Computer as Community Memory:

How People in Very Poor Neighborhoods Made a Computer Their Own

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Introduction:

"A bright orange electric cord dangles down from a second-floor apartment to a Volkswagen van parked by the sidewalk below. The van's open hatchback reveals an inexpensive PC computer to which the extensions cord connects. In contrast to the bleak vacant lots and burnt-out buildings of the South Bronx neighborhood, the scene in the street is full of life. Children cluster around the van watching each other using the computer in turn. Others sit on blankets on the sidewalk, drawing, painting, and reading books. Parents watch from apartment windows; others are involved with the children, helping or just supervising. Passers-by stop, look and occasionaly offer advice." [Fanelli, Tardieu, 1986]

In the summer of 1985, one could find the same scene repeated in three other neighborhoods of New York City: East New York, Coney Island and the Lower East Side of Manhattan, and later in the lobby of a welfare hotel in Manhattan. The activity, called a "Street Libraries", is a pilot project of the Fourth World Movement[2] and its volunteers workers, in conjunction with families of these communities. Introducing computers in these Street Libraries was an innovation within an innovation that I will try to describe here, drawing extensiveley on a book, Passport to a new world of technology... computers, in which Vincent Fanelli and myself documented the experiment. I will also describe the process of thoughts, questions, design of action, action and "reflexion on action" [Schon, 1983] that occurred all along this experiment in widely uncharted field, as well as mention new experiments that grew out of that first project.

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[1] To be published as a chapter of a book about Advanced Information Technology and Poor Communities at MIT Press fall 1997, edited by Donal Schon and Bish Saynial.

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To fully understand the approach we have had, I will first describe some of the Fourth World Movement's founding ideas, vision on poverty and ways of operation, in particular those of the street library. We will then see how these premises led us to confronting the new advanced information technology, raising new questions and worries, then developping new actions and learning.

1 Background to the Community Computer Street Library project

1.1 Why there? Why computers?

The South Bronx, East New York and the other neighborhoods were not chosen by chance. The history of our action in the United States since 1964 with constantly moving families led us there. They are indeed significant places. "The poorest of the poor by any standards"... "Fear and anxiety are common. Many cannot sleep"... "In the streets outside, the restlessness and anger that are present in all seasons frequently intensify under the stress of heat" ... " 'The *Times* refers to the streets around St. Ann's Church as the 'deadliest blocks' in the 'deadliest precinct" of the city. If there is a deadlier place in the United States, I don't know where it is." These words of Jonathan Kozol describe, in his recent book Amazing Grace, the very same neighborhood where the street library took place, two blocks away from that church. In short, these neighborhoods are touched by extreme poverty that the Fourth World Movement has been fighting for the last 40 years throughout the world.

Yet, one might wonder why children, young people and adults coping with such extreme conditions, wordless suffering, and trapped in idleness, would suddenly mobilize their energy for books, paints and computers, create peace in the street, and dare again to show their hope, especially for the little ones.

Since its beginning in France in the 1960s, and now in Europe, Asia, Africa and the Americas, the street library program has been opening the modern world to children in poverty, through reading books, story telling, art and science projects. Yet introducing computers in the street libraries has not been an easy step. It took the vision of Father

Joseph Wresinski founder of the International Movement ATD Fourth World to convince Fourth World volunteers with background in science and computers, including myself, to start thinking about it. He was sure poor people would get involved immediately, eager to be a part of today's world. It was others, us, who resisted.

For Joseph Wresinski the central issue of poverty is an exclusion that extends beyond economic resources to being left out of the social, cultural, educational and political life of the nation. When computers arrived on the scene, he insisted that the poorest be part of this modern revolution, and not once again left behind. He was confident that the very basic humanity of the poorest would lead the volunteers and bring new light to that revolution that some feared as dehuminizing relationships. After all was not that revolution precisely about knowledge, and communication between human beings, what he saw as key dimentions of the strggle against poverty?

1.2 Wresinski's vision on extreme poverty. The Fourth World.

--When experience is denied.

