands, the stations hardly communicate with each other at all. A national newscast would create the possibility for a real democratic interchange.

"The question is, what kind of social organization do you want to set up? And where does your self-interest lie? If your financial or political self-interest is in creating a centralized, hierarchical system, then that's what you're going to get. But if you create a system whose base is in community organizations and whose interest is the development of a discussion among those organizations and speaking to constituencies who have no representation right now, and if your funding is coming largely from those stations, then you're going to be responsive to those stations' needs. It's the base of such an organization that really keeps it meaningful -- the aspirations and ideals of the people who are setting it up."

In his travels around the country, Snitow has found that unions and community organizations are excited by the idea of a national news operation that is interested in them. On commercial radio or NPR, "you don't get coverage of hearings in Washington about the 35 hour work week. You don't get coverage of the concentration of the press. Or comparative analyses of tenant and rent control movements, or of the different experiences of community organizations or rank and file groups. These aren't deemed worthwhile. When you can put them up as part of your newscast, then you're presenting a different conception of what news is."

Marcy Darnovsky is a freelance writer and Co-Editor of this journal.

A Revolution in Personal Communications:
the Explosive Growth of
Citizens Band Radio

by Bert Cowlan

Bert Cowlan, consultant, has been active for more than 20 years in education, communications and technology and has managed large-scale projects in social science and technology assessment. He has a CB radio in his New York office.

A Significant Phenomenon

One in every eleven American families is using it. One of every 19 vehicles on the road in the United States is equipped with it. Hardly an American over six years of age doesn't understand "Smokey the Bear," "Beaver" and "10-4 Good Buddy."

But what does Citizens Band radio -- the phenomenon itself -- mean?

Look at some other figures: Twelve million CB users are licensed by the Federal Communications Commission, but informed guesses put the number of unlicensed ones at almost double that. In 1976, about $366,000,000 was spent on CB; by 1984 the market may run to nearly a billion dollars annually.

There's been a lot written about CB in the popular press. Much of it seems designed either to shock or to titillate. There have been dictionaries of CB slang ("Smokey" is the highway patrol, a "beaver" a woman, "10-4" is yes) and of the various codes, some of which are the same, some of which vary in different parts of the country. Much of the slang is of a variety which used to be called "unprintable." And there are slick magazines, many of which tend to feature ladies in deep decolletage or bikinis draped over the newest gadget. There is even a tabloid publication called *CB Bible*.

But very little formal research based on sound methodology has been done about CB. I have chosen to discuss what I feel has yet to be learned so that some valid judgments about CB as a communications medium can be made. There will be no formal answers here, because not all of the questions have yet been asked.

I have used the word "phenomenon" to describe the proliferation of CB. I use it in its meaning as a "rare or significant event or fact." It's hardly rare, but I believe it to be extremely significant. I will discuss only the United States experience, although CB is turning up as something of significance in Canada, Australia and elsewhere.

An Immediate Medium

What might be going on here? The literature of sociology, of psychology and behavior, and of political science, both academic and popular, is increasingly pointing to the alienation Americans feel from their institutions and their media and to the sense of frustration they feel in attempting to create change. Those who govern us are beginning to suggest we may be ungovernable. Those who watch the way decisions are made in Washington and other power centers tend to suspect that government today is a matter of crisis management, that this country is one huge brushfire and no one knows any longer how to put it out.

An example on just one institutional level is the prediction that fewer Americans will vote in each succeeding election than in the last one. On the communications level,we are surrounded with the "richest" communications ambience in the world, yet people see the mass media as less and less credible, reliable or even satisfying.

Still, people *need* to communicate in order to fulfill certain hungers of the mind and soul, in order to recreate community, in order to reestablish contact despite an increasingly impersonal existence. And some people seem to be doing something about this. They have found in CB a medium for *themselves.* They are turning to it in ever increasing numbers; they are devising their own protocols for its use; they are putting together a formidable political lobby to ensure its development. They are, in short, mounting and managing the first telecommunications system ever created from the bottom up.

CB radio is a medium which puts the citizen in control of the communication process. It permits one to communicate to one -- or to many. No complicated technical knowledge is needed to enter into the CB culture; licensing is simple and free; the price of entry can be quite moderate and the equipment is easy to operate. As a personal communications technology, CB radio is quite unusual.
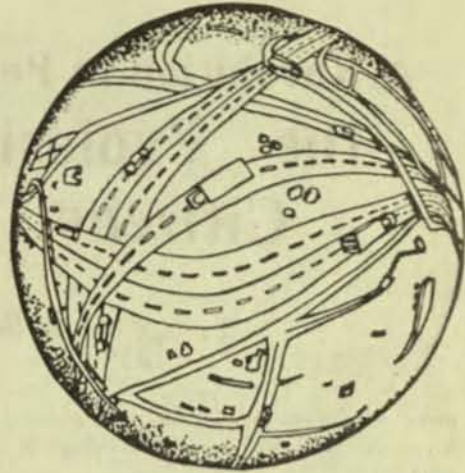
The Big Dummy's Guide to CB Radio

Forerunners of CB

CB has had forerunners, of course; it did not bloom in isolation. At the time of Darius the Great, from 521-486 B.B., a system of runners carried mail from one end of the Persian empire to the other in seven days. In the 19th century, the Pony Express sped personal communications across this country. The telegraph accelerated both the process of mail and its volume. With the telephone, personal communications grew explosively.

