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Spring 2012 **Honor of Michael Hauben & Emergence of Netizens** **Volume 21 No. 2**

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Introduction

On May 1, 1997, the book *Netizens: On the History and Impact of Usenet and the Internet* was published in a print edition. This May Day, May 1, 2012, marks the 15th anniversary of that occasion.

Five years ago, on the occasion of the 10th anniversary of the book, I wrote an article for the online magazine Telepolis (www.heise.de/tp). In the article I wrote that an anniversary "offers an occasion to consider the potential of the Net that was identified in *Netizens* and to assess what has developed with regard to this potential today."

I reviewed some of the background of *Netizens*: "During the course of his pioneering research in the early 1990s, Michael Hauben discovered a surprising phenomenon. He recognized that there was a

new social consciousness developing among those in the online community. At the time, the Internet had recently emerged as a new communications infrastructure. More and more people were gaining access. The experience of being online and of having access to the participatory interactive online environment was proving to be a significance experience."

The article continued, "People were eager to explore the nature and power of these new communication capabilities. To be online led to a feeling of empowerment. The idea began to impress itself on some in the online community that here was the potential for a new meaning for the concept of citizen. Could the Internet make it possible for the citizen to be able to act in a way not hitherto possible? Could the Net really make it possible for citizens to become active participants in the process of determining what happened in their society?"

The result of this process was that "a new identify was in the process of being generated. This was a social identity as a citizen of the Net, as a netizen."

To celebrate the 15th anniversary of the publication of the print edition of *Netizens* we have gathered a number of articles written or presented as talks by Michael Hauben. This collection brings together both new work Michael did after the publication of *Netizens* along with work done earlier which was not included in the book. Also included in this collection are some of Michael's articles that were published in *Netizens*.

This collection of articles and speeches particularly concentrates the ability Michael had to reflect on the importance of a current development through the perspective of a commentary on an earlier development. He was thus able to grasp the long range broader implications of the contemporaneous development of the Internet.

In his article "The Expanding Commonwealth of Learning: Printing and the Net," (p. 22, this issue) Michael writes, "Understanding how the printing press unleashed a communications revolution provides a basis to assess if the establishment of worldwide computer communication networking is the next communication revolution."

The articles in this collection consider how the Net is expanding the ability of the common people with access to the Net to communicate with each other to offer to the world their thoughts, ideas and questions, in short, for the common people to contribute to the intellectual and creative commonwealth still coming into existence in a way never before possible.

And it is this broadening of intellectual and collaborative cooperation that similarly makes possible and desired more democratic political structures and institutions.

For Michael, the key to this ferment is the Netizen, those who contribute to the ever expanding public set of resources. This is the unique advance. “Making a contribution is an integral part of Netizen behavior,” writes Michael.

He sees the Net as a “new kind of public space,” a space that makes “collaboration and cooperation possible.” This new public commons, as Michael characterizes the public space made available via the Net, is one where “people are encouraged to share their views, thoughts and questions with others.” It is a “many to many” process where netizens can broadcast to others around the world and get responses back. This participation Michael recognized is an empowering experience.

Personal computer pioneer Lee Felsenstein realized that “the development of the commons to the exclusion of the big media representations makes this a grassroots medium or a new enlarged public commons.” Michael concurs with this characterization of the commons created by the Net.

Similarly the ability of netizens to contribute to and create their own news is a means to create an alternative to the commercial business oriented media. This makes possible a means to effectively challenge the outdated forms and processes that have come to dominate in the commercial media environment.

The Net is “the poor man’s version of the mass media” writes Michael. With the Net, the monopoly of the elites over the media was broken. One important example of the potential of the Net, Michael explains, is that the Net bestows, “the power of the reporter on the netizen.”

Netizens now have the ability to not only critique the misrepresentations and limitations of the commercial media, but also to create a more broad ranging and accurate media.

Similarly in his article "Participatory Democracy: From the 1960s and SDS into the Future On-line" (first article this issue), Michael shows how an early goal of SDS was to create "a medium to make it possible for a community of active citizens to discuss and debate the issues affecting their lives." This new communication infrastructure would be one that would make it possible for people to have a means to participate in the discussion and determination of the political decisions of their society. Michael pointed out that Usenet and the Internet provided what SDS saw as necessary but lacked, in Al Haber's words, "an institutionalized communication system that would give perspective to our immediate actions."

The articles in this collection, we hope, will help to stimulate thought and discussion over the potential of the Net and Netizen, but more profoundly, over how to recognize, as Michael did, the important prototypes that are developing and emerging. The aim is to nourish those that will help to bring about the changes which will bring more power to the grassroots of society in the new global commons.

[Editor's Note: The following was written in 1995 as a paper for the Columbia University course "Radical Tradition in America." The year 2012 marks the 50th Anniversary of *The Port Huron Statement* which was issued on June 15, 1962.]

Participatory Democracy From the 1960s and SDS into the Future On-line

by Michael Hauben

The 1960s was a time of people around the world struggling for more of a say in the decisions of their society. The emergence of the personal computer in the late 70s and early 80s and the longer gesta-

tion of the new forms of people-controlled communication facilitated by the Internet and Usenet in the late 80s and today are the direct descendants of 1960s.

The era of the 1960s was a special time in America. Masses of people realized their own potential to affect how the world around them worked. People rose up to protest the ways of society which were out of their control, whether to fight against racial segregation, or to gain more power for students in the university setting. The *Port Huron Statement* created by the Students for a Democratic Society (SDS) was a document which helped set the mood for the decade.

By the 1970s, some of the people who were directly involved in student protests continued their efforts to bring power to the people by developing and spreading computer power in a form accessible and affordable to individuals. The personal computer movement of the 1970s created the personal computer. By the mid 1980s they forced the corporations to produce computers which everyone could afford. The new communications media of the Internet grew out of the ARPAnet research that started in 1969 and Usenet which was born in 1979. These communications advances coupled with the availability of computers transforms the spirit of the 1960s into an achievable goal for our times.

SDS and The Need for Participatory Democracy

The early members of SDS found a real problem in American society. They felt that the United States was a democracy that never existed, or rather which was transformed into a representative system after the constitutional convention. The United States society is called a democracy, but had ceased being democratic after the early beginnings of American society. SDS felt it is crucial for people to have a part in how their society is governed. SDS leaders had an understanding of democratic forms which did not function democratically in the 1960s nor do they today. This is a real problem which the leaders and members of SDS intuitively understood and worked to change.

An important part of the SDS program included the understanding of the need for a medium to make it possible for a community of active citizens to discuss and debate the issues affecting their lives.

While not available in the 1960s, such a medium exists today in the 1990s. The seeds for the revival of the 1960s SDS vision of how to bring about a more democratic society now exists in the personal computer and the Net. These seeds will be an important element in the battle for winning control for people as we approach the new millennium.

The *Port Huron Statement* and Deep Problems With American Democracy

The *Port Huron Statement* was the foundation on which to build a movement for participatory democracy in the 1960s. In June 1962, an SDS national convention was held in a UAW camp located in the backwoods of Port Huron, Michigan. The original text of the *Port Huron Statement* was drafted by Tom Hayden, who was then SDS Field Secretary. The Statement sets out the theory of SDS's criticism of American society. The Port Huron convention was itself a concrete living example of the practice of participatory democracy.

The *Port Huron Statement* was originally thought of as a manifesto, but SDS members moved instead to call it a "statement." It was prefixed by an introductory note describing how it was to be a document that should develop and change with experience: "This document represents the results of several months of writing and discussion among the membership, a draft paper, and revision by the Students for a Democratic Society national convention meeting in Port Huron, Michigan, June 11-15, 1962. It is presented as a document with which SDS officially identifies, but also as a living document open to change with our times and experiences. It is a beginning: in our own debate and education, in our dialogue with society." (*Port Huron Statement* in Miller, p. 329)

This note is important in that it signifies that the SDS document was not defining the definite solution to the problems of society, but was making suggestions that would be open to experiences toward a better understanding. This openness is an important precursor to practicing participatory democracy by asking for the opinions of everyone and treating these various opinions equally.

The first serious problem inherent in American society identified by the *Port Huron Statement* is the myth of a functioning democracy: "For Americans concerned with the development of democratic societies, the anticolonial movements and revolutions in the emerging nations pose serious problems. We need to face the problems with humility; after 180 years of constitutional government we are still striving for democracy in our own society." (*Port Huron Statement* in Miller, p. 361)

This lack of democracy in American society contributes to the political disillusionment of the population. Tom Hayden and SDS were deeply influenced by the writings of C. Wright Mills, a philosopher who was a professor at Columbia University until his death early in 1962. Mills' thesis was that the "the idea of the community of publics" which make up a democracy had disappeared as people increasingly got further away from politics. Mills felt that the disengagement of people from the State had resulted in control being given to a few who in the 1960s were no longer valid representatives of the American people. In his book about SDS, *Democracy is in the Streets*, James Miller wrote: "Politics became a spectator sport. The support of voters was marshaled through advertising campaigns, not direct participation in reasoned debate. A citizen's chief sources of political information, the mass media, typically assaulted him with a barrage of distracting commercial come-ons, feeble entertainments and hand-me-down glosses on complicated issues." (Miller, p. 85)

Such fundamental problems with democracy continue today in the middle of the 1990s. In the *Port Huron Statement*, SDS was successful in identifying and understanding the problems which still plague us today. This is a necessary first step to working toward a solution. The students involved with SDS understood people were tired of the problems and wanted to make changes in society. The *Port Huron Statement* was written to address these concerns: "…do they not as well produce a yearning to believe there is an alternative to the present that something can be done to change circumstances in the school, the workplaces, the bureaucracies, the government? It is to this latter yearning, at once the spark and engine of change, that we direct our present appeal. The search for a truly democratic alterna-

tives to the present, and a commitment to social experimentation with them, is a worthy and fulfilling human enterprise, one which moves us, and we hope, others today." (*Port Huron Statement* in Miller, p. 331)

Describing how the separation of people from power is the means used to keep people uninterested and apathetic, the *Port Huron Statement* explains: "The apathy is, first, subjective – the felt powerlessness of ordinary people, the resignation before the enormity of events. But subjective apathy is encouraged by the objective American situation – the actual structural separation of people from power, from relevant knowledge, from pinnacles of decision-making. Just as the university influences the student way of life, so do major social institutions create the circumstances which the isolated citizen will try hopelessly to understand the world and himself." ("The Society Beyond" in the *Port Huron Statement*, in Miller, p. 336)

The Statement analyzes the personal disconnection to society and its effect: "The very isolation of the individual – from power and community and ability to aspire – means the rise of democracy without publics. With the great mass of people structurally remote and psychologically hesitant with respect to democratic institutions, those institutions themselves attenuate and become, in the fashion of the vicious cycle, progressively less accessible to those few who aspire to serious participation in social affairs. The vital democratic connection between community and leadership, between the mass and the several elites, has been so wrenched and perverted that disastrous policies go unchallenged time and again." (*Port Huron Statement* in Miller, p. 336)

The Statement describes how it is typical for people to get frustrated and quit going along with the electoral system as something which works. The problem has continued, as we now have all time lows in voter turn-outs for national and local elections. In a section titled "Politics Without Publics," the Statement explains: "The American voter is buffeted from all directions by pseudoproblems, by the structurally initiated sense that nothing political is subject to human mastery. Worried by his mundane problems which never get solved, but constrained by the common belief that politics is an agonizingly

slow accommodation of views, he quits all pretense of bothering." (*Port Huron Statement* in Miller, p. 337)

Students in SDS did not let these real problems discourage their efforts to work for a better future. They wanted to be part of the forces to defeat the problems. The *Port Huron Statement* contains an understanding that people are inherently good and can deal with the problems that were described. This understanding is conveyed in the "Values" section of the Statement: "Men have unrealized potential for self-cultivation, self-direction, self-understanding, and creativity. It is this potential that we regard as crucial and to which we appeal, not to the human potential for violence, unreason, and submission to authority. The goal of man and society should be human independence: a concern not with the image of popularity but with finding a meaning in life that is personally authentic; a quality of mind not compulsively driven by a sense of powerlessness, nor one which unthinkingly adopts status values, nor one which represses all threats to its habits, but one which easily unites the fragmented parts of personal history, one which openly faces problems which are troubling and unresolved; one with an intuitive awareness of possibilities, an active sense of curiosity, an ability and willingness to learn." (*Port Huron Statement* in Miller, p. 332)

Participatory Democracy

Those participating in the Port Huron convention came away with a sense of the importance of participatory democracy. This sense was in the air in several ways. The convention itself embodied participatory democracy through the discussion and debate over the text of the Statement as several people later explained. The *Port Huron Statement* called for the implementation of participatory democracy as a way to bring people back into decisions about the country in general, and their individual lives, in particular. One of Tom Hayden's professors at University of Michigan, Arnold Kaufman, came to speak about his thoughts and use of phrase 'participatory democracy.'

Miller writes that in a 1960 essay, "Participatory Democracy and Human Nature," Kaufman had described a society in which every member had a "direct responsibility for decisions." The "main justi-

fying function" of participatory democracy, quotes Miller, "is and always has been, not the extent to which it protects or stabilizes a community, but the contribution it can make to the development of human powers of thought, feeling and action. In this respect, it differs, and differs quite fundamentally, from a representative system incorporating all sorts of institutional features designed to safeguard human rights and ensure social order." (Miller, p. 94)

"Participation" explained Kaufman, "means both personal initiative – that men feel obliged to help resolve social problems – and social opportunity – that society feels obliged to maximize the possibility for personal initiative to find creative outlets." (Miller, p. 95)

A participant at the Port Huron Conference, Richard Flacks remembers Arnold Kaufman speaking at the convention, "At one point, he declared that our job as citizens was not to role-play the President. Our job was to put forth our own perspective. That was the real meaning of democracy – press for your own perspective as you see it, not trying to be a statesman understanding the big picture." (Miller, p. 111)

After identifying participatory democracy as the means of how to wrest control back from corporate and government bureaucracies, the next step was to identify the means to having participatory democracy. In the "Values" section of *The Port Huron Statement*, the means proposed is a new media that would make this possible: "As a social system we seek the establishment of a democracy of individual participation governed by two central aims: that the individual share in those social decisions determining the quality and direction of his life; the society be organized to encourage independence in men and provide the media for their common participation." (*Port Huron Statement* in Miller, p. 333)

Others in SDS further detailed their understandings of participatory democracy to mean people becoming active and committed to playing more of a public role. Miller documents Al Haber's idea of democracy as 'a model, another way of organizing society.' The emphasis was on a charge to action. It was how to be out there doing. Rather than an ideology or a theory." (Miller, pp. 143-144)

Tom Hayden, Miller writes, understood participatory democracy to mean: "number one, action; we believed in action. We had behind us the so-called decade of apathy; we were emerging from apathy. What's the opposite of apathy? Active participation. Citizenship. Making history. Secondly, we were very directly influenced by the civil rights movement in its student phase, which believed that by personally committing yourself and taking risks, you could enter history and try to change it after a hundred years of segregation. And so it was this element of participation in democracy that was important. Voting was not enough. Having a democracy in which you have an apathetic citizenship, spoon-fed information by a monolithic media, periodically voting, was very weak, a declining form of democracy. And we believed, as an end in itself, to make the human being whole by becoming an actor in history instead of just a passive object. Not only as an end in itself, but as a means to change, the idea of participatory democracy was our central focus." (Miller, p. 144) Another member of SDS, Sharon Jeffrey understood "Participatory" to mean "involved in decisions." She continued, "And I definitely wanted to be involved in decisions that were going to affect me! How could I let anyone make a decision about me that I wasn't involved in?" (Miller, p. 144)

It is important to see the value of participatory democracy as a common understanding among both the leaders and members of SDS. While the *Port Huron Statement* contained other criticisms and thoughts, its major contribution was to highlight the need to more actively involve the citizens of the United States in the daily political process to correct some of the wrongs which passivity had allowed to build. Richard Flacks summarizes this in his article, "On the Uses of Participatory Democracy": "The most frequently heard phrase for defining participatory democracy is that 'men must share in the decisions which effect their lives.' In other words, participatory democrats take seriously a vision of man as citizen: and by taking seriously such a vision, they seek to extend the conception of citizenship beyond the conventional political sphere to all institutions. Other ways of stating the core values are to assert the following: each man has responsibil-

ity for the action of the institutions in which he is embedded…." (Flacks, pp. 397-398)

The Need for Community for Participatory Democracy

The leaders of SDS strove to create forms of participatory democracy within its structure and organization as a prototype and as leadership for the student protest movement and society in general. Al Haber, the University of Michigan graduate student who was the first SDS national officer, describes the need for a communication system to provide the foundation for the movement: "The challenge ahead is to appraise and evolve radical alternatives to the inadequate society of today, and to develop an institutionalized communication system that will give perspective to our immediate actions. We will then have the groundwork for a radical student movement in America." (Sale, p. 25)