The late Joseph Wresinski[3] was born himself in poverty and exclusion. He knew first hand that beyond poverty, there is misery, where people are seen as "infra human beings," a "social death" that makes extreme poverty a denial of human rights.[4]

At school Joseph was told not to take the elementary school exam because coming from such a family, teachers were sure he would fail; Pushed by his mother he took it anyway outside of the school and passed. Later he was threatened to be put in an orphenage to receive better influence. Time and again the poorest of the poor are told that their children are not well equipped to learn and end up believing it. They too are told that the experience of their milieu is harmful, not to be transmitted to their children. It makes

[3] About Father Joseph Wresinski's life (1917-1988) see *Father Joseph Wresinski-Voice of the Poorest* by Alwyne de Vos van Steenwijk, Queenship Publishing Company 1996.Ed Quart Monde, Paris 1989.
[4] "Extreme Poverty and Lack of Economic Security" Report of the French Economic and Social Council, Joseph Wresinski, 1987.

the poor constantly uprooted, with a denied past, doubting of their own experience, knowledge and history, the "first man on earth" as Albert Camus wrote.[5]

-- Sharing knowledge to break the isolation

Wresinski saw knowledge as the key, and sharing knowledge the action to undertake: Enable the very poor to free themselves of their "truncated culture" in which values cannot be lived [6] by learning from others, and all the other to acknowedge and learn from the poor's suffering and struggle. As Mr. Dacier, a man who knew the extremes of poverty recently told me, "lack of education and ignorance is a cruse, but it is not the worse. The worse is that people ignore you." The learning has to be reciprocical.

-- Fourth World: An identity that allows to contribute as full citizens

In 1956 in the camp for homeless families of Noisy le Grand where he funded the Fourth World Movement, Wresinski recognized the experience of his own family and realized "that the families gathered in that camp were not just an accumulation of individual situation, of 'social cases' as the administration in these years called them. The Movement knew right away that they belonged to a same people.(...) Discover a people where other saw social cases, see a historic identity where others denied the social reality.[7]" These reflections led this association and its newly created institue of research to forge a name, allowing the poorest of the poor to have their distinct voice heard. They coined the word Fourth World[8] referring to the "Cahiers du Quatrieme Ordre" published during the French revolution by Dufourny de Villiers to call the attention on these citizens who were

[5] Le Premier Homme, A. Camus, Gallimard, 1994, Paris.
[6] "Extreme Poverty and Lack of Economic Security" Report of the French Economic and Social Council, Joseph Wresinski, 1987. This approach deepens and somewhat contradicts the idea of "culture of poverty" of Oscar Lewis.
[7] Les Pauvres sont l'Eglise, J Wresinski, Ed Le Centurion, 1983, Paris.

[8] The association used the word in various piblicaton during the 60s, then published in 1969 "Le Quart Monde" by Professeur Jean Labbens. For a definition of Fourth World (refering to the poorest as subjects, unlike in the sociological notions of underclass or lumpen proletariat) see Quart Monde, by Louis Join Lambert, in Encyclopedie Unversalia, Themes et Problemes, pp 341-344, 1981.
In his conference during the colloquium leading to this book, Manuel Castel mentionned the emergence of a fourth world "from the South Bronx to Burkina Faso," "people who are not exploited but are irrelevent."

so poor that they did not participte in the national consultation and which contribution had to be specially sought.[Dufourny de Villiers, 1789]

These ideas formulated in the late 1950s find today a strong echo in the coming of the new information society. Are not full citizens of today's world the ones whose experience, expertise and intelligence are sought for produce today's wealth and contribute to the conversations that sustain modern democracy? What then about the citizenship of the poor if their experience is not valued, nor documented by the places who give value to knowledge, the universities[9]?

That's why when advanced informaion technology appeared Father Wresinski kept saying that short of using them with the poorest, the impossibility of communication between the poor and the others would cristallize even more into the system. Professor Seymour Papert, working in Paris at that time, met Pere Wresinski and the volunteers, then visited some of the poorest families in the area. "What struck me most in that first visit, Papert confided recently, is that the people had no hopes to learn themselves about computers and the modern world. But they had tremendous hopes for their children. And they felt that maybe the computer could help. The children could be the mediators for their parents." This pointed the fingers to trying to experiement first with computers and children in our street libraries.