These media were all two-way, as opposed to the one-way channels of radio and television. ("Ham," or amateur radio maintained the two-way aspects of earlier media, but it has been mainly used by a limited elite with technical knowledge and skills, and the ability to buy and operate costly and complicated equipment.)

Perhaps the first widespread sign of frustration with one-way media was the development of the "call-in" shows on radio which allowed some entry into what had become a major communications channel. But "talk radio" is a system which places buffers between the listener and the communicator. One has to use (and pay for) a telephone call to gain entry; one has to go through a producer (or other gatekeeper or screening mechanism); one often

has to put up with a seven second delay loop which screens out both obscenity and other elements not wanted by the producer; and perhaps most importantly, the show's host is in complete control and can (and in my home city often does) cut the caller off at whim. The main aim of talk radio seems to be entertainment, not communication.

CB radio tends to be associated historically with its use by truck drivers to inform each other of road conditions and police traps. But long before CB, truck drivers had developed a surprisingly sophisticated communication system which used only front, rear, and side lamps and flashers along with horn signals. This "language" was used precisely for what truck drivers now communicate on their CB radios: "There are police ahead," "I'll meet you at the diner up the road," "There's been an accident," "Look out for fog," "It's safe to pass."

As one might expect, truck drivers began using CB at an early stage. However, the incredible popularity of CB may also have been stimulated by the increasing expense and decreasing reliability of mail, telephone and telegraph. At the same time, the transistor and the new chip technology made this form of electronic communication less costly, smaller, more rugged, more reliable and thus better able to compete. This, of course, was only one set of reasons: CB also offers the highest degree of mobility of any of the personal systems, it allows complete anonymity (the "handle" is the electronic equivalent of a pen-name; you choose whether or not to reveal who you are), and it offers ease of access, ownership and control.

SENDING

The Big Dummy's Guide to CB Radio

CB and Other Media

Ownership and control are perhaps the major factors in CB's growth. CB gives people the opportunity to build and manage their *own* systems and to participate in designing their protocols and operational rules.

It has not been shown whether CB users perceive these advantages or whether they are unconscious motivating factors. In either case, CB's rapid growth has vast implications for the future of telecommunications and mass media in the United States. The use of CB in "drive-time" is already reported to be cutting into the revenue of commercial radio stations in some areas. CB users are providing each other, it seems, with more accurate and timely information about road conditions than can the commercial stations which people used to depend on for such data. In fact, a new relationship between CB and commercial radio is in the process of evolving. A proposal has been put to the FCC by commercial radio stations requesting that they be allowed to carry CB-generated information about traffic conditions and other events over their own air-waves.

RECEIVING

The Big Dummy's Guide to CB Radio

CB operators have begun assigning each other or volunteering to be "channelmasters" for specific time periods in order to relay messages (or even the actual signals) from weak stations through a strong base station. These "repeater" stations extend the range of CB beyond the local horizon. There is even talk of a satellite system similar to the one the "hams" have in place.

CB is now being used *by* the police in many places. (If you can't lick 'em, join 'em.) The Long Island Expressway, referred to unfondly as "the world's longest parking lot" because of its chronic

traffic jams, has signs telling CBers that the police are monitoring Channel 19 for the length of it. Channels for traffic information have long been known in countries like Germany, but they are all broadcast systems. With CB's, someone in trouble can call for help rather than passively sit trapped in a car and wait. In a non-accident situation, there is no need to be lonely.

CB: Some Sociological Questions

A Spanish language slang and a Native American code, both used almost exclusively for CB, have developed. There have also been extensions to the number codes, the "10-" codes used originally by the police. For example, "10-34" means an emergency, "10-36" is a request for the correct time. In the "13" code, "13-4" means "Sorry about that, fella" and it goes on from there. The slang and some of the newer number codes are mostly highly colloquial and a bit reminiscent of "sounding," which is the practice found among some urban Black groups of exchanging amiable insults -- by the numbers, in this case. It would be interesting to determine whether marine and amateur radio operators, forerunners of CB, have begun to adopt the free and easy language of CB operators, the slang words, the new number codes, and the slightly southern dialect used in all parts of the country.

The CB magazines themselves deserve some serious scrutiny by the communications scholar. They are highly technical on one hand, very "folksy" on the other. One publication recently printed a major article explaining why linear amplifiers (which boost power and range) are illegal. It ran an extensive interview with FCC officials about how illegal operators are caught and what is done to them. Yet in the same issue, there was also a copiously illustrated article that managed to give the specifications, price, place of manufacture and point of sale of virtually every (illegal!) linear amplifier on the market.

Much of what is heard on CB channels is rooted in fantasy -- especially macho fantasy. On New York City airwaves, there is a great deal of outright profanity and obscenity, a sort of verbal swaggering.

Much of it, judging from the voices, is transmitted by young children. A great deal of traffic relates to drugs and prostitution.

It is possible that CB is merely a mass fad -- remember the hula hoop? But if it remains a significant social activity, then legislative and regulatory policy decisions will be made about the future of the medium, about rules of access to it, about protocols for its use, and about its relationship with other media.

