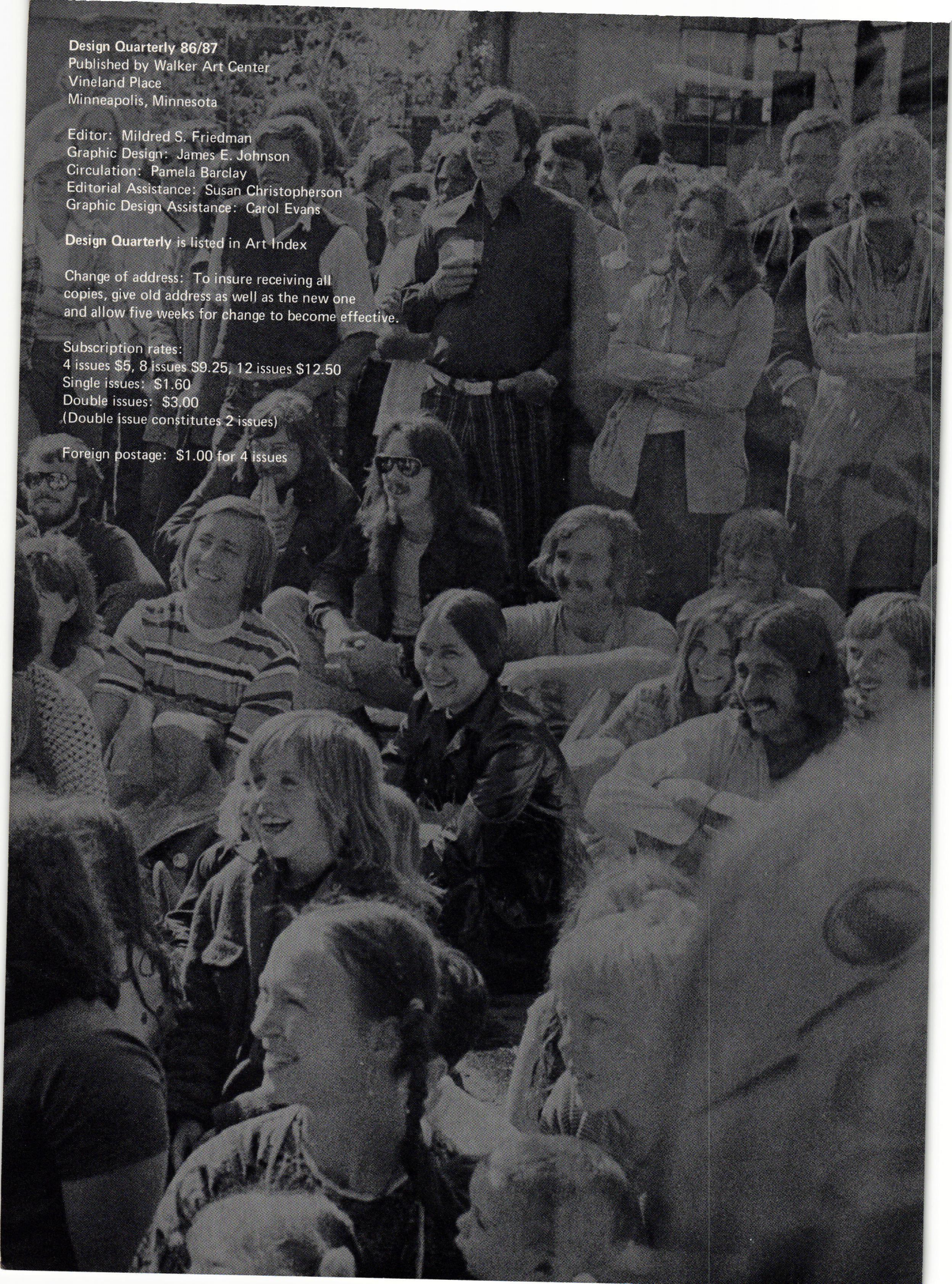




International
Design
Conference
in Aspen

The
Invisible
City

Design
Quarterly
86/87



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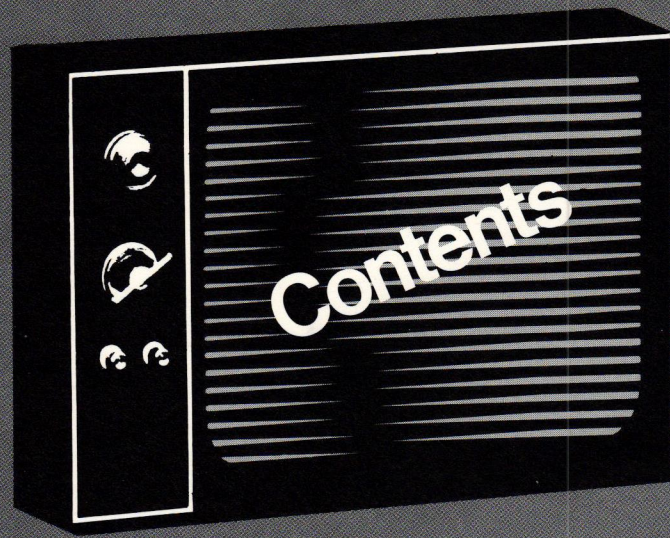
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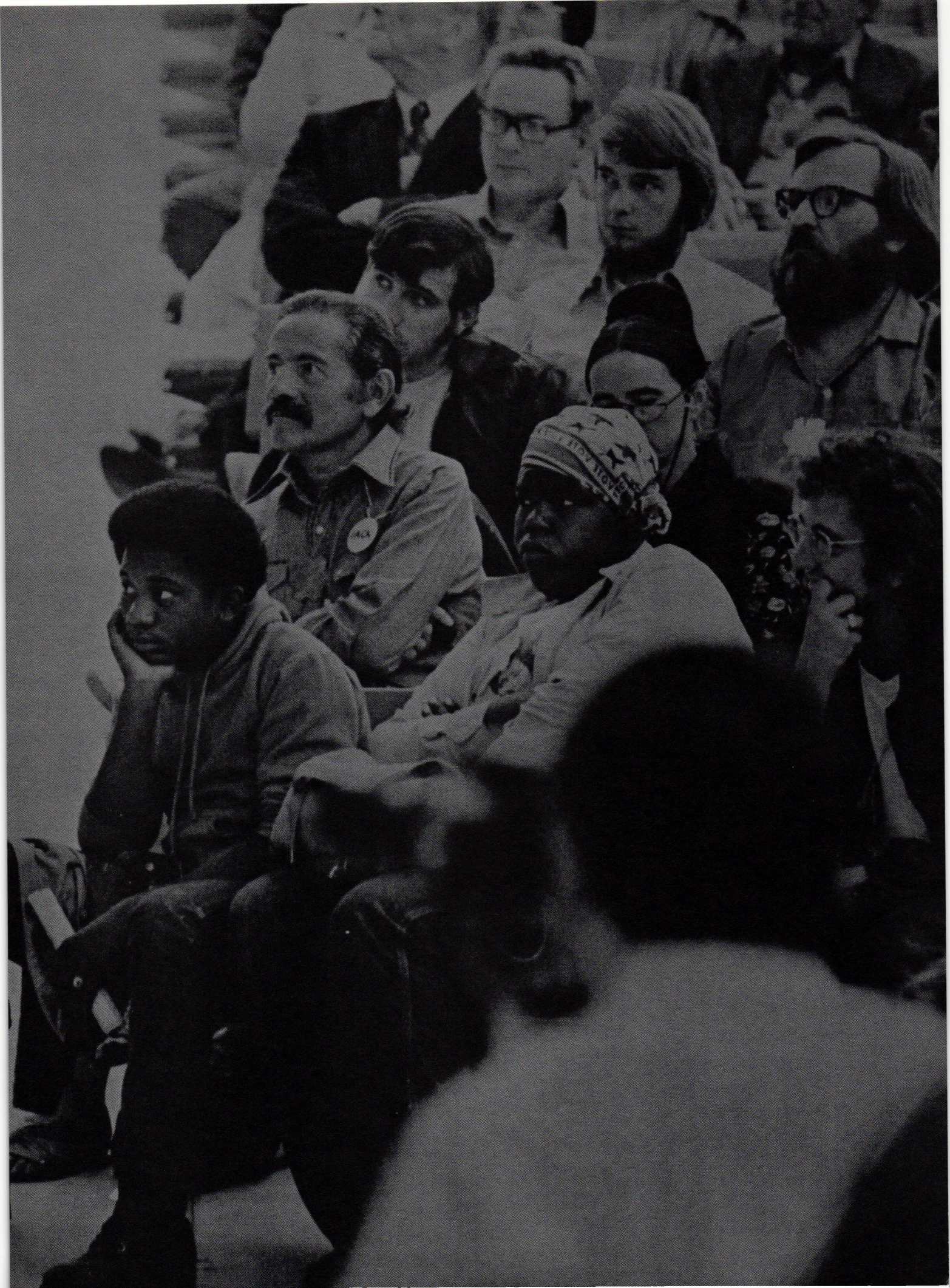
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Editor's Notes: The Invisible City

Never did the city seem less visible than at the 22nd International Design Conference held last June in the lush and lofty isolation of the Rockies, as coping with the exigencies of urban life (survival in the city or survival of the city) was not the issue. This year's gathering of the "regulars"—architects, industrial and graphic designers, teachers and students of art—was expanded substantially by a generous influx of theoreticians and practitioners of the new education, whose presence shifted the Conference's emphasis away from practical design questions to other social and philosophical issues. Radical education became the Conference core.

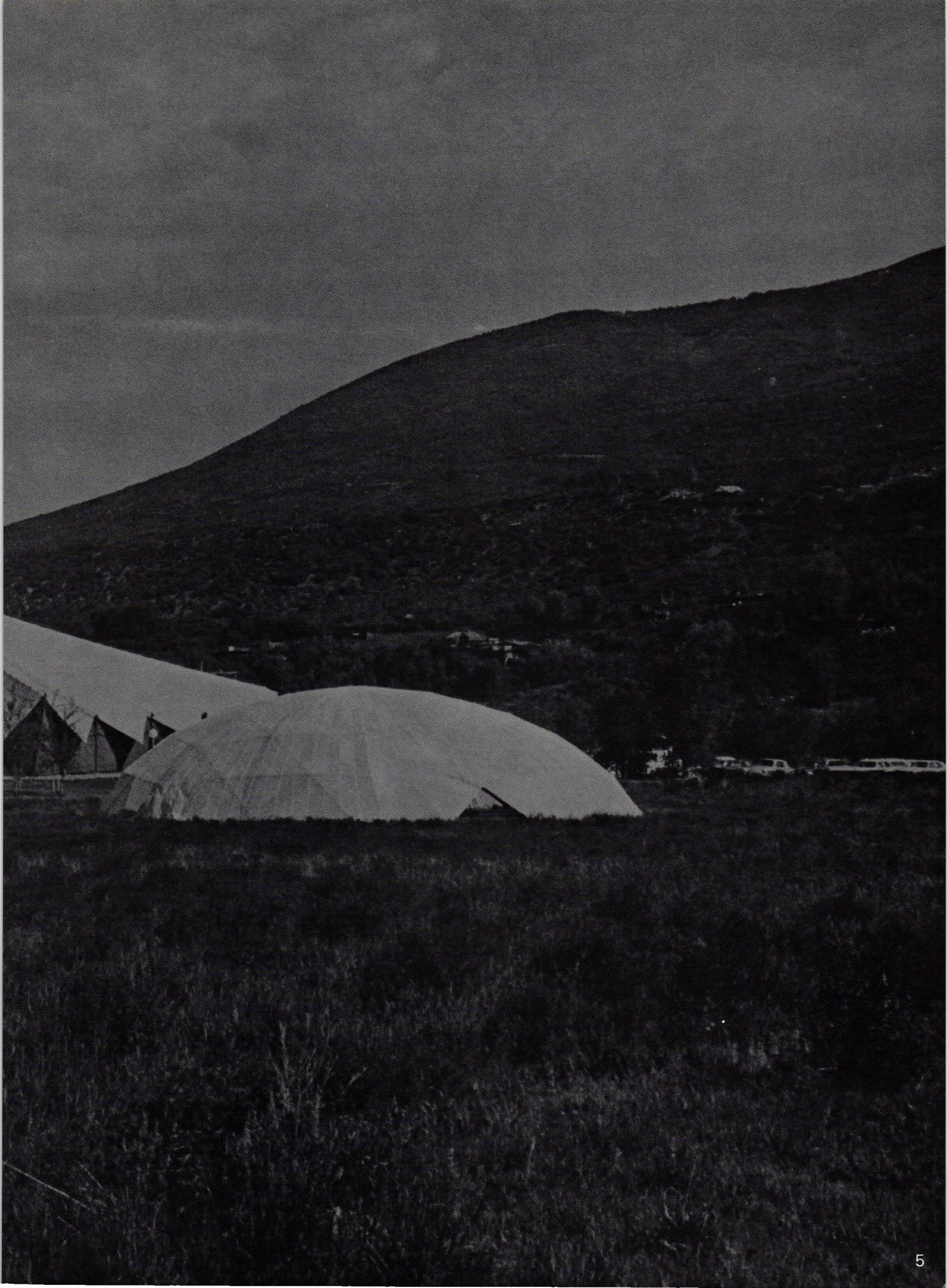
An improbable topic for designers? Not if we examine urban information, educational programs and city structures as elements in the total urban framework and look for new ways to make these aspects of city life understandable (visible) for a diverse citizenry. A designer who understands the variety of "systems"—government, transportation, schools, social services—that make the city a functioning, usable environment, can act as visual interpreter for the people. Stating the Conference theme, Richard Wurman emphasized the use of urban resources (people, places, processes) as tools for learning: "We live in *the invisible city*. A place where public information is not public; a place where the young are shunted to fenced-in buildings, amidst islands of macadam, under the guise of learning. The architecture of learning, however, rarely is concerned with the building of schools. The architecture of learning instead is the city as a schoolhouse whose ground floor is both bulletin board and library."

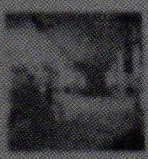
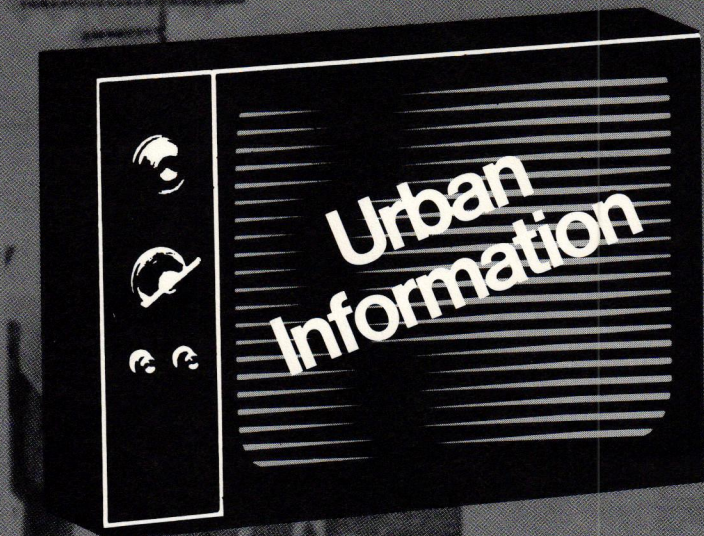
The Invisible City was possibly the most diffuse, porous topic ever undertaken in Aspen. Many sessions bogged down in "educationese" and drifted away from areas of direct concern to designers. Resource people (speakers and discussion leaders), best when describing what they actually do, were less successful in bridging the gap between education and how designers might realistically function in an educational capacity.

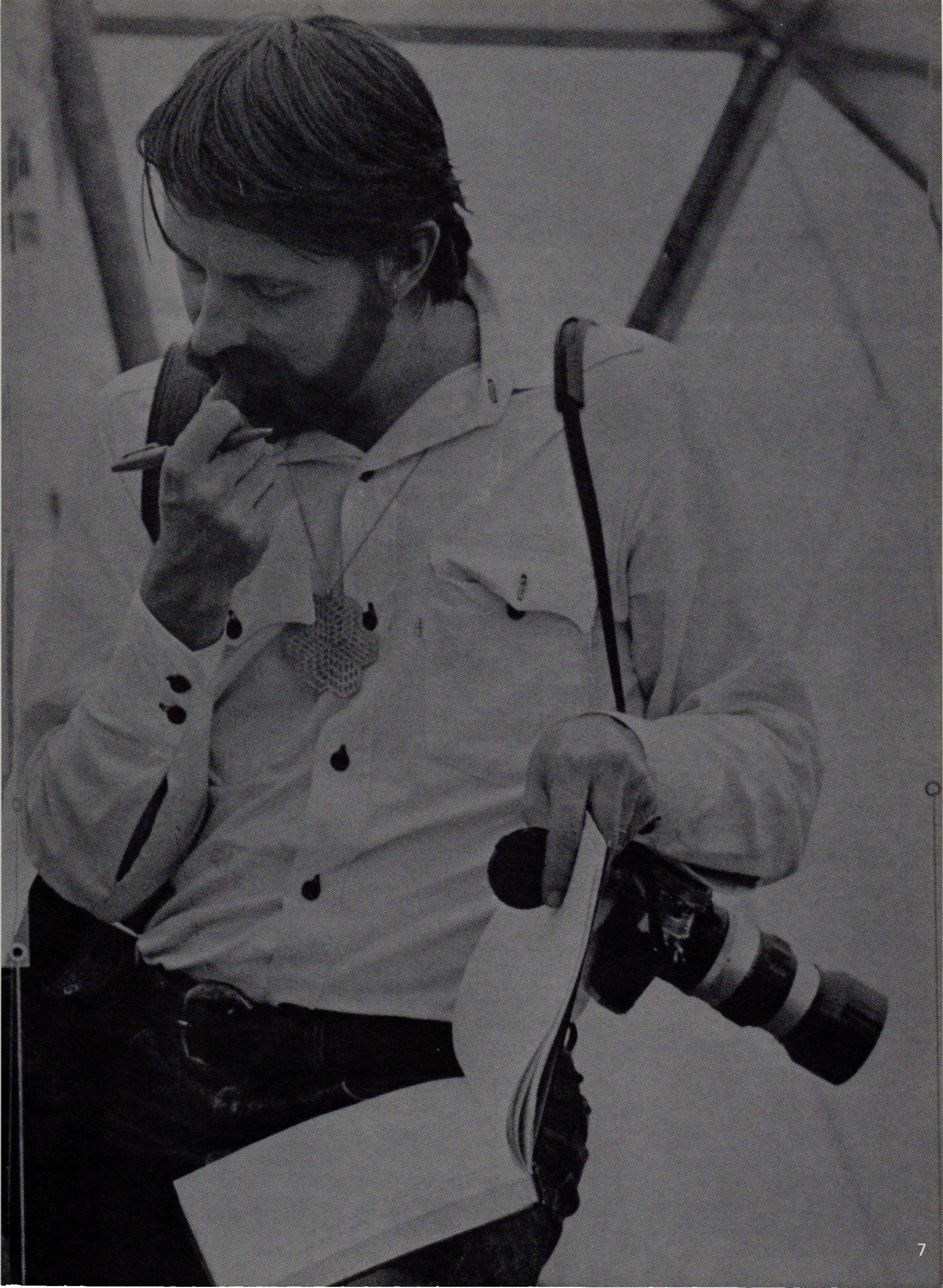
Over 1500 people participated in IDCA 1972. There was a vast array of excellent programs, exhibitions, films, discussion sessions for this unusually large number of conferees to choose from. Most sessions were organized on a speaker-audience basis, but there was a productive exchange of ideas in many of the ten to twenty small conversation groups available every afternoon. More could be gained from these small meetings, at future conferences, if all participants had the opportunity to do some homework, to replace often rambling remarks with more knowledgeable interchanges.