1.3 Street Library: meeting with the children of the poor, on their turf.

The idea of street library came about when, in 1968, Wresinski had conversations with French students occupying La Sorbonne, and rioting in Paris stating that university knowledge was oppressive and real knowledge was in the streets. He challenged them to apply these ideas by going and sharing their knowledge in the mud of the shanty towns' streets around Paris. Many students did and started that movement. In the US, where Fourth World volunteers had been introduced in 1964 by Professor Lloyd Olin[10], street li-

[9] Echec a la misere, Adress to university in La Sorbonne, J Wresinski 1983.

[10] Criminologist from Columbia University, one of the inspirers of the US war on Poverty, co-founder of Mobilization for Youth, Lloyd Olin learned about the Fourth World Movement in one of the first colloquium organized by its institute of research in UNESCO. He then offered to have Fourth World Volunteers

braries had grown out from a joint history between the volunteers and the poor families. Volunteers first lived and worked in the Lower East Side of Manhattan, running a Montessori type preschool and learning center for youth. When the poorest families were driven out by gentrification, volunteers chose to persue the links with them rather that keep their programs. Eventually, informal links in which learning was always central decided some of these families to talk to neighbors about learning together, and these gathering of children naturally found their way to the street, becoming street libraries.

The street is really the center of the community life in poor neighborhoods. In neighborhoods where nothing is organized for the children once school closes, and the street is their only playground, the street library is a resource in the hands of a community. It is a public affirmation that despite all the difficulties, every child wants to learn, enjoys learning and creating, even the poorest ones, if they are given priority.

2. Preparatory work to introduce computers: What do we know? What should we do?

2.1 Two relevent features of the computer: powerful words and associative memory.

When Pere Joseph and later Vincent Fanelli told me to use my skills in computers in the street library program in New York City, I had my doubts. It was only two years since I had finished my Ph.D. in computer science on "learning models". I did not see how the very poor children could benefit from computers. What convinced me was to realize that Wresinski's questions were real challenges to my own knowledge about learning processes; his dialogue with Seymour Papert and intellectual links with Piaget attracted me. Yet I felt quite unsecured with this challenge, wondering what I really knew. I kept these questions in mind while doing these street libraries, and discussed them with Vincent Fanelli, former science teacher who too was thinking a lot about this. Two facts about computers reappeared to me as significant.

First of all, computers are machines linking language and action. Words can either be an object of word processing or an order to the computer: you can type the word "PRINT" as part of the story of Gutemberg or type it to actually make a printer print that

participate in the MFY evaluation.

story. In computer jargon one say that a string of bits can be either data or command. This equivalence allows programming: words make things happen. Seeing the effect of words, making them "powerful ideas" [Papert, 1980], helps to learn. This was explained for me once by a child who renamed the computer's "Return Key" the "key that obeys." He was stunned: no such key in his hard life that would make it "obey" his words.

Another fact struck me about computers is that it "has a memory." "I go to school then I forget everything," a Puertorican girl explained to me. And as an echo Wresinski says, "the poorest, with no memory, no history, have no future." With computers memory makes a step by being associative. The distinction between adress and content blurs. It means that unlike books or tapes, electronic memory can be searched by its content: a text can be found not only through its author or title but through the subjects it covers. Moreover, two texts can be associated according to any inquiry, not necessarily predicted by the organizers of that memory, nor by the authors of the texts. Could this associative memory possibly help free ouselves from always questionning the same people, supposed to know, while we never question others? Could it help us judge from the matter rather than authority of authors, and "think together" with less boundaries? This has its importance for the poor who are cut off from this "thinking together."

2.2 First approach, experiments and survey: computers already in the poor's lives.

Before deciding whether or not bring computers to the street libraries, and how to go about it without loosing sight of our priority -- remain close to the poorest families, we wanted to find out what the families we knew thought of computers and what experience, if any, they already had of them. We did this by conducting a survey in our Tapori[11] newsletter that reaches about 5000 children from very poor areas and other backgrounds throughout the United States; by making a small personal computer available to the families who came to the Fourth World center and take another one to people's home to give

[11] Tapori is the children branch of the Fourth World Movement. It was named after children that Father Wresinski had met in India, living in railway stations, sharing what they had, yet despised by many. Everyone had told him not to interact with these children who had nothing good to teach him. Tapori allows children from very poor background and other backgrounds to learn from each other and become friends.

them a chance to try and comment. The following observations come from the survey as well as from the Fourth World volunteers daily participant-observation reports.