He understood the general society would be the last place to approach. There was a need to start smaller among the elements of society that was becoming more active in the 1960s or the students. Haber outlined his idea of where to start: "We do not now have such a public [interaction in a functioning community] in America. Perhaps, among the students, we are beginning to approach it on the left. It is now the major task before liberals, radicals, socialists and democrats. It is a task in which the SDS should play a major role." (Miller, p. 69)

The *Port Huron Statement* defines 'community' to mean: "Human relations should involve fraternity and honesty. Human interdependence is a contemporary fact;…. 'Personal links between man and man are needed.'" (*Port Huron Statement* in Miller, p. 332)

Prior to his full time involvement with SDS, Hayden wrote an article for the *Michigan Daily* describing how democratic decision making is a necessary first step toward creating community. Hayden's focus was on the University when he wrote, "If decisions are the sole work of an isolated few rather than of a participating many, alienation from the University complex will emerge, because the University will be just that: a complex, not a community." However, this sentiment persisted in Hayden's and others thoughts about community and democracy for the whole country. (Miller, p. 54)

This feeling about community is represented in the *Port Huron Statement*'s conclusion. The Statement calls for the communal sharing of problems to see that they are public and not private problems. Only by communicating and sharing these problems through a community will it be a chance to solve them together. SDS called for the new left to "transform modern complexity into issues that can be understood and felt close-up by every human being." The statement continues, "It must give form to the feelings of helplessness and indifference, so people may see the political, social an economic sources of their private troubles and organize to change society….'" (*Port Huron Statement* in Miller, p. 374)

The theory of participatory democracy was engaging. However, the actual practice of giving everyone a say within the SDS structures made the value of participatory democracy clear. The Port Huron Convention was a real life example of how the principles were refreshing and capable of bringing American citizens back into political process. The community created among SDS members brought this new spirit to light. C. Wright Mills writings spoke about "the scattered little circles of face-to-face citizens discussing their public business." Al Haber's hope for this to happen among students was demonstrated at Port Huron. SDS members saw this as proof of Mills' hope for democracy. This was to be the first example of many among SDS gatherings and meetings. Richard Flacks highlighted what made Port Huron special. He found a "mutual discovery of like minds." Flacks continued, "You felt isolated before, because you had these political interests and values and suddenly you were discovering not only like minds, but the possibility of actually creating something together." It was also exciting because, "it was our thing: we were there at the beginning." (Miller, p. 118)

The Means For Change

SDS succeeded in doing several things. First, they clearly identified the crucial problem in American democracy. Next, they came up with an understanding of what theory would make a difference. All that remained was to find the means to make this change manifest. They discovered how to create changes in their own lives and these

changes affected the world around them. However, something more was needed to bring change to all of American society.

Al Haber understood this something more would be an open communication system or media which people could use to communicate. He understood that, "the challenge ahead is to appraise and evolve radical alternatives to the inadequate society of today, and to develop an institutionalized communication system that will give perspective to our immediate actions." (Sale, p. 25) This system would lay the "the groundwork for a radical student movement in America." (Sale, p. 25) Haber and Hayden understood SDS to be this, "a national communications network" (Miller, p. 72)

While many people made their voices heard and produced a real effect on the world in the 1960s, lasting structural changes were not established. The real problems outlined earlier continued in the 1970s and afterwards. A national, or even an international, public communications network needed to be built to keep the public's voice out in the open.

Members of SDS partially understood this, and put forth the following two points in the *Port Huron Statement* section on "Toward American Democracy":

– "Mechanisms of voluntary association must be created through which political information can be imparted and political participation encouraged."

– "The allocation of resources must be based on social needs. A truly 'public sector' must be established, and its nature debated and planned." (*Port Huron Statement* in Miller, p. 362)

International Public Communications Network – or The Net

This network and the means to access it began developing toward the end of the 1960s. Two milestones in the genesis were 1969 when the first ARPAnet node was installed and in 1979 when Usenet started. Both are pioneering experiments in using computers to facilitate human communication in a fundamentally different way than already existing public communications networks like the telephone or

television networks. The ARPAnet, which was a prototype for today's Internet, and Usenet, which continues to grow and expand around the world, are parts of the Net, or the worldwide global computer communication networks. Another important step toward the development of an international communication network was the personal computer movement, which took place in the middle to late 1970s. This movement created the personal computer which makes it affordable for an individual to purchase the means to connect to this public network.

However, the network cannot simply be created. SDS understood that "democracy and freedom do not magically occur, but have roots in historical experience; they cannot always be demanded for any society at any time, but must be nurtured and facilitated." (*Port Huron Statement* in Miller, p. 361)

Participants on the ARPAnet, Internet and Usenet inherently understood this, and built a social and knowledge network from the ground up. As Usenet was created to help students who did not have access to the ARPAnet, or a chance to communicate in a similar way, they came to it in full force. In "Culture and Communication: The Interplay in the New Public Commons," Michael Hauben writes that the on-line user is part of a global culture and considers him or herself to be a global citizen. This global citizen is a net citizen, or a Netizen. The world which has developed is based on communal effort to make a cooperative community. Those who have become Netizens have gained more control of their lives and the world around them. However, access to this world needs to spread in order to have the largest possible effect for the most number of people. In addition, as some efforts to spread the Net become more commercial, some of the values important to the Net are being challenged.

A recent speech I was invited to present at a conference on "the Netizen Revolution and the Regional Information Infrastructure" in Beppu, Japan helps to bring the world of the Netizen into perspective with the ideas of participatory democracy: "Netizens are not just anyone who comes on-line, and they are especially not people who come on-line for isolated gain or profit. They are not people who come to the Net thinking it is a service. Rather they are people who understand

it takes effort and action on each and every ones part to make the Net a regenerative and vibrant community and resource. Netizens are people who decide to devote time and effort into making the Net, this new part of our world, a better place." (Hauben, Hypernetwork '95 speech)

The Net is a technological and social development which is in the spirit of the theory clearly defined by the Students for a Democratic Society. This understanding could help in the fight to keep the Net a uncommercialized public commons (Felsenstein). This many to many medium provides the tools necessary to bring the open commons needed to make participatory democracy a reality. It is important now to spread access to this medium to all who understand they could benefit.

The Net brings power to people's lives because it is a public forum. The airing of real problems and concerns in the open brings help toward the solution and makes those responsible accountable to the general public. The Net is the public distribution of people's muckraking and whistle blowing. It is also just a damn good way for people to come together to communicate about common interests and to come into contact with people with similar and differing ideas.

The lack of control over the events surrounding an individual's life was a common concern of protesters in the 1960s. The *Port Huron Statement* gave this as a reason for the reforms SDS was calling for. The section titled "The Society Beyond" included that "Americans are in withdrawal from public life, from any collective efforts at directing their own affairs." (*Port Huron Statement* in Miller, p. 335)

Hayden echoed C. Wright Mills when he wrote, "What experience we have is our own, not vicarious or inherited." Hayden continued, "We keep believing that people need to control, or try to control, their work and their life. Otherwise, they are without intensity, without the subjective creative consciousness of themselves which is the root of free and secure feeling. It may be too much to believe, we don't know." (Miller, p. 262)

The desire to bring more control into people's daily life was a common goal of student protest in the 1960s. Mario Savio, active in the Berkeley Free Speech movement, "believed that the students, who

paid the university to educate them, should have the power to influence decisions concerning their university lives." (Haskins and Benson, p. 55) This desire was also a common motivator of the personal computer movement.

The Personal Computer Movement

The personal computer movement immediately picked up after the protest movements of the 1960s died down. Hobbyist computer enthusiasts wanted to provide access to computing power to the people. People across the United States picked up circuit boards and worked on making a personal minicomputer or mainframe which previously only large corporations and educational institutions could afford. Magazines, such as *Creative Computing*, *Byte* and *Dr. Dobbs' Journal*, and clubs, such as the Homebrew Club, formed cooperative communities of people working toward solving the technical problems of building a personal and inexpensive computer.

Several pioneers of the personal computer movement contributed to the tenth anniversary issue of *Creative Computing* Magazine. Some of their impressions follow: "The people involved were people with vision, people who stubbornly clung to the idea that the computers could offer individuals advantages previously available only to large corporations…." (Leyland, p. 111) "Computer power was meant for the people. In the early 70s computer cults were being formed across the country. Sol Libes on the East Coast and Gordon French in the West were organizing computer enthusiasts into clubs…." (Terrell, p. 100) "We didn't have many things you take for granted today, but we did have a feeling of excitement and adventure. A feeling that we were the pioneers in a new era in which small computers would free everyone from much of the drudgery of everyday life. A feeling that we were secretly taking control of information and power jealously guarded by the Fortune 500 owners of multimillion dollar IBM mainframes. A feeling that the world would never be the same once 'hobby computers' really caught on." (Marsh, p. 110) "There was a strong feeling [at the Homebrew Club] that we were subversives. We were subverting the way the giant corporations had run things. We were upsetting the establishment, forcing our mores into the industry.

I was amazed that we could continue to meet without people arriving with bayonets to arrest the lot of us."

The Net and Conclusion

The development of the Internet and of Usenet is an investment in a strong force toward making direct democracy a reality. These new technologies present the chance to overcome the obstacles preventing the implementation of direct democracy. Online communication forums also make possible the discussion necessary to identify today's fundamental questions. One criticism is that it would be impossible to assemble the body politic in person at a single time. The Net allows for a meeting which takes place on each person's own time, rather than all at one time. Usenet newsgroups are discussion forums where questions are raised, and people can leave comments when convenient, rather than at a particular time and at a particular place. As a computer discussion forum, individuals can connect from their own computers, or from publicly accessible computers across the nation to participate in a particular debate. The discussion takes place in one concrete time and place, while the discussants can be dispersed. Current Usenet newsgroups and mailing lists prove that citizens can both do their daily jobs and participate in discussions that interest them within their daily schedules.

Another criticism was that people would not be able to communicate peacefully after assembling. Online discussions do not have the same characteristics as in-person meetings. As people connect to the discussion forum when they wish, and when they have time, they can be thoughtful in their responses to the discussion. Whereas in a traditional meeting, participants have to think quickly to respond. In addition, online discussions allow everyone to have a say, whereas finite length meetings only allow a certain number of people to have their say. Online meetings allow everyone to contribute their thoughts in a message, which is then accessible to whomever else is reading and participating in the discussion.

These new communication technologies hold the potential for the implementation of direct democracy in a country as long as the necessary computer and communications infrastructure are installed. Future

advancement toward a more responsible government is possible with these new technologies. While the future is discussed and planned for, it will also be possible to use these technologies to assist in the citizen participation in government. Netizens are watching various government institutions on various newsgroups and mailing lists throughout the global computer communications network. People's thoughts about and criticisms of their respective governments are being aired on the currently uncensored networks.

These networks can revitalize the concept of a democratic "Town Meeting" via online communication and discussion. Discussions involve people interacting with others. Voting involves the isolated thoughts of an individual on an issue, and then his or her acting on those thoughts in a private vote. In society where people live together, it is important for people to communicate with each other about their situations to best understand the world from the broadest possible viewpoint.

The individuals involved with SDS, the personal computer movement and the pioneers involved with the development of the Net understood they were a part of history. This spirit helped them to push forward in the hard struggle needed to bring the movements to fruition. The invention of the personal computer was one step that made it possible for people to afford the means to connect to the Net. The Internet has just begun to emerge as a tool available to the public. It is important that the combination of the personal computer and the Net be spread and made widely available at low or no costs to people around the world. It is important to understand the tradition which these developments have come from, in order to truly understand their value to society and to make them widely available. With the hope connected to this new public communications medium, I encourage people to take up the struggle which continues in the great American radical tradition.

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[Editor's Note: The following is a speech given to Columbia University's student ACM Chapter on March 24, 1994 and at the Mid-Manhattan Branch of the New York Public Library on May 1, 1995. Adapted from the paper titled: "The Net and Netizens: The Impact the Net has on People's Lives."]

Researching the "Net": The Evolution of Usenet and The Significance of the Global Computer Network

by Michael Hauben

Welcome to the 21st Century. You are a Netizen, or a Net Citizen, and you exist as a citizen of the world thanks to the global connectivity that the Net makes possible. You consider everyone as your compatriot. You physically live in one country but you are in contact with much of the world via the global computer network. Virtually you live next door to every other single Netizen in the world. Geographical separation is replaced by existence in the same virtual space.

The situation I describe is only a prediction of the future, but a large part of the necessary infrastructure currently exists. The Net – or the Internet, BITNET, FidoNet, other physical networks, Usenet, VMSnet, and other logical networks and so on – has rapidly grown to cover all of the developed countries in the world. Every day more computers attach to the existing networks and every new computer adds to the user base – at least twenty seven-million people are interconnected today. Why do all these people pass their time sitting in front of a computer typing away? They have very good reason to! Twenty-seven-million people plus have very good reason not to be wrong.

We are seeing a revitalization of society. The frameworks are being redesigned from the bottom up. A new more democratic world is becoming possible. According to one user, the Net has "immeasurably increased the quality of…life." The Net seems to open a new lease on life for people. Social connections which were never before possible, or which were relatively hard to achieve, are now facilitated by the Net. Geography and time no longer are boundaries. Social limitations and conventions no longer prevent potential friendships or partnerships. In this manner Netizens are meeting other Netizens from far away and close by that they might never have met without the Net.

A new world of connections between people – either privately from individual to individual or publicly from individuals to the collective mass of many on the net – is possible. The old model of central distribution of information from the Network Broadcasting or Publication Company is being questioned and challenged. The top-down model of information being distributed by a few for mass-consumption is no longer the only News. Netnews brings the power of the reporter to the Netizen. People now have the ability to broadcast their observations or questions around the world and have other people respond. The computer networks form a new grassroots connection that allows the excluded sections of society to have a voice. This new medium is unprecedented. Previous grassroots media have existed for much smaller-sized selections of people. The model of the Net proves the old way does not have to be the only way of networking. The Net extends the idea of networking – of making connections with strangers that prove to be advantageous to one or both parties.

The complete connection of the body of citizens of the world that the Net makes possible does not exist as of today, and it will definitely be a fight to make access to the Net open and available to all. However, in the future we might be seeing the possible expansion of what it means to be a social animal. Practically every single individual on the Net today is available to every other person on the Net. International connection coexists on the same level with local connection. Also the computer networks allow a more advanced connection between the people who are communicating. With computer-communication systems, information or thoughts are connected to people's

names and electronic-mail addresses. On the Net, one can connect to others who have similar interests or whose thought processes they enjoy.

Netizens make it a point to be helpful and friendly – if they feel it to be worthwhile. Many Netizens feel they have an obligation to be helpful and answer queries and followup on discussions to put their opinion into the pot of opinions. Over a period of time the voluntary contributions to the Net have built it into a useful connection to other people around the world. The Net can be a helpful medium to understand the world. Only by seeing all points of view can any one person attempt to figure out either their own position on a topic or in the end, the truth.

Net Society differs from off-line society by welcoming intellectual activity. People are encouraged to have things on their mind and to present those ideas to the Net. People are allowed to be intellectually interesting and interested. This intellectual activity forms a major part of the on-line information that is carried by the various computer networks. Netizens can interact with other people to help add to or alter that information. Brainstorming between varieties of people produces robust thinking. Information is no longer a fixed commodity or resource on the Nets. It is constantly being added to and improved collectively. The Net is a grand intellectual and social commune in the spirit of the collective nature present at the origins of human society. Netizens working together continually expand the store of information worldwide. One person called the Net an untapped resource because it provides an alternative to the normal channels and ways of doing things. The Net allows for the meeting of minds to form and develop ideas. It brings people's thinking processes out of isolation and into the open. Every user of the Net gains the role of being special and useful. The fact that every user has his or her own opinions and interests adds to the general body of specialized knowledge on the Net. Each Netizen thus becomes a special resource valuable to the Net. Each user contributes to the whole intellectual and social value and possibilities of the Net.

Licklider, the Visionary

The world of the Netizen was envisioned some twenty-seven years ago by J. C. R. Licklider and Robert Taylor in their article "The Computer as a Communication Device" (*Science and Technology*, April 1968). Licklider brought to his leadership of the U.S. Department of Defense's Advanced Research Projects Agency (ARPA) a vision of "the intergalactic computer network." Whenever he would speak of ARPA, he would mention this vision. J. C. R. Licklider was a prophet of the Net. In his article Licklider establishes several helpful principles which would make the computer play a helpful role in human communication. These principles were:

1) Communication is defined as an interactive creative process.
2) Response times need to be short to make the "conversation" free and easy.
3) The larger network would form out of smaller regional networks.
4) Communities would form out of affinity and common interests.