Major segments of the six-day program, with emphasis on the salient remarks of Nicholas Johnson, Louis Kahn and Everett Reimer, are included in this coverage. The enormous number of areas and disciplines explored at the Conference have been organized here into four major categories: urban information, school programs, city structures and critics. The discussion sessions and speeches have been selected and edited in an effort to give a general picture of the meetings. Lack of space necessitates deletion of many good moments. Observations of conferees, sent to Richard Wurman or to *Design Quarterly* (in response to a request for participants' reactions), are incorporated as anonymous marginal notes, along with biographical information on the speakers and key resource people.

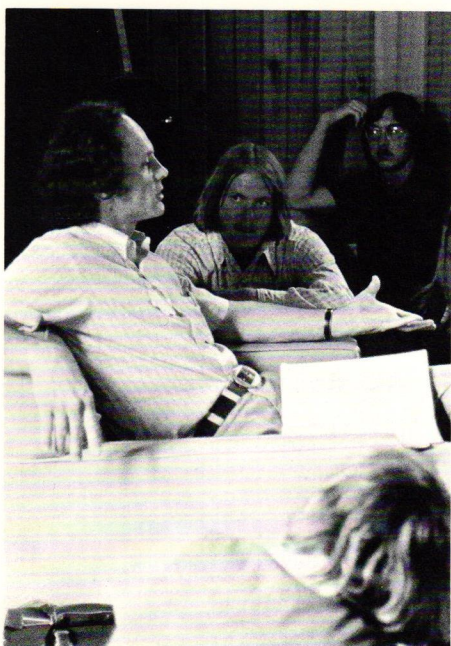
This issue of Design Quarterly is supported in part by a grant from the National Endowment for the Arts, Washington D.C., and by the International Design Conference in Aspen. We are indebted to Richard Wurman, Program Chairman for IDCA 1972, for his assistance in gathering materials for publication, to the sound technicians who taped the presentations, and to the Board of IDCA for inviting us to explore The Invisible City.







Nicholas Johnson on the Politics of Communication



Nicholas Johnson has been a Federal Communications Commissioner since 1966. While at the FCC, Mr. Johnson has become a noted advocate of the right of citizens to control the information and values they receive via television, and he has written a number of articles which attempt to make the workings of the FCC visible. Mr. Johnson has also written two books: How to Talk Back to Your Television Set, and more recently, Test Pattern for Living.

"The three most important areas for people to work in who really want to have an effect on society are education, communication, and politics. This is based on an insight that Tom Jefferson had. His theory was that if people are generally pretty well educated and you give them adequate information and you establish a governmental system that is responsive to their expressed desires, the whole thing will work out pretty well and you'll tend to create an environment in which individuals grow and develop and achieve to the maximum of their potentials. That's the way I feel and, therefore, as a political scientist and public official, that's the kind of society that I'm trying to create; partly out of a belief that whatever comes out of that society is what it is I want. That's the place I want to live, whatever substantive policies come out of that system, those are the policies I'd like to live under. Jefferson also wrote that the purpose of government, as you'll recall from the Declaration of Independence, is life, liberty and the pursuit of happiness. Now that was a long time ago, admittedly, and nobody has focused on that in Washington recently. But I still think that's a pretty good definition of what government ought to be about.

"Now the problem is in the way Jefferson's theories worked out. The process that we call education tends rather to stifle curiosity and the self-learning process, and creativity and spontaneous expression. It tends to stifle all those things rather than encourage them; so just because you have schools doesn't mean you end up with educated people. The second thing wrong with the way it's worked out is that the information system doesn't work very well. It's by and large a one-way system, it tends to be pretty well clogged, and a lot of stuff that's erroneous gets through. And a lot of stuff that ought to get through gets censored out. So the people aren't too well educated and they don't get adequate information. The third thing that's wrong — the political system isn't working either. The theory was that everybody would vote for a representative of his point of view so that we all would be represented in Washington. That's a good idea when you think about it. The problem is that this hasn't worked out, that we've now got it transformed to a system where the amounts of money involved are such that the only people who can really control the process are the large corporations. When you examine the budget you discover that they are the beneficiaries who are getting the tax money that is being taken from the poor.

"The problem in addition to that fact is, once the system is controlled by money it can't be controlled by people. This is further ensured through the seniority system, so that the people who actually run the congress are not the people who have come to it newly, but people who have been there longest, which makes it much easier for those who are using the money to control the system. Well, in any event, an effort to make the city more visible and to give people information that they ought to have about their environment, seems to deal rather effectively with all three of these problems. It helps in terms of education, it helps get information out to people, and hopefully, makes the political system responsive in the way that was intended.

"Most of you know I'm a writer for the government printing office. It turns out that most of what I write about is an effort to make the government visible, over the protests of those who would just as soon leave it the way it is.

"I'll give you a couple of examples. We recently announced a cable television policy, as some of you know, and during 1971 we went through a visible public process, we had public hearings — not only did

we have public hearings, we had panel discussions which are pretty innovative for Washington's administrative agencies. Virtually everybody who wanted to be represented was there. The people who work with half-inch video tape and minority groups, as well as the old standbys, the broadcasters and cable operators, so it was really pretty good. We hammered out a policy that I was willing to concur in, vote for.

"It was the best we could get, and I really felt pretty good about government for once, and then I read in the paper, that while I hadn't been looking, Dean Burch, the chairman, without telling any of the other commissioners went over to the White House one day, because the President asked him to, and sat down with the very largest broadcasters, cable operators, copyright owners and the motion picture companies. Between them, over there enjoying the hospitality of Richard Nixon, they rewrote the cable television policy we had worked out in these public sessions, in a very invisible way, in a secret meeting, and then Mr. Burch came back and said since he was chairman, we all had to vote for the new policy, even though we didn't understand it or participate in it. It differed from our old one and we didn't like it very much. So what I did was write it up just as I told it to you, and I published it, and that's a way of making government visible.

"Another example occurred last Christmas, actually the FCC announced on Christmas Eve that it was no longer going to regulate the rates of the Bell Telephone System. To those in the know this didn't cause much shock because, what the heck, we never were regulating the rates of the telephone system. But people who didn't know were really appalled. And, so, there again, I just described what we'd done, how we called the whole thing off, and I wrote a little article in the *Saturday Review* called, "Why Ma Bell Still Believes in Santa Claus," and, lo and behold, early the next year the hearings were reinstated.

"So I guess it's true that much of what I do is not only describe what goes on in the FCC in particular, but the government in general. For example, when ITT offered the 400 thousand dollar gift to Richard Nixon while the anti-trust case was pending against ITT, I thought that some of that ought to be made visible too, and I wrote that it seemed to me that the newspapers had been kind of confusing the issue, that it had been turned into a "did Dita do it?" kind of story. What's really wrong is not that once in a while a corporation comes to town and lays a couple hundred grand on the President because they like what he's doing, and support his policies, and like to contribute to his campaign fund, although if I may try a parenthetical insertion in the middle of a very long sentence, I was just reminded of it, (you may recall earlier in the year some 300 thousand dollars was contributed by the milk industry, and immediately the wholesale price of milk went up something like from 27 to 37 cents, so people thought that that was maybe related somehow to that contribution) but the point is that that really isn't the problem. The problem is that it goes on all the time, and that it's not just the donations and private planes and men on corporate payrolls who work as advance men for the President in the campaign, and the stuff that gets printed up, and all the tremendous support services that you can provide for a President if you like him. The problem is that this whole kind of attitude permeates the whole town, and that it may very well have been true that when Harold Geneen offered the 400 thousand dollars, he didn't know what he was going to get for it, sometime. And that it's the most natural thing in the world that a guy on the White House staff would contact a former classmate, who's now working for the same Wall Street firm, to do the analysis of ITT for the Justice Department. It's that whole kind of little closed family quality. Who gets his phone calls returned and that whole thing. Not that they're engaged in

a conflict of interest, it's that they don't even perceive that there is a conflict of interest.

"The other thing that I do, as you know, is I'm interested in communications, and that's my responsibility too. I find out upon reflection that much of what I try to do is create communication policies that will make everything more visible. I've been having difficulties there as well, as some of you who have been following the FCC hearings may know. Let me go over these things that the FCC is involved in, or at least that I'm involved in, and can help to make the communications system more responsive in helping to get information out to people.

"The first thing you need to know about, and the major area in which there's been a lot of activity in the last few years is the license renewal process. What you need to know here is the very first section of the Communications Act. The part that has to do with commercial broadcasters provides that there's no right of property in that license. The broadcaster is a trustee of public property, he holds the right to broadcast only for the terms of his license, which is 3 years, and at the end of that time his right to broadcast ceases. He's got to come in and ask for a new license to be given or not given, and at that time members of the public can participate in that process. And, you have been doing it by the hundreds in communities all over the country. If you're really interested in communications that's something you ought to be into. I can't possibly tell you all about it tonight, even if I talked about nothing else, but I've written a little book about it called *How to Talk Back to Your Television Set*, and there's a lot of other material available from the office if you want to read about it. Through the license renewal process one of the most effective things done in recent years is using it as a negotiation instrument, e.g. a particular minority group wanting to increase the amount of employment for blacks, have found it effective as a device.

"The second thing you need to know about is a fairness doctrine. The fairness doctrine simply provides that a station has two obligations: one, to cover controversial issues of public importance; second, when they do that, to do it fairly. What that means is, in the course of the totality of their programming, they have to present more or less all points of view on the issue involved. You cannot use the station as a propaganda instrument. You've heard that there's something very special about the President's use of television, particularly this President's use of television. It exceeds that of virtually all Presidents preceding him combined, and should require something in the nature of an automatic reply on the part of somebody. We should get some dialogue going on the tube and we don't just let the White House have access to prime time whenever it wants it, and not make it available to anybody else.

"The second innovation in the area of the fairness doctrine, that I've been involved in to some degree, is urging that we have what we call 'counter commercials' on television. We had them for a while in regard to cigarettes, as you recall, the anti-smoking spot. It was a marvelous spot, it was the only time the American public was exposed to truth on television, and that was the reason the ads had to be taken off. The cigarette industry obliged, and as a result as you may have noted their stock skyrocketed after cigarette advertising on television was banned, because it immediately saved them money on advertising, and enabled them to cut down on the number of brands. Although just prior to that, you may not have noted in the news, they increased the nicotine content of cigarettes in order to ensure that those already on them would remain hooked. Counter advertising could be extended to other products as well, and you could be told there are alternative means of getting around besides automobile and that soap and water is also available as an alternative to deodorants. A third general area

is the law of access, so called, this doctrine is newly evolving. The basic idea is what the First Amendment meant when it was first drafted. It could be satisfied simply with the right to distribute handbills, and corner your neighbors after church on the village green, and tell them whatever was on your mind, and that is simply no longer adequate in the 20th century. If the First Amendment is to have any meaning whatsoever, in the 1970s, it has to mean that some people some time have access to radio and television, and newspapers too, for that matter.

“A case that’s now before the Supreme Court involves a group called, Business Men Move for Viet Nam Peace. These businessmen came to channel WTOP in Washington and offered their money, at the going rate posted by WTOP, to put on spots opposing the war. And they, as good businessmen (most businessmen are used to getting whatever they want for money), simply assumed that, of course, the time would be made available to them. They were just stunned when they found out they couldn’t put their message on. WTOP explained, ‘you see, you don’t understand, we just use this time for selling products. If you wanted to sell some war material or something like that, we’d be happy to take your money, but you’re into ideas, and we’re not in that business.’ The businessmen came to the FCC confident that, of course, justice would triumph, only to find out their second lesson, which is, that ain’t where you get it in Washington. So the six to one decision out of the FCC went to the U.S. Court of Appeals, where justice does triumph.

“The fourth thing you should know about is the prime time rule. This is indeed a small step for mankind but a giant leap for the FCC. It provides simply that the networks, instead of programming your entire evening of television on your local television network, will only program three hours, a radical cutback, and it’s been opposed all the way by the networks, as you might imagine, but it’s still enforced. It at least gives your local station the option of getting programs from somewhere else, or actually, an innovation extreme, of doing some programming of their own. But, as you might suspect, most who set out to prove that there really could be something worse than network programming have succeeded in proving their proposition. With an exercise of incredible ingenuity and imagination and a great searching of old files, films and syndicated shows, they have come up with some pretty crummy stuff. But the theory of the doctrine was not quality, but a radical theory known as private enterprise, which businessmen tend to applaud at rotary clubs, but panic when it moves in next door and next season. When the networks no longer have their exemption under the rule that says you can go on using syndicated shows, we’ll really give the rule a chance and see if it works, and if we get anything better.

“Number five is cable television. In the cable television wreckage — one of the things they failed to gut from it when they worked it over at the White House — what we still have in it, are two very useful concepts. One is that of public access channels. Every cable network that is covered by the rules (and one of the effects of the White House compromise is there’s not much likelihood that there will be much cable television in large cities where it is most useful and most competitive) is supposed to have a public access channel. A public access channel means anybody can walk in and use the channel, for free, without regard to content, or you can put on your half-inch video tape or whatever you want to do. The other thing that has been retained, is the concept of leasing channels, and this again is a tremendous step forward from where we are now. You cannot go to a local station and buy time to put on your program. They can, as a matter of law, say no, we will not accept your program, we will not accept your money, for whatever reason. Under the lease channel concept, they can no longer do that. And, if you walk into a cable television system, and have the money to pay their leased rate — which should be more like five dollars an hour, rather than

the 500 dollars an hour you'd pay on an over the air station — if you've got that five dollars and your video tape or film, or a live presentation, they've got to take your money and let you have access to the system. That really opens up the mass communication system the way it has never been opened up in this country or in the world. Whether that is used is up to you out there. The opportunity is there, and it's yours to have.

"Number six is public broadcasting. Public broadcasting is kind of a mixed bag, it tends to be owned and controlled by the same guys that own the rest of the country, and it is less courageous than one would hope in some of its programming. Nonetheless, it does exist as an alternative. It has had an impact on commercial broadcasting. Witness the Public Broadcasting Lab which nobody watched. It later spawned 'First Tuesday' and '60 Minutes' on NBC and CBS, which a great number of people did watch. The problem is that we seem to refuse, in this country, to fund it. If we were to spend a proportion of our gross national product on public broadcasting comparable to what the Japanese and British spend, we would need to spend something on the order of two billion dollars a year. I have recommended as a modest compromise, 500 million dollars a year. I have yet to receive ten percent of that from the administration. But, it's beginning, and like all good Parkinson institutions, it ought to grow.

"The seventh thing represented by the people here, is the possibility of representing more people in the production process, whether or not the product is ultimately shown over the network system or cable television. You know, one use of video tape in a community is bringing people together, showing people to themselves. We ought to be putting half-inch video tape equipment in all junior highs and high schools, labor union halls and churches. There ought to be as many people in your town who are familiar with how to use a half-inch video tape camera as there are people who know how to use a typewriter, for a number of reasons, not the least of which is that you can learn how to use the video tape camera a lot quicker than you can learn to use a typewriter. It's a very simple piece of equipment. You can give it to grade school children, and they learn how to operate it in five or ten minutes. That equipment ought to be out there in the community, and if you're ever going to get anything on television, you've got to have people using it. If we've got 30 million people making television programs, we may find two or three people who can make really good ones. So it's very important that we have millions of people using this stuff. It's also possible to involve professional people in television who don't know anything about television itself. The BBC has a program called 'One Pair of Eyes,' where they take one person and simply turn over the TV to him: writers, producers, cameramen, what not, and let him tell the story the way he wants to tell it. CBS tried that once with Reischauer, then Ambassador to Japan, on a program they did on Japan. I've talked with him about it. They originally wanted to turn it into an hour long geisha party, but he stuck with it, he didn't drop out, and they finally got a fairly decent program.