-- Expectations but out of reach.

In the spring of 1985 among 220 readers of the Tapori newsletter who answered the survey, almost all the children from middle-class background had used computers, while two-thirds of the children from poor neighborhoods said they had never used one. Yet families in poor neighborhoods seemed to be waiting for computers. "We will get forty-five computers for Christmas in our school" Luis told us three times, excited about it. But Christmas passed and there were still no computers. Norma spoke about a candy sale in her school to raise money for computers, but again they never appeared. Parents told us that their children were asking for a computer for Christmas, but could not afford one.

-- Computers mean success

Johnny once surprised his family and I by using all the computer terminology, "joystick", "database, "lightpen". He had never used a computer, nor were there any in his school. He had learned in his own way: "On Saturday afternoon I always watch TV because between the cartoons they have commercials, and most of them are about computers. Some kids have computers at home, but we can't pay all that money(...). You'd better learn about computers if you don't want to be dumb. That's why I learn on TV."

Other children told us, "If I had a computer, I could go to college." ... "I would pass all grades." That message comes from television commercials, advertisements in the subway for computer training programs and handbills distributed in the hallways in low-income housing projects. Yet most of the families we knew had no idea of what computers can actually do, so they were easily influenced. Their expectations were not realistic. They realized computers had to do with success in today's world, but they saw them as something out of their control, almost magic.

-- Previous contacts with computers: be controled and play games. The same "Atari" can be used different ways...

When some young people tried out the small computer we had in our center, their first idea was to write their name. Vincent Fanelli would show them how that name could remain in the memory of the computer. That reminded them their experience at public assistance offices or in the criminal justice system, where information on them is kept by computers. “They look up your name and they know more about you than you do yourself,” a mother commented. After that experience they all wanted to make sure that their names were erased from the memory: “I don’t want my name to stay in that thing.”

The other discovery was that in fact children had used computers many times at every corner store, in the form of video game. The very same technology, the very same Atari computer was used as video games in the South Bronx and used with the Logo language developed in the Media Lab of MIT in many middle class schools (and by ourselves a few months later). The money was not the determining factor then, but the expectation of a society towards its children: from some to develop their intelligence with the best tools, for others to kill time for a quarter a minute.

One day Johnny, the same Johnny, came to our center with his father to try out our computer. He was quite disappointed to find no game. His father told him: “Here you can learn how to feed the computer, it’s not just the computer that feeds you, like these stupid games. That’s why it is harder.” Johnny overcame his frustration, then discovered he could do some simple math with the Basic language on our computer. He quickly got tired of watching it give the right answer. “I want to make the computer wrong,” he said, and eventually succeeded in entering a number too large for it to handle. This example and many others showed us basic natural need to master the computer, as a tool, including exploring its limits, away from magic.

2.3 Designing a project integrating the computer. Making choices.

-- Overcoming initial fears: a tool among other tools

Some adults were afraid when we took our small computer around that it would be broken or stolen. They were surprised by its price, $150, the price of a TV set. Yet

most remained reluctant: “I watch it but I don’t touch it. I’m afraid I hit the wrong key and break it. Then I have to pay for it.” Then Vincent designed simple projects in which the equipment was used by teenagers in our center, along with other tools: for example to print the text of the invitation of our next party, along with block printing for the illustration. The computer was losing its mystique, a tool among others, being used to carry out a specific project. Any further project should retain that quality.

Around that time one mother, Mrs. Gattling, a true leader who knew her community, told me: “Well if you talk to us about this computer, and show it around, it’s because you will bring it during the street library for the children to use, right?” Others said again that the computer would be broken or stolen right away in the street. But her calm and clear determination showed us the way. “How are they going to get electricity for the computer? someone asked”, “Bring a long extension cord, we’ll plug it on our homes, we’ll take turns,” Mrs. Gattling concluded.

-- PC (Personal Computers), or CC (Community Computers)?