Licklider focused on the Net comprising of a network of networks. While other researchers of the time focused on the sharing of computing resources, Licklider kept an open mind and wrote: "…The collection of people, hardware, and software – the multiaccess computer together with its local community of users – will become a node in a geographically distributed computer network…. Through the network, therefore, all the large computers can communicate with one another. And through them, all the members of the supercommunity can communicate – with other people, with programs, with data, or with a selected combination of those resources."[32]

Licklider's understandings from his 1968 paper have stood the test of time, and do represent what the Net is today. His concept of the sharing of both computing and human resources accurately describes today's Net. The networking of various human connections quickly forms, changes its goals, disbands and reforms into new collaborations. The fluidity of such group dynamics leads to a quickening of the creation of new ideas. Groups can form to discuss an idea, focus

in or broaden out and reform to fit the new ideas that have resulted from the process.

The virtual space created on noncommercial computer networks is accessible universally. This space is accessible from the connections that exist; whereas social networks in the physical world generally are connected only by limited gateways. So the capability of networking on computer nets overcomes limitations inherent in noncomputer social networks. This is important because it reduces the problems of population growth. Population growth no longer means limited resources. Rather, that very growth of population now means an improvement of resources. Thus, growth of population can be seen as a positive asset. This is a new way of looking at people in our society. Every new person can mean a new set of perspectives and specialties to add to the wealth of knowledge of the world. This new view of people could help improve the view of the future. The old model looks down on population growth and people as a strain on the environment rather than the increase of intellectual contribution these individuals can make. However, access to the Net needs to be universal for the Net to fully utilize the contribution each person can represent. Once access is limited, the Net and those on the Net lose the full possible advantages the Net can offer. Lastly the people on the Net need to be active in order to bring about the best possible use of the Network.

Licklider foresaw that the Net allows for people of common interests, who are otherwise strangers, to communicate. Much of the magic of the Net is the ability to make a contribution of your ideas, and then be connected to utter strangers. He saw that people would connect to others via this net in ways that had been much harder in the past. Licklider observed as the ARPAnet spanned two continents. This physical connection allowed for wider social collaborations to form. This was the beginning of Computer Data networks facilitating connections of people around the world.

My research on and about the Net has been and continues to be very exciting for me. When I posted my inquiries, I usually received the first reply within a couple of hours. The feeling of receiving that very first reply from a total stranger is always exhilarating! That set

of first replies from people reminds me of the magic of email. It is nice that there can be reminders of how exciting it all is – so that the value of this new use of computers is never forgotten.

Critical Mass

The Net has grown so much in the last few decades, that a critical mass of people and interests has been reached. This collection of individuals adds to the interests and specialties of the whole community. Most people can now gain something from the Net, while at the same time helping it out. A critical mass has developed on the net. Enough people exist that the whole is now greater than anyone individual and thus makes the Net worthwhile to be part of. People are meshing intellects and knowledge to form new ideas. Larry Press made this clear by writing: "I now work on the Net at least two hours per day. I've had an account since around 1975 but it has only become super important in the last couple of years because a critical mass of membership was reached. I no longer work in L.A., but in cyberspace."

Many inhabitants of the Net feel that only the most technically inclined people use the Net. This is not true, as many different kinds of people are now connected to the Net. While the original users of the Net were from exclusively technical and scientific communities, many of them found it a valuable experience to explore the Net for more than just technical reasons. The nets, in their early days, were only available in a few parts of the world. Now however, people of all ages, from most parts of the globe, and of many professions, make up the Net. The original prototype networks (e.g.,: ARPAnet in the U.S.A., NPL in the United Kingdom, CYCLADES in France and other networks around the world) developed the necessary physical infrastructure for a fertile social network to develop. Einar Stefferud wrote of this social connection in an article, "The ARPAnet has produced several monumental results. It provided the physical and electrical communications backbone for development of the latent social infrastructure we now call 'The Internet Community.'" (*ConneXions*, Oct. 1989, Vol. 3 No. 10, p. 21)

Many different kinds of people comprise the Net. The University Community sponsors access for a broad range of people (students,

professors, staff, professor emeritus, and so on). Programmers, engineers and researchers from many companies are connected. A K-12 Net exists within the lower grades of education which helps to invite young people to be a part of our community. Special Bulletin Board software (for example Waffle) exists to connect personal computer users to the Net. Various Unix bulletin board systems exist to connect other users. It is impossible to tell exactly who connects to public bulletin board systems, as only an inexpensive computer (or terminal) and a modem are required to connect. Many common bulletin board systems (for example fido board) have at least e-mail and many also participate through a gateway to Netnews. Prototype Community Network Systems are forming around the world (e.g., In Cleveland – the Cleveland Freenet, In New Zealand – the Wellington Citynet, In California, the Santa Monica Public Electronic Network, etc.) Access via these community systems can be as easy as visiting the community library and membership is open to all who live in the community.

In addition to the living body of resources this diversity of Netizens represent, there is also a continually growing body of digitized data that forms a set of resources. Whether it is Netizens digitizing great literature of the past (e.g., the Gutenberg Project), or it is people gathering otherwise obscure or nonmainstream material (e.g., Various Religions, unusual hobbies, fringe and cult materials, and so on), or if it is Netizens contributing new and original material (e.g., the *Amateur Computerist Newsletter*), the net follows in the great tradition of other public bottom-up institutions, such as the public library or the principle behind public education. The Net shares with these institutions that they serve the general populace. This data is just part of the treasure. Often living Netizens provide pointers to this digitized store of publicly available information. Many of the network access tools have been programmed with the principle of being available to everyone. The best example is the method of connecting to file repositories via FTP (file transfer protocol) by logging in as an “anonymous” user. Most (if not all) World Wide Web Sites, Wide Area Information Systems (WAIS), and gopher sites are open for all users of the Net. It is true that the current membership of the Net Community

is smaller than it will be, but the net has reached a point of general usefulness no matter who you are.

All of this evidence is exactly why there could be problems as the Net comes under the control of commercial entities. Once commercial interests gain control, the Net will be much less powerful for the ordinary person than it is currently. Commercial interests vary from those of the common person. They attempt to make profit from any available means. Compuserve is an example of one current commercial network. A user of Compuserve pays for access by the hour. If this scenario would be extended to the Net of which I speak, the Netiquette of being helpful would have a price tag attached to it. If people had had to pay by the minute during the Net's development, very few would have been able to afford the network time needed to be helpful to others.

The Net has only developed because of the hard work and voluntary dedication of many people. It has grown because the Net is under the control and power of the people at a bottom-level, and because these people have over the years made a point to make it something worthwhile. People's posts and contributions to the Net have been the developing forces.

Network as a New Democratic Force

For the people of the world, the Net provides a powerful way of peaceful assembly. Peaceful assembly allows for people to take control over their lives, rather than that control being in the hands of others. This power has to be honored and protected. Any medium or tool that helps people to hold or gain power is something that is special and has to be protected. (See "The Computer as a Democratizer," this issue next article.)

J. C. R. Licklider believed that access to the then growing information network should be made ubiquitous. He felt that the Net's value would depend on high connectivity. In his article, "The Computer as a Communication Device", Licklider argues that the impact upon society depends on how available the network is to the society as a whole. He wrote: "For the society, the impact will be good or bad depending mainly on the question: Will 'to be on line' be a privilege

or a right? If only a favored segment of the population gets a chance to enjoy the advantage of 'intelligence amplification,' the network may exaggerate the discontinuity in the spectrum of intellectual opportunity."

The Net has made a valuable impact on human society. I have heard from many people how their lives have been substantially improved via their connection to the Net. This enhancement of people's lives provides the incentive needed for providing access to all in society. Society will improve if net access is made available to people as a whole. Only if access is universal will the Net itself truly advance. The ubiquitous connection is necessary for the Net to encompass all possible resources. One Net visionary responded to my research by calling for universal access. Steve Welch wrote: "If we can get to the point where anyone who gets out of high school alive has used computers to communicate on the Net or a reasonable facsimile or successor to it, then we as a society will benefit in ways not currently understandable. When access to information is as ubiquitous as access to the phone system, all hell will break loose. Bet on it."

Steve is right, "all hell will break loose" in the most positive of ways imaginable. The philosophers Thomas Paine, Jean Jacques Rousseau, and all other fighters for democracy would have been proud.

Similar to past communications advances such as the printing press, mail, and the telephone, the Global Computer Communications Network has already fundamentally changed our lives. Licklider predicted that the Net would fundamentally change the way people live and work. It is important to try to understand this impact, so as to help further this advance.

This article is online at:
http://www.ais.org/~hauben/Michael_Hauben/Collected_Works/Articles/speech_acm.txt

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[Editor's Note: The following appeared online in Spring 1992. A later version appeared as Chapter 18 of *Netizens: On the History and Impact of Usenet and the Internet*]

The Computer as a Democratizer

by Michael Hauben

"...only through diversity of opinion is there, in the existing state of human intellect, a chance of fair play to all sides of the truth."
John Stuart Mill, "On Liberty"

"In a very real sense, Usenet is a marketplace of ideas."
Bart Anderson, Bryan Costales, and Harry Henderson

Political thought has developed as writers presented the theoretical basis behind the various class structures from aristocracy to democracy. Plato wrote of the rule of the elite Guardians. Thomas Paine wrote why people need control of their governments. The computer connects to this democratizing trend through facilitating wider communications among individual citizens to the whole body of citizens.

James Mill, the father of John Stuart Mill, takes a look at democracy in his article "Liberty of the Press" from the 1825 Supplement to the *Encyclopedia Britannica*. He writes about the question of a government that works as it should – for the advantage and gain of the people instead of the advantage and gain for those in control. Mill sees the government necessarily being corrupted if the chance exists. Those in the position of rule, would abuse that power for their advantage. Mill describes, "If one man saw that he might promote misrule for his own advantage, so would another; so, of course would they all." (James Mill, "Liberty of the Press," p. 20) Mill says that the people need a check on those in government. People need to keep watch on their government in order to make sure this government works in the interest of the many. Mill thus concludes, "There can be

no adequate check without the freedom of the press. The evidence of this is irresistible." (Mill, p. 18)

What Mill often phrases as freedom of the press, or liberty of the press, is more precisely defined as the uncensored press. The uncensored press provides for the dissemination of information that allows the reader or thinker to do two things. First, a person can size up the issue and honestly decide his or her own position. Second, as the press is uncensored, this person can make his distinctive contribution available for other people to consider and appreciate. Thus what Mill calls "freedom of the press" makes possible the free flow and exchange of different ideas.

Thomas Paine, in *The Rights of Man*, describes a fundamental principle of democracy. Paine writes, "that the right of altering the government was a national right, and not a right of the government." (p. 341) Mill also expresses that active participation by the populace is a necessary principle of democracy. He writes: "Unless a door is left open to the resistance of the government, in the largest sense of the word, the doctrine of passive obedience is adopted; and the consequence is, the universal prevalence of the misgovernment, ensuring the misery and degradation of the people." (Mill, p. 13)

Another principle Mill links democracy to, is the right of the people to define who can responsibly represent their will. However, this right requires information to make a proper decision. Mill declares: "We may then ask, if there are any possible means by which the people can make a good choice, besides liberty of the press? The very foundation of a good choice is knowledge. The fuller and more perfect the knowledge, the better the chance, where all sinister interest is absent, of a good choice. How can the people receive the most perfect knowledge relative to the characters of those who present themselves to their choice, but by information conveyed freely, and without reserve, from one to another?" (Mill p. 19) Without information being available to the people, the candidates for office can be either as bad as the incumbents or worse. Therefore there is a need to prevent the government from censoring the information available to people. Mill explains: "If it is in the power of their rulers to permit one person and forbid another, the people may be sure that a false report, – a report

calculated to make them believe that they are well governed, when they are ill-governed, will be often presented to them." (Mill, p. 20)

After electing their representatives, democracy gives the public the right to evaluate their chosen representatives in office. The public continually needs information as to how their chosen representatives are fulfilling their role. Once these representatives have abused their power, Paine's and Mill's principle allows the public to replace those abusers. Mill also clarifies that free use of the means of communication is another extremely important principle: "That an accurate report of what is done by each of the representatives, a transcript of his speeches, and a statement of his propositions and votes, is necessary to be laid before the people, to enable them to judge of his conduct, nobody, we presume, will deny. This requires the use of the cheapest means of communication, and, we add, the free use of those means. Unless every man has the liberty of publishing the proceedings of the Legislative Assembly, the people can have no security that they are fairly published." (Mill, p. 20)

Ignorance, Thomas Paine calls the absence of knowledge and says that man with knowledge cannot be returned to a state of ignorance. (*The Rights of Man*, p. 357) James Mill shows how the knowledge man thirsts after leads to a communal feeling. General conformity of opinion seeds resistance against misgovernment. Both conformity of opinion and resistance require general information or knowledge. Mill explains: "In all countries people have either a power legally and peaceably of removing their governors, or they have not that power. If they have not that power, they can only obtain very considerable ameliorations of their governments by resistance, by applying physical force to their rulers, or, at least, by threats so likely to be followed by performance, as may frighten their rulers into compliance. But resistance, to have this effect, must be general. To be general, it must spring from a general conformity of opinion, and a general knowledge of that conformity. How is this effect to be produced, but by some means, fully enjoyed by the people of communicating their sentiments to one another? Unless the people can all meet in general assembly, there is no other means, known to the world, of attaining this object, to be compared with freedom of the press." (Mill, p. 18)

In the previous quote Mill places his championing of the freedom of press as a realistic alternative to Rousseau's general assembly, which is not possible most of the time. Mill expands on the freedom of the press by setting the rules. An opinion cannot be well founded until its converse is also present. Here he sets forth the importance of developing your own opinion from those that exist. Mill writes: "We have then arrived at the following important conclusions, – that there is no safety to the people in allowing anybody to choose opinions for them; that there are no marks by which it can be decided beforehand, what opinions are true and what are false; that there must, therefore, be equal freedom of declaring all opinions both true and false; and that, when all opinions, true and false, are equally declared, the assent of the greater number, when their interests are not opposed to them, may always be expected to be given to the true. These principles, the foundation of which appears to be impregnable, suffice for the speedy determination of every practical question." (Mill, p. 23)

The technology that is the personal computer, international computer networks, and other recent contributions embody and put into practice James Mill's theory of liberty of the press. The personal computer makes it affordable for most people to have an information access station in their very own home. There are international computer networks that exist which allow a person to have debates with other people across the world, search for data in various data banks, or even play a computer game.

If a person is affiliated with a university community, works at a business which pays to connect to the Internet, or pays a special service fee, he or she can connect to a network of computer networks around the world. A connection to this international network empowers a person by giving him access to various services. These services include electronic mail, which means the ability to send private messages electronically to people across the world who also have electronic mail boxes. The public alternative to this is a service called Usenet. This service is an example of James Mill's democratic principles.

Usenet consists of many newsgroups which each cover a broad, but yet specific topic. People who utilize Usenet typically pick certain

newsgroups or topics to focus on. Every group has several items of discussion going on at the same time. Some examples of newsgroups include serious topics such as talk.politics.theory, – people "talking" about current issues and political theory, sci.econ – people discussing the science of economics, soc.culture.usa – people debating questions of United States society; and recreational topics (which might also be serious) such as alt.rock-n-roll – discussing various aspects of rock music, rec.sport.hockey – a discussion of hockey and rec.humor – jokes and humor. The discussions are very active and provide a source of information that fulfills James Mill's criteria for both more oversight over government and a more informed population. In a sense, what was once impossible, is now possible; everyone's letter to the editor is published. (Hauben, Interview with Staff Member, *The Amateur Computerist*, vol. 4 no. 2-3 p. 14) What is important is that Usenet is conducted publicly, and is uncensored. This means that everyone can both contribute and gain from everyone else's opinion.

The importance of Usenet also exists in that it is an improvement in communications technology from that of previous telecommunications. The predecessors to computer networks were the Ham Radio and Citizen Band Radio (CB). The computer network is an advance in that it is easier to store, reproduce and utilize the communications. It is easier to continue a prolonged question and answer session or debate. The newsgroups on Usenet have a distribution designation which allows them to be available to a wide variety of different size areas – local, city, national, or international. This allows for a variety of uses. The problem with the Internet is that in a sense it is only open to those who either have it provided to them by a university or company that they are affiliated with, or who pay for it. This limits part of the current development of the computer networks.

An example of a public enterprise, however, is a computer service called Freenet in Cleveland, Ohio. Freenet is operated by Case Western Reserve University as a community service. Anyone with a personal computer and a modem (a device to connect to other computers over existing phone lines) can call a local phone number to connect to Freenet. If members of the public do not own computers, they can use Freenet at the public library. Besides Usenet, Freenet

provides free access to a vast variety of information databases and community information. Freenet is just one example of the computer networks becoming much more readily available to broad sectors of society. As part of its databases, Freenet includes Supreme Court decisions, discussion of political issues and candidates, and debate over contemporary laws. Freenet is beginning to exemplify Mill's principle that democracy requires the "use of the cheapest means of communication, and, we add, the free use of those means." (Mill, p. 20)

This is an exciting time to see the democratic ideas of some great political thinkers beginning to be practiced. James Mill wrote that for government to serve the people, it must be watched by the people utilizing an uncensored press. Freedom of the press also makes possible the debate necessary for the forming of well-founded opinions by the people. Usenet and Freenet are examples of the contemporary electronic practice of the uncensored accessible press required by Mill. These networks are also the result of hard work by many people aspiring for more democracy. However, they still require more help from those dedicated to the hard fight against tyranny.