"I've been thinking a lot about making the city visible, and what the real problem is. I'm not sure it's a matter of posters, better architectural design and films. If we're going to have meaningful change in this country the reforms are going to have to come, not so much from institutional changes, and imposed things from outside, but from change of an individual nature."

A sense of man's evolutionary progression has been lost and should be re-incorporated into the learning process, to allow a more natural understanding of the complex urban environment.

"Those of you who were here last year know that the first thing I did with my kids was go out in the woods. We learned what we could. Then it

"Nicholas Johnson is a good man doing a good job, but his statement, if you feel a need to listen to the radio or watch TV, something is very wrong with your life, is clearly absurd. More Americans learned more about English history by watching Elizabeth I on television, than the grand total of all students in all classes of English literature and history in the history of the Republic. Without television we would be both uninformed and misinformed about what is happening in our world today."

seemed to me the next thing was to take them to farming, which was what man turned to, so that's what we're doing now. We don't own it; you own dirt by having it in your hand — someone else has the piece of paper. There you can learn about planting things, livestock, simple structures. The next thing you might do is introduce a child to a small village. What is the sociology of that, the economics, and then finally he's ready for your visible city. I do have the feeling you ought to go through this progression from the simplest element in the universe to the most complex thing the world has ever known, which is you, sitting there, today.

"The more I study television the more convinced I become of the importance of books, not just as education or information, but as literally a matter of survival. I doubt that one to five percent of the population of the U.S. reads six to a dozen serious books a year. And yet, I think that's about one-tenth of what you ought to be going through. You can begin to take control of this aspect of your life which is so fundamental, that is, controlling your own information."

An individual with a more complete knowledge of the natural environment and a sense of personal responsibility within the community will reevaluate his lifestyle. He will give serious consideration to the distortion of values and inequalities perpetuated by the workings of our economic system.

"I'm not urging the blessings of genuine poverty, what I'm saying is that the life style that has been sold to us by the large corporations and the advertisers is being seen by ever larger numbers of people as not being what it's cracked up to be. Love is not at all like ginger ale. Things, life in general, and food in particular, really go better with milk and fruit and vegetable juices than they do with Coca Cola. And Pepsi does not help you come alive. And not only does it not have a lot to give, it's got a lot to take away, which you'll discover as soon as you find out that energy comes from protein, not sugar, and that sugar makes you lose energy and develop low sugar levels, not increased sugar levels.

"There are other examples of false advertising on a societal scale. The cars — it's just a crummy part-time job, working for Detroit, paying them for the privilege of wearing out and repairing their cars for them. Suburban homes just turn into wall to wall labor intensive prisons. The soil is too poor to grow anything but crab grass, and the homes are too far from the city to allow participation in what's going on there. Aerosol cans — they put chemical particles into your lungs, they're a safety hazard for incinerators, they're not bio-degradable, they bring you a product that is grossly overpriced, it's probably unnecessary and very possibly hazardous to your health. Yet Americans are still today spending some 75 percent of their personal consumption dollars on such items. The very least that can be said is that you can free up a lot of money for some other things you might enjoy a little more because recreation, education and foreign travel together total less than ten percent of those consumable dollars. I would say that it's more than just our own lives at stake. We've taken our eye off the goals of the American dream. The pursuit of plenty was never supposed to be an end in itself."

The Poster Group: Worth a Thousand Words

Thirteen posters (or charts) were designed for the Aspen Conference by distinguished graphic artists in an effort to demonstrate that essential urban information can be communicated visually, and to show that something can be learned from everything in the city. Bill McCaffery, who supervised the production of the posters, commented that, "Designers are only beginning to recognize the significance of words. These posters represent a new relationship between visual and verbal communication."

The topic was the city, and each designer chose some aspect of that broad subject for his poster. Although there was a general feeling that the posters did not totally achieve their goal of communicating the internal organization of human institutions, they are a valid attempt at conveying complex concepts in visual terms.

Four are illustrated; the remaining posters are:

Printing by John Rieben, Genesis Incorporated

The Dog Store by William McCaffery

Yellow Pages and *Aspen Colorado* by Joel Katz, Murphy Levy Wurman

Stadium by Lance Wyman and Bill Cannan, Wyman & Cannan Company

The Automobile by Henry Wolf

Airports by Ivan Chermayeff

Chinese Grocery by Milton Glaser, Push Pin Studios

What You Can Learn from an Antique Dealer by Herb Lubalin

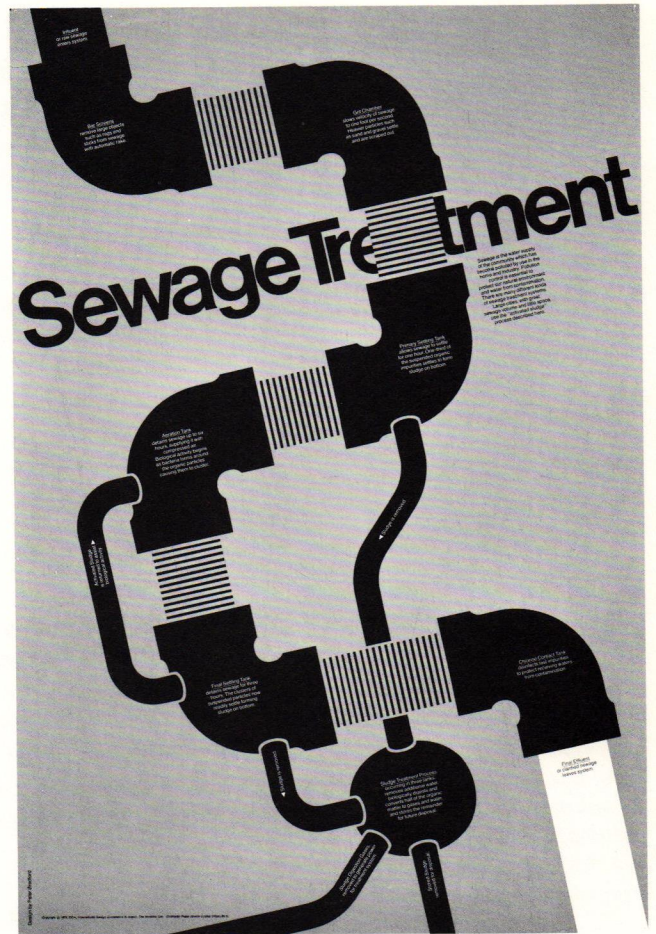
Artists donated their time and services, Champion Paper Corporation contributed the paper, the Visual Arts Program of the National Endowment for the Arts, through GEE! Group for Environmental Education Inc., paid for the printing and shared distribution costs with Educational Facilities Laboratories.



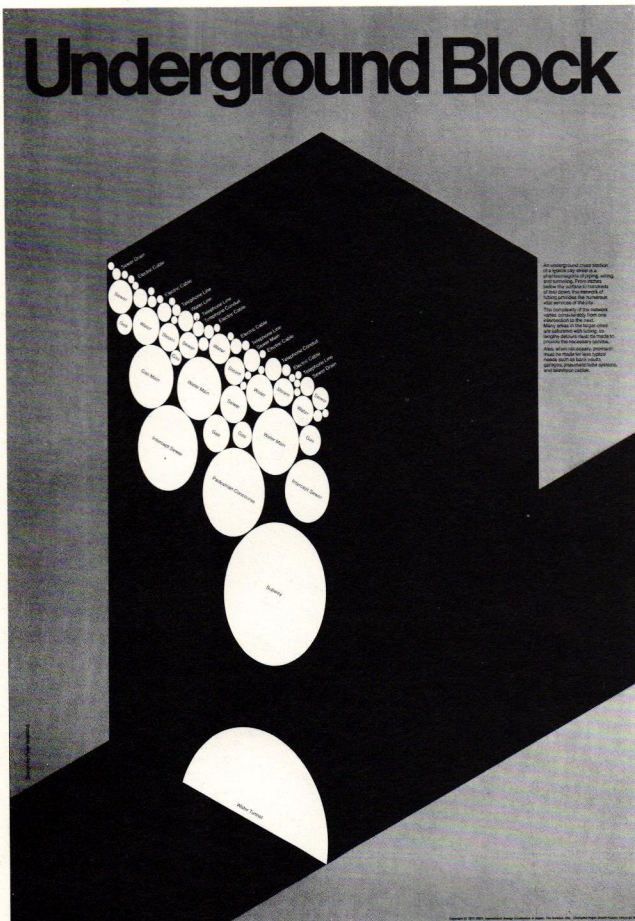
The poster group in an afternoon session with conferees.



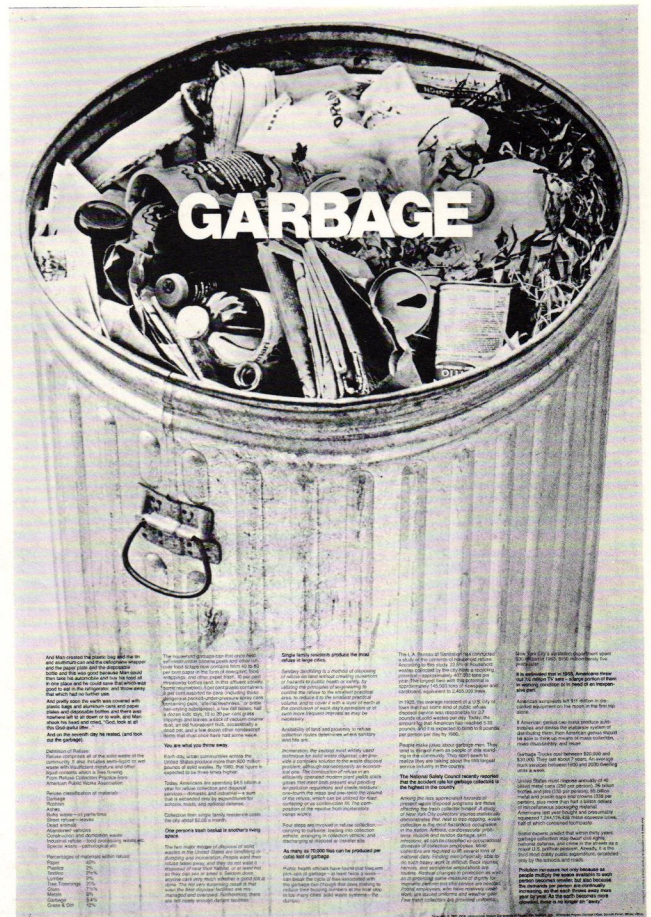
Commodity Trader by John Massey explains the function of a commodity exchange using the hand of a signaling trader as a symbol for the activity.



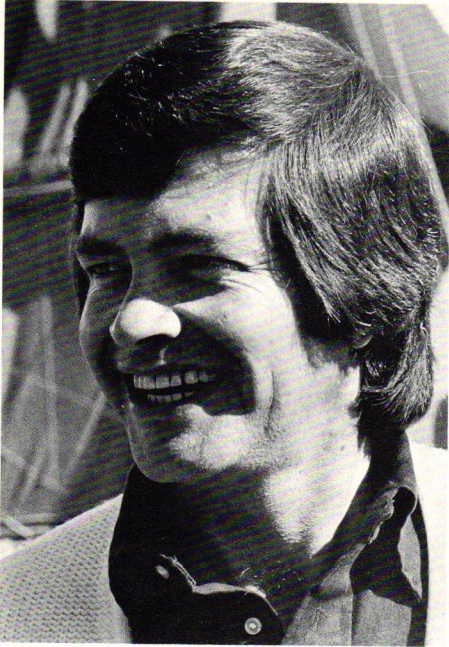
Sewage Treatment by Peter Bradford charts the sewage system of a metropolitan area using the "activated sludge" method of disposal.



Underground Block by Peter Bradford shows what happens beneath a city street.



Garbage by Saul Bass is a chart of facts on city refuse.



Bill N. Lacy is Director of the Department of Architecture and Environmental Arts for the National Endowment for the Arts, Washington, D. C. Mr. Lacy, a practicing architect and former Dean of the School of Architecture, University of Tennessee, has published articles in the AIA Journal, Architectural Record and Progressive Architecture.

Conversations: Urban Information

The visibility of a city is largely dependent on the quality and quantity of information available to the public on the activities of institutions serving public needs. A number of different perspectives on how this visibility can be increased were discussed with IDCA participants by designers and public officials.

Bill Lacy, of the National Endowment for the Arts and Nicholas Johnson, Federal Communications Commissioner, presented contrasting views on the role of agencies on a Federal level. There was consensus concerning the need for public support for those people who are willing to work in the public interest. It was noted that although their goals differ, it is as difficult for an artist or dancer to support himself through the private sector as it is for a lawyer or doctor who wishes to serve public rather than private interests.

Representatives of leading architectural and design publications also attended the IDCA and discussed their editorial policies in an afternoon conversation. Peter Blake, formerly of *Architectural Forum* and now editor of a new magazine, *Architecture Plus*, noted that, "The magazines are not directed toward a mass audience but toward a selected clientele. They are very personalized operations editorially and for good reason must reflect the personal interests and judgment of their editors." Sharon Lee Ryder of *Progressive Architecture* indicated an effort on the part of some publications "to broaden their editorial scope to deal with the total environment rather than solely with individual buildings."

Members of GEE! Group for Environmental Education Inc., tied together many questions raised at the conference by considering whether environmental awareness should be considered a psychological sense or a political tool. Commenting on interdisciplinary environmentalists, "There are those who deal primarily with people and those who deal primarily with things; environmental education deals with the relationship of people and things in the same space. Depending on the individuals involved, the focus (on people or things) will be at either end of the spectrum."



The magazine group included (left to right): Gilles de Bure, Sharon Lee Ryder, Ellen Perry Berkeley, Peter Blake and Lisa Ponti.

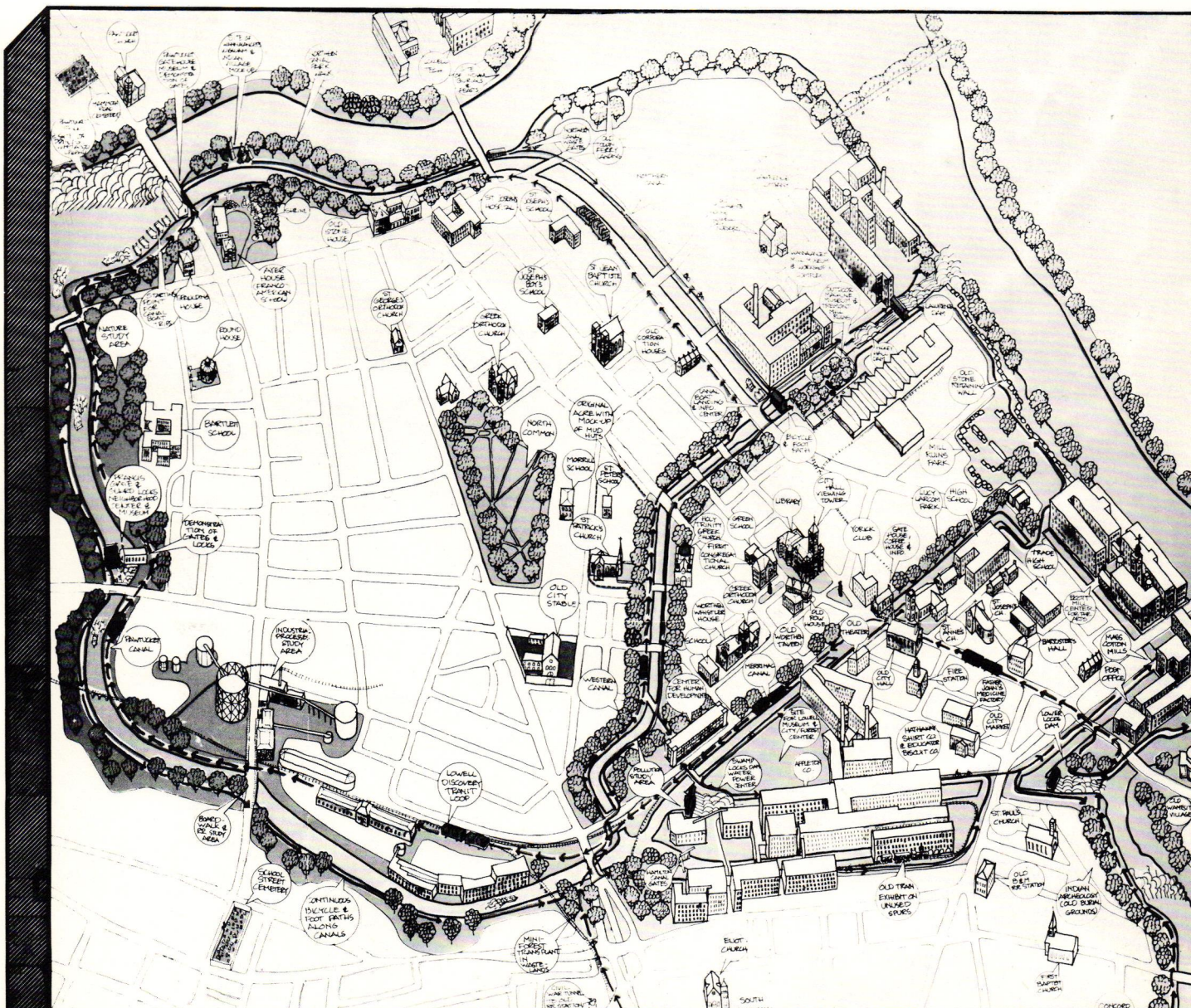
Exhibitions

A small dome structure, located near Aspen's tent, housed a number of exhibitions dealing with various kinds of urban information. Some of these were put together for the conference; others were traveling shows, brought to Aspen to demonstrate a particular way to make the city more visible. The materials (all uniformly laminated in plastic sheets) were installed by Ivan Chermayeff.