There are some thorny questions here. In 1978, the FCC received some 80,000 complaints of CB interference with other radio and TV stations. CB has now been granted an increase from 23 to 40 channels -- will it now demand more? Spectrum space is an increasingly scarce natural resource. Is this the use to which we as a society wish to put it?

Does CB represent a vast outpouring of the need for human contact? Or is the CB user better described as an electronic Lone Ranger, hiding behind his power to range across space, riding the airways cloaked in anonymity? It may well be that all of this is simply a transformation of the gossip Americans once exchanged across back fences to a technology suitable for the automobile era. It may also be that people are adopting electronic communication procedures because they no longer wish to travel or take the time to write a letter. For that matter, they may no longer *want* to communicate face-to-face.

While advertisements for CB stress "safety" on the road and at home, purchases made on this pretext actually may fulfill the fantasies suggested earlier. Or, CB really may represent a desire for the opportunity to manage one's own communications system and coordinate one's resources in order to survive in an increasingly hostile, bureaucratic, depersonalized, costly, inefficient and high-risk environment.

The major question that needs to be asked is this: Is CB radio a harmless phenomenon, a useful and even liberatory one -- or [as one might gather from CB's customary level of discourse], are we dealing with social pathology on an unprecedented scale?

Personal Computer Networks:
Some Notes on Current Systems

by Art Kleiner

More than twenty groups, ranging from corporations like American Telephone and Telegraph to grassroots groups of computer hobbyists, are choosing sides this year in the fight to control a new communications medium -- the electronic information and mail network. At stake is a potential market estimated by AT&T marketing researchers to be up to $85 billion, for a service which could combine news media, telephones and computers, allow white-collar employees to work at home instead of commuting, and bring a town-meeting feeling to business and politics in this country.

The Source.

Although computer networks among scientists and business executives have existed since the early 70's, the first one aimed at home users hit the market this June. Its founder, William von Meister, consultant to the Telecomputing Corporation of America in Vienna, Virginia, said he hopes to reach 10 percent of American homes by 1985.

This network, called "The Source", is typical of the basic technology. Computer terminals, generally looking like television screens attached to typewriter keyboards with telephones plugged in back, translate written messages into computer code.

Long-distance digital transmission lines, dialed by telephone, carry the code to and from a central computer in suburban Washington, D.C. The computer stores news, information, and peoples' personal files of text, and sorts everything by preselected keywords to appear at the right coded call.

People use The Source to play games or use business programs, as if it were their own personal computer. They leave messages for each other and browse through electronically indexed bulletin boards. They follow the news off the United Press International wire, calling up stories of special interest only, and they search for specific topics in the bibliographic New York Times Information Bank. Most people don't become proficient until they've been on line about a month.

"What we haven't done yet as a society is develop the habits which cause us to go to an information utility," said Rich Kuzmack, one of the earliest Source users. "But before very long people will automatically put much of their day-to-day life -- mail, news, address files -- on The Source or other systems."

Kuzmack, a former president of the Chesapeake Computer Club in Washington, D.C., said he uses the system to send mail to friends, to collaborate on articles and

Art Kleiner is a freelance writer specializing in telecommunications, and a habitual computer network user.
The opinions in this article are his, and don't represent either Source or EIES management.

plan meetings with them, and to transmit computer programs. The system announces "mail call" if a message is waiting when someone logs on, and a user can read it, ignore it, file it electronically for later, or read a one-liner header only and then decide what to do. A chat mode allows words to appear on the screen as they are typed on someone else's terminal miles away.

"I'll usually log on, see if anyone I know is on, and then chat," Kuzmack said. "If they're not on I'll send a message for later." Although The Source hopes to tap into a big computer-assisted instruction market later, and although it includes updated guides to restaurants and shows now, its most popular feature is business news and stock prices.

"I call up a sequence of exactly the stocks I want," Kuzmack said. "Then I plug that data into a program already on-line, and that tells me how well I'm doing with my investments."

There are plans to merchandize the Source through franchised stores called Telecomputing Centers. The first of these, opened in McLean, Virginia in July, looks like a plush apartment, with terminals on coffee tables, kitchen counters, and bedside reading stands. In addition to the cost of a terminal ($595 and up), Source users must pay $2.75 for each hour outside business hours that they are connected to the computer. By comparison, an hour of cross-country evening telephoning could cost $15.

But users say the greatest impact of computer networks will not be on the cost of communicating, but on how people communicate. Within fifteen years these networks are expected to evolve into multimedia information utilities, carrying voices and pictures as well as typed messages. People will use them to shop, bank, invest, work, vote, explore vast interactive fantasy worlds, or join national communities of people with special interests.

Viewdata.

The Source's biggest rival for home users may be Viewdata, a more limited electronic text system originally developed for the British Post Office. Viewdata does not permit people to send messages, and it uses a cumbersome page-by-page method of finding specific information, but it is much easier to learn to use. Commands are coded in on a tiny keypad resembling a pocket calculator, and text shows up in bright colors on home color TV sets. The Knight-Ridder newspaper chain in Miami, working with American Telephone and Telegraph, recently announced plans to spend $1.3 million developing a Viewdata system. In addition, General Telephone and Electronics has contracted with Viewdata's British designers to come up with an American version for business information over Telenet, which they recently acquired.

"We're going to test to see if this market is real or not," said a staff member at GTE. "We are looking at business applications initially, but we anticipate that this will evolve at some point into a national consumer service -- depending on who is around to provide information and what types of terminals are available."