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[Editor's Note: The following was written in Spring 1994.]

What the Net Means to Me

by Michael Hauben

The Net means personal power in a world of little or no personal power for those other than on the top. (Those on top are called powerful because of money, but not because of thoughts or ideas.) The essence of the Net is Communication: personal communication both between individual people, and between individuals and those in society who care (and do not care) to listen. The closest parallels I can think of are:

- Samizdat Literature in Eastern Europe.
- People's Presses.
- The Searchlight, Appeal to Reason, Penny Press, etc.
- Citizen's Band Radio.
- Amateur or Ham radio.

However the Net seems to have grown farther and to be more accessible than the above. The audience is larger, and continues to grow. Plus communication via the Net allows easier control over the information – as it is digitized and can be stored, sorted, searched, replied to, and easily adapted to another format.

The Net is the vehicle for distribution of people's ideas, thoughts and yearnings. No commercial service deals with the presentation of peoples' ideas. I do not need a computer to order flowers from "FTD" or clothes from the "Gap." I need the Net to be able to voice my thoughts, artistic impressions, and opinions to the rest of the world.

The world will then be a judge as to if they are worthy by either responding or ignoring my contribution.

Throughout history (at least in the U.S.A.), there has been a phenomenon of the street-corner soapbox. People would “stand up” and make a presentation of some beliefs or thoughts they have. There are very few soapboxes in our society today. The '70s and '80s wiped out public expression. The financial crisis substituted a growing sentiment of make your money or shut up. In the late '80s and early '90s, the Net has emerged as a forum for public expression and discussion. The Net is partially a development from those who were involved with the Civil Rights movement, anti-war struggles and free speech movements in the '60s. The personal computer was also a development by some of these same people.

Somehow the social advances rise from the fact that people are communicating with other people to help them undermine the upper hand other institutions have. An example is people in California keeping tabs on gas station prices around the state using Netnews and exposing gougers. Another example is people publically reviewing music themselves – rather than telling others,” you should really go buy the latest issue of magazine ‘X’ (Rolling Stone, etc.) as it has a great review.” This is what I mean by people power – people individually communicating to present their view on something rather than saying go get commercial entity ‘Xs’ view from place ‘Y.’ This is people contributing to other people to make a difference in people’s lives. In addition, people have debated commercial companies’ opposition to the selling of used CDs. This conversation is done in a grassroots way – people are questioning the music industry’s profit making grasp on the music out there. The industry definitely puts profit ahead of artistic merit, and people are not interested in the industry’s profit making motive, but rather great music.

The Net is allowing two new avenues not available to the average person before:

1) A way of having one’s voice heard.

2) A way of organizing and questioning other people’s experiences so as to have a better grip on a question or problem.

Thus in some ways there is a regaining control of one's life from society.

These are all reasons why I feel so passionately about 1) keeping the Net open to everyone, and having such connections being available publicly, and 2) keeping the Net un-commercialized and un-privatized. Commercialism will lead to a growing emphasis on other uses for the Net. As I said before, it is not important for me to be able to custom order my next outfit from the "Gap" or any other clothing store. Companies should develop their own networks if they wish to provide another avenue to sell their products. In addition, commercial companies will not have it in their interest to allow people to use the Net to realize their political self. Again let me reemphasize, when I say politics, I mean power over one's own life and surroundings. And this type of politics I would call democracy.

A version of this article is online at:
http://www.ais.org/~hauben/Michael_Hauben/Collected_Works/Amateur_Computerist/What_the_Net_Means_to_Me.txt

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[Editor's Note: The following first appeared online in January 1997. It appears as a chapter in *An Ethical Global Information Society: Culture and Democracy Revisited*, edited Jacques Berleur and Diane Whitehouse.]

Culture and Communication The Interplay in the New Public Commons — Usenet and Community Networks

by Michael Hauben

"Any document that attempts to cover an emerging culture is doomed to be incomplete. Even more so if the culture has no overt identity (at least none outside virtual space). But the other

side of that coin presents us with the opportunity to document the ebb and flow, the moments of growth and defeat, the development of this young culture."
John Frost*, Cyberpoet's Guide to Virtual Culture*

As we approach the new millennium, social relationships are changing radically. In 1978, the anthropologist Margaret Mead wrote of an "approaching world-wide culture" (p. 3). While she wrote of a global culture made possible by the mass media of her day, her words actually foresaw fundamental changes made by computer communication networks that were just beginning. A new culture is being formed out of a desire for communication (Graham, 1995). This culture is partially formed and formulated by new technology and by social desires (Jones, 1989; Woodbury, 1994). People are dissatisfied with the modern condition, and much of the new communication technology facilitates new global connections (*Uncapher*, 1992). This article will explore the effect of new communication forms on human culture and of human culture on these new communication forms.

The development of transportation and communication technologies has linked the world together in ways which make it simple to travel or communicate with peoples and cultures around the world. The daily exposure to various cultures makes it impossible for an individual to envision the world consisting of only his or her culture (Mead). We really are moving into a new global age which affects most aspects of human life, for example, economics, language, politics, and entertainment. The exposure to media and forms of communication help spread many of these cultural elements. Television and radio connect people with the rest of the world in a rather impersonal fashion, whereas computer networks are increasingly bringing people of various cultures together in a much more intimate and grassroots manner.

Historically, culture has changed slowly and been passed on from generation to generation. In the last half of the twentieth century, culture is a living dynamic part of people's lives. Mead writes that while in the past culture was transmitted from the older generation to the younger, today the younger generation learn from their peers and

teach their elders. Human culture gets set by how people live their lives (Graham). Culture is created and re-enforced through how that person lives in context of society and social movements. One is taught the culture of his or her society while growing up, but those perceptions change as he or she matures, develops and lives an adult life. Culture is no longer statically defined. Rather a person grows up into a culture and then changes it as that life progresses through time.

As people increasingly live a more global lifestyle, whether mediated through media or actual experience, culture is changing. This global experience is facilitated by the ability of the individual to interact with people from other cultures and countries on a personal level. Images and thoughts available via mass media show these cultures exist, but when people get a chance to talk and interact, then the differences become less of an oddity and more of an opportunity (Uncapher).

There are critics (Appadurai, 1990; etc.) who claim this global culture, or mass culture is snuffing out individual differences for a pre-packaged culture. These critics call for the isolation of communities from each other so that the uniqueness can be preserved. This criticism misses that human culture is a dynamic element of society, and freezing it would produce a museum of human society. Uncapher correctly points out that what these critics do not recognize is that more and more these various cultures are understanding the power of the new communication technologies. More and more people are reacting against the mass media and corporate dominance and calling for a chance to express their views and contribute their culture into the global culture. Margaret Mead tells a story (pp. 5–6) of returning to a village in New Guinea which originally requested medicine and trade goods. On this later visit, rather than asking for more contributions of western civilization, the villagers requested their songs be recorded via tape recorder in order to contribute their own culture to the outside world. The presence of radios made the villagers aware of others' music, and they wanted a part of their culture broadcast around the world.

The new media of Usenet, electronic mail and the Internet facilitate the growth of global interactive communities. These forums are

made available through community networks, universities, the work place, Internet access providers, and other public access locations (Hauben & Hauben, 1994). Human culture is ever evolving and developing, and the new public commons are of a global nature. People are coming together and living more of their daily lives with people from around the world. Through the sharing of these moments by people, their cultures are coming to encompass more of the world not before immediately available.

Usenet newsgroups are a relatively young medium of human discourse and communication.[1] Studies are just being completed on the global online culture. A recent thesis by Tim North (1994) asked the question "is there an online culture and society on Usenet?" His conclusion was that there is a definite Usenet culture, but that Usenet can not be considered a separate society. Rather Usenet is "a super-structural society that spans many main-stream societies and is dependent upon them for its continued existence." (North, chap. 4.2.2, p. 4) Others (Avis, 1995; Graham; Jones; etc.) are studying the online culture and the connection to the growing global culture.

The Usenet technology was developed by graduate students in the late 1970s as a way to promote the sharing of information and to spread communication between university campuses. This design highlights the importance of the contribution by individuals to the community. Thus the content of Usenet is produced by elements of the community for the whole of the community. In forming of this public space, or commons, people are encouraged to share their views, thoughts, and questions with others (Hauben & Hauben). The chance to contribute and interact with other people spread Usenet to become a truly global community of people hooking their computers together to communicate. People both desire to talk and to communicate with other people (Graham; Woodbury).

Both the technological design of opening one's computer up to accept contributions of others and the desire to communicate led to the creation of an egalitarian culture (Jones; North; Woodbury). People have both a chance to introduce and share their own culture and a chance to broaden themselves through exposures to these various cultures. As such, the Usenet culture is an example of a global culture

which is not a reflection of purely one culture. Instead, Usenet both incorporates cultural elements from many nations and builds a new online culture (North).

Community networks provide a way for citizens of a locality to hook into these global communities for little or no cost (Graham). Community networks also provide a way for communities to truly represent themselves to others connected online (Graham; Weston). Without access made available through community networks, through publicly available computer terminals or local dial-in phone numbers, only those who could afford the monthly charges or who have access through work or school would represent themselves (Avis). Particular portraits of various cultures would thus be only partially represented. Also, when access is available and open to all, a greater wealth of contributions can be made. There is a strong push in Canada and Canadian communities to get online. A lot of grass-roots community network building is taking place. A grass-roots organization, Telecommunities Canada, stresses the importance of contributing Canada's various cultures to the online community and in this way make a contribution to the whole community (Graham, Weston). In a similar way, Izumi Aizu (1995, p. 6) says that Japan has "an opportunity to bring its own cultural value to the open world." He continues, "It also opens the possibility of changing Japan into a less rigid, more decentralized society, following the network paradigm exercised by the distributed nature of the Internet itself" (ibid.).

There's something to be said about the attraction of representing one's self to the greater community. The many-to-many form of communication where an individual can broadcast to the community and get responses back from other individuals is an empowering experience. No longer do you have to be rich and powerful to communicate broadly to others and to represent yourself and your own views. This power is making it possible for individuals to communicate with others with similar interests (and different interests) around the world. Grassroots organization is boosted and even the formation of local community groups is accelerated. Development of the commons to the exclusion of the big media representations makes this a grassroots medium, or a new enlarged public commons (Felsenstein, 1993).

The online culture is primarily a written one, although much of the text is written generally in a non-formal almost off the cuff type of nature. While people will post papers and well thought out ideas, much of the conversation is generated in an immediate response to others' messages. This text can feel like a conversation, or a written version of oral culture. Stories akin to the great stories of the pre-history come about. Legends and urban myths circulate and are disseminated (Jones). Pictures and other non-text items can be sent in Usenet messages, but these non-text items are primarily transferred and not modified, thought upon or communally worked on as are the textual ideas. The common shared online language is English (Azumi). However, other languages exist in country hierarchies and newsgroups and in mailing lists. Along with IRC channels, gopher sites and World Wide Web pages.

Text also means that body language and other non-verbal clues need to be spelled out. Extra-sensory emoticons[2] have been invented (e.g., <grin>, <laugh>, etc.) along with smileys. Smileys are textual drawings of a person's face with a smile or grin rotated 90 degrees counter-clockwise to be typeable and printable on computer text screens and printouts.[3]

North writes on how there is a distinct Usenet culture, and that this culture is opening and welcoming of new-comers. He also notes when there is unfriendliness to "newbies", but focuses on how the online culture is documented and available for people to learn from documents available online.[4] This definition of culture and Netiquette (the online word for net etiquette) is available to learn from and open for discussion. Bruce Jones sums up the net culture, "…the Usenet network of computers and users constitutes a community and a culture, bounded by its own set of norms and conventions, marked by its own linguistic jargon and sense of humor and accumulating its own folklore." (p. 2)

Both North and Jones elaborate on what they see to be an egalitarian tendency or tendency to contribute to the community's benefit. Jones writes, "…the people of the net owe something to each other. While not bound by formal, written agreements, people nevertheless are required by convention to observe certain amenities because they

serve the greater common interest of the net. These aspects of voluntary association are the elements of culture and community that bind the people of Usenet together." (p. 4)

The global culture is formed in several ways, none of which is a generic corporate rubber stamp. People are taking charge. They are bringing their own cultures into the global culture and spreading this new culture around the world. This is taking on a general form and an online form. The online form provides a strong means by which people can spread their ideas and culture which in turn affects the broader global culture. This broader global culture also affects newsgroups or online media. The ability to express oneself to the rest of the world is addictive and the rapid increase of new people joining the online global community makes that manifest. "The voiceless and the oppressed in every part of the world have begun to demand more power…. The secure belief that those who knew had authority over those who did not has been shaken" (Mead, p. 5).

Notes

1. Usenet was initiated in 1979.
2. Emoticons are "icons" which are used to include emotion and other meta-messages otherwise not transmittable in written online communication forms.
3. Examples include :-) traditional smile ;-) wink, etc. See Sanderson, 1992 for more examples.
4. The online culture is described and written about in FAQ (frequently asked question) files in various newsgroups, the various news.newuser newsgroups and in other readily available files (North).

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This article is online at
http://www.columbia.edu/~hauben/CS/usenet-culture.txt

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The Expanding Commonwealth of Learning: Printing and the Net

by Michael Hauben

A revolution in human communications is happening. People around the world are connecting to each other via the new computer telecommunication networks now known as the Net. The Net, in a significant way, is a continuation of the important technological development of the printing press. The printing press might seem to be an unlikely choice for such a comparison considering the similarity that might be seen between the Net and, for example, television, the telephone, radio, or the news media. That is why it is important to compare the current networking developments with the history of printing to understand why the printing press should be seen as the forefather of the currently developing computer networks.

With the invention of the printing press in the second half of the fifteenth century, there arose print shops and printing trades. Printing and the distribution of printed works grew rapidly. In the last quarter of the twentieth century, a global computer network has emerged which gives users the ability to post and distribute their views and

news broadly and inexpensively. Comparing the emergence of the printing press to the emergence of the global computer network will reveal some of the fascinating parallels which demonstrate how the Net is continuing the important social revolution that the printing press had begun.

The printing press developed out of a scribal culture surrounding the hand-copying of texts. This scribal culture could only go so far in furthering the distribution of information and ideas. Texts existed, but were largely unavailable for use by the common people. There were very few copies of books as each copy of a book had to be laboriously hand-copied from a previous copy. Relying on scribal culture for access to and distribution of knowledge caused many problems. Texts were often inaccurate as scribes made mistakes while copying them. Since a single scribe usually had access to only one copy of the text he was copying, he had no way to know if he was duplicating mistakes other scribes had made before him. The effect of copying mistakes, or non-exact copies, led to numerous "versions" of the same text. Also, scholars who wanted to use various texts had to travel in order to have a good variety of material to study. The majority of people could not afford, nor did they have the time to pursue scholarly pursuits. In her book, *The Printing Revolution in Early Modern Europe*, Elizabeth Eisenstein writes: "[one] needs to recall the conditions before texts could be set to type. No manuscript, however useful as a reference guide, could be preserved for long without undergoing corruption by copyists, and even this sort of 'preservation' rested precariously on the shifting demands of local elites and a fluctuating incidence of trained scribal labor…wear and tear...moisture, vermin, theft or threat."[1] Under such conditions, scribal efforts did not preserve many valuable texts. Plenty did not survive.

Just as the printing press essentially replaced the hand-copying of books in the Renaissance, people using computer networks are essentially creating a new method of production and distribution of creative and intellectual written works today.

Around the same time that computer communications networks started to emerge from computer communications research communities in the early 1970s, the personal computer (PC) was developed by

students, hobbyists, and proponents of the free-speech movement on the West Coast of the United States. The personal computer became widely available at prices many people could afford. The PC made the power of the multipurpose computer available to a wider cross section of people who otherwise would not have had access to time on a larger minicomputer or mainframe computer which were then owned by universities, businesses and the government. The personal computer movement made computers available to the mass of people in the United States. As computers are multipurpose, they can be used to accomplish many things. A PC can be made to duplicate the functions of a printing press, with the user having little or no professional printing experience. In the past, a skilled printer combined movable type and engravings (woodcut, or otherwise) to mass produce copies of a page combining varied images (text, graphics, etc). The personal computer brings this power from the master printer to the average individual – both in price and availability. The personal computer (e.g., Apple II family, Commodore, Atari, TRS-80, etc. leading to the IBM PC family, the Apple Macintosh family, Amiga, etc.) linked to an electronic printer (first dot-matrix and daisy-wheel, later laser printers) and even more recently to scanners which convert images into usable data – make the production and reproduction of information a common task available to all. Even if one does not own a PC, one can rent time on one in a store. Copy shops (in themselves part of the continual process that made publishing ubiquitous) have begun to have PCs available to rent time on. These advances make the act of publication immensely easier. The personal computer, printers and scanners, however, do not solve the problem of distribution.