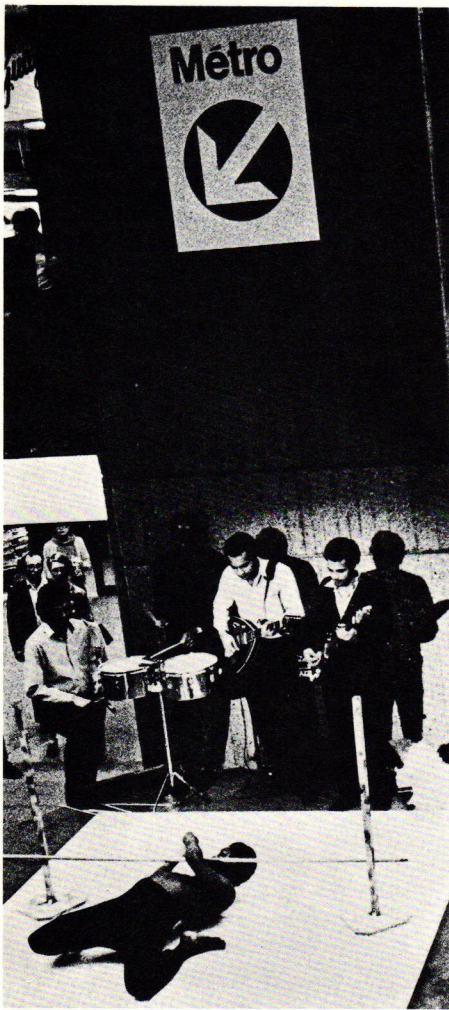
Panels from four of the exhibitions are illustrated here; the other exhibits were: Explanatory graphics defining and conveying the idea of the Farmers' Market, Detroit, Michigan; The South Arsenal Project, Hartford, Connecticut; Some drawings of Louis Kahn.

Lowell Discovery Network

Lowell, Massachusetts is the proposed site of a National Culture Park, located in a Model Cities area. Five and one half miles of canals, bordered by bicycle and foot paths, provide the framework for a series of educational and recreational experiences. This project involves the preservation, restoration and conversion of a number of historic buildings aimed at the revitalization of a declining city that presently lacks recreational, educational and artistic resources.



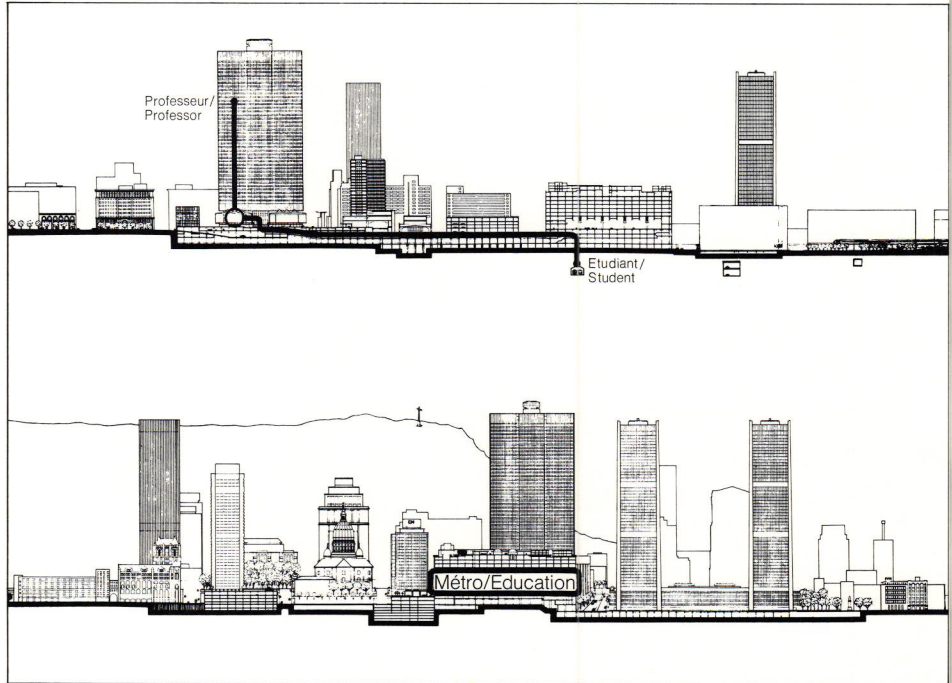
Lowell Discovery Network, by planners Michael and Susan Southworth.



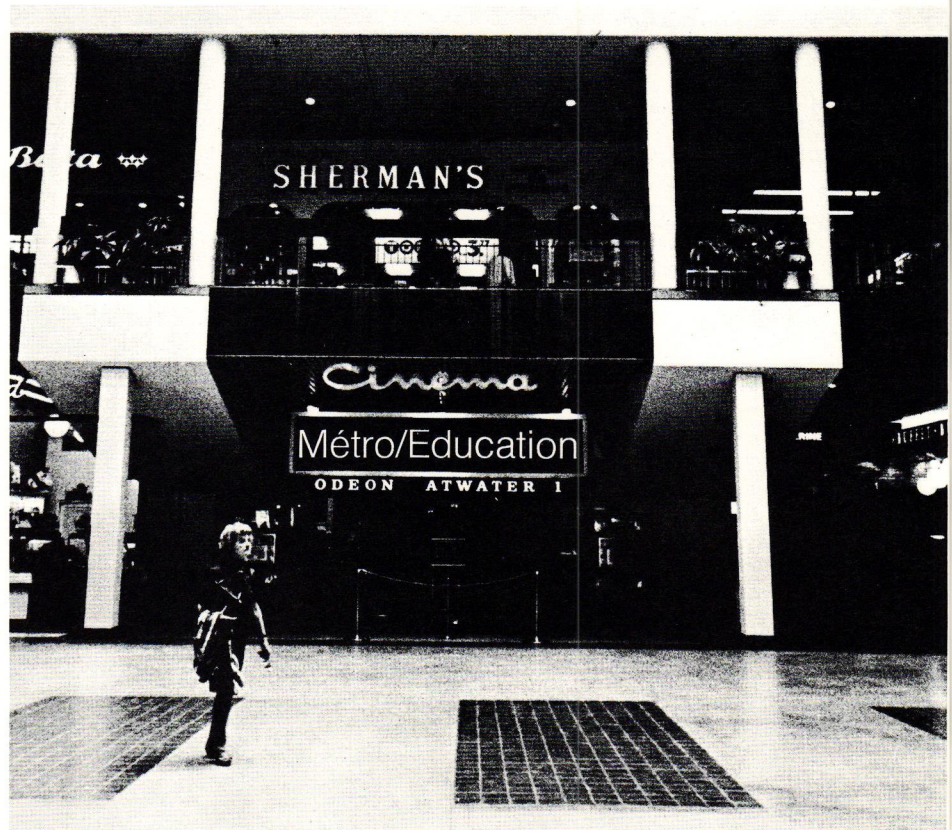
Montreal's Metro contains large station spaces that function well for concerts and other group activities.

Metro/education

Metro/education proposes to use Montreal's subway as the central corridor for the city's educational system. The Metro will act as home base for high school students, providing classrooms, transportation and access to all of the city's resources. The project will form a link between Montreal's educational needs and its available infrastructure. Now in the planning stage, Metro/education is seen as a way to test and evaluate the concept of integrating education and urban life.



The Metro connects the most densely populated areas of Montreal and gives direct interior access from transportation to the major public buildings.



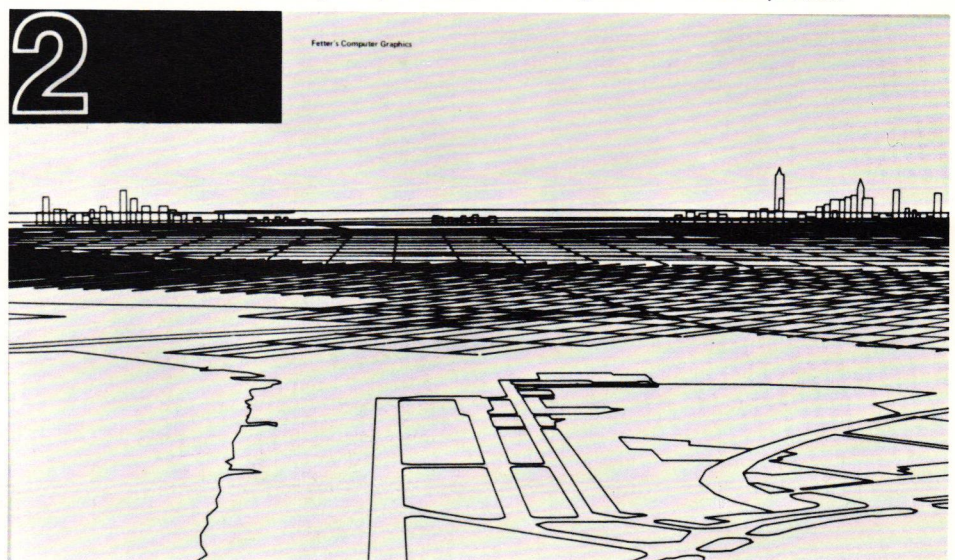
Cinemas located in the Metro framework will act as classrooms on weekday mornings at a minimal cost per student.

Making the City Observable

A collection of 112 maps, guides, urban education projects and new scientific methods for describing the urban environment in visual terms, this exhibition was organized by Walker Art Center with the assistance of the Graham Foundation for Advanced Studies in the Fine Arts. The materials were gathered from all over the United States and Europe to show the best examples available that explain various urban characteristics and programs.



Making the City Observable installed in the dome structure provided for temporary exhibitions during the Conference period.



A panel showing William Fetter's computer graphics of an airport landing field.



Hans Proppe teaches at the California Institute of the Arts. His selection and programming of films for IDCA was a vital contribution to the Conference.



Allegro ma Troppo, a film on the city of Paris, by Paul de Roubaix; still courtesy Pyramid Films, Santa Monica, California.

Films: IDCA 1972

Hans Proppe selected, programmed and wrote the notes that follow, for all films shown at the conference.

The film program consisted of seven different film packages, each designed with a specific purpose and intended to reflect a particular aspect of the conference theme, "the invisible city." Specifically, the intention was to make visible the way discrete portions of the population such as urbanologists, city agencies, schools, neighborhood groups and artists visualize and represent the city from their points of view.

The selection of the program was not made primarily on the basis of excellence of technique, but rather on the representative nature of particular genres, i.e., not to find the best educational or training films, but to make visible the current state of the art and demonstrate the perspective and assumptions of a film type.

Films are listed as they were programmed at the conference. Title, description and maker, are followed by running time, rental fee and name of distributor.

I The City as Perceived by Its Inhabitants

Films conceived, written and directed by children, street gangs, and political "street people."

Saturday Animation and film montage by pre-teenagers. 5 minutes; \$8; Cellar Door Cinema.

From the Inside Out Written and directed by black teenagers from North Richmond, California; about ghetto life. 24 minutes; \$9.50; Extension Media Center.

People's Park The People's Park controversy as seen and described from the people's point of view. 25 minutes; \$25; San Francisco Newsreel.

Lincoln Center Urban renewal and cultural displacement described by the Puerto Rican families removed by the construction of Lincoln Center. New York Newsreel. 12 minutes; \$15; San Francisco Newsreel.

The Jungle The 12th and Oxford Street gang of Philadelphia describe life on their home turf. 22 minutes; \$7.50; Extension Media Center.

II The City as Interpreted by Artists, Designers and Filmmakers

Innovative techniques (narrative and/or mechanical) for describing city people, functions and environments.

Allegro ma Troppo Paris presented as a visual metaphor through the use of accelerated and time lapse photography. Paul de Roubaix. 13 minutes; \$15; Pyramid.

N.Y., N.Y. Abstract and surreal images defining the temper and personality of New York City. Francis Thompson. 16 minutes; \$20; Pyramid.

Snapshots of the City Collage-montage statement about the city. Stan Vanderbeek. 5 minutes; \$5; Film Makers Cooperative.

21-87 Impressionistic comment on the automation of city people and modern living. Canadian Film Board. 10 minutes; \$10; Contemporary.

Castro Street A film in the form of a street. Bruce Baillie. 10 minutes; \$10; Audio-Brandon.

Urbanissimo Animated film about rural versus urban living. John Hubley. 7 minutes; \$8; Creative Film Society.

S.W.L.A. Abstract "cinemoem" using high contrast effects to describe the industrial area in southwest Los Angeles. Rob Thompson. 8 minutes; \$10; Creative Film Society.

Easy Out Cinematic effects through contact with optical printing using city/country contrasts. Pat O'Neill. 10 minutes; \$20; California Institute of the Arts.

III Training and Educational Films about City Functions

Films designed by and for public agencies describing typical interpretations of the city and functions it performs.

Fire Fighting During Riots Los Angeles Fire Department training film using the Watts riots as visual and tactical source material. 25 minutes; not available for general distribution.

City Protection and Welfare Services Describes the police, fire and welfare services in the city; intended for high school audiences. 10 minutes; \$7; Contemporary.

Jobs in Drafting Job Corps training film designed to interest minorities and unemployed persons in design/drafting jobs. 8 minutes; \$7.50; National Audiovisual Center.

Duke Thomas, Mailman Junior high school educational film in a cinema verite style, following and describing the typical tasks of a mailman. Dimension Films. 11 minutes; Churchill Films.

Philadelphia Electric Company Commercials Seven commercials commissioned by the Philadelphia Electric Company, attempting to inform the public about their operations and problems in providing electric service.

IV The 51st State

Films dealing subjectively with the quality of life in New York City.

Muzak The Muzak Corporation describes its procedures and assumptions about the service it performs. Tony Ganz and Rhody Streeter.

Bowery A look at men's shelters on the Bowery. Tony Ganz and Rhody Streeter.

Yoga Women in Great Neck in Yoga classes. Claudia Weill and Eli Noyes.

Help Line Listening and talking to the switchboard operators who talk to desperate and lonely people. Tony Ganz and Rhody Streeter.

Mannikins Making a mannikin for Saks Fifth Avenue. Mike Bortman.

Golden Gloves Talking to Golden Gloves competitors and their entourages. Mike Bortman.

Dogs A walk in Central Park from the point of view of a dog. Claudia Weill and Eli Noyes.

Marriage People who get married in the city. Claudia Weill and Eli Noyes.

Lost and Found New York subway system's lost and found. Claudia Weill and Eli Noyes.

Commuters Scarsdale commuters leave and the third world cleaning force arrives. Claudia Weill and Eli Noyes.

Roaches Roaches, and various ways people try to get rid of them. Claudia Weill and Eli Noyes.

All films in program IV were made for station WNET in New York; Cyclops Films.

V The City as Seen by the Professional

More traditional criticisms and analysis of the city by urbanologists, economists and the news media.

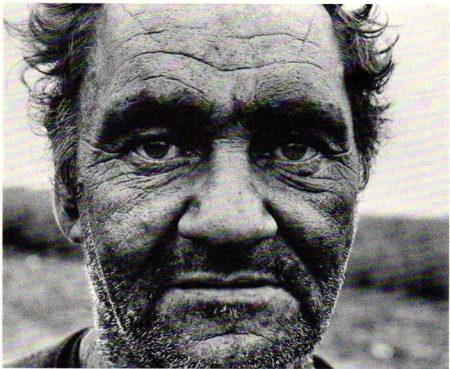
The Idea of the City John Kenneth Galbraith discusses the transition from the pre-industrial to the industrial city. 28 minutes; \$40; The University at Large.

The Writer and the City Alfred Kazin discusses and illustrates New York and Chicago as seen through the eyes of 19th and 20th century American writers. 28 minutes; \$40; The University at Large.

Uptown: Portrait of the South Bronx Documentary about the slums across the river from Harlem. Herb Danska. 27 minutes; Contemporary



Uptown: Portrait of the South Bronx, a documentary by Herb Danska; still courtesy Contemporary Films, San Francisco.



Living Off the Land, Bruce Davidson's portrait of a family subsisting on the refuse of New York City; still courtesy the filmmaker and the American Film Institute. Mr. Davidson described the making of this film and showed slides from his book, East 100th Street, at one of the evening film sessions.



Alphaville, Jean Luc Godard's futuristic gangster film; still courtesy Contemporary Films.

Abandonment of the Cities Investigative reporting on the causes and effects of inner city building abandonment. NBC News. 11 minutes; \$10; NBC Educational Enterprises.

VI Education as Process and Product

Innovative techniques, environments and theories in education.
New Lease on Learning Experimental education programs. Alan Green. Educational Facilities Laboratories.
With Such as These Teaching and learning in the context of dehumanizing classroom practices. 17 minutes; \$17.50; Center for Curriculum Design.
Saturday Morning Condensed version of a seven day encounter retreat with fifteen high school students talking about parents, school, sex. Scott Mackenzie. 70 minutes; Dimension Films.

VII Evening Programs

High School Documentary profile of a high school. Frederick Wiseman. 60 minutes; \$150; Zipporah Films.
Evolution Animated film on aspects of evolution. Film Board of Canada. 12 minutes; \$15; Learning Corporation of America.
Metropolis Classic 1927 expressionistic vision of the struggle between management and labor in a city of the future. Fritz Lang. 93 minutes; \$40; Audio-Brandon.
Labyrinth Animation masterpiece: individualism, conformism, the city and Icarus. Jan Lenica. 14 minutes; \$20; Contemporary.
Man with a Movie Camera A classic documentary in which the making of the film is part of the documentation of one day of Soviet life, covering birth, work, marriage, recreation and death. Dziga Vertov. 67 minutes; \$30; Audio-Brandon.
Living Off the Land Sensitive portrait of a man and his family living off the junk and garbage in New York. Bruce Davidson. 30 minutes; American Film Institute.
Alphaville Homage to American gangster, detective film genre set in a city of the future. Jean Luc Godard. 100 minutes; \$75; Contemporary.