A step had yet to be taken. Being in the street is different from being in our center. It meant sharing the computer with many children and make a real project with it. We had tried several softwares. Apart from video games, most of them were traditional school drills of math and English, accompanied by flashing colors and sounds. We quickly observed that in a group of children, some were succeeding in giving the right answers and had no reason to let others try, while others did not really want to try once they had failed. The computer was adding to the exclusion of the poorest. Only a high moral pressure enabled us to force the children to take turn at the computer. I realized how much the word PC, Personal Computer, was rightly chosen. It was not meant to be shared and created even more tension than usual. In the middle of the street library with up to 100 children around, it would be terrible.

We did not have to accept the goal computers had been designed for, but redesign them to our goals. The particular constraints of a street library project, the fact that it is

wide open, that children are totally free and walk away if not interested, the choice to include every one, imposes on us to bring only things that are meaningful to all children, that they can master and get involved with. This forced us to rethink the use of the computer.

--Tapori Encyclopedia

As we said before computers could help master knowledge by storing it in its memory, ordering it in a databank, using a particular kind of "powerful idea" in which words --"key words" -- command actions of researching texts on the same subject . Could we turn the children into writers and researchers? We decided to try. We decided to make a giant encyclopedia with all what the children knew, combining the computers capacities mentionned above as well as its printer, with other tools such as paint brush to illustrate the encyclopedia, and carpentry tools to build the book itself out of wood. Children in each neighborhood would contribute what they knew from their lives or from books by entering information in the database and would be able to look up other entries by typing a key word. This project would make the computer a common good, instead of an exclusive tool: the more skilled children would not monopolize the computer since they would also need to see other children's entries. The encyclopedia project would need the computer, and the children participating in it would need each other.

I then designed an original software, called Tapori Databank, with which children could enter short texts, sign them, do research by title, by authors or by keywords, any word in the text being a potential key word (no preestablished list of keyword). For these functions not to take hours on such a small computer (Commodore 64) the software had to be written entirely in machine language, which I had to relearn for the occasion.

-- Equipment choices - choose according to which criterion?

We used a black and white TV set as monitor. During the first summer it broke down, immediately a father offered one he had. Along the same lines, we chose to use cassette tapes rather than disk drive to store the software and the database, because cas-

settes are less fragile and expensive. More important, the children could relate to that object. “Why doesn’t it talk?” a child asked. We listened to the tape on one of their “boom box” radio and heard the high-pitched beeps of the data, coding the texts we had entered. This multi sensorial experience helped them understand the idea of coding information. Familiarity with cassettes also provided an occasion for teenagers to “fix the computer” when our tape got tangled up. They would patiently untangle the tape, rewind it with a pencil and proudly watch as the program was successfully reloaded.

Of course a data cassette is much slower than a disk drive. But who is in a hurry when the summer feels like eternity with nothing in front of you? And who said one learns better by going faster? Speed determined also our choice between two printers, a dot matrix and a plotter. We noticed that with the dot matrix printer, things went so fast that the children just could not realize what was going on. On the contrary the plotter, that we had first bought because it was cheaper, was actually a little ink pen drawing every single letter. The children were fascinated by watching it print slowly and hearing the “click-clack” it made as it printed. They were finally watching a computer work at their rythm. Unfortunately when we looked for another plotter we were told it was no longer produced: too slow. Too slow for what?

3 What really happened?

3.1 First steps

The first week of that summer 1985 with children, teenagers and adults, we built and painted wooden platforms that would welcome the computers in the van. The following week, though, the van broke down and we brought the computers by subway. That week was particularly warm, and the sight of three volunteers carrying suitcases from the subway impressed the children. They quickly got organized to get tables from their parents, install the computers, help connect the wires and get the street library started. In the van the maze of wires was out of sight under the platforms, but now they were all open. Yet no one pulled or touched wires. This tought us how this was for the whole community a source of pride and confidence -- first condition for learning.

3.2 A typical session of street library, from one tool to another.

After an hour of book reading we would introduce a theme for the day's work on the encyclopedia. Often children would first play charades to suggest items to be entered in the encyclopedia on that theme. It was a first way to internalize their idea. Then the original plan had been that the children would first read more about the entry they wanted to make, draft a text, enter it into the computer, and then paint an illustration for it or go to the carpentry workshop to make the wooden cover. At the beginning, however, the children were immediately attracted by the novelty of the computer, and when their turn came they had not prepared what they wanted to enter. When that happened we would send them to the painting workshop. There, the slow process of painting fixed the children's attention, helped them to calm down, and gave them time to think more about what they would put in the computer, speak about it with others or ask for a book to learn more.