The recent development, standardization and interconnection of computers via computer communications networks help to solve the problem of distribution. Examples of on-line utilities include file transfer (ftp), remote login to other computers (Telnet), remote execution of programs, electronic mail (e-mail), access to various information data bases (gopher, WWW), other information searching utilities (archie, veronica, Lycos), real-time chat (irc), and a distributed news service which allows people to share information publicly and become citizen reporters (Netnews). The two utilities most relevant to

this revolution in human communication are e-mail and Netnews (or Usenet). E-mail allows for the private and semi-private distribution of information and communications through messages to a particular person or persons, or to a designated set of people via electronic mailing lists. Netnews allows for the public dissemination of information, opinions and questions in an open forum. When a Netizen makes a contribution to any of the many defined subject areas (newsgroups), anyone from around the world who chooses to read that particular newsgroup will have a chance to read that message. Usenet's potential for inexpensive global distribution represents one major advance of Usenet beyond the printing press.

The printing press developed sometime in the 1460s and spread quickly throughout Europe. The broad distribution of presses ended the age of the scribal culture and ushered in the age of printing. "Unknown anywhere in Europe before the mid-fifteenth century," Eisenstein writes, "printer's workshops would be found in every important municipal center by 1500."[2]

Eisenstein points out that the printing press dramatically increased the total number of books, while at the same time decreasing the number of hours of labor necessary to create books. She argues that this made the transition from hand-copied manuscripts to machine-produced books one of a revolutionary nature, and not evolutionary as claimed in much of the literature about this transformation.[3] Understanding how the printing press unleashed a communications revolution provides a basis to assess if the establishment of worldwide computer communication networking is the next communication revolution.

New communication technologies facilitate new ways of organizing information and of thinking. The invention of the printing press changed the way texts were handled. From its outset, the men who controlled the presses, the printers, experimented with ways to use the printing press to change texts. Textual techniques such as "graduated types, running heads…footnotes…table of contents…superior figures, cross references…"[4] are examples of the ways in which the press broke through some boundaries which had previously limited the production of books in scribal culture.

Moreover, the new technologies changed the way books were written. The establishment of printing shops in the major European cities formed a common meeting place for scholars and authors from across the continent. The great number of printing presses and printing shops enabled more people to write books and produce works that would be duplicated by the presses. When these new authors traveled they would gather in printing shops to meet other writers and scholars. Thus the printing press facilitated the meeting of minds pursuing intellectual pursuits. The interconnection of people led to the quickening of the development of ideas and knowledge. These progenitors of the printing trade were in the forefront of the sweeping intellectual changes which the presses made possible.[5] Similar connections among people are taking place on the Net today at a much faster rate. And, just as the printers were in the forefront of the printing revolution, so today the developers of computer communications software and hardware and netusers are the first to experience the increased connectivity with other people around the world afforded by the computer networks.

As printing spread, publishers realized the value of utilizing input from readers to improve their product. Since the press could turn out multiple copies of a first edition quickly, many people would see the first edition and could send by letter their comments, corrections and criticisms. Publishers and authors could then use this feedback to write and print second, and third editions, and so on. Mistakes would be caught by careful readers, and printers thus "were also able to improve on themselves." Eisenstein explains that copied mistakes and mistakes in copying common with scribal copies now could be caught by the increasing number of readers. She writes, "the immemorial drift of scribal culture had been not merely arrested but actually reversed."[6]

The Net likewise provides a ready mechanism for the interaction between authors and readers. On the Net, people often keep track of knowledge, such as lists of a musician's records (discographies), or FAQ files of answers to Frequently Asked Questions. Authors of these works often act as both editor and compiler. People send further information, which the keeper of the file often adds. This makes for a

communal base of information which is often available to anyone minimally connected to the Net by at least electronic mail. The constant updating of information on the Net continues the tradition of revising intellectual work introduced by the printing press.

Eisenstein's description of how communal information was gathered is similar to how such procedures work on the Net. She writes: "But others created a vast network of correspondents and solicited criticism of each edition, sometimes publicly promising to mention the names of readers who sent in new information or who spotted the errors which would be weeded out."[7] People who ask questions on the discussion sections of the Net (either Netnews or Mailing lists) often summarize the answers they receive and post this summary back to the Net. When doing this, many compilers include acknowledgments to the people who supplied the information. Also when people send in corrections to an FAQ, the keeper of the FAQ often makes a list at the end thanking these individuals.

Eisenstein details these networks of correspondence in an example of a particular text titled the "Theatrum."

By the simple expedient of being honest with his readers and inviting criticism and suggestions, Ortelius made his Theatrum a sort of cooperative enterprise on an international basis. He received helpful suggestions from far and wide, and cartographers stumbled over themselves to send him their latest maps of regions not covered in the Theatrum.[8]

On Usenet, too, making a contribution is an integral part of Netizen behavior. Netizens make a point of being helpful to others. Often the Net has made a positive difference in their lives and they return the favor by making their own contribution, perhaps by answering the questions of others or developing an archive. These individual and increasingly group contributions are what have built the Net from a connection of computers and computing resources into a vast resource of people and knowledge. People who use the Net have access to Net resources and can contribute to them. Thus the culture of the Net has been shaped by people actively contributing to the growth and development of the Net. The tale of the Theatrum shows

there is a historical precedent in human nature for this "stumbling over oneself" in order to try and be helpful.[9]

The flow of information to the publishers of the Theatrum meant that at least 28 editions were published by the time of the publisher Ortelius' death in 1598.[10] In a similar way, Usenet is by its very nature constantly evolving. The basic element of Usenet is the post whose life is temporary. The Usenet software is designed to "expire" or delete messages after a certain time period. Without constant new contributions from people to Netnews, there would be no messages to read or discussions to take part in. So there is a constant evolution of Usenet. But, also the material in the more permanent information depositories is often updated so they evolve as well.

During the early days of the printing press, publishers' requests for information led to people starting their own research and work. "Thus a knowledge explosion was set off," Eisenstein exclaims.[11] The Net follows in the tradition of the press, by having one set of people asking questions, leading to another set of people conducting research. In this sense the Net can serve the role as a thinktank for the ordinary person. So the advanced possibilities the printing press made possible in the sixteenth century is being replicated many times more by the Net today. It is important to recognize and value Netnews for its contribution to human society and the advancement of knowledge.

Eisenstein observed that the art of printing opened people's eyes to their previous ignorance. She quotes the German historian, Johann Sleidan, in his "Address to the Estates of the Empire" of 1542, describing the impact printing had in Germany, "[The] art of printing [has] opened German eyes even as it is now bringing enlightenment to other countries. Each man became eager for knowledge, not without feeling a sense of amazement at his former blindness."[12] This sentiment has been echoed by many Netizens on Usenet and in other on-line conversations. People have been amazed at what the Net made possible and how it was changing their lives.

Eisenstein comments in her book on the role of feedback to early authors and print publishers. She wrote that feedback helped to "define the difference between data collection before and after the communications shift. After printing, large-scale data collection did be-

come subject to new forms of feedback which had not been possible in the age of the scribes."[13] Computer networks likewise make possible very easy and natural feedback. Once one reads a message (either public or private), a simple keystroke allows the composition of an answer or response, and another keystroke is often all it takes to send the response. This takes less effort than writing to a publishing house or calling a television station. Since responding to other messages becomes such a natural part of the on-line process, the procedure becomes almost automatic.

Many people who use Usenet find television dull rather than thought provoking. Doug Thompson, a user of Usenet, wrote "TV is so bloody tame and boring in comparison to Usenet." Others, too, have described how they have completely stopped watching TV and reading the newspaper because of Usenet.

Eisenstein refers to the process of constant improvement which printing made possible, as observed by the Scottish philosopher David Hume, "The Power which Printing gives us of continually improving and correcting our Works in successive Editions appears to me the chief advantage of that art."[14] Eisenstein expands on this idea adding, "The future seem[ed] to hold more promise of enlightenment than the past."[15]

This promise of a better future is also seen by those on the Net. People on-line are being enlightened by the interconnection of peoples around the world. The Net helps people to make social connections which were never before possible, or which were relatively hard to achieve. Geography and time no longer are boundaries. Social limitations and conventions no longer prevent potential friendships or partnerships. In this manner Netizens are meeting other Netizens from far-away and close by that they might never have met without the Net.

Eisenstein reports that the printing press too helped people interact with other people who they would not have met before its invention. "Vicarious participation in more distant events was enhanced," she writes, "and even while local ties were loosened, links to larger collective units were being forged."[16] Improvement of information about other parts of the world "by the output of more uniform maps

containing more uniform boundaries and place names" helped people to know more of the facts of the world. "Similar developments affected local customs, laws, languages, and costumes."[17]

The Net similarly provides people with a broader view of the world by introducing them to other people's ideas and opinions. The Net makes it possible to access more and differing viewpoints than were normally available in a person's daily life.

Much as printer's houses in the sixteenth century served as places to stop when traveling, computers and phone lines connect people around the world as in our times. Eisenstein describes how such print shops, "point to the formation of polygot households in scattered urban centers upon the continent." She observes that during the sixteenth century, "such printing shops represented miniature 'international houses.' They provided wandering scholars with a meeting place, message center, sanctuary, and cultural center all in one. The new industry encouraged not only the formation of syndicates and far-flung trade networks, similar to those extended by merchants engaged in the cloth trade, or in other large-scale enterprises during early modern times. It also encouraged the formation of an ethos which was specifically associated with the Commonwealth of Learning – ecumenical and tolerant without being secular, genuinely pious yet opposed to fanaticism, often combining outward conformity to diverse established churches with inner fidelity to heterodox creeds."[18]

The social networks made possible by Usenet and the emergence of the printing press are very similar. Even though Netnews has no official guiding body, Netizens have developed social rules which control and mediate the medium. As the forum is democratic, there will be people who have nothing intelligent to add, or only want to be disruptive or offensive. Others will often debate these troublemakers and through argumentation and the posting of opposite opinions help others to make up their own minds as to the value of the original postings.

The printing press facilitated new cross-cultural networks which encouraged "forms of combinatory activity which were social as well as intellectual."[19] Differing ideas were more easily set against one

another. The theories of Arabists were set against the theories of Galenists and those of Aristoteleans against Ptolemaists. Eisenstein writes: "Not only was confidence in old theories weakened, but an enriched reading matter also encouraged the development of new intellectual combinations and permutations. Combinatory intellectual activity… nspires many creative acts."[20]

The Net helps people communicate with each other who might not have communicated before. Strangers meet each other because of interest in each other's ideas and this leads to new intellectual collaborations and combinations.

The connection of differing ideas and people meant the first century of printing is recognized for "intellectual ferment" and by what Eisenstein writes was a "'somewhat wide-angled, unfocused scholarship.'"[21]

The new availability of different theories or opinions about the same topics led Eisenstein to conclude that the contribution a scientist like Copernicus was able to make was not that he produced a new theory, but rather he was "confronting the next generation with a problem to be solved rather than a solution to be learned."[22] Lastly on this subject, Eisenstein equates the quickening of science toward a "cognitive breakthrough of an unprecedented kind."[23] The Net is continuing and accelerating that advance.

The lure of being able to produce numerous copies of books cheaply, was that an author's words could be spread around the world. This proved to be powerful. Eisenstein quotes Maurice Gravier on the power the press presented to the Protestant reformers: "The theses…were said to be known throughout Germany in a fortnight and throughout Europe in a month…. Printing was recognized as a new power and publicity came into its own. In doing for Luther what copyists had done for Wycliffe, the printing press transformed the field of communications and fathered an international revolt. It was a revolution. The advent of printing was an important precondition for the Protestant Reformation taken as a whole; for without it one could not implement 'a priesthood of all believers.' At the same time, however, the new medium also acted as a precipitant. It provided the 'stroke of magic' by which an obscure theologian in Wittenberg man-

aged to shake Saint Peter's throne."[24] This idea is repeated by the English writer Daniel Defoe (1660-1732), whom Eisenstein quotes, when he wrote "The preaching of sermons is speaking to a few of mankind, printing books is talking to the whole world."[25] The Net has opened up a channel for "talking to the whole world" to an even wider set of people than did printed books.

A social role which grew to be crucial in this new world of printing was that of the master printer. His was the business of running a print shop, and finding and promoting potential authors. In the course of this work his workshop became a center of intellectual excitement. Eisenstein explains that the master printer's "workshop became a veritable cultural center attracting local literati and celebrated foreigners, providing both a meeting place and message center for an expanding Commonwealth of Learning."[26]

This development of an intellectual family started to bring the world closer together. "In the late sixteenth century," Eisenstein maintains, "for the first time in the history of any civilization, the concept of a Concordia Mundi was being developed on a truly global scale and the 'family of man' was being extended to encompass all the peoples of the world."[27] The hospitality which the printers provided to travelers and intellectuals helped to make this happen.

The Net continues in this tradition of uniting the world. It is easy to hold conversations and develop relationships with others from around the world. The Net speeds this transaction as the conversation is brought from the print shop into a Netizen's home. A major advancement which the personal computer and the Net make possible is accessibility of publishing. Anyone who owns a personal computer can develop and print their own books, pamphlets, signs, and so forth. The Net comes in to help with distribution.

Eisenstein talks about one result that standardization of printing brought about. "One might consider," she writes, "the emergence of a new sense of individualism as a by-product of the new forms of standardization. The more standardized the type, indeed, the more compelling the sense of an idiosyncratic personal self."[28] Similarly, because Usenet and mailing lists only present people via their ideas and writing styles, people have to write the way they want themselves to

be viewed. Thus people develop their own styles. Reading posts can therefore at times be an enjoyable experience. A famous cartoon printed in the *New Yorker* magazine in 1993 show a dog at a computer. He says to another dog, "On the Internet, no one knows you're a dog." In fact, no one knows if you are white or black, yellow or purple, ugly or beautiful, short or tall. Discrimination based on appearance and visual impressions loses its basis. People can still be verbally harassed if they act stupid, or prove unhelpful to the Net. One problem, however, which has not yet been solved is harassment based on user name. For example, women with user names that are clearly identifiable as a woman's still receive some attention and sometimes harassment.

The printing revolution affected both tool making and symbol manipulation, which led to new ways of thinking. As Eisenstein notes, "The decisions made by early printers, however, directly affected both tool making and symbol making. Their products reshaped powers to manipulate objects, to perceive and think about varied phenomena." Computers, too, are in general directly affecting tool production and symbol manipulation. The tools on the Net are new tools – and thus lead to radical ways of thinking and dealing with information. People's thought processes can expand and develop in original ways. New ways of manipulating information, such as Unix tools, hypertext media and search engines for searching distributed data sources foster new means of intellectual activity.

Printing made consultation of various texts much easier – no longer did someone have to be able to be a "Wandering Scholar" to gain access to various information. With the development of the Net, information access becomes much more varied and widespread. The local public library, along with libraries around the world, other data banks and knowledgeable people are becoming accessible via the Net, for some netusers even from their homes. Only a few libraries currently offer electronic access to any of the actual texts of their holdings, but that is rapidly changing. Undertakings such as Project Gutenberg and various digital library initiatives are trying to make library resources available from any computer hooked into the Net.

Both the printing revolution and the Net revolution have been a catalyst for increased intellectual activity. Such activity tends to provide pressure for more democracy. When people have the chance and the means to start thinking, ideas of self-rule appear. Eisenstein describes how, "Puritan tradesman who had learned to talk to God in the presence of their apprentices, wives, and children were already on their way to self-government."[30] Many social and political questions are being discussed on Usenet newsgroups especially questions like censorship and Net access which affect the Net directly. Based on these discussions, Netizens are exerting pressure on their governments to form new democratic structures like the NTIA on-line conference.[31]

Mass production via printing makes it possible to have sufficient books so that everyone who wants a copy can borrow one from a library or buy one. Eisenstein presents Thomas Jefferson's view of this "democratizing aspect of the preservative powers of print which secured precious documents not by putting them under lock and key but by removing them from chests and duplicating them for all to see." According to Eisenstein, "The notion that valuable data could be preserved best by being made public, rather than being kept secret, ran counter to tradition, led to clashes with new censors, and was central both to early modern science and to Enlightenment thought."[32] The democratizing power and effect of the printing revolution, Eisenstein contends, is overlooked in most historical writings.[33]

With the advent of printing, the Law was affected by the onset of the ability to duplicate numerous copies of a single document cheaply. People saw that this capability would be helpful in making the Law available for the common person to read and understand, and therefore the common person would be able to watch carefully if it was administered fairly. John Liburne, a person who lived in England during the Stuart Monarchy felt that legal documents should be freed from the confines of Latin and old French so that "every Freeman may read it as well as the lawyers." People like him also held that knowledge which had been esoteric, "rare, and difficult," should be transformed into a form where it could be useful to all. Eisenstein also quotes Florio, who made translations and dictionaries in English. He

symbolized the democratic possibilities of the printing press saying, "Learning cannot be too common and the commoner the better…. Why but the vulgar should not know all."[34]

Legal decisions are now being made available on the Net so that anyone with a computer and modem and net connection will have access to them. Also there are legal newsgroups on Usenet like misc.legal where various laws are examined and discussed. This provides a helpful perspective for understanding the value of the Net. The culture that is currently characteristic of the Net supports the principle that much of it should be available openly for the rest of the world to use. There is a collective communal democratic aspect of it, too. The simple fact of the matter is that every single person who is connected to the Net and has Usenet access can make a post to Netnews and every net user can send electronic mail to any other person who is on-line.[35]

The scribal tradition restricted who made the choice of what was copied to the Church or those who had substantial property. "As long as texts could be duplicated only by hand, perpetuation of the classical heritage rested precariously on the shifting requirements of local elites."[36] With the spread of the printing press, the monopoly of these elites was broken. Netnews is a similar advance over today's mass media. In the 'traditional' forms of mass media, the content is decided by the national 'elites'. However, on Netnews there is no control over the whole and the content is contributed to by every single person who is active on the Net.