High School, a classic documentary on traditional high school life, by Frederick Wiseman; still courtesy Zipporah Films, Boston.

In addition to reading materials and posters, each conferee was given an hexagonal stamped metal symbol that acted as a reusable ticket for all Conference events. Worn on a chain around the neck, this pot-metal object became a universal, unisex jewel. (see p. 7)

Books: IDCA 1972

The Jerome Hotel, one of Aspen's few remaining Victorian structures, has always been the headquarters for the IDCA, and last June it also housed a temporary bookstore/resource center for the Conference. The store was organized and run by Sam Yanes.

On opening day, all conferees were given (as part of their enrollment fee) a large brown paper bag containing an assortment of publications. Included were: the program for the meetings; *Aspen Visible*, a small but comprehensive guide to the town and its environs, by Joel Katz; *Yellow Pages of Learning Resources*, an alphabetized general guide to urban resources, inventively put together by a number of contributors under the guidance of Richard Wurman; a copy of *Big Rock Candy Mountain*; a number of reprints of articles related to the Conference theme; and the thirteen posters designed for IDCA 1972.

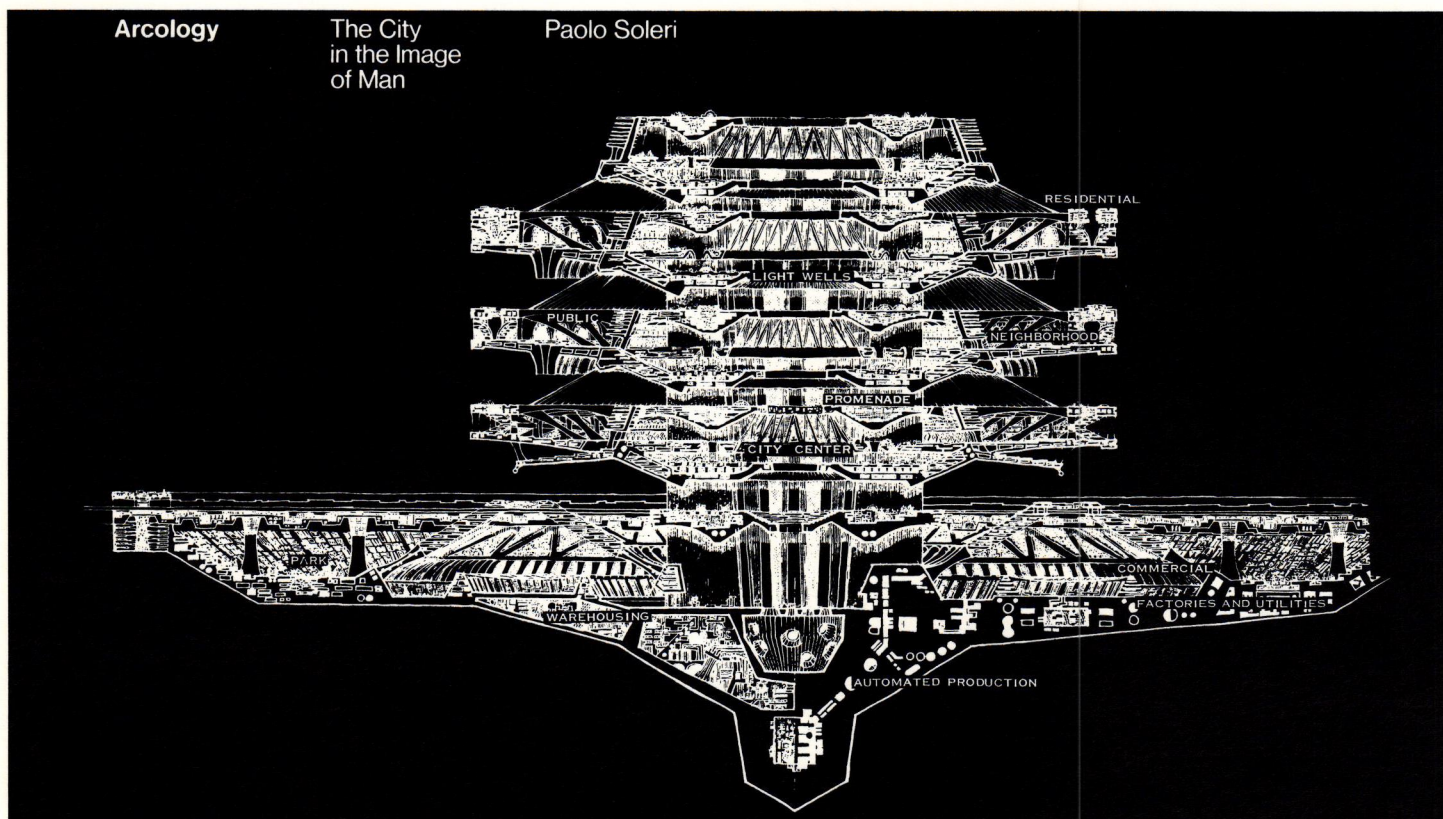
By the next day a bookstore was in full operation and the brisk business was testimony to the fact that designers (McLuhan aside) still read. Sam Yanes reports: "Conferees wandered in and bought combinations of books usually considered to be unrelated in the traditional world of Doubleday or the Harvard Coop. The connections were made—people buying sociological tracts along with books by John Holt and Paolo Soleri at one crack. Designers seemed to realize they were educators, by the nature of their work; educators seemed to have visions of new applications of design—at least their libraries would be altered. The list that follows is a partial inventory of the store."

Benevolo, Leonardo. *Origins of Modern Town Planning*. MIT Press.

Birenbaum, William M. *Overlive: Power, Poverty and the University*. Dell.

Bennis, Warren G. and Slater, Philip. *Temporary Society*. Harper and Row.

Blake, Peter. *God's Own Junkyard: The Planned Deterioration of America's Landscape*. Holt, Rinehart and Winston.



Paolo Soleri, Arcology: The City in the Image of Man, The MIT Press, Cambridge, Mass., 1969.

Blumenfeld, Hans. *Modern Metropolis*. MIT Press.

Bremer, John. *School Without Walls*. Holt, Rinehart and Winston.

Burchard, John. *The Voice of the Phoenix*. MIT Press.

Conrads, Ulrich. *Programs and Manifestoes on 20th Century Architecture*. MIT Press.

Dietz, Albert G. *Dwelling House Construction*. MIT Press.

Educational Facilities Laboratories. *Places and Things for Experimental Schools*.

EFL. *High School*.

Foster, Marcus. *Making Schools Work: Strategies for Changing Education*. Westminster.

GEE!, Levy, Chapman, Wurman. *Our Man-Made Environment Book 7*. MIT Press.

Gross, Ronald and Beatrice. *Radical School Reform*. Simon and Schuster.

Handlin, Oscar and Burchard, John. *Historian and the City*. MIT Press.

Hitchcock, Henry Russell. *Rhode Island Architecture*. MIT Press.

Holt, John. *Freedom and Beyond*. E. P. Dutton and Co.

Howard, Ebenezer. *Garden Cities of Tomorrow*. MIT Press.

Illich, Ivan. *Celebration of Awareness*. Doubleday.

Jacobs, Jane. *The Death and Life of Great American Cities*. Random House.

Kahn, Louis. *Three Talks at Rice*. Wittenborn.

Kohl, Herbert. *The Open Classroom*. New York Review of Books Series.

Kozol, Jonathan. *Death at an Early Age*. Bantam.

Krauss, Rosalind. *Terminal Iron Works: Sculpture of David Smith*. MIT Press.

Lissitzky, El. *Russia: An Architecture for World Revolution*. MIT Press.

Negroponte, Nicholas. *Architecture Machine*. MIT Press.

Norberg-Schulz, Christian. *Intentions in Architecture*. MIT Press.

Otto, Frei. *Tensile Structures, Vol. 1 and 2*. MIT Press.

Perin, Constance. *With Man in Mind: An Interdisciplinary Prospectus for Environmental Design*. MIT Press.

Rasmussen, Steen E. *London: The Unique City*. MIT Press.

Rettig, Robert B. *Guide to Cambridge Architecture: Ten Walking Tours*. MIT Press.

Rudolfsky, Bernard. *Streets are for People*. Doubleday.

Safdie, Moshe. *Beyond Habitat*. MIT Press.

Smithson, Alison, Ed. *Team Ten Primer*. MIT Press.

Stein, Clarence S. *Toward New Towns for America*. MIT Press.

Summerson, John. *Classical Language of Architecture*. MIT Press.

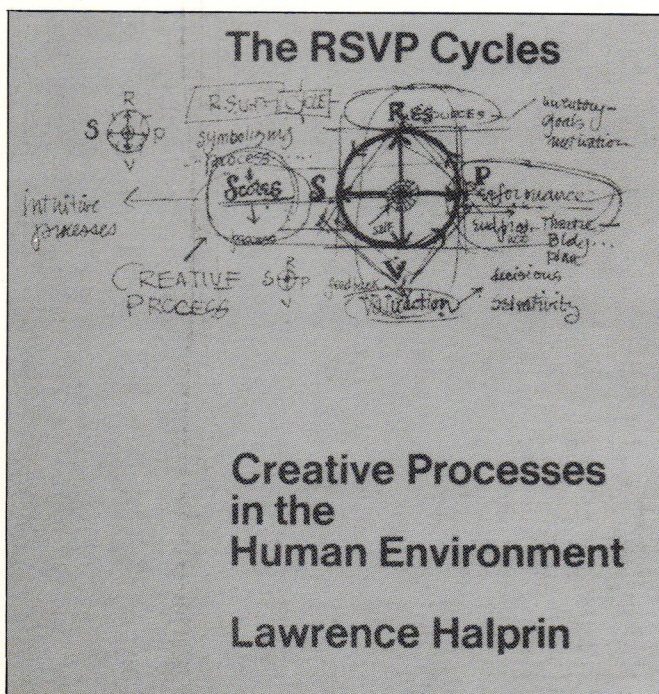
Warner, Sam B., Ed. *Planning for a Nation of Cities*. MIT Press.

Wilson, James O. *Urban Renewal: The Record and the Controversy*. MIT Press.

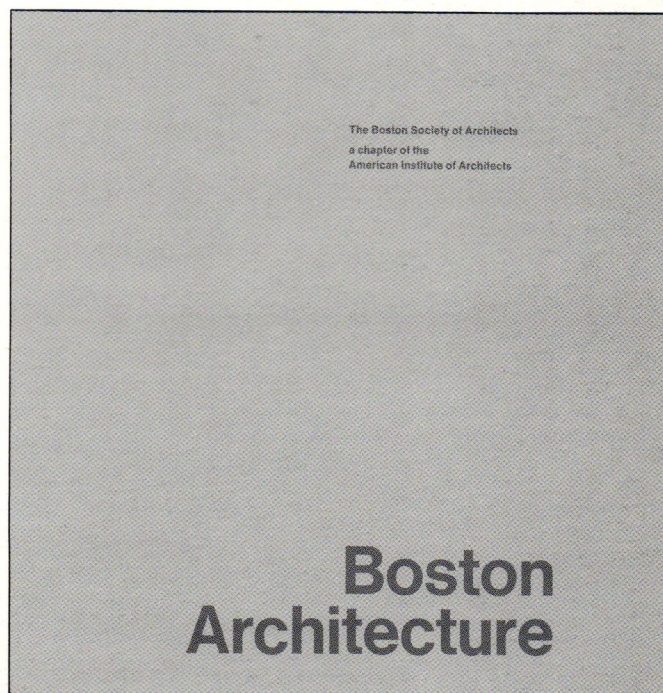
Wingler, Hans M. *Bauhaus*. MIT Press.

Woods, Robert A. and Kennedy, Albert J. *Zone of Emergence: Observations of Lower, Middle and Upper Working Class Communities of Boston*. 2nd ed. MIT Press.

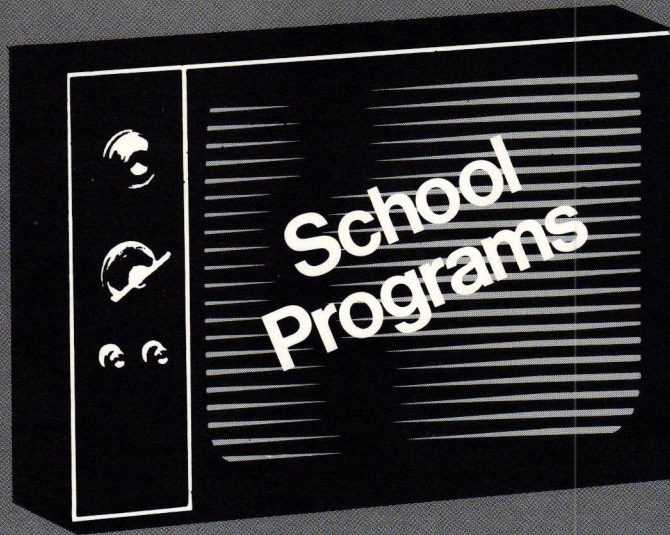
Wurman, Richard. *Making the City Observable. DQ 80*. Walker Art Center and MIT Press.



Lawrence Halprin, *The RSVP Cycles: Creative Processes in the Human Environment*, George Braziller, Inc., New York, 1969.



Donald Freeman, *Boston/Architecture*, The MIT Press, Cambridge, Mass. 1970.



Students on Learning

A representative group of ten high school students (with Richard Farson as referee) discussed some tentative and some well-defined efforts to get students into the real world on a daily basis. Their feelings about their schools and themselves in relation to the various programs discussed reveals one essential truth — even abortive or tentative efforts to open school doors (to bring new kinds of people in and to allow students time to be constructively out) make young people a contributing element in the urban scene in a way that the fenced in school cannot. It's this awareness of life around them and their very real role in that larger life that gives these students the motivation to grow and expand that precedes all learning.

Participants in this session, conducted by Richard Farson, include: Jim Benninger, Gilbert Tyson, David Bentley and Donna Sedlacek from Metro School in Chicago; Isaac Dyer, Gloria Slaughter, Nancy Gould and Sheldon Herman from the Parkway Program in Philadelphia; and Michael Johnson, Mark Melendrez and Logan Moore from the Berkeley Community Schools.

As individual voices were not distinguishable on the tape recording of the session, the responses of the various student participants are identified simply as "student."

Farson "The students we are going to be talking with this morning come from schools which are significant not only in the fact of educational reform, but because they represent political reform. They are trying to give more options, more freedom, more voice, more power to young people. They are trying to do something that we haven't been very successful in; to organize themselves so as to elicit the potential of children. We have yet to know much about the potential of children, because we have never designed society to elicit it."

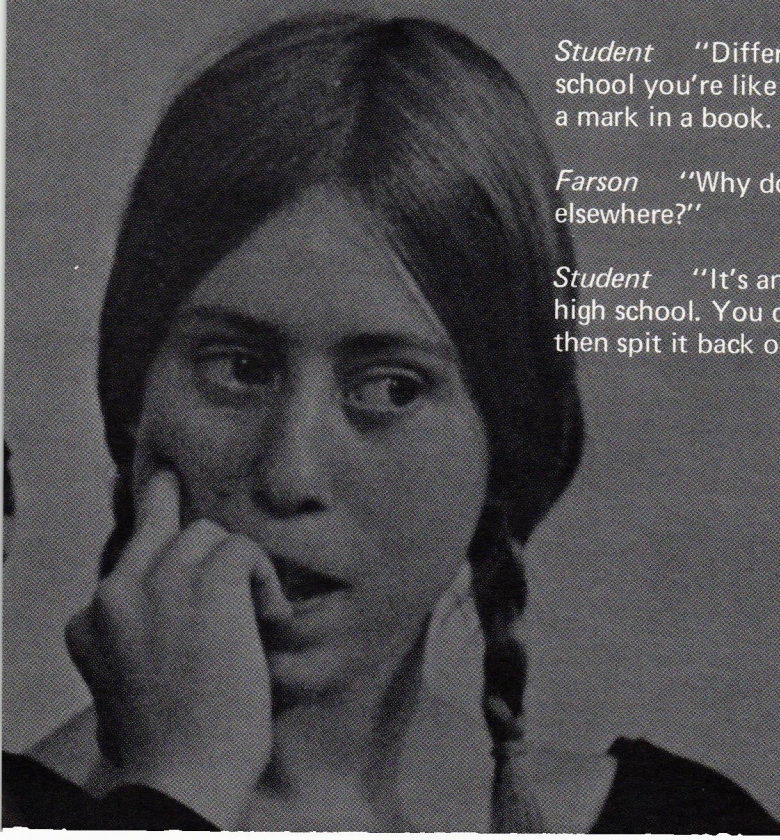
The students describe their particular school programs in both their positive and negative aspects and compare their experiences with that of students in more traditional school settings.

Farson "In what way is Metro different?"

Student "Different in the way that teachers are your friends. In high school you're like a regiment; they know you by name, black and white, by a mark in a book. At Metro, teachers are more than teachers."

Farson "Why do you think that's possible at Metro and not possible elsewhere?"

Student "It's an attitude of wanting to break away from the system of high school. You don't have information shoved down your throat and then spit it back on tests, it's more that you're learning."



Student "This is my first year in Community High (Berkeley). When I first got there I saw dogs and hippies riding bikes around in the halls, and I was just looking. They would come to class, and if they didn't want to, they would never come to class. Later on in the year I found out that all they wanted was a school where they didn't have to learn. You've got the straight white people and the crooked white people. The straight white people go to schools and get a righteous education, but the crooked ones, will find some place where they can lounge, or bring their dogs or ride their bikes. If you go to a traditional school you see everybody coming in shirts, shoes, socks, but in Community High you see no shoes, no shirts, they might be wearing pants but they've got big holes. I just had to get used to it. It was either facing hippies with no clothes or facing teachers that put junk in front of you five days a week."