3.3 Look up my own entry.

At first, and for months, the children did not use this possibility of referring to each other's entry. They did use the research function but it was systematically to look for their own entry. I was somewhat disappointed thinking of the pains it took me to build this function. I changed slightly the program so that texts from other children using the word a child had chosen as title, would be printed together with his own text. They continued to look up only their entries.

We were to accept the necessary time for them to internalize and ripen this new experience that their entries were kept in the machine's memory, and their knowedge valued. Only after 6 months, they started to be eager to look up what others had written. Conversations about a whole range of subjects took place around the computer, within the community and from one community to another: which is the tallest skyscraper; what can you do with a pumpkin; why firefighters are heroes; can bees be bad since they are a creatures of God; how pretty are our moms; who is the best wrestler; what is police for?

Several hundred entries were written, often with four or five authors giving their views. Many of them were entered by children who actually could not read or write, and feared any occasion to try. Yet for this project, because they knew their contribution was expected and no one would make fun of them, they did not count their efforts. Writing five lines by asking how each word is spelled and then for each letter asking where it is hidden in that weird-non-alphabetical keyboard could take a long time. Patience of other children waiting for their turn in front of such efforts was always a lesson for me.

All the texts were printed and pasted in the encyclopedia and illustrated with beautiful watercolor paints. Pasting the other print out on bright blue index card for the child who had just entered his text to keep, was always a very special ceremony. These cards have found their ways in the homes of the families. Recently, I was visiting East New York, a mother insisted that I would come up and see how she had arranged the photo of her child who had passed away too young: the four texts he had written ten years ago, pasted on the blue card, all around his picture. “He would have been a whiz,” she said.

3.4 When the parents and the whole community get involved

Parents showed pride and support in many ways including the crucial one: providing electricity. Our huge bright orange extention cord going sometimes up to the 6th floor intrigued passer-by and really hooked us up to the community. Yet at the end of the first summer many parents had come to watch the children use the computer, but no one ventured to try it themselves, and refused when invited to. It was the celebration at the end of the summer in each neighborhood that brought the parents to the computer. It started with a parade with children carrying big cardboard mock-ups of a computer, cassette, monitor, printer, paint brushes, hammers, saw, scissors -- all the tools they had used during the street libraries -- and finally the completed encyclopedia itself, measuring two and a half by four feet, with, on its wooden cover, the names of the neighborhoods and the title “Tapori Encyclopedia." A short play in witch the children used the cardboard mock-

ups explained how they constructed the encyclopedia. The adults asked a lot of questions, some asked about the computer. They seem to want to try it. Volunteers and children quickly agreed: today the computer would be for the adults. That week, in the four neighborhoods, hundreds of adults touched computers for the first time, to look up what their children, little brothers and sisters had written in the Tapori databank.

3.5 Using the databank for other street library projects

We wrote about this project in the Tapori newsletter, inviting children from all backgrounds to send in their own entries and illustrations to continue the encyclopedia. We sent them back print outs with theirs and related texts. Exchange also started with other street libraries in Louisiana and in a Sioux reservation. The following year,1987, international year of the homeless, and 200th anniversary of the US constitution gave new themes for conversation between children of various backgrounds. We invited children to design the ideal home, neighborhood, city and constitution. Children from a new street library in a welfare hotel were particularly eager to share their experience and thoughts about homes and neighborhoods. This created a whole new database on themes like: why a table around which the whole family can sit is important; how a telephone can save your building from burning down; how to make a street safer; what could be a constitution for a Tapori City. A wooden model Tapori City with all these ideas, built in the street libraries was exhibited in events of the International Year of the Homeless at the UN.

3.6 Create links between people

In that same year a family in one neighborhood suddenly disappeared. It took us months to discover that they had left in the middle of one night, out of too much chaos in their building, to end up in one of the most terrible welfare hotel in the city. Links between two best friends, Bridget and Norma, were brutally stopped. When I finally found Norma and her family in that small hotel room, with just one bed for the family, they asked right away to bring the computer. I came back with it and Norma undersanding quickly the idea, looked up under author: Bridget. Her mother was surprised, she thought they could not talk to each other anymore after all that had happened. When I took the

computer back in the neighborhood, Bridget and her mother, Mrs. Gattling, right away looked up what Norma had written. Then they started to see each other again.