Eisenstein compares this control of elites over what manuscripts were copied to the role of the printer and publisher who have it in their interest to unleash all sorts of books. Eisenstein writes: "The politics of censorship made [the printers] the natural opponents not only of church officials but also of lay bureaucrats, regulations and red tape. As independent agents, they supplied organs of publicity and covert support to a 'third force' that was not affiliated with any one church or one state. This third force was, however, obviously affiliated with the interests of early modern capitalists."[37]

These publishers were "the natural enemy of narrow minds," and "encouraged the adoption of a new ethos which was cosmopolitan,

ecumenical, and tolerant without being secular, incredulous or necessarily Protestant…."[38] The Net has offered a parallel encouragement by providing a new kind of public space separate from either commercial purposes or religious or political limitations or ideas.

The printing press provided a new way for people to challenge the status quo. Eisenstein asks the question, "Did printing at first serve prelates and patricians as a 'divine art,' or should one think of it rather as the 'poor man's friend'?"[39] She answers it might have served in both roles, but that literacy seemed more "compatible" with the life of a peasant than that of a noble or lord.[40]

We can pose the same question about the Net. Should one think about the Net as a 'poor man's friend'? If we think of the Net as an alternative to the current media of Television, Radio, and Newspapers and Magazines – the answer is yes. People who have a lot of money can afford to own a segment of the mass media described above, and control the content of that media, whereas the Net is controlled by the mass of people connected to it, so it is 'the poor man's' version of the mass media.

The printing revolution fostered the spread of education. Books were used by apprentices and students to learn more than was offered by their teachers. The Net similarly makes multiple resources available for people interested in learning. People can access more information resources and, even more important, other people. This increased accessibility of people to each other means we can all gain and learn from the interests and knowledge of others, more so than from any single teacher.

The impact of the new print technology on science was enormous. Collaboration and cooperation over longer distances were made possible by the power of print. In particular, Eisenstein refers to the impact on the science of Astronomy. The change she sees happened within Copernicus's lifetime. "Copernicus was not supplied, as Tycho's successors would be, with precisely recorded fresh data," she notes. "But he was supplied, as Regiomontaus's successor and Aldus Manutius's contemporary, with guidance to technical literature carefully culled from the best Renaissance Greek manuscript collections, and for the first time, made available outside library walls."[41]

The progress of science is much faster because of the speed of communication afforded by the Net. Articles to be published in scientific journals are often available as electronic preprints – and thus have wider distribution earlier than was the norm before the Net. An outstanding example of this increased speed of scientific activity occurred when researchers all over the world tried to reproduce the result of the two University of Utah researchers who had announced that they had achieved cold fusion. A newsgroup sci.physics.fusion was very quickly set up and researchers' questions and results and problems were posted regularly and feverishly. As a result, what might have taken years to retest and figure out was sorted out in a three or four month period. The physicists found the rapid exchange of data and results invigorating and encouraging and felt they were more productive and sharper in their work because of the Net. Also, they argued that the use of the Net saved much valuable research time which might have been wasted if the original claims had not been shown to have been faulty in such a short amount of time and to such a wide body of scientists.

The invention of the printing press, which led to many developments not possible before the power of printing, "laid the basis for modern science…and remains indispensable for humanistic scholarship." Eisenstein poignantly claims that printing is responsible for "our museum without walls."[42] As a storehouse of information and living information contained in other people, the Net could also be seen as a living "museum without walls." In her conclusion Eisenstein states that "Cumulative processes were set in motion in the mid-fifteenth century, and they have not ceased to gather momentum in the age of the computer printout and the television guide."[43] We, too, are in an age of amazing changes in communications technologies, and it is important to realize how these changes are firmly based on the extension of the development of the printing press which took place in the fifteenth and sixteenth centuries.

Notes

1. Elizabeth L. Eisenstein, *The Printing Revolution in Early Modern Europe*, Cambridge University Press, Cambridge, 1993, p. 78.
2. Ibid., p. 12.
3. Ibid., p. 13.
4. Ibid., p. 22.
5. Ibid., p. 45.
6. Ibid., p. 73.
7. Ibid., p. 74.
8. Ibid.
9. See "The Net and the Netizens", Chapter 1 in *Netizens: On the History and Impact of Usenet and the Internet*.
10. *The Printing Revolution in Early Modern Europe*, p. 74.
11. Ibid., p. 75.
12. Ibid., p. 150.
13. Ibid., p. 76.
14. Ibid., p. 77.
15. Ibid., p. 78.
16. Ibid., p. 95.
17. Ibid., p. 56.
18. Ibid., p. 101.
19. Ibid., p. 45.
20. Ibid., p. 44.
21. Ibid., p. 45.
22. Ibid., p. 223.
23. Ibid., p. 225.
24. Ibid., p. 154.
25. Ibid., p. 157.
26. Ibid., p. 25.
27. Ibid., p. 182.
28. Ibid., p. 56.
29. Ibid., p. 64.
30. Ibid., p. 167.
31. See "The Net and the Future of Politics," Chapter 13 in *Netizens: On the History and Impact of Usenet and the Internet*.
32. *The Printing Revolution in Early Modern Europe*, p. 81.
33. Ibid., Chapter 1, "An Unacknowledged Revolution."
34. Ibid., p. 165.
35. See "The Computer as Democratizer," Chapter 18 in *Netizens: On the History and Impact of Usenet and the Internet*.
36. *The Printing Revolution in Early Modern Europe*, p. 125.
37. Ibid., p. 178.
38. Ibid., pp. 177, 178.

39. Ibid., p. 31.
40. Ibid.
41. Ibid., p. 209.
42. Ibid., p. 275.
43. Ibid., p. 276.

This article can be seen online at:
http://www.columbia.edu/~rh120/ch106.x16

[Editor's Note: The following was written in 1995. A major component of the internet in the 1980s and early 1990s was the Usenet system of forums and discussion groups. A later version of this appeared as Chapter 13 of the book *Netizens: On the History and Impact of Usenet and the Internet* co-authored by Michael Hauben and Ronda Hauben.]

The Effect of the Net on the Professional News Media: The USENET Collective — The Man-Computer News Symbiosis

by Michael Hauben

> *"The archdeacon contemplated the gigantic cathedral for a time in silence, then he sighed and stretched out his right hand towards the printed book lying open on his table and his left hand toward Notre Dame, and he looked sadly from the book to the church: 'Alas,' he said, 'this will kill that.'"*
>
> Victor Hugo, *Notre Dame de Paris*

I. Media Criticism

Will this kill that? Will the new online forms of discourse dethrone the professional news media?

The French writer Victor Hugo observed that the printed book rose to replace the cathedral and the church as the conveyor of important ideas in the 15th century. Will Usenet and other young online discussion forums develop to replace the current news media? Various people throughout society are currently discussing this question.

The role of modern journalism is being reconsidered in a variety of ways. There are journalists and media critics, like the late Professor Christopher Lasch, who have challenged the fundamental premises of professional journalism. There are other journalists like *Wall Street Journal* reporter Jared Sandberg, who cover an online beat, and are learning quickly about the growing online public forums. These two approaches are beginning to converge to make it possible to understand the changes in the role of the media in our society brought about by the development of the Internet and Usenet.

Media critics like Christopher Lasch have established a theoretical foundation that makes it possible to critique the news media and challenge the current practice of these media. In "Journalism, Publicity, and the Lost Art of Argument," Lasch argued: "What democracy requires is public debate, and not information. Of course, it needs information, too, but the kind of information it needs can be generated only by vigorous popular debate."[1]

Applying his critique to the press, Lasch wrote: "From these considerations it follows the job of the press is to encourage debate, not to supply the public with information. But as things now stand the press generates information in abundance, and nobody pays any attention."[2]

Lasch explained that more and more people are getting less and less interested in the press because, "Much of the press…now delivers an abundance of useless, indigestible information that nobody wants, most of which ends up as unread waste."[3]

Reporters like Jared Sandberg of the *Wall Street Journal*, on the other hand, recognize that more and more of the information that the public is interested in, is starting to come from people other than professional journalists. In an article about the April 1995 Oklahoma Federal Building explosion, Sandberg writes: "In times of crisis, the Internet has become the medium of choice for users to learn more

about breaking news, often faster than many news organizations can deliver it."[4]

People curious and concerned about relatives and others present on the scene turned to the Net to find out timely information about survivors and to discuss the questions raised by the event. Soon after the explosion, it was reported and discussed live on Internet Relay Chat, in newsgroups on Usenet such as alt.current-events.amfb-explosion and on various Web sites. Sandberg noted that many logged onto the Internet to get news from first-hand observers rather than turning on the TV to CNN or comparable news sources.

Along with the broader strata of the population that has begun to report and discuss the news via the Internet and Usenet, a definition of who is a media critic is developing. Journalists and media critics like Martha Fitzsimon and Lawrence T. McGill present such a broader definition of media critics when they write, "Everyone who watches television, listens to a radio or reads…passes judgment on what they see, hear or read."[5] Acknowledging the public's discontent with the traditional forms of the media, they note that, "the evaluations of the media put forward by the public are grim and getting worse."[6]

Other journalists have written about public criticism of the news media. In his article, "Encounters Online", Thomas Valovic recognizes some of the advantages inherent in the new online form of criticism. Unlike old criticism, the new type "fosters dialogue between reporters and readers."[7] He observes how this dialogue "can subject reporters to interrogations by experts that undermine journalists' claim to speak with authority."[8]

Changes are taking place in the field of journalism, and these changes are apparent to some, but not all journalists and media critics. Tom Goldstein, Dean of the University of California at Berkeley Journalism School, observes that change is occurring, but the results are not fully understood.[9]

II. Examining the role of Internet/Usenet and the press

There are discussions online about the role of the press and the role of online discussion forums. The debate is active. There are those

who believe the printed press is here to stay, while others contend that interactive discussion forums are likely to replace the authority of the print news media. Those who argue for the dominance of the online media present impassioned arguments. Their comments are much more persuasive than those who defend the traditional role of the print media as something that is handy to read over breakfast or on the train. In a newsgroup thread discussing the future of print journalism, Gloria Stern stated: "My experience is that I have garnered more information from the Internet than I ever could from any newspaper. Topical or not, it has given me community that I never had before. I touch base with more informed kindred souls than any tonnage of paper could ever bring me."[10]

Regularly, people are commenting on how they have stopped reading newspapers. Even those who continue to read printed newspapers note that Usenet has become one of the important sources for their news. For example, a user wrote: "I do get the *NY Times* every day, and the *Post* and the *Washington Times* and the *Wall Street Journal* (along with about 100 other hard-copy publications), and I still find Usenet a valuable source of in-depth news reporting."[11]

More and more people on Usenet have announced their discontent with the traditional one-way media, often leading to their refusal to seriously read newspapers again. In a discussion about a *Time* magazine article about the Internet and Usenet, Elizabeth Fischer wrote: "The point of the whole exercise is that for us, most of us, paper media is a dead issue (so to speak)."[12]

In the same thread, Jim Zoes stated the challenge posed by the online media for reporters: "This writer believes that you (the traditional press) face the same challenge that the monks in the monastery faced when Gutenberg started printing Bibles."[13]

Describing why the new media represent such a formidable foe, Zoes continued: "Your top-down model of journalism allows traditional media to control the debate, and even if you provide opportunity for opposing views, the editor always had the last word.… In the new paradigm, not only do you not necessarily have the last word, you no longer even control the flow of the debate."[14]

He concludes with his understanding of the value of Usenet to society: "The growth and acceptance of e-mail, coupled with discussion groups (Usenet) and mail lists provide for a 'market place of ideas' hitherto not possible since perhaps the days of the classic Athenians."[15]

Others present their views on a more personal level. One poster writes: "I will not purchase another issue of *Newsweek*. I won't even glance through their magazine if it's lying around now given what a shoddy job they did on that article."[16]

Another explains: "My husband brought [the article] home… for me to read and [I] said, 'Where is that damn follow up key? ARGH!' I've pretty much quit reading mainstream media except when someone puts something in front of me or I'm riding the bus to work…."[17]

These responses are just some of the recent examples of people voicing their discontent with the professional news media. The online forum provides a public way of sharing this discontent with others. It is in sharing ideas and understandings with others with similar views that grassroots efforts begin to attempt to change society.

While some Net users have stopped reading the professional news media, others are interested in influencing the media to more accurately portray the Net. Many are critical of the news media's reporting of the Internet, and other events. Users of the Internet are interested in protecting the Internet. They do this by watch-dogging politicians and journalists. Concern with the coverage of the Internet in the press comes from first-hand experience with the Internet. One Net-user expressing such dissatisfaction writes: "The Net is a special problem for reporters, because bad reporting in other areas is protected by distance. If someone reports to the *Times* from Croatia, you're not going to have a better source unless you've been there (imagine how many people in that part of the world could correct the reports we read). All points of Usenet are equidistant from the user and the reporter – we can check their accuracy at every move. And what do we notice? Not the parts that the reporter gets right, just the errors. And Usenet is such a complete culture that no reporter, absent some form of formal training or total immersion in the Net, is going to get it all right."[18]

Another online critic writes: "It's scary when you actually are familiar with what a journalist is writing about. Kinda punches a whole bunch of holes in the 'facts'. Unfortunately it's been going on for a looong time…we, the general viewing public, just aren't up to speed on the majority of issues. That whole 'faith in media' thing. Yick. I can't even trust the damn AP wire anymore after reading an enormous amount of total crap on it during the first few hours of the Oklahoma bombing."[19]

In Usenet's formation of a community, that community has developed the self-awareness to respond to and reject an outside description of the Net. If the Net was just the telephone lines and computer infrastructure making up a machine, that very machine could not object and scold journalists for describing it as a spreader of pornography or a bomb-production press. Wesley Howard believes that the critical online commentary is having a healthy effect on the press: "The coverage has become more accurate and less sloppy in its coverage of the Net because it (the Net) has become more defined itself from a cultural point of view. Partly because of growth and partly because of what the media was saying fed debates and caused a firmer definition within itself. This does not mean the print media was in any way responsible for the Net's self definition, but was one influence of many."[20]

Another person, writing from Japan, believed that journalists should be more responsible, urging that "all journalists should be forced to have an e-mail address." He explained: "Journalists usually have a much bigger audience than their critics. I often feel a sense of helplessness in trying to counter the damage they cause when they abuse their privilege. Often it is impossible even to get the attention of the persons responsible for the lies and distortions."[21]

Usenet newsgroups and mailing lists provide a media where people are in control. People who are online understand the value of this control and are trying to articulate their understandings. Some of this discussion is being carried on on Usenet. Having the ability to control the mass media also encourages people to try to affect other media. The proposal to require print journalists to acquire and publicize an

e-mail address is an example of how online users are trying to apply the lessons learned from the online media to change the print media.

III. People as critics: the role the Net is playing and will play in the future

People online are excited, and this is not an exaggeration. The various discussion forums connected to the global computer communications network (or the Net) are the prototype for a new public form of communication. This new form of human communication will either supplement the current forms of news or replace them. One person on a newsgroup succinctly stated: "The real news is right here. And it can't get any newer because I watch it as it happens."[22]

The very concept of news is being reinvented as people come to realize that they can provide the news about the environment they live in; that people can contribute their real-life conditions and this information proves worthwhile for others. The post continued: "As other segments of society come online, we will have less and less need for some commercially driven entity that gathers the news for me, filters it, and then delivers it to me, hoping fervently that I'll find enough of interest to keep paying for it."[23]

Such sentiment represents a fundamental challenge to the professional creation and dissemination of news. The online discussion forums allow open and free discourse. Individuals outside of the traditional power structures are finding a forum in which to contribute, where those contributions are welcomed. Describing the importance of the open forum available on the Net, Dolores Dege wrote: "The most important and eventually most powerful aspect of the Net will be the effect(s) of having access to alternative viewpoints to the published and usually (although not always either intentionally or consciously) biased local news media. This access to differing 'truths' is similar to the communication revolution which occurred when the first printing presses made knowledge available to the common populace, instead of held in the tight fists of the clergy and ruling classes."[24]

This change in who makes the news is also apparent to Keith Cowing: "How one becomes a 'provider' and 'receiver' of information is being totally revamped. The status quo hasn't quite noticed – yet – this is what is so interesting."[25]

While this openness also encourages different conspiracy theorists and crackpots to write messages, their contributions are scrutinized as much as any other posting. This uncensored environment leads to a sorting out of mis-truths from thoughtful convictions. Many people online keep their wits about them and seek to refute half-truths and lies. A post from Australia notes that it is common to post refutations of inaccurate posts: "One of the good things about Usenet is the propensity of people to post refutations of false information that others have posted."[26]

As the online media are in the control of many people, no one person can come online and drastically alter the flow or quality of discussion. The multiplicity of ideas and opinions make Usenet and mailing lists the opposite of a free-for-all.