Student "One thing that I think is a problem with students when they first come to an experimental school is they've been so trained to be robots at a regular school, when they get to an experimental school they freak out. They go wow, I'm free, so I really think experimental school should start with grammar school-age kids. There's no reason why not, kids are a lot more intelligent than people think."

Student "We have an attendance problem at Metro. Students don't like to go to class, they can go to the park so they were saying it's the blacks not going to class, so we started to have meetings about it and found out that there were just as many whites missing class as blacks. At one time they were saying the only way we can eliminate this is to eliminate the blacks from the school, I felt that was the wrong solution."

Student "If you don't want to go to school in Parkway there's plenty of places to hide, the park fountain, and JFK Plaza, but I think the statistics are that we have more people attending school every day."



The student participants in conversation with Richard Farson (at right of microphone), discussed their feelings about education.

"Selecting among resources available in the city might lead to a superficial shopping around approach. Another danger in the apprenticeship system is that in closing the gap between learning and life, the kids, liberated from the authoritarianism of teachers and curricula are subjected to the manipulations of government and industry people gung-ho for the status quo. The new system may fail to break with the hidden agenda of the old system, namely that of schooling the nation's kids for success or failure in the employment rat race. Without a change in the goals of education, schools will continue to divide losers from winners and emphasize the importance of winning through conforming."

Farson "How does your education compare to standard schools, are you learning more, and if so what?"

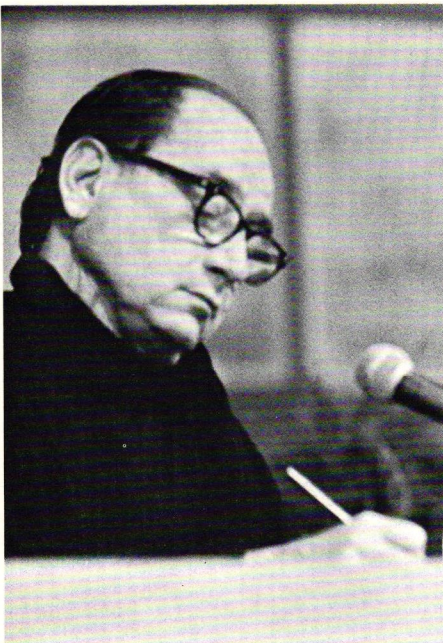
Student "I think I've been learning more, because I'm not confined to the classroom. You can get out into the city and see what's happening, so in the future you have more of an idea what's going on."

Student "We definitely learn different things, we don't learn certain history things that other schools learn but we learn more practical things and things we're interested in. I'm interested in radio so I had a class at a radio station one afternoon a week so I could really learn what happened there."

Student "At Metro there are opportunities to get into specific areas. I'm interested in photography and work at a photographer's studio. I got the job through school. If I was back at my old high school I wouldn't even know what a camera was. Another difference is that we don't get grades at Metro, but instead have an evaluation filled out between the student and teacher. At the beginning of the cycle you take a class three times a week, and you get four points for it which equals a fraction of a credit. You either go to your classes and get credit, or you don't go and you don't get credit. You don't get by passing with a 'D' as you did in traditional high school where you can get away with murder."

"At Metro the students learn on an individual basis. If you need help in reading, go to an English teacher and you'll get the basic help in reading or writing. If you're advanced, and already have mastered that, you can go on to bigger and better things like poetry. It's not like a class that does the same things the whole year, it's more individual learning, which is why a school like Metro, or Berkeley, or Parkway is good."





George Nelson, designer and educator, recently taught at the Center for Intercultural Documentation in Cuernavaca, Mexico.



Leonard B. Finkelstein, Director of the Parkway Program in Philadelphia and a specialist in staff development, has had over twenty years of administrative and teaching experience. Through his work with the Parkway Program, he has contributed significantly to the effort to find methods for utilizing the city and its professionals as learning resources.

Experimental Urban Schools

In this session George Nelson talks with representatives of experimental programs, all concerned with varying approaches to educational change, and environmental awareness. All the participants utilize the resources of the city as a classroom in a way that challenges traditional educational structure and content.

Leonard Finkelstein, Director of the Parkway Program in Philadelphia, describes the philosophy behind an open school that operates within the public school structure.

Nelson "The Parkway Program seems to be the granddaddy of the programs that talk about utilizing the resources of the city, making use of the people, places and processes."

Finkelstein "We do, in fact, utilize the resources of the city. We have discovered that there are thousands of classrooms that aren't really classrooms, and thousands of teachers who aren't really teachers, and we put together a program that makes it possible for young men and women to deal with their own education in a way that seems to be different.

"We're not a private entity, we are part of the public school system; we do want to remain different, but we do want to spin-off and come into the system. And, this year with the new Superintendent of Schools and new Board of Education, with an old deficit of 65 million dollars, we're going to be moving into a series of 60 alternative programs. It is now possible for secondary schools in the city of Philadelphia to develop the kind of programs that will speak to some of their problems. The design coming from within those schools is speaking to the very specific problems that they sense and feel should be dealt with. This is new, and exciting, because it says that experimental, open, innovative education need not happen 'out there,' but should, in fact, become part of the ongoing program."

Ruth Kohn, an educator who has had cross-cultural experience teaching in India and France, comments on her experience in attempting to break through social as well as cultural barriers through open school techniques that include the development of environmental education in France.

Kohn "I lived for seven years in India, three years in France, which means I haven't lived in the U.S. for the last ten years. So coming here is in some ways refreshing, in some ways disturbing. I would like to tell you first about experiences in India where I started a nursery and primary school, which was not a school, in the sense that it was not a building, not tables and chairs. It was a school situated in the middle of a field under some mango trees. An effort was made not to have special equipment, something special for a school. They were things from the market place, as they were found, which were adapted for school use. The purpose was to search out what exists that could be used. Since we were outdoors, the herds of sheep and camels would come by, the tractors would come by, this was all part of the school day. The children would go out of the school to visit the shepherd who was milking; local puppeteers would come into the school; there was a constant back and forth between school and the outside. Teachers were not trained teachers, but generally mothers who became interested in what was happening and who could visit freely. These parents joined small discussion groups we had, a kind of training program for parents, teachers already in the school, and other teachers.

"In Paris I am in the Education Department of the University, set up to satisfy some of the demands students expressed in May, 1968. My work there is helping teachers and future teachers to look around more



Ruth Kohn is coordinator of an environmental education project sponsored by the Association pour L'Environnement Pédagogique and an instructor in the Department of Education of L'Université de Vincennes, Paris. In conjunction with teaching in India and France, Mrs. Kohn has published a number of articles and books related to education and child development.

carefully to see what's really going on in their classrooms or outside of their classrooms. The first step is look around, become aware of what you're doing and what someone else is doing; and the next step is to find techniques that help to sharpen our knowledge, our ability to see and analyze. What's interesting in all this is the process of reflection and change that takes place in each person.

"My third hat is in connection with programing a new building for a somewhat experimental school, where children have to go—there we're trying to get all the participants involved in the school in the programing procedure. The children have given their opinion about what the school is and what they think it should be. It was interesting because one of the teachers and I talked with the eldest children in the school about what their ideas were. The eldest children then went and talked to the younger children in the school, the process was kind of a rolling stone. Everything was taken down, the parents were also consulted in a similar manner. All these ideas have been pulled together now, classified and organized for the architects to work with and come up with some kinds of options. The hope was that the architects would be able to come up with a few different ideas, turn them back to the public, and see what the public thinks and which way the public wants the architects to go."

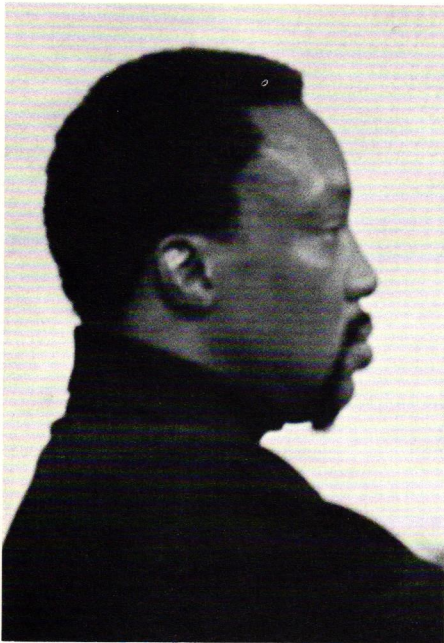
Nelson "Do these architects like to be given a detailed program, does it interfere with their occasional tendency to turn out a masterpiece when nobody's looking, do they accept it?"

Kohn "That depends on the architects. In this particular case the architects were particularly willing because it's their own children's school as well. The chief problem that we find is lack of a common language. The architects speak in visual terms, they'll make a diagram, a scheme, and expect that the teacher can read it. But the teacher has no idea what the plan means. Teachers will say certain things in their jargon, and the architects will have no idea what that means — so the chief problem we've had is finding a way of communicating, and it's a process that takes a lot of time."

Nelson "Do you have any describable impressions of the difference between working in your field in France and here, because you did work here before you went to India?"

Kohn "Yes, the difference that strikes me most is that it seems to me there's a greater possibility for the individual to make his mark in America. Decentralization exists — every state has control of education, every locality has control, therefore the system that you're coping with is a smaller system. In France, everything is nationalized, that is education is a national function. There's a Ministry of Education that controls absolutely everything from the nursery school to the university. All education is free, so that's an advantage. On the other hand, the tables are bought, paper is ordered, program is decided, teachers are hired, buildings are decided upon by the Ministry of Education, so the individual's impact on that system is much less than here. The students and teachers I have contact with are extremely conscious of the weight of the system.

"The students, in fact, have forced upon me a consciousness that we've been discussing, and that is the power of the institution. We talk a great deal here about individual concern, contact. In France, this individual action is much less perceptible, and the individual feels himself much less able to do something. He feels the weight of the system. When I talk in France about what individuals can do, in general, people look down their noses, because the concern is with the system, the entire institutional structure, and I don't think it's something we can ignore here either."



Lawrence L. Wells is Director of the Experimental Schools Project of the Berkeley Unified School District. He was previously both a principal and teacher for the Berkeley Schools.



Judy Seidenbaum is Executive Director of Open Space, Inc., a non-profit educational development corporation founded with the purpose of expanding alternatives within public education. A recent grant has made it possible for Open Space to expand its activities to include an environmental education workshop which cooperates with the public schools in carrying out experimental programs.

Larry Wells heads the Berkeley Community School Program, an attempt to provide a diversity of school structures to meet particular educational needs of ethnic or other special interest groups in the city.

Wells "I guess in a way I come from a different place, and in a way a very similar place, in the sense of Berkeley, California. If you have a feeling of that community, it represents diversity, not only racial, but political diversity, it provides a fantastic range of kinds of people, ideas, fermentation.

"In Berkeley, the experimental schools program stems from the recognition that there's a whole segment of people who are continuously invisible within our society. The effort is to make them extremely visible. So, we have an over-reaching program that consists of 24 separate alternatives that we're trying to introduce within a school system. Those 24 alternatives represent various kinds of needs we've been able to identify, coming from students, parents, community at large, as to what the needs are and how we want education to relate to us. The program encompasses a third of a district of five thousand students.

"The programs take place on existing school sites, in warehouses and churches. There are programs directed and controlled by parents, programs directed and controlled by community groups. The program runs from kindergarten through grade twelve — the schools differ in size from 50 to 400 students depending on the structure that that group of students, that group of teachers, that group of parents, decide they want in trying to re-shape an educational approach.

"We have within our 24 schools two schools that speak to a racial orientation or identity of students. Berkeley is one of the few communities of its size to become desegregated in an entire school district. As a result of our experiences of that desegregation, it became very obvious in one high school that there were a number of black students, a number of Chicano students, who had particular kinds of needs for self-esteem and identity that that general school was not able to address itself to.

"Out of that have come programs and perspectives that speak to youngsters with these kinds of needs. We have another school that could be designated in terms of counter-culture, basically young, white families who reject the middle-class value system and want a whole different kind of education for their children. They have the opportunity of setting up their school and developing it around their values. The school programs stem from a variety of needs that come from different segments of that community."

Judy Seidenbaum represents Open Space, a consultant-resource group interested in encouraging more diversity in the existing school system by proposing an alternative curriculum.

Seidenbaum "Open Space is a group of people: two architects, one scientist, a sociologist, a photographer, a community relations person, a librarian, and various assorted people like me. It's a private corporation, formed with the express purpose of using the community services, the resources of the Los Angeles school system. We chose the school system and public education because that's where the people are. There was always a temptation in the formative stages of this group to form a private school, or to go somewhere else away from the city. But every time we thought about that we realized it was only going to be nice for us, and somehow we realized that the city was going to be a challenge. We're committed to trying to encourage choice in the schools — in other words to have it pluralistic — if it's going to be public.

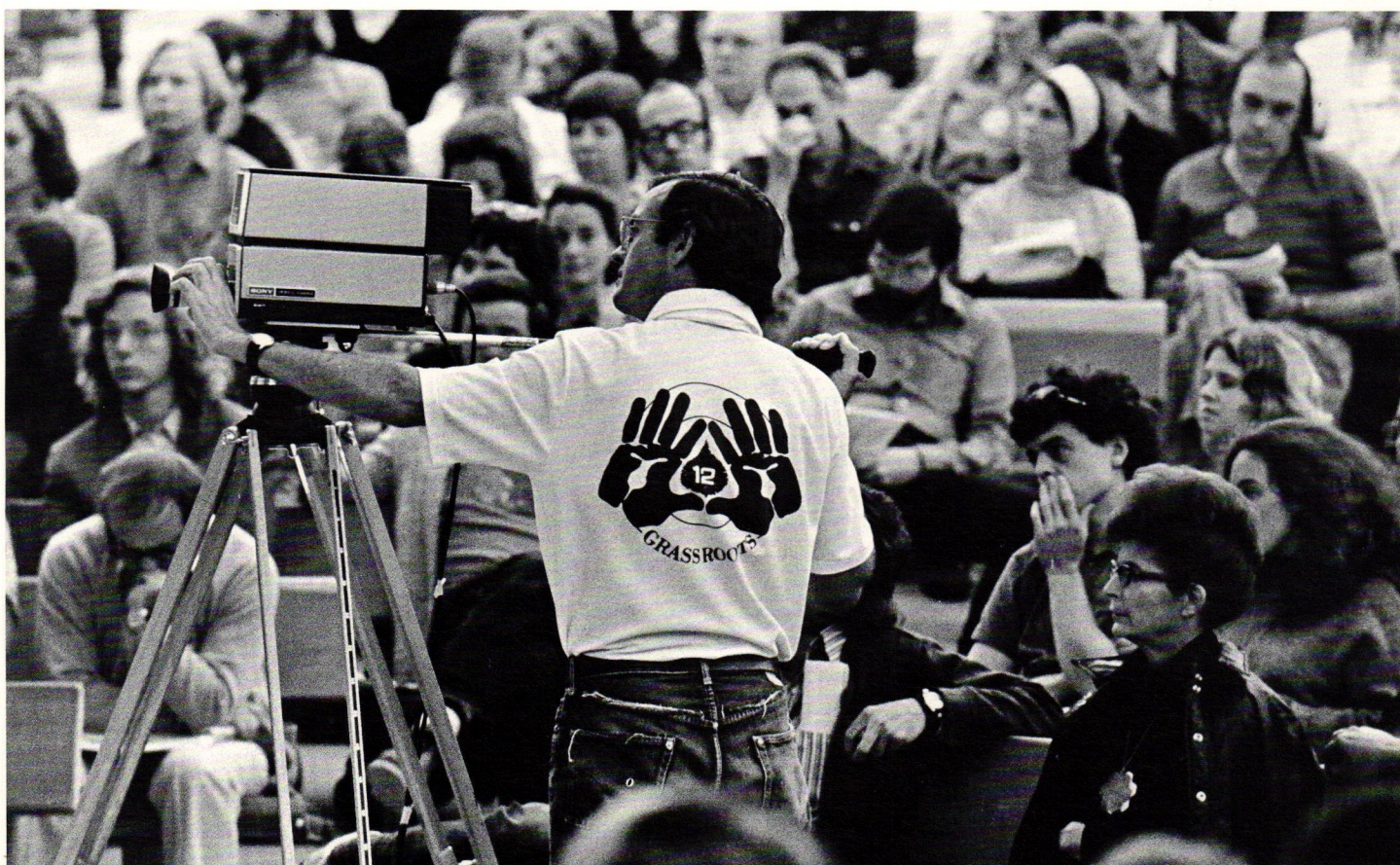
"Like probably every other conference in history, IDCA '72 fell short of a definitive answer to the problem it posed. It did, however, air an important, double-edged question: How can educational methods be changed to make better use of the outside world as a learning space, and how can cities be changed to make them more readily yield the rich store of information that they contain?"

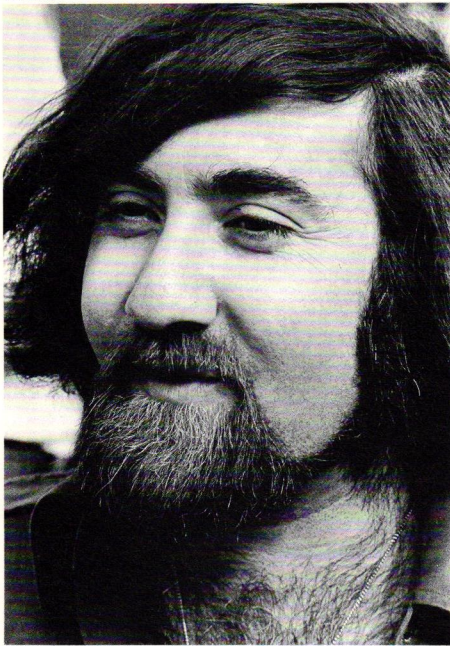
"Our own group is particularly concerned about encouraging an environmentally oriented program in the regular curriculum, not an enrichment program. We are trying to show teachers that if students worry about what's going on outside of the school, if they have a chance to see and talk to people, they can incorporate the things they learn outside into the regular, fairly strict curriculum of the Los Angeles school system.