Several broadcasting companies have also proposed or experimented with television screen text systems, including CBS, ABC, and the Corporation for Public Broadcasting. But broadcasters worry that people will dial up text information instead of watching regular programs, or worse, switch on the computer network during commercials.

Industry consultant Howard Anderson said three million Americans are now using computer networks. Most of them are message-switching systems for corporations or universities.
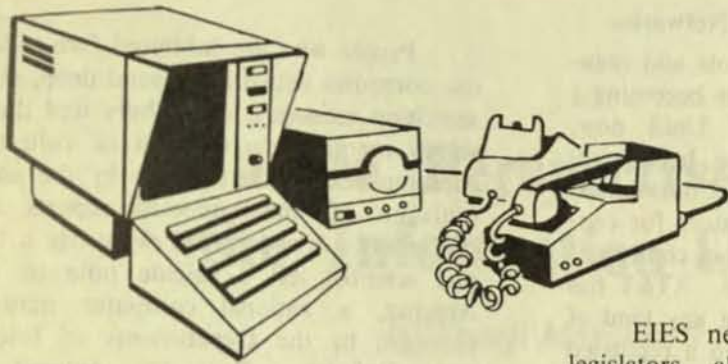
EIES.

Like Citizens Band radio users, people who work over computer networks often become devoted to the medium and find it making broad changes in their personal lives. "This is not simply a hobby," said Robert Bezilla, a consultant active on the Electronic Information Exchange System (EIES), which is a national computer conferencing system at the New Jersey Institute of Technology dedicated to exploring the potential of computer networks. "It portends a new lifestyle or career that can be frighening to those who are not participating. [A computer network] exists in the electronic ether; disembodied communication takes place; evidence indicates that new friendships are formed in new ways. From the addicted, there is a gnashing of teeth when it is not accessible."

Like The Source, EIES holds messages until its members are ready to see them, and also permits members to go back and read through old messages. Members can also check through accumulated lists of comments in public conferences, which are open to all members, or in private conferences, closed to all but direct participants. EIES includes an experimental programming language, INTERACT, which can be used for vote-taking, electronic questionnaires, searches and filtering of information, or anything else which a programmer is willing to undertake.

EIES networkers, who include state legislators, alternative groups, scientists, writers and academicians, say they can work more coherently without having to interrupt their time for sudden phone calls or meetings. They can think more clearly without the pressure to reply immediately in face-to-face conversation. .And they say the system helps sift through masses of information on complex issues like energy or waste disposal, by means of special searching mechanisms which sort by topic, or simply by being able to skim through headlines and titles and read only those conferences and messages which interest them.

Subjects discussed on EIES include cybernetics theory, electronic hardware, privacy, social network theory, political decentralization, librarianship, alternative energy, technology in the workplace, and of course, the issues and ramifications raised by computer networking itself. Until this year, most EIES discussions were funded by the National Science Foundation or other similar granting agencies. As some of these grants run out, EIES is expected to look increasingly for business users and other paying members.

The Hobbyist Systems.

Another set of computer networks is being developed by groups of independent computer hobbists around the country, who use their personal computers as links in low-budget bulletin board or mail networks. David Caulkins of Los Altos, who founded the Personal Computer Network, said they decided to use no central computer to keep any one individual or company from dominating the system.

For more information about EIES and other computer networks, see *The Network Nation*, by Starr Roxanne Hiltz and Murray Turoff (Addison-Wesley, 1978).

Issues in Personal Computer Networks.

The issue of who controls and regulates the computer networks is becoming a complex political dilemma. Until now, communications systems have been carefully regulated by the Federal Communications Commission -- broadcasters for content and obscenity, telephone companies for rates and types of service. AT&T has been prohibited from offering any kind of computer service while it held a regulated telephone monopoly. But this year there were moves in Congress and the FCC to deregulate telecommunications, allowing major companies to bring the technologies of broadcast, telephones and computers together to form massive computer networks. AT&T, GTE, Xerox and IBM have all expressed interest in doing this. But public interest groups say this could lead to one or two of the largest corporations dominating what could become the central form of communication in the country.

"It's not like trucking, where there are 16,000 competing firms," said Consumer Union's lawyer Sharon Nelson. "If you immediately throw off the reins, it could lead to a concentration of power, not in the interests of individual consumers."

But other observers say too many companies are interested for any one to gain control, and that severe government regulation would be worse because government agencies are not informed about the possible impacts of these systems. The Postal Service, frightened by the possible loss of bills and business mail to electronic mail, lobbied for its own electronic mail system, which even in the planning stages is considered outdated by many companies. Documents would be brought to the post office, transmitted via facsimile reproduction to faraway post offices, and then delivered by hand to the receiver.

People who are inhibited face-to-face use computer networks to send deep, soul-searching messages, and others find themselves merging into a kind of collective consciousness made possible by the accumulation of interconnected reports and comments. A widespread story has it that one scientist left a suicide note on the Arpanet, a national computer network managed by the Departments of Energy and Defense. But he entered it anonymously, and no one could figure out who he was in time to save him.

Sometimes, practical use of a computer network is blocked by its context. One government employee tried to buck regulations and work over his home terminal one day a week instead of commuting 40 miles. He was told his body had to be in the office, even though all his work would be done over a terminal anyway.