IV. Qualities of this new medium

A common assumption of the ethic of individualism is that the individual is in control and is the prime mover of society. Others believe that it is not the individual who is in control, but that society is being controlled by people organized around the various large corporations that own so much of our society – whether those corporations are the media, manufacturers, etc. The global computer communications networks currently allow uncensored expression from the individual at a bottom rung of society. The grassroots connection of people around the world and in local communities based on common interests is an important step in bringing people more control over their lives. Lisa Pease wrote in alt.journalism: "The net… requires no permissions, no groveling to authority, no editors to deal with – no one basically to say 'no don't say that.' As a result, far more has been said here publicly than has probably been said in a hundred years about issues that really matter – political prisoners, democratic uprisings, exposure of disinformation – this is what makes the net more valuable than any other news source."[27]

Similar views are expressed by others about the power of the Internet to work in favor of people rather than commercial conglomerates: "The Internet is our last hope for a medium that will enable individuals to combat the overpowering influence of the commercial media to shape public opinion, voter attitudes, select candidates, influence legislation, etc…."[28]

People are beginning to be empowered by the open communications the online media provide. This empowerment is beginning to lead toward more active involvement by people in the societal issues they care about.

V. The Pentium story

In discussions about the future of the online media, people have observed how Usenet makes it possible to challenge the privileges inherent in the traditional news media. John Pike started a thread describing the challenge the Net presents to the former content providers: "To me this is the really exciting opportunity for Usenet, namely that the professional content providers will be directly confronted with and by their audience. The prevailing info-structure privileges certain individuals by virtue of institutional affiliation. But cyberspace is a far more meritocractic environment – the free exchange of ideas can take place regardless of institutional affiliation."[29]

Pike continues by arguing that online forums are becoming a place where "news" is both made and reported, and thus traditional sources are often scooped. He writes: "This has tremendously exciting possibilities for democratizing the info-structure, as the 'official' hardcopy implementations are increasingly lagging cyberspace in breaking news."[30]

An example of news being made online occurred when Intel, the computer chip manufacturer, was forced to recall faulty Pentium chips because of the online pressure and the effect of that pressure on computer manufacturers such as IBM and Gateway. These companies put pressure on Intel because people using Usenet discovered problems with the Pentium. The online discussion led to people becoming active and getting the manufacturers of their computers, and Intel to fix the problems.

In the article "Online Snits Fomenting Public Storms," *Wall Street Journal* reporters Bart Ziegler and Jared Sandberg commented: "Some industry insiders say that had the Pentium flub occurred five years ago, before the Internet got hot and the media caught on, Intel might have escaped a public flogging and avoided a costly recall."[31]

Buried in the report is the acknowledgment that the traditional press would not have caught the defect in the Pentium chip, but that the online media forced the traditional media to respond. The original reporting about the problem was done in the Usenet newsgroup comp.sys.intel and further online discussion took place in that newsgroup and other newsgroups and on Internet mailing lists. The *Wall Street Journal* reporters recognized their debt to news that people were posting online to come up with a story that dealt with a major computer company and with the real-world role that Usenet played.

In another article in the *Wall Street Journal*, reporter Fara Warner focused on the impact of the online news on Intel. "[Intel] offered consumers a promise of reliability and quality, and now that promise has been called into question," she writes, quoting the CEO of a consulting firm.[32] The people who did this questioning were the users of the computers with the faulty chips. Communicating about the problem online, these users were able to have an impact not otherwise possible. Ziegler and Sandberg noted that the discussions were online rather than in "traditional public forums like trade journals, newspapers or the electronic media."[33] Online users were able to work together to deal with a problem, instead of depending on other forums traditionally associated with reporting dissatisfaction with consumer goods. After all of the criticisms, Intel had to replace faulty chips to keep their reputation viable. The *Wall Street Journal*, *New York Times* and other newspapers and magazines played second fiddle to what was happening online. In their article, Ziegler and Sandberg quote Dean Tom Goldstein: "It's absolutely changing how journalism is practiced in ways that aren't fully developed."[34]

These journalists acknowledge that the field of journalism is changing as a result of the existence of the online complaints. The

online connection of people is forming a large and important social force.

An Australian reporter, John Hilvert, commented on the value of being online: "[Usenet] can be a great source of leads about the mood of the Net. The recent GIF-Unisys-CompuServe row and the Intel Pentium bug are examples of Usenet taking an activist and educative role."[35]

Although it is hard to rely on any single piece of information, Usenet is not about ideas in a vacuum. Usenet is about discussion and discourse. The great number and range of the unedited posts on Usenet bring up the question of whether editors are needed to deal with the amount of information. Discussing the need to take time to deal with the growing amount of information, a post on alt.internet.media-coverage explained, "The difference being that for the first time in human history, the general populace has the ability to determine what it finds important, rather than relying on the whims of those who knew how to write, or controlled the printing presses. It means that we as individuals are going to have to deal with sifting through a lot of information on our own, but in the end I believe that we will all benefit from it."[36]

Such posts lead to the question of what is meant by the notion of the general populace and a popular press. The point is important, as those who are on the Net make up but a small percentage of the total population of either the United States or the world. However, that online population makes up a significant body of people connecting to each other online.[37] The fast rate of growth also makes one take note of the trends and developments. Defining what is meant by 'general populace and a popular press' the post continues: "By general populace, I mean those who can actually afford a computer, and a connection to the Net, or have access to a public terminal. As computer prices go down, the amount of people who fit this description will increase. At any rate, comparing the 5–10 million people with Usenet access, to the handful who control the mass media shows that even in a nascent stage, Usenet is far more the 'people's voice' than any media conglomerate could ever be."[38]

Computer pioneers like Norbert Wiener, J. C. R. Licklider and John Kemeny discussed the need for man-computer symbiosis to help humans deal with the growing problems of our times.[39] The online discussion forums provide a new form of man-computer symbiosis. They are helpful intellectual exercises. It is healthy for society if all members think and make active use of their brains – and Usenet is conducive to thinking. It is not the role of journalists to provide answers. Even if everybody's life is busy, what happens when they come to depend on the opinions and summaries of others as their own? Usenet is helping to create a mass community that works communally to aid the individual to come to his or her own opinions.

Usenet works via the active involvement and thoughtful contributions of each user. The Usenet software facilitates the creation of a community whose thought processes can accumulate and benefit the entire community. The creation of the printed book helped to increase the speed of the accumulation of ideas. Usenet now speeds up that process to help accumulate the thoughts of the moment. The resulting discussion seen on Usenet could not have been produced beforehand as the work of one individual. The bias or the point of view of any one individual or group is no longer presented as the whole truth.

Karl Krueger describes some of the value of Usenet in a post: "Over time, Usenetters get better at being parts of the Usenet matrix – because their own condensations support Usenet's, and this helps other users. In a way, Usenet is a 'meta-symbiont' with each user – the user is a part of Usenet and benefits Usenet (with a few exceptions…), and Usenet includes the user and benefits him/her."[40]

Krueger points out how experienced Usenet users contribute to the Usenet community. He writes: "As time increases normally, the experienced Usenet user uses Usenet to make himself more knowledgeable and successful. Experienced users also contribute back to Usenet, primarily in the forms of conveying knowledge (answering questions, compiling FAQs), conveying experience (being part of the environment a newbie interacts with), and protecting Usenet (upholding responsible and non-destructive use, canceling potentially damaging SPAMs, fighting 'newsgroup invasions,' etc.)."[41]

As each new user connects to Usenet, and learns from others, the Usenet collective grows and becomes one person richer. Krueger continues: "Provided that all users are willing to spend the minimal amount of effort to gain some basic Usenet experience then they can be added to this loop. In Usenet, old users gain their benefits from other old users, while simultaneously bringing new users into the old-users group to gain benefits."[42]

The collective body of people, assisted by the Usenet software, has grown larger than any individual newspaper. As people continue to connect to Usenet and other discussion forums, the collective global population will contribute back to the human community in this new form of news.

VI. Conclusion

Newspapers and magazines are a convenient form for dealing with information transfer. People have grown accustomed to reading newspapers and magazines wherever and whenever they please. The growing dissatisfaction with the print media is more with the content than with the form. There is a significant criticism that the current print media do not allow for a dynamic response or follow-up to the articles in hand. One possible direction would be toward online distribution and home or on-site printing of online discussion groups. This would allow for the convenience of the traditional newspaper and magazine form to be connected to the dynamic conversation that online Netnews allows. The reader could choose at what point in the conversation or how much of the discussion to make a part of the printed form. But this leaves out the element of interactivity. Still, it could be a temporary solution until the time when ubiquitous slate computers with mobile networks would allow the combination of a light, easy to handle screen, with a continuous connection with the Internet from any location.

Newspapers could continue to provide entertainment in the form of crossword puzzles, comics, classified ads, and entertainment sections (e.g., entertainment, lifestyles, sports, fashion, gossip, reviews, coupons, and so on). However, the real challenge comes in what is traditionally known as news, or information and newly breaking

events from around the world. Citizen, or now Netizen reporters are challenging the premise that authoritative professional reporters are the only possible reporters of the news. The news of the day is biased and opinionated no matter how many claims for objectivity exist in the world of the reporter. In addition, the choice of what becomes news is clearly subjective. Now that more people are gaining a voice on the open public electronic discussion forums, previously unheard "news" is being made available. The current professional news reporting is not really reporting the news, rather it is reporting the news as decided by a certain set of economic or political interests. Todd Masco contrasts the two contending forms of the news media: "Free communication is essential to the proper functioning of an open, free society such as ours. In recent years, the functioning of this society has been impaired by the monolithic control of our means of communication and news gathering (through television and conglomerate-owned newspapers). This monolithic control allows issues to be talked about only really in terms that only the people who control the media and access to same can frame. Usenet, and [online] News in general, changes this: it allows real debate on issues, allowing perspectives from all sides to be seen."[43]

Journalists may survive, but they will be secondary to the symbiosis that the combination of the Usenet software and computers with the Usenet community produces. Karl Krueger observes how the Usenet collective is evolving to join man and machine into a news-gathering, sorting and disseminating body. He writes: "There is no need for Official Summarizers (a.k.a. journalists) on Usenet, because everyone does it – by cross-posting, following-up, forwarding relevant articles to other places, maintaining ftp archives and WWW indexes of Usenet articles."[44]

He continues: "Journalists will never replace software. The purpose of journalists is similar to scribes in medieval times: to provide an information service when there is insufficient technology or insufficient general skill at using it. I'm not insulting journalism; it is a respectable profession and useful. But you won't need a journalist when you have a good enough newsreader/browser and know how to use it."[45]

These online commentators echo Victor Hugo's description of how the printed book grew up to replace the authority that architecture had held in earlier times. Hugo writes: "This was the presentiment that as human ideas changed their form they would change their mode of expression, that the crucial idea of each generation would no longer be written in the same material or in the same way, that the book of stone, so solid and durable, would give way to the book of paper, which was more solid and durable still."[46]

Today, similarly, the need for a broader, and more cooperative gathering and reporting of the news has helped to create the new online media that are gradually supplanting the traditional forms of journalism. Professional media critics writing in the *Freedom Forum Media Studies Journal* acknowledge that online critics and news gatherers are presenting a challenge to the professional news media that can lead to their overthrow when they write: "News organizations can weather the blasts of professional media critics, but their credibility cannot survive if they lose the trust of the multitude of citizens critics throughout the United States."[47]

As more and more people come online, and realize the grassroots power of becoming a Netizen reporter, the professional news media must evolve a new role or will be increasingly marginalized.

Notes

1. Christopher Lasch, "Journalism, Publicity, and the Lost Art of Argument," *Media Studies Journal,* Vol 9 no 1, Winter 1995, p. 81.
2. ibid.
3. ibid., p. 91.
4. Jared Sandberg, "Oklahoma City Blast Turns Users Onto Internet for Facts, Some Fiction," *Wall Street Journal*, April 20, 1995, p. A6.
5. Martha Fitzsimon and Lawrence T. McGill, "The Citizen as Media Critic," *Media Studies Journal*, Vol 9 no 2, Spring 1995, p. 91.
6. ibid.
7. Thomas S. Volovic, "Encounters Online," *Media Studies Journal*, Vol 9 no 2, Spring 1995, p. 115.
8. ibid.
9. Bart Ziegler and Jared Sandberg, "Online Snits Fomenting Public Storms," *Wall Street Journal*, December 23, 1994.
10. From: Gloria Stern
    Date: 7 April 1995

Subject: Re: Future of print journalism
Newsgroups: alt.journalism

11. From: John Pike
Date: 24 April 1995
Subject: Re: Usenet's political power (was Re: Content Providers — Professionals versus Amateurs on Usenet)
Newsgroups: alt.culture.usenet
12. From: Elizabeth Fischer
Date: 20 July 1994
Subject: Re: *Time* Cover Story: pipeline to editors
Newsgroups: alt.internet.media-coverage
13. From: Jim Zoes
Date: 22 July, 1994
Subject: Re: *Time* Cover Story: pipeline to editors
Newsgroups: alt.internet.media-coverage
14. ibid.
15. ibid.
16. From: Catherine Stanton
Date: 21 July 1994
Subject: Re: *Time* Cover Story: pipeline to editors
Newsgroups: alt.internet.media-coverage
17. From: Abby Franquemont-Guillory
Date: 22 July 1994 13:45:19 -0500
Subject: Re: *Time* Cover Story: pipeline to editors
Newsgroups: alt.internet.media-coverage
18. From: The Nutty Professor
Date: Mon, 16 Jan 1995 13:35:34 GMT
Subject: Re: Reporter Seeking Net-Abuse Comments
Newsgroups: alt.internet.media-coverage
19. From: Mikez
Date: Tue, 25 Apr 95 03:58:55 GMT
Subject: Re: Mass media exploiting 'cyberspace' for ratings
Newsgroups: alt.journalism.criticism
20. From: Wesley Howard
Date: 8 Apr 1995 05:39:43 GMT
Subject: Re: Does Usenet have an effect on the print news media?
Newsgroups: alt.internet.media-coverage
21. From: John DeHoog
Date: Fri, 21 Apr 1995 20:01:24 +0900
Subject: Make journalists get an e-mail address!
Newsgroups: alt.journalism
22. Message-Id: <elknox.35.00091823@bsu.idbsu.edu>
23. ibid.
24. Delores Dege, "Re: Impact of the Net on Society," e-mail message, 21 February 1995.
25. From: Keith L. Cowing
Date: Mon, 17 Apr 1995 12:33:23 -0500
Subject: Re: Content Providers — Professionals versus Amateurs on Usenet
Newsgroups: alt.culture.internet

26. From: William Logan Lee
    Subject: Re: Is hobby computing dead? (was Creative
    Newsgroups: alt.folklore.computers
27. From: Lisa Pease
    Date: Wed, 5 Apr 1995 23:17:24 GMT
    Subject: Re: Future of print journalism
    Newsgroups: alt.journalism
28. From: Norman
    Date: 20 Mar 1995 21:05:54 -0500
    Subject: Re: Impact of the Net on Society
    Newsgroups: alt.culture.internet
29. From: John Pike
    Date: 17 Apr 1995 12:21:49 GMT
    Subject: Content Providers — Professionals versus Amateurs on Usenet
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31. Bart Ziegler and Jared Sandberg.
32. Fara Warner, "Experts Surprised Intel Isn't Reaching Out To Consumers More," *Wall Street Journal*, 14 December 1994.
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34. ibid.
35. From: John Hilvert
    Date: Wed, 5 Apr 1995 03:40:57 GMT
    Subject: Re: Does Usenet have an effect on the print news media?
    Newsgroups: alt.culture.usenet
36. From: Miskatonic Gryn.
    Date: 17 Apr 1995 15:31:22 -0400
    Subject: Re: Cliff Stoll
    Newsgroups: alt.internet.media-coverage
37. The number of people accessible via e-mail was placed at 27.5 million as of October 1994 according to John Quarterman and MIDS at http://www.tic.com/mids/howbig.html
38. From: Miskatonic Gryn.
39. See John Kemeny, *Man and the Computer*, J. C. R. Licklider, "Man Computer Symbiosis," Norbert Wiener, *God & Golem*, Inc.
40. From: Karl A. Krueger
    Date: Mon, 27 Mar 1995 08:58:33 GMT
    Subject: Re: Special Issue of *Time*: Welcome to Cyberspace
    Newsgroups: alt.internet.media-coverage
41. ibid.
42. ibid.
43. From: L. Todd Masco
    Newsgroups: news.future, comp.society.futures, ny.general
    (No subject line)
44. Karl A. Krueger.
45. ibid.
46. Victor Hugo, *Notre Dame de Paris*, translated by John Sturrock, Penguin Books, London, 1978, p. 189.
47. Fitzsimon and McGill, p. 201.