3.7 creating links between thoughts. Using the power of keywords.

Once a mother in the welfare hotel where we had our street library was living very hard times. After having tried for months to raise her family in these impossible conditions, two of her children had been taken away to be put in foster care. That made her constantly angry. She had arguments with the social workers, the other adults, everyone, including me. She would refuse any programs offered by various organizations (to teach her how do her budget, teach her how to feed her family, teach her how to behave with her children...) by saying loudly that she did not have the time, although she obviously had nothing to do. Authorities did not appreciate her humor and were interpreting her attitude by stating that she really did not care about her children, nor about anything; her attitude made no sense.

That day, as she had been observing the children working on the computer for a while, she asked me: “so what do they write in there?” After a few explanations, quickly swallowed by her fast mind, she asked again: “so you can type a word and see what the children have written about it?” “Yes” “Can I try?” After a moment of thought, she typed the key word HAPPY. All the text of the children including the word “happy” printed out. There were quite a few, and that impressed her. Then she typed the word FAMILY and again she was moved to see that this was a topic often mentioned by the children. She pasted the print-outs on a blue card and then read them carefully. In her suddenly frail and delicate expression I could guess the inquiry that haunted her: “After all what we make our children suffer, what do they think of us, of their family, of life? Are they bitter? Can they still say the word happy? Can they still speak about families?”. She showed the print outs around, including to the social workers. I realized I would have never dared to propose such themes to the children. Her research made them appear, and made sense.

4. Projects grew out of that first experience, in New York and world wide

4.1 Fourth World Network

In 1986 Vincent Fanelli and I, urged by Father Joseph, wrote "Passport to the new world of technology... Computers" mentioned above. The project itself and its publication helped convince other Fourth World groups and affiliate associations to venture with computers and poor families. It also opened new avenues for experimentation. In the last page of the book we wrote: "Our project in New York had international echoes. We are looking into how we might link up with groups in other areas, using a modem that was recently given to us which we can use with our Commodore computer." Internet, in 1986 was not yet used by the large public.

Two years later, with a grant of the European Union, Vincent Fanelli developed a computerized network that enabled all the Fourth World Universities[12] in 15 cities in Europe to connect and exchange summaries of their monthly discussions. This Fourth World Network expanded with weekly news and internal E mail for Fourth World teams. Soon the young people and the children also had their "corner" in the network. ATD Fourth World being worldwide, Vincent Fanelli then worked at expending the network to all our teams, even though telephone lines are in such a bad shape in the largest (and poorest) part of the world. Despite all the difficulties, it proved particularly successful, especially when we were able to use it as a tool to support our efforts to unify the poor and their allies worldwide in international campaigns and gatherings.

4.2 In New York, links with the world and street workshop.

This world wide exchange via new technology has its impact back in New York where it all started. Every month, families get together to share what has happened in the neighborhoods as well as news coming from the rest of the world. People ask to answer the news or write to volunteers gone elsewhere. A young man, who had been participating in the street library in New York as a child and now lives Boston, used my computer to write to the group in New York. It has become natural for the families we know to feel in

[12] For a definition and history of Fourth World University see "Et vous qu'en pensez-vous?" Francoise Ferrand 1996 Ed Quart Monde Paris.

touch with other poor families from other continent as well as with people from other backgrounds concerned by poverty, and to use advanced information technology for this.

In the street library itself the computer has also remained naturally integrated to the learning. Chris Cleary, a Fourth World volunteer now working in the New York street libraries says that several parents call them “the computer people.” Most of them, he adds, have never heard of internet or rather “did not register it when they heard it: how often do we see e-mail or web-site addresses on TV or in the newspapers?” So they decided to introduce it in the street library. He writes, “when the children first got in touch with it they had a difficult time figuring out what to look for, as if thrown into a huge library and having to choose a book. We had them start with thinking about things around them, like their neighborhood of Harlem, and we found a site with a picture of a young boy and a few things he had to say about living in Harlem, a few blocks from where we had the street library. From then on the ideas came fairly quickly.” Then Denis Cretinon, now in charge of the program, introduced the children to an experimental website, allowing all the street libraries going on in the world to exchange. This might be the beginning of a new adventure.