"(A computer information utility) is inevitable, but how it grows in our laissez-faire economy is extremely important," said John Clippinger, consultant on information policy. "It could be distributed between many companies or few. It could be labor-intensive or automated. It could reinforce some of our cultural values or undermine them. Government as it stands now is not equipped to cope with political and social implications of this magnitude. In France they have a Ministry of Culture which asks, 'What will this mean for our civilization?' But we don't have a feel for that here."

Future Perspectives on the Information Utility

by Yoneji Masuda

I. What is an Information Utility?

An information utility would consist of public information processing and service facilities that combine computer and communications networks. From these facilities anyone, anywhere, at any time would be able to obtain needed information quickly and inexpensively.

An information utility would meet at least the following four criteria:

1) It would have central facilities consisting of a large-scale computer with a huge memory, many program packages and extensive data bases, and would be capable of handling the needs of many users simultaneously.

2) The central computers would be directly connected to remote terminals in schools, businesses and homes so that the facilities could be used by the general public.

3) Services would be available at any time, either to users directly or for them through a staff person.

4) Services would be available at low enough rates to be used by people on a day-to-day basis.

In the future information society, the general public will be able to use such information utilities from their home or office terminals. Already we can see their beginnings around us. There is a prototype

in the SAGE system (Semi Automatic Ground Environment System) that the American military developed after World War II to intercept missile-carrying Soviet fighters approaching the American continent. Technologically, SAGE has the information processing functions necessary for an information utility. It has (1) a gigantic computer that can carry out simultaneous parallel processing, (2) a 'man machine' processing system, (3) an information network connecting many terminals to a computer, and (4) an on-line real time system capable of instantaneous response.

Systems like SAGE that have complex information processing technology can be called 'man-machine computer network systems.' For the sake of brevity, we will refer to them as "computer networks" or "information networks."

Since SAGE, computer networks have developed into time sharing systems used in business. In the future, we can expect them to develop further into societal information systems, and finally, at their most advanced stage, into citizen-managed information utilities.

The General Electric time-sharing system is a typical example of a business computer network. To the technological base of SAGE were added (1) a program

language in a conversational mode (2) terminals that are easy to operate (3) man computer units of all sizes, and (4) a shared-use system that utilizes communications satellites. The users are limited to business organizations, governments, and universities; the largest user is the multinational corporation.

Although the military's monopoly on information networks has disappeared with the emergence of time sharing systems for businesses, usage is still limited to only a small number of large enterprises. When information networks finally develop into societal information systems, they will be available to the general public. Two types of public interest computer networks may then develop.

The first systems will probably be for specific areas of public interest. Most individuals will not participate in these systems, though they may benefit from them. Coordinated traffic control, pollution warning and control, and medical care systems fall into this category. The second kind of system will be used by a large number of individuals for education and various kinds of inquiry services (about weather, shopping, etc.).

This second type of system, characterized by individual usage, begins to take on the characteristics of the information utility and to produce the "information infrastructure." The development of more sophisticated computer technology and of many program packages designed for the individual will encourage this trend. Moreover, the shared utilization of computer networks will rapidly combine computer-communications technology and satellites, thereby expanding their use from a national to a global scale.

The beginnings of a global information network can already be seen in the PEACESAT (Pacific Education and Communication Experiment by Satellite), a pan-Pacific education information system that connects schools throughout the Pacific (in Guam, Manila, Fiji, etc.) with a central educational center in Hawaii.

At their most advanced stage, the computer networks will become global information utilities. The fact that they were originally developed for the military but may become the technological base for information utilities that will increase our ability to create and use information to improve the quality of life is an interesting dialectical development in human history.

II. Infrastructural Characteristics of the Information Utility

Well then, what sort of characteristics, what type of capital structure, what form of management will the information utility actually have? First of all, it will share many basic characteristics with other components of the infrastructure, such as electricity, water, and railroads. The information utility, like these existing facilities, will

(1) become the indispensable base for supporting the development and maintenance of socio-economic activity;

(2) require massive investment in equipment and facilities; and

(3) be connected in a regional or nationwide network.

Second, and more importantly, the information utility is, by nature, well suited for public use and benefit, because its production is uniquely characterized by the self-multiplication of information. I am referring here not to the successive production of new information, but rather to the information utility's continuous expansion in the production of information, both quantitatively and qualitatively. The information produced by the utility will be accumulated, and then new information will be added again and again. Put more simply, the accumulation of information brings on even further accumulation of information over time and space.

I would like to explain the unique character of information production in the information utility by approaching the sub-

ject from three sides: (1) the inherent properties of information itself, (2) the epoch-making capabilities of computer communications technology, and (3) the unique interaction of machine and user in the information utility.

First of all, information, unlike goods, has four inherent properties that make self-multiplication possible. Information is (1) inconsumable, (2) untransferable, (3) indivisible, (4) accumulative. These terms may be explained as follows:

(1) Inconsumable -- Goods disappear through use, but information remains unchanged however much it is used.

(2) Untransferable -- When a good is transferred from A to B, it is moved completely from A to B, but when information is transferred from A to B, the original information remains at A.

(3) Indivisible -- Goods used as materials (electricity, water, etc.) can be divided and used, but information can only be used when it constitutes a 'set.'