[Editor's Note: The following was put online in January 1997. Netnews is another name for Usenet]

New York City Civic Culture from "The Friendly Club" in the Eighteenth Century to Netnews Today

by Michael Hauben

The birth of intellectual thought in New York City during the eighteenth century mirrored the intellectual ferment of the time in Edinburgh and London. Thomas Bender in *New York Intellect* (Alfred A. Knopf Inc, New York, 1987) describes this intellectual climate as a civic culture. Prior to the development of such an active culture, America needed to develop a critical mass of people. As residential density is greater in the city, the city had the potential to be more intellectually exciting than the country. However, during the first half of the eighteenth century thoughtful people in American cities still felt isolated. This isolation came about from the lack of the ability to communicate and discuss ideas with others. It is hard to be able to improve upon one's thoughts if there is no outside commentary or criticism. Also, the best ideas often come about from the meshing and interaction of two or more minds. The mixing of different sources usually lead to new and robust creations. New Yorkers felt isolated as they knew they were on the periphery of the world, far away from the cultural centers of Europe. However, these people sought to develop a community which would welcome the discussion and creation of ideas.

Civic culture describes a possible city life in which public life and intellectual life merge and overlap, rather than when these lifestyles are lived by two sets of different people. In London, people would often meet in coffeehouses to get together in order to exchange and discuss ideas. These discussions were different from past intellec-

tual exchanges by being secular in nature and taking on, at times, very defined forms. The essay provided a way of both thinking about a topic and writing it down in a concrete form. (Thomas Bender, *New York Intellect*, p. 10) The essay provided thoughtful material to discuss upon meeting other people. Bender writes that this culture in New York developed "a distinctive metropolitan character by the conjunction of literary and practical affairs." (p. 10)

During the time of the birth of this new American intellectual culture, colleges existed, but were different from today's academic institutions. American colleges in the eighteenth century existed as traditional centers of denominational religious education. An important figure in the beginning of New York City's intellectual life was William Livingston. Livingston graduated from Yale as part of a first generation of non-ministerial college graduates. (p. 17) Livingston and colleagues met together in New York City in a group which Livingston described to a friend as a "Society for Improving Themselves in Useful Knowledge." (p. 17) This was just one of many burgeoning social civic societies. These societies represented a life which was not possible in a more rural area. Gradually, the purpose of these societies evolved from the social to the intellectual. Participants became interested in further increasing their knowledge of the world and of ideas.

By 1754, two general institutions were formed which would help to spread this intellectual milieu throughout the city. The New York Society Library was opened to help promote "a spirit of inquiry among the people." (p. 18) As such, it was intended to help any individual who would be interested in expanding his or her mind. In addition to providing access to books, the Library was to function as a museum and a research institute. (p. 18) Kings College, later renamed Columbia College, was also formed to make advanced intellectual study a possibility for New Yorkers.

The social circles in the community continued to grow and encourage intellectual association. A prominent example was "The Friendly Club" formed in 1793. These circles started concentrating on the discussion and criticism of literature. This discussion often took place in the form of conversation at weekly meetings. The partici-

pants likened these meetings as their connection to the growing "republic of intellect." (p. 31) Today's intellectual activity differs in that much of it relies on printed publications rather than on on-going conversations.

Some involved in these weekly societies would note with disdain that others tended to have less time for concentrating on the discussion because of their growing interest in commerce. This seemed to pave the way for the development in New York City of what Bender calls a literary culture, and later the academic culture. Both represent the narrowing of who would consider themselves part of the intellectual culture of the times. Whereas the businessmen, lawyers and mechanics among others would participate in the civic culture, writers and others made up the literary milieu. Lastly, the university represents the total separation of intellectual study from any other profession. Bender notes this as the academicization of knowledge. He concludes his book by calling for the liberation of knowledge and intellectual thought from the privileged university into the democratic mass of the general city.

The civic culture of the eighteenth century has reemerged in the late twentieth century in the form of discussion groups facilitated by the interconnection of computers and computer networks. Computer facilitated communications take the form of Netnews, mailing lists and real-time discussion groups in Internet Relay Chat (IRC) or conferences. Bender described some of the intellectual activity pursued by the eighteenth century societies as "the gathering of information and its distribution." (p. 32) The most important of the new developments I listed above, Netnews, technically does just that. Usenet was created to provide an automated and cost-effective way of distributing information between early Unix computer sites. This allows for people to contribute some information in the form of a post or article, and have the system distribute it to the next Usenet site up the stream. The next site continues the distribution and so on until the article has gone around the world. Local newsgroups which discuss New York City and its environs include nyc.general, nyc.announce and nyc.seminar, which is used to announced seminars, meetings and other such "societies."

Other similarities abound. Bender wrote how intellectual life in the eighteenth century was founded on conversation. (p. 39) He then contrasted that with today's reliance on books and journals as a means for intellectual life. Usenet removes the boundary between conversation and the structured form of the printed word. A contribution to Netnews is in the form of a post. A post is a message contributed to any one or combination of newsgroups or subject areas of discussion. A person's post is either a reply to a previous post, or the beginning of a new thread of discussion. In either case, a person's contribution can include a short or longer reply written in a conversational style, or it can be a more structured answer as in the form of an essay, pamphlet, or paper. The Usenet "Post" thus bridges the gap between the conversations of the eighteenth century and the publications of the twentieth century.

In New York Intellect, Bender discussed how growing concern about people's money making efforts helped lead to the professionalization of intellectual thinking. This concern about one's profession meant some people spent less time outside of work trying to expand their mind. (p. 120) This is a very contemporary issue with the computer networks. The physical connection of multiple computers and networks, often called the "Net," was originally developed and funded through public monies. The future of who will run the Net is currently in question. However, one thing which ties in with this is the culture of the Net. It has developed as a culture of sharing, where people contribute to the greater whole. This culture of sharing was facilitated by the fact that there were no charges to connect to Usenet or the ARPAnet outside of the normal operational costs and a possibly a local phone call. If profit would begin to run the Net, sharing might not continue to be a part of the picture. Users might come to understand the Net as a service which they demand certain outcomes from, and not as a community to both gain from and contribute to at the same time.

The concept of a 'civic intellectual culture' is a very interesting idea. It describes a progressive way of gathering people in today's society and cities together to help solve the problems which seem to plague today's cities. Today's technologies provide a way to realize

civic culture. Only through the facilitation of uncentralized discussion based on peoples varying schedules and commitments can such a conversation actually take place. To make civic culture feasible, connections into the computer networks need to be made easily available. It is impossible to assume that everyone should have a computer to hook into the conversation. As such, the placement of public terminals into community centers and libraries would be a possible solution. And for those who do have personal computers and modems in their homes, a local bank of phone numbers should be available to facilitate the conversation. Thomas Bender foresaw the need to move intellectual discussions out from the University into the broader community, and today's technology has started this process. In order to improve our future, we need to spread access to the general public to make the discussion on the Net fully democratic in form and availability. A New York Freenet[1] would help make this vision a reality.

Notes:

1. Freenet is an experimental community computer networking program. The first freenet was opened in Cleveland with support from Case Western Reserve University and the Cleveland Public Hospital. The Cleveland Freenet is open and available for free to all Cleveland residents (and anyone willing to call a Cleveland phone number or with access to the Internet). It provides the capability of communicating with local governmental officials, other freenet users, and e-mail users around the world. In addition, access is given to many international Netnews newsgroups. Freenets have started to be established across the U.S.A. and the world.

This article can be seen online at:
http://www.columbia.edu/~hauben/CS/civic-culture.txt

[Editor's Note: The following was put online in December 1992. It is not scientifically correct because it suggests incorrectly that acquired biological characteristics can be passed on to future generations. On the other hand, beneficial cultural characteristics (for example labor saving inventions, or speech or writing) can be and are passed on from generation to generation. That is the 'progress' the author argues results from technology.]

Does Progress Result from Technology?

by Michael Hauben

What does progress mean to the human species? Progress is the gradual betterment or development of mankind. Technology is a basis for progress. We can figure out if this is correct by looking at the very dawn of mankind some four or five million years ago. The beginnings of a phenomena display the easiest understandable form. From its early form, we should be better able to understand the influence technology has had on progress. In the nineteenth Century, two substantial thinkers produced works on this idea. Lewis Henry Morgan, an amateur anthropologist wrote *Ancient Society* (1877), and Frederick Engels, who in this case might be considered an amateur archeologist, wrote an article entitled "The Part Played by Labor in the Transition from Ape to Man" (1884).

Both Morgan and Engels agree that humans started without any technical prowess, and gradually developed technology through experimentation. Engels starts his paper describing the human ancestor as an anthropoid ape, and of the biological process that led to a man without technology. Morgan wrote: "The latest investigations respecting the early condition of the human race, are tending to the conclusion that mankind commenced their career at the bottom of the scale and worked their way up from savagery to civilization through the slow accumulations of experimental knowledge." (Morgan, p. 3) Engels pinpoints bipedalism as the decisive transition from ape to man. He writes: "Climbing assigns different functions to the hands

and feet, and when their mode of life involved locomotion on level ground, these apes gradually got out of the habit of using their hands [in walking] and adopted a more and more erect posture. This was the decisive step in the transition from ape to man." (Engels, p. 251)

Early primates emerged from the tree environment and entered onto the savanna. Bipedalism was the next development. The slow biological evolution paved the path for the much faster cultural evolution. "Handedness" developed as man's ancestors walked on only two feet. The least competitive food source was available by foraging plants. Free hands were naturally better to forage with. Naturally selected bipedalism allowed the hands freedom to develop. Engels talks about the development: "But the decisive step had to be taken, the hand had become free and could henceforth attain ever greater dexterity; the greater flexibility thus acquired was inherited and increased from generation to generation." (Engels, p. 251) The hand freed from climbing could evolve by natural selection to do more successful non tree-climbing activities. So Engels had the correct sense, but the wrong mechanism in mind.

Once the hand was freed from walking or climbing through evolution, more useful or varied purposes could be developed. Engels explains: "Thus the hand is not only the organ of labor, it is also the product of labor. Labor, adaption to ever new operations, the inheritance of muscles, ligaments, and, over longer periods of time, bones that had undergone special development and the ever renewed employment of this inherited finesse in new, more and more complicated operations." (Engels, p. 252)

What happened next is unknown, but with the hand freed to develop, the first technology emerged. Man's earliest ancestors (Homo habilis, or maybe even one of the australopithecine species) were the first to make and use stone tools. Most likely natural stones were first picked up and found to be strong and usable to achieve a goal faster. Increasing use of stones, made possible by the uniquely evolved hand of man, led to the advantage of increasing flexibility of the hand. As stones were picked up and used, either accidently or through experimentation, broken or "crafted" rocks were found to be even more useful. Here stands the beginnings of tool-making. The use of the hands

in conjunction with rocks allowed the brain to develop through the experimentation and use of the hand. Experience with using the hand led to development of the brain. The experimentation with the hand lead to the evolution of the brain. Those with biologically developed hands had increased flexibility. These individuals had an increased advantage via natural selection. The offspring of these individuals had a biological advantage over those without the increased flexibility. Engels describes tool-making as a clue to the transition from ape to man: "Labor begins with the making of tools. And what are the most ancient tools that we find – the most ancient judging by heirlooms of prehistoric man that have been discovered, and by the rawest of contemporary savages? They are hunting and fishing implements, the former serving at the same time as weapons. But hunting and fishing presuppose the transition from an exclusively vegetable diet to the concomitant use of meat, and this is another important transition from ape to man." (Engels, p. 256)

Progress of stone tool development is an important technology to follow. The evidence of increasing intricacy and complexity of stone tools in the archeological record leads to an interesting question. Does the advancement in stone tool technology demonstrate tool usages effect on the brain, or vice versa? The continued experimentation pushed the degree to which man had to expand his mind. This was a totally cultural development. New discoveries were likely to have been shared and this allowed for a continued communal cultural development.

The development of tool-making is the first example of technological development pushing our ancestors to further develop an idea and in the process challenging the brain which helped development. The brain did not develop by itself. Instead, the experimentation with certain ideas and concepts led to development. Morgan explains the importance of constant experimentation to human progress: "With the production of inventions and discoveries, and with the growth of institutions, the human mind necessarily grew and expanded; and we are led to recognize a gradual enlargement of the brain itself, particularly of the cerebral portion." (Morgan, p. 37) The question that is not taken up is how natural selection works in respect to the brain. In ad-

dition the influence of the development of the hand to the brain has not been successfully understood. However, this is an important question.

This "playfulness" was necessary in order for continued development to happen. Today the human species constantly is at work pushing the technological envelope never being satisfied. This is a good direction, because this also pushes the continued development of the intellect. The continued development of the mental processes helps improve the standard of society. This is what is meant by progress. There is no finished "plateau" of total achievement.

The earliest development was the slowest, because it was relatively the greatest. Morgan writes: "The slowness of this mental growth was inevitable, in the period of savagery, from the extreme difficultly of compassing the simplest invention out of nothing, or with next to nothing to assist mental effort; and of discovering any substance or force in nature available in such a rude condition of life." (Morgan, p. 37)

Development was not always progressively increasing. There were periods of stagnation. Morgan explains how development was held back. The next step could be elusive. The development of domestication of animals and later of the smelting of iron ore were crucial steps. Morgan explains: "The most advanced portion of the human race were halted, so to express it, at certain stages of progress, until some great invention or discovery, such as the domestication of animals, or the smelting of iron ore, gave a new and powerful impulse forward." (Morgan, p. 39)

Man's developments that differentiated him from other animals are numerous. Man gradually added different foods to his diet. The development of tools to forage led to the development of tools to scavenge. As man added scavenged meat to his diet, it was seen that there was plenty more live meat about. This live game needed to be killed before being edible. The further development of tools made this possible. Constant development of technology allowed man to further define his environment. Engels describes this process: "Just as man learned to consume everything edible, he also learned to live in any

climate. He spread over the whole of habitable world, being the only animal fully able to do so of its own accord." (Engels, p. 258)

Fire was probably the next invention of great importance. Fire made control over environment possible. Fire provided warmth for colder regions, and made subsistence easier. Engels elaborates on the second of these points: "[Fire] still further shortened the digestive process, as it provided the mouth with food already, as it were, half digested" (Engels, p. 257)

Man is a part of nature, but learned how to deal with nature. Man learned how to control nature for his advantage. This represents the ultimate difference from other animals. Engels first tells how man is part of nature: "In nature nothing takes place in isolation. Everything affects and is affected by every other thing." (Engels, p. 259) Man's ability over nature is his next point. Engels writes: "In short, the animal merely uses its environment, and brings about changes in it simply by his presence; man by his changes makes it serve his ends, masters it. This is the final, essential difference between man and other animals, and once again it is labor that brings about the distinction." (Engels, p. 260)

Two patterns of thought disagree with technological progress. Religion and creationism holds that man was given superiority by living in paradise in the Garden of Eden. After the original sin, man was kicked out and made to start over again. Not very helpful when man in fact started out with nothing. Constant experimentation led to technological and intellectual development and the constant progress of the human species. The other pattern is from an environmentalist point of view. Human use of technology is said to destroy the environment, when in fact technology is the main reason we are not still in a primitive stage.

Progress in man's beginnings meant gaining control of the environment in order to be able to make the decisions that would help with survival. This was made possible through the development of technology of man. Biological evolution produced bipedalism, which provided our early ancestors with an advantage and thus set the platform for further developments. First stone tool use, then stone tool production helped to encourage intellectual development of the spe-

cies. Next came better control over subsistence. Fire helped, but animal domestication and agriculture allowed for steady flow of food for a set rate of work. Presumably at some point in the various stages spoken language developed. Speech meant man was able to communicate and make decisions as a group. Now, control was stabilized and gave room for written language.

Written language made future development much easier. What was developed could not be yet recorded for posterity and communicated in all its detail to future generations until there was written language. Morgan says with this development civilization commences. Written language was the foundation for most of modern advances. We are at this point in the world development through the driving force of technology. New tools and inventions have led to a progressively better developed ability to provide the needed sustenance and livelihood to the human species. Those who deny the role played by inventions and discoveries in the progressive evolution of the human species deny the long evolution of advancement from prehistory to the modern era.

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