"We researched the city, found out what junior and senior high school students could do to be of value in the city and started working in a group of summer programs for two years. We took students into the inner city, which was sometimes two hours away by bus, giving them a chance to work with children who never did get out of that city. They worked as tutors or day-camp counselors. We used a bus to take the inner city kids, and ours, out of the inner city to look at other communities so that they would learn how other people lived, and hopefully begin to be stimulated to do and learn a little bit more. After a couple of years I was asked to start a resource center at a junior high school. It became an environmental program, because of our interest in environmental problems. It's impossible not to be that way in Los Angeles."

Nelson "From your position in the Open Space program in Los Angeles, and your view as a resource person, what can we do about compulsory education? Should we let the system die out, or can we work from our position, go back to the city we live in, and do something?"

Seidenbaum "I probably hold a different view in regard to compulsory education, because until our society has developed new ways of deciding who are the winners and who are the losers, in terms of minority groups, we've got to have a way of developing the skills and opportunities for a wider community. If compulsory education is simply abandoned in the case of minorities, I think that would present a continuing trap to again simply not educate that large segment of our society."





Jivan Tabibian, political scientist and urban designer, is on the faculty of the California Institute of the Arts and is a principal in the consulting firm, Social Engineering Technology. Dr. Tabibian has taught at Princeton, USC and UCLA and will be co-director with Milton Glaser of the program for IDCA 1973.



Marcus Foster is Superintendent of Schools for the Oakland California School District. Dr. Foster, whose activities in Oakland include aiding the black community in developing a renewal plan, is the author of Making Schools Work: Strategies for Changing Education.

Education and Politics

In this session, Jivan Tabibian directs his attention toward the political aspects of attempts to change the educational system or the physical environment. He first talks with Marcus Foster about the political dimensions of his work as Superintendent of Schools for Oakland, California.

Foster "One of the continuing problems of education is the matter of finance. As one reels from one economic crisis to the other and has to go through the masochistic effort of picking through an already bare bones budget he knows that he must somehow find full funding for education, and that this will be done in the political arena. A political decision will be the solution for the inadequate funding of urban education.

"From my experience, I have discovered that politicians tend to respond not so much out of the rightness or righteousness of the cause, but because of political activity that threatens their tenure. There are certain people in each of the large cities who control resources, who speak and are listened to, and somehow we have to mobilize those resources. I think of the spectacle of the political climate in this country where it's safer to vote against children than it is against bailing out an aircraft firm; it shows where our values are, and where the clout is. Where is the clout that will bring about the visible city? We can sit around and verbalize, but until we gear ourselves for effective political action, I suspect that decisions will not be made. People will be somewhat stimulated by the philosophical conversations that occur at conferences, but to move those ideas into action requires organizing one's resources and forces politically."

Tabibian "What aspects of the budgetary process that you are involved in should be made more visible to the people who are affected by it? What would be the benefit of increased visibility, both to the people affected and to those who administer? I do believe that secrecy is not always to the benefit of those who practice it. Thirdly, what specific measures would you recommend to make the budgetary process a more accessible and participatory one in terms of all those affected?"

Foster "Institutions cannot change themselves. They tend to change because of input from outside forces, requiring and requesting, demanding change. Therefore, any process involving budget, in my philosophical view, would be a participatory one. I don't know how one can work for support, involving finances, which does not involve the people affected by it.

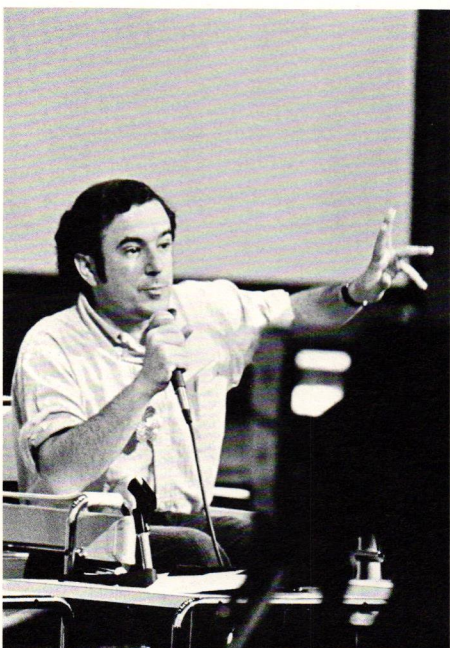
"How do you get those services more accessible and available and more easily influenced by those who need those services and use them? I believe the most effective configuration is a decentralized system. Part of our budgetary process has been to break the budget out in a programmatic format and push it to the school site and say to principals and to teachers and to the community — here are our resources, limited as they are. What are your priorities? See if you can focus these resources in such a way that they have impact on those priorities."

Tabibian "What happens when you decentralize the system? You are aware of the fact that certain sub-districts or certain schools have a greater political influence than others because of their race, because of their income and tradition, as well as because of more vocal, smarter principals and teachers. How does a decentralized system account for the different distribution of political strength in a place such as Oakland?"

Foster "The sophisticated negotiator knows that if he sticks with it long enough a decision is going to be made, and he wants to be there when the



Jaquelin Robertson is Director, Office of Mid-town Planning and Development, Office of the Mayor, City of New York. Formerly a project architect with Edward L. Barnes, Mr. Robertson entered the planning field in 1966 as a member of the Mayor's Task Force on Urban Design, and has been involved with New York City urban design since that time.



Ronald Gross is adjunct Assistant Professor of Social Thought at New York University. Mr. Gross has published a number of books on education, including: The Revolution in the Schools, The Arts and the Poor and Individualism: Man in Modern Society.

pie is cut. The person who comes from a background that does not include the experience of dealing with a high level of negotiation in highly abstract terms, tends to fall away. Through the liaison person, communication through printed media, and through seminars and practicums that we operate in depressed neighborhoods, people begin to develop some style of negotiating with power, and winning something for themselves.

"The little paradox in that is when you begin to really make changes, and bring people in who have heretofore been shut out, in that very process, you are sowing the seeds that will lead to moving to another job later on. That is the commitment as a superintendent, not to a career assignment, but to mobility. Because you work at a job, and you begin to stir up these forces, they do indeed begin to become powerful. Those who are on the cutting edge are now in the middle, and those who have moved to the front are saying, let's have new leadership; it's a healthy process."

Tabibian "What would you say should be kept invisible in the political process, and from whom?"

Foster "I would go all the way for openness. I don't know of any aspect of the political process that has benefited from being invisible. It has to all hang out and be dealt with. One of the board members said, at a meeting we had the other evening, that we had taken the issues out to the community, to the groups that had not before come down to the meetings. He made the remark and I guess it's true, that the school board meeting in Oakland is the only meeting in which you can have 400 people together who are not mad at anybody. The reason for this absence of hostility is that they have been a part of the process, and they've come to know that they are going to be heard. I think we get into trouble when we try to keep parts of it invisible. Why would we have it invisible? The schools belong to the community."

Tabibian next talks with Jaquelin Robertson, director of the Office of Midtown Planning for the City of New York, about his attempts to affect the physical environment of Manhattan through the political process as well as through design decisions.

Tabibian "In your role as a force to try and make New York more interesting, more livable, you have to make judgments that are simultaneously esthetic and political. I would like you to tell us what that combination of roles implies."

Robertson "I'm very definitely a gradualist. I'm only able to move with little steps at a time. It's very difficult for me when I'm asked to get too far in the future. I'm an architect who came into politics for the simple reason that I didn't think architects were affecting the physical environment at a very appreciable scale. It seemed to me that most of the decisions that affect the environment, as we know it, are not made by architects, they're generally made by people who are interested in money."

Tabibian "In our attempts to manipulate the existing political development system in order to improve upon existing environmental conditions, at what point do we draw the line between practical cooperation with the political structure, recognizing its long term strategic implications? Even if we make visible the development deals that go on, the fact that we did make the fat cat fatter is making other things less visible. Each time they get fatter, they literally buy wider and wider seclusion rings around themselves, and bigger and bigger space within which to hide, and better and better protection from the public eye. Tactically, it looks like we're exposing the world, but by reinforcing the power of those who have the power we make the world less vulnerable to our direct intervention."

“Conference talk is nearly always too global and general. Contrary to what many of this year’s conferees seemed to think, what is needed is not so much a rethinking or even remaking of the system, as a hard look at making things work within a given set of circumstances. To change the system has become, too often, the peculiarly crippling prerequisite to doing anything these days; and since this is a privilege (?) that, at best, comes once every couple of generations, changes in between cycles are really no more than surface changes. We need pointed talk about specific problem areas; not, putting these aside until sweeping changes can be affected.”

Robertson “Tactics change strategies. If you have goals and you develop tactics to get there, you generally find that the goal changes by virtue of the tactics that you use. It not only changes you, it changes the people that you are using the tactics against. The real estate developer, for example, is not enormously imaginative. He’s a very good manipulator in a reasonably small area of expertise. He really doesn’t care so much if you persuade, or cajole or reward him to build a multiple use building against a single use building, as long as he can escape with his usual reward. Now, if it’s necessary to reward him slightly more, in the initial process, to change what we think is a bad habit, then you reward him slightly more.

“Architects don’t participate enough in the sort of nasty process we refer to as the development process. Since the developer’s going to build about 90% of the country anyway, whether we like it or not, the architect is going to be left out of that process if he doesn’t understand it or is not going to join it. I suggest that he join it. The economics of a project are a central part of the project and are merely a form of constraint. Economics are not obviously or necessarily the most important constraints once you get by them. If you are successful, if you are a good architect and can understand that, and I’m talking now about a very long range process, then we will begin to build a country which is probably more human. Otherwise, the architect, as a man who shapes his environment, becomes less and less important.”

Tabibian next talks with Ron Gross, author, poet and planner of continuing education projects that exist outside traditional institutions.

Tabibian “Since you’ve written extensively on educational policy and approaches to learning, and you’re also a poet, I thought I would give you a third dimension. I would like to explore how you see yourself as an activist. I would like to know your notions of activism from both learning and living.”

Gross “My interest is in awareness, in perception both as a poet and a planner, two things I have worked hard at doing. Everyone, of course, is both of these; each of us is poet insofar as he lives in the present moment, and realizes that’s all we have, and if it’s overshadowed by the past or the future, we’re not really living. We’re all planners in the fact that we have to take each moment and recognize it as part of history.”

Gross explores the current reaction in New York to the “graffiti epidemic,” an indication of desire for self-expression in an atmosphere which, in every possible way, stifles the means to that expression.

Gross “One day I was in the subway, the doors opened and I saw, amidst the Preparation H and Oreos, this thing going up the wall and over the ceiling and it says ‘Pepito, 168.’ It took me awhile to realize this was what the letters (in the papers) were all about. I went reeling through the cars, turned on by all of this and when I got back home, was delighted by the fact that persons had found ways to humanize the most dehumanizing parts of the city. The graffiti is an example of an instrument for the individual to assert his identity or personality and therefore we should not repress it.”

Tabibian “But there is a larger question, namely, who decides what is blight? Who decides what must remain invisible? How do you choose between a Preparation H and the graffiti as a cure for alienation; on what basis do we make this definition, and what are some of your ways of coping with this issue of what must be visible? Somehow, we have the notion that visibility is intrinsically necessary and/or desirable. We must recognize that visible/invisible is a choice as well as a political allocation. I find many people whose decorations in their own yards are an absolute blight, but

"It is a profoundly erroneous truism, repeated by all copybooks and by eminent people when they are making speeches, that we should cultivate the habit of thinking of what we are doing. The precise opposite is the case. Civilization advances by extending the number of important operations which we can perform without thinking about them. Operations of thought are like cavalry changes in battle—they are strictly limited in number, they require fresh horses, and must only be made at decisive moments."

Alfred North Whitehead

they are totally enthralled with them. How might I cope with this question of my own judgment of what might be esthetically acceptable?"

Gross "Well, it doesn't seem to me that there is a great danger, the human condition being what it is, of too much becoming visible. The structure of our society, being what it is, I see little danger of a headlong and precipitously dangerous avowal of the need for visibility and expression. My own feeling is that we have erred so far in the direction of constraint and inhibition and repression, that it's hard for me to think of a human impulse, to color, to the expression of person, that I would feel should be inhibited or judged."

Gross comments on the Auto-Didac Project, an attempt to explore the potential of self-education through a community of learners outside the traditional educational institutions.

Tabibian "I think American admiration for the self-taught person is probably only surpassed by admiration for the self-made man, from rags to riches. Meanwhile, we must also realize the reality of a complex social structure, of 200 some million people, where, believe it or not, and no matter how polluting they may be, things need to get done. What would be the possibility, and I mean this in the most technical, narrow pedestrian way, of running a complex society based upon the skills and competence and techniques and abilities of people who are all self-taught at leisure?"

Gross "Well, first I believe that that is the way the society and culture actually operate now. We are so schooled up that we have lost the sense of the potency of individuals and the processes between them that are not institutionalized. What's being talked about is not a major shift, or throwing out the baby with the bath water. It's an awareness of how institutions really operate now and an impulse to get past the blocks that institutions provide. This is what I'm working for in education."

Tabibian "I believe there is some sort of circulatory of thought in the following way; we are reluctant to admit that we have been involved in training rather than education, because we have made education the central preoccupation of our culture, and the more central the preoccupation the greater the disappointment in our success or failure. While you may be able to dispense with education, we still will be unable to dispense with training and though our educational system produces very poorly educated people, it still produces adequately trained people to maintain the system on its road to self-destruction. But at least it does a good job at it. I want you to try to disentangle, as much as possible, the two notions. Schooling does not mean training, and we in fact recognize that the development of the person is a larger concern than any institution can deal with. The institution however has a job to do and we, as 19th century libertarians, must not be embarrassed by it. How do you see the relationship of the two?"

Gross "There is a good deal of evidence that schooling, the process of training in schooling, has no relationship to the job. There are interesting inverse relations frequently. We all recognize that the educational system doesn't have a very educative function. Even the assumption that the credentials it gives are signs of efficacy in training, is simply not supported by the available data. Think where you learned how to do the thing you do for a living, or the thing you like yourself most for being able to do, the most useful things you've ever learned—and go look at your high school transcript. See to what degree the time and energy that was invested in those subjects, and in that social structure, benefited you and left you any residual that is of use or joy."

"If schools are so bad, and if education is so ineffective, then what is the explanation for the younger generation we see today: the most informed, active, creative, and able group in our history? How shall we account for them if we deny any positive contributions by the schools and mass media?"

In response to the conversations and comments which have followed his own analysis of the crisis facing educational institutions, Marcus Foster makes some final comments.

Foster "The fact remains that when I go back to Oakland, 61,000 youngsters are in school and are there to be dealt with on a day to day basis. As we grow into a kind of world that you envision, in the meantime, there's work to be done, and there is that tie-in between achievement and socio-economic status. Some bright psychologist looking at the large segments of the population in core cities that have not been educated, over a generation, begins to draw the conclusion that there is something wrong with those people. There is something wrong with them, there is a tie-in between economics and achievement. Until we get a new reward system, that rewards people who do not achieve in the way we now measure it, we're going to have to deal with people who are shut out of the system.

"But, there is one other way of interpreting it besides saying that those kids can't learn, and it's the way revisionists and historians are now beginning to look at the history of American public education. A recent book of Colin Greer's, *The Great School Legend*, attempts to show that the public schools in this country, have always promised the poor that education was the way out of poverty, and have always failed to make good on that promise. It raises very serious questions about the intentions of the schools; is their true function, their invisible function, to continue a class structure, rather than to alleviate or overcome it?"



Conversations: School Programs

Conversations with coordinators of experimental school programs focused on political tactics and community attitudes as well as on facilities, materials and the educational process.