(4) Accumulative -- The only way to accumulate goods is to not use them. Information, however, because it cannot be consumed or transferred, can be accumulated while it is being used again and again. Information of a higher quality is produced by adding new information to that which has been accumulated previously.

Although information has always had the property of self-multiplication, computer communications have rapidly increased its speed and quality because the technology itself has added four more properties to information: (1) concentration, (2) dispersion, (3) circulation, and (4) feedback.

(1) Concentration -- The computer information networks collect in one place many types of information from many information sources, which the computer can process all together.

(2) Dispersion -- Computer networks transmit necessary information instantaneously from a center to a large number of different places at the same time.

(3) Circulation -- Computer networks transmit necessary information in relay fashion from point A to point B and again to point C.

(4) Feedback -- The concentration, dispersion and circulation of information do not end in one cycle; instead information is fed back many times over in response to new situations and changing conditions.

The third unique characteristic of information utilities is that they are systems that demonstrate to a maximum the self-multiplication of information through the interaction of computers and their users.

III. The Four Developmental Stages of the Information Utility.

Information utilities will come to maturation after passing through four stages of development: (1) public services, (2) user production, (3) shared utilization, (4) synergetic production and utilization.

The Public Services Stage:

This is the stage in which the information utility provides information processing and services for the public. All sorts of programs and data bases are prepared by the utilities in advance, and the users receive information service within the scope of this preparation.

The User Production Stage:

This is the stage in which information is produced by the *user* of the information utility. The user collects data, writes programs, and then uses the information utility to produce original information. This stage will be promoted when the general public becomes more aware of its ability to produce its own information and when sophisticated program languages in conversational mode, various program module packages, and data bases for all sorts of fields become available.

The Stage of Shared Utilization:

This is the stage in which the information utility makes possible the shared use of information produced by individual users. When the production of separate information by individuals reaches a certain point, the data and programs will be registered so that third parties can use them. At this stage the self-multiplication of information and the shared utilization of information will interact to create a geometric effect.

The Stage of Joint Production and Shared Use:

The shared use of information based on a system of voluntary registration of programs and data developed by individuals will then develop into the voluntary joint production and shared utilization of information by groups. This will happen because it will frequently be more efficient for several people to work together on collecting data and also because there frequently arises the need for complex programs that are possible only when several people work on them together.

IV. The Citizen Managed Information Utility.

Now let's look at the type of capital structure and management the information utilities may have. We can envisage three possible types of information utilities: (1) the business type, (2) the government-managed type and (3) the citizen-managed type. In the long run the last of the three, the citizen-managed type, will probably dominate. In order to explain why I believe this to be so, let's examine, from a macro point of view, the socio-economic merits and demerits of each.

In the business type of information utility, the capital will be private and the goal of management will be the pursuit of profit. This information utility will be carried out on a completely commercial basis under the principle of free competition. The base of operations will be the income from information processing and services. The basic form of information production, processing and service will be time sharing

systems, and the major types of information services will be information either concerned with convenience in the day-to-day lives of the general public (from television programs and news requests to information for shopping, traffic, and leisure) or concerned with various sorts of games (anything from chess to spaceship games). These services will be provided at an hourly rate. The time-sharing services currently used by businesses are an example of this sort of information utility. There is a strong possibility that the business type of information utility will emerge in the advanced Western nations.

The business type of information utility would probably provide efficient management and thorough services. But its thoroughgoing commercialism will encourage laziness and mental stagnation by emphasizing convenience and advertising. Information services concerned with social welfare that do not render profits quickly are likely to be disregarded, and it would be difficult for individuals and groups to voluntarily create information.

(2) In a government type of information utility, the capital would be provided from the national budget. The nominal management goal would be to increase the welfare of the people as a whole. The national government would operate the utility completely by itself, relying on taxes and revenue from the utility rates. The information processing and services would be based on data bank information retrieval systems and would include all sorts of governmental statistics, public relations information about government policy, information in the public interest (about weather, pollution, and transportation, etc.), and information services of a social welfare nature such as education and medical care. As in the business type of information utility, hourly rates would be charged, but the rate structure would be set up like those of other public utilities. This type of information utility is likely to first come into being in the socialist countries.

The merits of the government-managed type of information utility, of course, would be the low rates and the fact

that the utilities would be set up for the public good. The demerits are the inefficiency that comes with bureaucratic organization and the dangers of increasing government control of society, particularly when excessive government management invades the privacy, freedom, and rights of the individual.

The citizen-managed type of information utility would rely on "civil capital," which citizens themselves would raise. The management goal of this type of utility would be the voluntary creation and utilization of information by citizens. The operations would be placed completely under autonomous management by citizens, and the operations base would consist of maintenance funds raised by citizens, usage fees, and voluntary contributions (including money, mental labor, and programs). Production and use of the software systems would be shared. Individuals and groups would hopefully use the information utility actively, and produce themselves the information they need. The type of information that they produce and use would likely be related to problem solving and opportunity development for individuals, groups, and even society as a whole. The rates charged for the use of this information utility would be determined by a combination of a sliding scale based on income and a system of public fees. This voluntarily managed type of information utility, funded by civil capital, would be a completely new form of organization.