Another major development in New York has been the use of the computer to design science machines. Kurt Reitz a new Fourth World volunteer and Denis Cretinon organized small workshops with the children who had the most difficulties to build a “Marble Rollercoaster." The idea came from seeing a large kinetic sculpture in Port Authority where billiard balls rolling down complicated tracks, “doing tricks,” making noises and music along the way. Each child had to invent a part of the track that would do whatever “tricks” he wished. The children first designed the track and describe what they wanted the ball to do. The computer was used by the children to enter their designs and comments about what the ball “should do” in a databank (designed by Kurt Reitz with Hypercard) with additional pages showing some basic physics laws about “balls going down hill.”

Then they had to actually build the track out of wood. Often the ball did not do exactly what they had planned it would do. “Then they had to adjust. It was amazing to see how conformable the children became with the tools, including power tools, wrote Denis Cretinon... It could have been dangerous but nothing happened. It is probably due to that process of designing, recording it, making it and reflect back on it. They were not just playing around with tools. They had a purpose.” Children would go back to the computer to write what the ball actually did, then entered new designs. Kurt wrote: “As the desire to create becomes stronger, the children naturally, gradually, develop the discipline that they lack to do the tedious work required to bring their creation to fruition.”

Conclusion:

Framing the issue as one of access is the ultimate success for people who have created a technology and try to sell it. If the poor and excluded need access, they mostly need reinvention for different aims. The fact that we saw ourselves pushed in a somewhat unexplored area was important to free us to question the means and the meaning behind. Technology by itself is meaningless, but people who have designed a specific application for it, did give it a meaning. We had to discover that meaning behind the tool, with no fear of challenging such imposing and powerful symbols of “smarter than thou”. We opened choices: “printer-has-to-be-fast-to-gain-time-and-money” versus “printer has-to-be-slow-for-children-who-have-plenty-of-time-to-observe-and-learn”; “Personnal Computer” versus “Community Computers;” “Computers to be fed by” versus “computers to feed;” “Technology to give you answers” versus “technology to help become a researcher and frame your questions.”

But if freeing oneself of commonly accepted ideas is a necesseray steps, it also calls for some securities. Our securities came in the form of simple practice enabling us to write our travel log and draw the map of our journey along the way to learn our directions, with people as only landmarks. By doing every night my participant-observation re-

port I had the feeling to be more scientific than when I was in my university, leting the facts sink in and challenge theories. We also had constant collective reflection on interpretation of what we had seen and heard and on our action. We could share aloud to our co-workers our surprises or disapointments, and with the security of team commitment and tenderness for each other, we could try to decode their meaning together to constantly reinvent the action. These two processes (personal and collective) allowed us to face the real challenges brought in by the poorest people, the ones who make actions and ideas fail, instead of covering them up or hardening ourselves as it is often tempting. It allowed us to remain close to the poorest and make their humanity and quest for transformation as our compass. "All came from a shared life, never from a theory", Wresinski wrote to explain how the group started. As Denis Cretinon said recently, "In the street the children are the master, not the computer. If what's on the computer doen't make sense to them, it is the end of it."

This opens up to an ongoing venture in which both very poor people and people who master todays means of communication are needed in a partnership. We tried to show here that a genuine joint venture and reciprocal learning between them can be fruitful and promising. It is also vital. If super powerful tools of knowledge construction and communication are mastered and put into practice by a continuously shrinking number of people, the gap between means and meaning will become forbiding, and a danger for our modern democracies. On the other hand if those who design the structure of today's and tomorrow's world accept to confront their inventions, values, and visions with the poorest people in our societies, with enough patience for each other, and no fear to be attacked, they will be able to reinvent them together, broader, deeper, more humane, more meaningful. Then our advancing technology will be also an advancement in civilization, and our different knowldeges will reinforce each other instead and building up barriers, fear and violence. As Father Joseph concluded his 1983 conference in La Sorbone to invite members of the academia in the struggle against extreme poverty, "When the free and ed-

ucated men and women will join the Fourth World, extreme poverty will not exist anymore.[13]”

[13] Echec a la Misere op cit

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