Such a system would maximize the voluntary participation of citizens, allow the individual to really obtain the information he needs, and make it much easier to begin joint action to solve common social problems. Its drawback is that in capital, technology, and organization, it is inferior to the previous two types of information utilities because its operation would rely to a very large extent on voluntary contributions, which may be insufficient. More specifically, the limitations are: (1) the difficulty of procuring the capital necessary for the computer communications facilities, (2) the lack of highly trained specialists with sophisticated knowledge about infor-

mation technology, and (3) inefficient administration and management of a complex organization.

Independent citizens exist in the midst of many values and relations of conflicting interests. If citizens are to participate voluntarily in the ongoing maintenance and consensual governance of the information utility, a high degree of civic awareness, a strong desire to contribute, and substantial self-discipline are required.

I have attempted to stereotype three types of possible management for the information utility. These are somewhat exaggerated, and in actuality the information utility of the future may combine the three types. In the business type, for example, there may be partial investment of public capital and even citizen participation in management. In the government-managed type, committees composed of representatives of business and citizens may be established, and in the citizen-managed type there may be capital participation by private enterprises and government. In fifty to a hundred years, a mix of the citizen-managed information utility that includes the management efficiency of the business type and the technological development, the capital procurement, and the national orientation of the government management type may emerge.

V. Benefits of the Citizen-Managed Information Utility.

I believe that the citizen-managed information utility would maximize the technological and socio-economic benefits of the information utility. I would like to explain this a little more in detail below.

A. The Macro-Cumulative Effect of Information

The citizen-managed type of information utility, more than any other, would facilitate the self-multiplication of information mentioned above. Let's refer to this self-multiplication of information in the information utility (when viewed from the

perspective of the national economy) as the *macro cumulative effect* of information. This macro cumulative effect is in complete contrast to the *mass production effect* of goods produced in the modern factory of industrial society.

In the production of goods, the more one invests in capital equipment, the more productive power increases and the more production costs decrease. This decrease in costs expands the market and encourages further profits and the accumulation of capital. From the enterprise's point of view, this consequence of the mass production of goods is the *self-multiplication of capital* in the sense that the accumulation of capital itself brings about further accumulation of capital. The self-multiplication of private capital has been the fundamental cause of the formation and development of the modern factory.

In the case of information, the expansion of the scale of production cannot be ignored either, but the cumulative effect is very different. The most important point in the production of information is the *self-multiplication of information value* itself -- how to accumulate information and how to carry out the further accumulation of information by adding new information.

The information utility would be used not by a limited group of users, but in the public interest by people in general. The synergetic production of information and its shared use will raise the macro-cumulative effect of the information utility to its highest level. The citizen-managed information utility, more than the business type that would aim to increase profits or the government-managed type that would prevent broad availability, would have the greatest macro-cumulative effect.

B. Autonomous Group Decision-Making

The second basis for believing that the information utility will tend toward citizen management is that it makes possible autonomous group decision-making -- policy-making aimed at solving complex socio-economic problems through the autonomous decisions of citizens themselves.

This sort of collection, dispersion, and feedback of information by a group cannot be achieved without the backup of highly developed information processing and transmission functions of the information utility. In order for society to avail itself of these functions, the information utility must be under the voluntary management of its members.

In other words, the information utility could be the basis of directly democratic citizen participation in national policy-making. The citizens themselves would select and determine socio-economic policies on a macro level. Attempts at citizen participation in this type of decision-making are currently being carried out experimentally by systems such as ORACLE in West Germany. In the future, however, autonomous group policy-making by citizens using information utilities to solve complex problems could become an everyday occurrence in all countries. The information utility could even be used to resolve problems such as overpopulation and nuclear power.

The fact that it has now become impossible to solve problems connected to the question of human existence itself through laws, governmental force and monetary compensation will encourage these possibilities even more. That is to say, the future information society will be one in which autonomous decision-making will be the most fundamental human right. The causes of the problems that arise in the future will be complex and interrelated, and in complex opposition to these will be the individual group interests of citizens. In solving these problems, mutual understanding and voluntary cooperation will be indispensable.

The information utility will (1) present impartial and accurate information concerned with the objective facts and the socio-economic effects of a problem under question, (2) organize the information, (3) manifest the development of simple comprehensive information to complex structural information, and (4) feed back and revise information according to the opinions of the people participating in policy-making.

C. A Means of Avoiding a Controlled Society

The third reason for believing that the information utility will tend toward the citizen-managed type of organization is that this is the only way that an information society will be able to avoid the dangers of a controlled society. Whether the information society becomes an ideal society aiming for voluntary decision-making, or a fearful Orwellian automated state may depend on the form of management of the information utility.

If information utilities come to be dominated by a despotic state organization, the future information society will be the ultimate controlled society. The potential abuses would not compare with the alienation of present industrial society or the abuse of human rights under dictatorships. In information utilities, public and personal infomation concerning every individual could be filed and accumulated, and a record of his major actions could be added to this file daily. Just the thought of a society in which people are restricted by an invisible net of information is enough to make one's hair stand on end.

If, however, the information utilities are completely entrusted to the voluntary management of the citizenry, and if personal information of individuals is protected and used to improve the private life of the individual and the quality of his social activity, then the information utility will bring about immeasurable benefit.

In the future, a citizen-managed information utility could not only provide the individual with information that is useful in solving everyday problems (illness, work, learning, housing, etc.), but it could also greatly contribute to maintaining the individual's life in a healthy active state by combining this sort of social information with personal data about the individual himself. By these means, information utilities could make it possible for individuals to design and realize their own futures and that of their society.
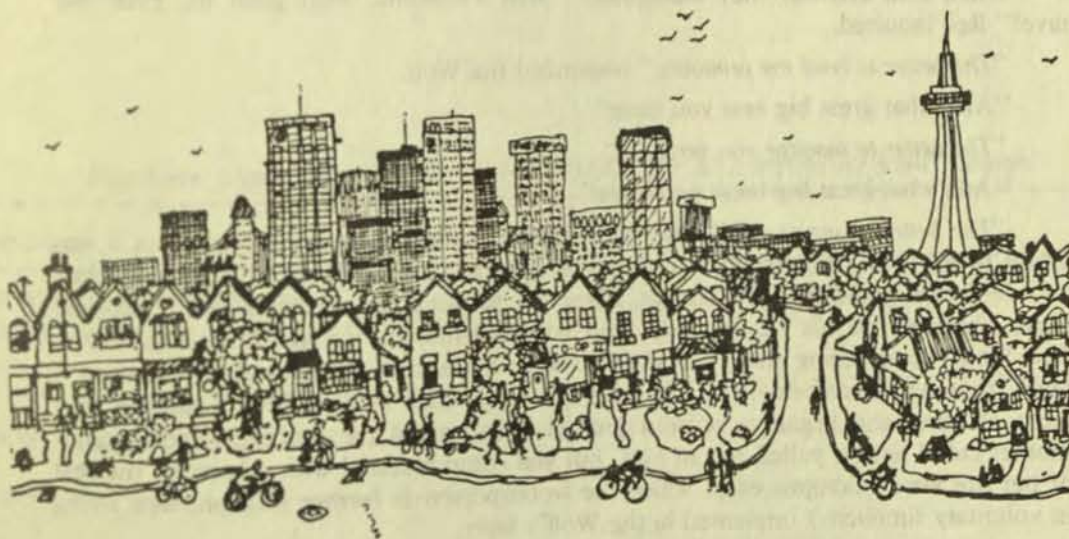
Institute for Local Self Reliance

Fables from the New Age :

" Little Red Riding Hood "

by Art Kleiner

Once upon a time a baby woman named Red Riding Hood shared a living and communications space in the forest with her mother, the Information Exchange Coordinator for the Greater Grandmothers' Woods Cake and Cookie Baking Alliance (GGWCCBA). One day Red Riding Hood's mother received input via a telephone tree that Red's grandmother was ill. So she facilitated the gathering together of some of her most connected cakes, put them with some xeroxed newspaper clippings into a basket, and said, "Now you pass this along to Grandmother while I reassess my filing."

So Red searched the directions to Grandmother's house in her mother's rolodex, and started her circuit. She didn't notice the Wolf until she had converged right into his space. He was sitting at a computer terminal, wearing a button on his fur which said Twig, Bark and Leaf Hobby Computer Club. Red had some good connections in the club herself, so they greeted each other with mutual joy, warmth, and caring, said "what a coincidence," exchanged phone numbers, and shared plans for starting a library. Finally the Wolf said, "What's on your schedule today?"

"I'm meeting my grandmother face-to-face," Red said, and vocally re-delineated her day's pattern for him. The Wolf, although he didn't say so, had read in a skills exchange of Red's mother's baking ability. He licked his lips and said, "I have to disengage now -- I'm overloaded on another commitment." Then he bounded away down a secret shortcut to Grandmother's space, where he gobbled her up, dressed in her clothes, and waited for Red.

When Red arrived, they dialogued: "Why Grandma, what great big eyes you have!" Red inquired.

"The better to read my printouts," responded the Wolf.

"And what great big ears you have!"

"The better to monitor you verbally."

"And what great big teeth you have!"

"The better to ingest you!" The Wolf lunged at her and Red screamed. As it was meant to happen, a woodsperson had at that moment touched base with his spirit just outside Red's grandmother's cottage. Hearing screams, he returned to the worldly plane, signalled via his CB for help, and bounded into the cottage to be supportive. The Wolf, upon seeing him, was charged with his excess energy and experienced a rapid, thorough transformation. He gave her space back to Red, helped himself to a piece of cake, and began to write a journal article about the process. Red's grandmother could not be pulled out of him, but she communicated with others for the rest of her life via a microprocessor which the woodsperson (a former surgeon, now living in voluntary simplicity) implanted in the Wolf's belly.

And they all shared joyful energy ever after.

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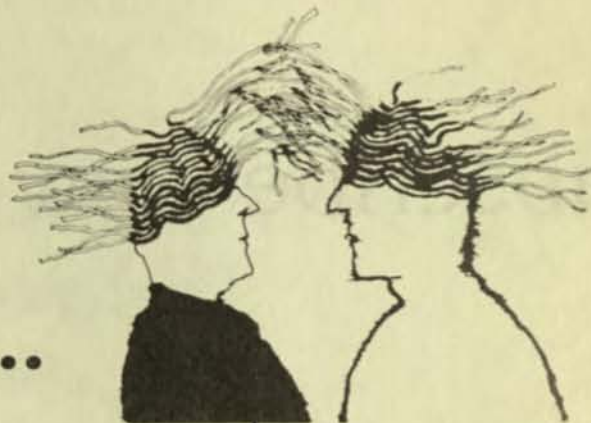
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