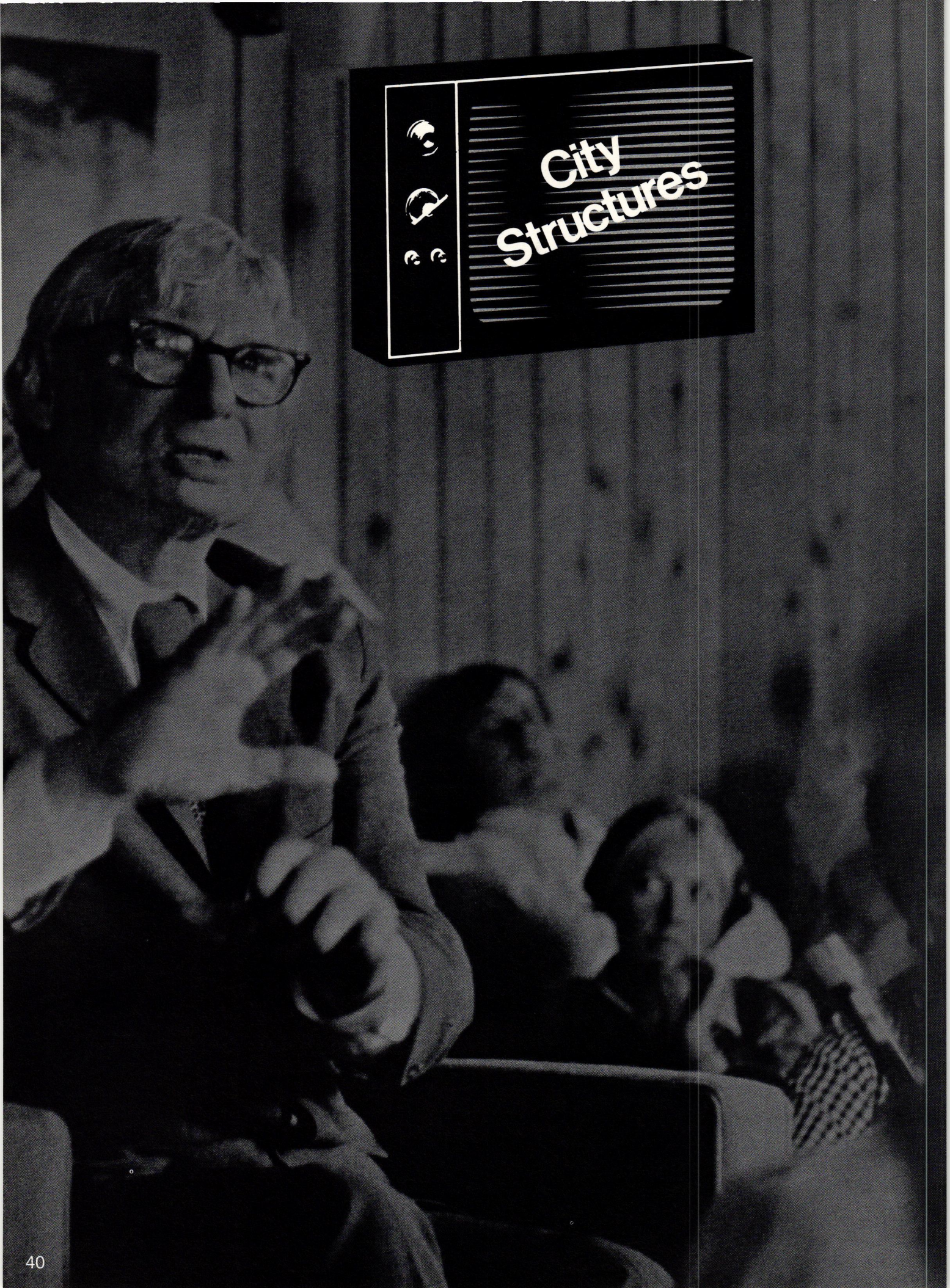
The relationship between education and social change was the subject of several discussions. Marcus Foster, Superintendent of the Oakland California School District, emphasized that the educational system must reflect the goals of the community. "If you buy the major goals for a community, it modifies your conduct regarding the educational system. A goals statement for the community, including educational goals, is a necessity; it makes action visible to the community."

Bernard Kohn, an architect and Ruth Kohn, coordinator of an environmental education project, live and work in Paris. They noted the difference in cultural values in France concerning education. While individual expression is a very important component of American educational goals, individualism or an educational system which would foster it, is seen as antagonistic to the goals of social change in France.

It is expected by those who are developing experimental school programs in the United States that these programs will also have implications beyond academic circles. John Sullivan, of the University Without Walls, described the broader goals of a program which breaks down the barriers between university and community. "We want to move beyond having students fill job niches which are going to become obsolete or having them move through a system having a better trip but maintaining the same values. The essential question is whether they are studying the same curriculum by other means or creating new disciplinary mixes. If a student can't formulate a new identity, his own particular way of looking at the world, and communicate that perception, he hasn't succeeded in achieving his educational goals."

The Parkway Program in Philadelphia, as one of the oldest open school programs in the United States, is beginning to assess the ways in which various communities in the city are affected by interaction with students. Penny Bach, a Parkway Program staff member, described their extensive use of businessmen, office-holders and other community members as resource teachers. They are not only some of Parkway's most effective and enthusiastic teachers but in addition, create community support for broadening the concept of education.





**City
Structures**



Louis Kahn on Learning

"I love beginnings, marvel at beginnings, I think beginning is that which confirms continuation. I revere learning because it is a fundamental inspiration. It isn't just something we do because we have a duty, it is born into us — the will to learn, the desire to learn is just one of the most, the greatest of inspirations. I am not that revering of education, learning yes, but education is something which is always on trial — because it can never capture, no system can ever capture, the real meaning of learning. The sense of wonder is so important to us because it precedes knowing, it precedes knowledge. When the astronauts went into space and the earth appeared as a marble, blue and rose, I felt nothing less important than knowing. Strangely enough, Paris, Rome, the wonderful works of man which came from circumstantial conditions, left the mind as of little importance compared to the sense of wonder that seemed to prevail at that time. The unmeasurable was the one thing that captivated the mind, the measurable made very little difference.

"From the first feelings of beauty, the first sense of it, and that of wonder which follows it, comes realization, and realization stems from the way we were made. That is because we have to employ all the laws of the universe to be. And we hold within us the record of all the decisions which made us particularly human. There is the psychic record, the physical record, and the choices we made to satisfy this desire to be, which directed itself to what we are now. I believe that this nucleus lies in the leaf, lies in the microbe, lies in everything that is. There is a consciousness I feel in all living things.

"From the sense of realization comes form. Form is not shape, shape is a design affair, but form is the realization of the inseparable parts of what is in realization. Design is to put into being what realization, form, tells us.

"Design demands the form, understands the order. When you are designing in brick you must ask the brick what it wants, or what it can do. And if you ask brick what it wants it will say, 'I like an arch,' and then you say, but arches are difficult to make, they are expensive. I think you can use concrete across your opening as well. But the brick says, 'I know you're right, but if you ask me what I like, I like an arch.' One says, why be so stubborn, and the brick says 'do you know that you are talking about being, and the being of a brick is an arch.' That's knowing the order, knowing its nature, knowing what it can do. Respect that tremendously. If you are dealing with brick, don't just use it as another kind of secondary availability, no, you've got to put it in absolute glory, that is the only position that it deserves. Beginning with concrete, you must know the order of concrete, you must know its nature, what concrete really strives to be. Concrete really wants to be granite, but can't quite manage. And steel wants to tell you that it can be an insect in strength. You know its beauty, its harmony, by the extensions of the material in its fullest capability."

Louis Kahn then speaks of other "original inspirations" which precede our ability to learn, to express ourselves, or to create our environment.

"Stop to think of other fundamental inspirations — for instance, the inspiration to meet. All city planning must be part of the inspiration to meet, and school, somehow, is also part of the inspiration to meet. There's another inspiration which is in my mind and that is the inspiration to well-being. Well-being includes such things as ecology. In this regard, when you see a gentle stream polluted your sense of wonder about the stream leaves you. If you go to a stream that is still clear you feel something ominous about being near the stream, from its position of wonder."



Louis I. Kahn has been Professor of Architecture at Yale, MIT and finally at the University of Pennsylvania. Although Mr. Kahn did not have a major architectural commission until he was over fifty years old, the list of his principal works has grown so extensive over the last ten years that, according to Vincent Scully, "Kahn's achievement of a single decade places him unquestionably first in professional importance among living American architects." Mr. Kahn has just completed the Kimball Museum of Art, Fort Worth, Texas, and is currently developing the Palazzo dei Congressi, Venice, Italy.

Kahn describes the inspiration which precedes man's ability to express himself through the medium of architecture. He makes a distinction, however, between the inspiration or "spirit" of architecture and the reality of structures or cities which are works of architecture.

"There is an inspiration which came to us when architecture became an apparent thing. At first it wasn't apparent as anything else except a kind of inspired moment, which later acquired a type. Its beginning wasn't a type, it was something that had an undeniable urge to be brought into being.

"There is no such thing as architecture. There is the spirit of architecture, but it has no presence whatsoever. What does have presence is the work of architecture and at best it must be considered an offering to architecture itself, merely because of the wonder of its beginning. So, when people talk about architecture being in one age and urban planning being in another and city planning in a third, and environmental design being another one, these are, to me, purely market-place divisions. I feel it is very destructive if on his stationery a man says that he is all these things, which in the market place is regarded as a great advantage. A man who feels architecture as a spirit cannot title himself this way, because he would consider it pure dissipation of the original inspiration. An architect can build a house and build a city in the same breath if he only thinks about it as being a marvelous inspired, expressive realm."

In commenting on his various architectural commissions, Kahn focuses on the need to create opportunities for interaction and expression available to people. He describes what took place among a group of architects who were chosen to collaborate in the development of the bi-centennial plans in Philadelphia.

"The original concept, before any of us got on the scene, was that of making a street, because a street is really a community room. It already has a tremendous binding character and a starting point. There were three buildings together: the Court of the Expressions, to be programmed by the great expressors, those who are interested in movies, printing, painting, sculpture, architecture, all the expressive urges; the Court of the Natural Resources which was to be programmed by the great scientists who could convey the manifestations of light, air, water, land; and the Hall of the Availabilities connected by a great street in the center. The theory was to invite all people who are learning and particularly those who have no notion of what availability is.

"The Indians, Pakistani, Chinese, African countries, the greater part of the world has not an immediacy of availabilities. The availabilities are there to make possible the urges of expressive instincts. This brings you to city planning. I think a city is measured by the character of its availabilities."

Kahn makes more specific comments on the relationships between design and education. He talks about the nature of buildings, such as schools and theaters, how they must reflect the activities which take place within them.

"School is an availability. I believe in schools of natural talents. I believe if a boy, no matter how young, shows aptitude to dance, he should be sent to a dancing school. He should have other learning, but the center of his learning should be that which he does, naturally, very well. One never learns anything that's not part of oneself. Everything else we learn is attached, glued on, has no real substance. If one is left to what his natural predilections are, he will eventually learn the most difficult subjects merely because he has a feeling for them. Schools, above all other places, should be the center of feeling. There should be no judgment, no comparing one person

“Just because we should not teach nursery school like graduate school does not mean we should teach graduate school like nursery school. Can anyone who sat through the 100 minutes with Louis Kahn honestly say he was not changed by this man’s words?”

with another. It should be a free place. I believe that if you have a classroom of thirty students, in which it is regarded that freedom reigns, you would have thirty teachers.

“Think of a corridorless school, but instead of a passage, which a corridor is, you have a hall, oriented to a garden, a hall which you may call the classroom of the students — it vies with the library for equal importance. Two fireplaces mark the ends of the hall. There are window niches, places one can go to in the school, free of obligations. You would not find that in a program, and I think you shouldn’t find it in a program. The architect, realizing that his first reaction to being offered the opportunity to describe the realm of spaces where it is good to learn, must begin all over again, disregard the program given to him and discover the nature of the room where it is good to learn. He would never present a room, or a series of rooms called seminar rooms 1, 2, 3, 4, 5 and 6 — but consider a seminar room as a discovered room.

“They would be rooms where one can choose the environment, where it’s good to talk about what you are talking about — and for the number that are going to talk in this room. And so with classrooms, so with the library, which has this disdainful title today of the ‘information center.’ Just how far that is from the original inspiration is unbelievable — it becomes operation, as though information is not important. A book is tremendously important — nobody ever paid the price of the book, they only paid for the printing. But a book is actually an offering, and must be regarded as such. If you give honor to the man who writes it, there is something that induces the express powers of writing.

“While we are on the subject of natures, having observed theaters, I came to the conclusion that one must think of the auditorium and the stage as a violin, a sensitive instrument where one is to hear — so that a whisper can be heard without any amplification. The lobbies and all other adjunct spaces are merely that which composes the violin case. The violin, and the violin case, are completely different from each other. Going backstage in many theaters I saw what I observed to be just the inside of a wastebasket. I decided to think of it then as the actors’ house, and designed his house a half-mile from the theater. I regarded the green room as the living room, with its fireplace; the practice room, the rehearsal rooms, the dressing rooms, all as if they were functions of that house. I even installed a little chapel where a man could think of his lines alone. I built a porch outside his house, which faced the street on which it was built and then wheeled it backstage, and presented the porch to the house as that which you see when the curtains are open. I was trying to discover the nature around which design was possible. This can also be thought of as what one does when building a house, when you consider the bedroom as being in the field, there’s no roof, so you can see the stars, and the window is limited, because the window is really above you. Then you discover that the room isn’t just a sleeping room, but becomes a sickroom, and then you need a cup of tea, and then you long for the kitchen, and slowly, stealthily, the bedroom creeps to the kitchen, maybe even begs for forgiveness. It combines in a loving way, an understanding way, somehow its strength is gathered not by looking into how things are now, but how they could be made.

“So also the city must be considered, in what can be made, not in how we correct what is made. I think the most inspirational point from which architecture can be understood is to regard the room, a simple room, as the beginning of architecture. You know when you enter your room, how you know it like no one else knows it. The windows of the room are maybe the most marvelous. Stevens, the American poet, said something to architects. He aspired to be an architect. He said, ‘What slice of the sun enters

your room?’ as if to say, the sun never knew how great it was until it struck the side of a building. I think a plan is a society of rooms, that a plan is one in which the rooms have talked to each other.”

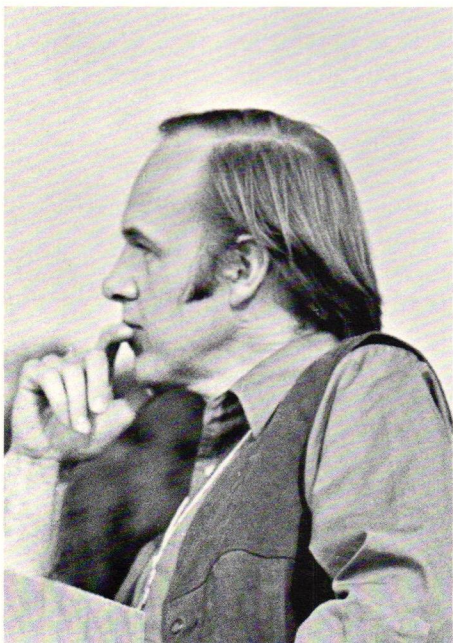
In concluding his remarks, Louis Kahn again notes that the basis of education is availability and interaction, whether in the city or in the school.

“Today, a street must be distinguished from a road. A street is a community room without a roof. The walls that flank the room are buildings on the street. It is established also by human agreement, human agreement is at the center. This is what makes a school a school. It is undeniable that a man who speaks to something that others don’t, should be near children so they can benefit.”





Richard Saul Wurman, Program Chairman for IDCA 1972, is a partner in the architecture and urban planning firm, Murphy Levy Wurman, in Philadelphia. He is a Vice-President of GEE!, Group for Environmental Education, Inc., and among his most recent publications are: Man Made Philadelphia, and Yellow Pages of Learning Resources, which he edited and compiled for the Aspen conference.



Charles Rusch, practicing architect and Associate Professor of Architecture at UCLA, is the founder of MOBOC (Mobile Open Classroom), a school-in-a-bus with a seven member student body, which operated in Los Angeles last year.

The City as a Classroom

Wurman "This morning we're going to hear from three architects and an educator who, in their own ways, are trying to do guidebooks for the city, although with different physical forms and different design implications. What I'd like to discuss with them now is how they go about designing and establishing the doorway into all the resources of the city."

Charles Rusch, a Los Angeles architect, is the founder and sole teacher in MOBOC (Mobile Open Classroom), a "school in a bus" for seven students.

Rusch "MOBOC is a very small thing, but the project has gotten quite wide in its implications and that's why I'm working on it. I had been rather upset about the educational situation, particularly in LA, and had been talking about it for years and about all the ways I could think of doing it differently. I talked to principals, teachers, people in the educational establishment, and to parents generally, and met with a lot of enthusiasm. They thought, these sound like good ideas — it would be nice if we could do it — and then they would give me a thousand reasons why we couldn't do it. I had half a sabbatical coming up, from teaching architecture at UCLA, and decided that the only way I was going to really stop talking was to start doing, and so I spent one hectic summer trying to find the children. That turned out to be the biggest challenge.

"I must have had twenty meetings during the summer with anywhere from five to twenty parents. By the time the summer was over, I had five kids in MOBOC, two of them were mine. I realized that parents have a terrific reluctance to commit their children to education that's different or innovative. Although most parents are committed to their children's education, they can't see what's happening, they can't see their own children deteriorate, they seem to be unaware."

Rusch describes the daily routine for MOBOC's students and teacher and his attempts to use the existing learning resources in the city.

Rusch "I wanted to bring the children into direct contact with all the things happening in the city and all the people in the city. I wanted to have those people explain to the children what they were doing, why they were doing it, how they were doing it, and why it was important.

"We would go to places we thought were interesting; to court rooms, to city council chambers, and we would discover we were working on some piece of the city, some system. When that became obvious, it was just a question of what are the other components of the system. Let's go find them and find the people working in the components. In this way we studied the legal system in the city, food distribution, communication in the city, some of the professional career-oriented side of the city and the blue collar workers. I'd like to emphasize the fact that each one of these discoveries started out of interest on our part, someplace we wanted to go, and then we realized that it all fit together."

Wurman "What is generic about your project, or is it just an interesting thing you are doing, and other people maybe could do?"

Rusch "I don't pretend that the whole city of LA could operate this way, but I would be willing to generalize something like this. First, you ought to look at each individual student; you find out enough about him to know if this would be a great thing for this child for a week, and for this one for a month. Some could learn this way forever. One of the generic things is the concept of MOBOC, a fantastic experience of learning directly from the city."



Harry Parnass is a practicing architect and an instructor at the Université de Montréal, Faculté de L'Aménagement (Ecole d'Architecture, Institut d'Urbanisme). Along with Michel Lincourt, Mr. Parnass has published Metro/education and Urbex-Urban Experimental Projects.

Wurman "Why is an architect doing this kind of thing?"

Rusch "My view is that architects and designers are breaking out of the mold. One of the responsibilities that we have is not to design for institutions, but to get inside those institutions and learn about them to the point where we can help the people in the institutions restructure them, new institutions forming from the old ones. I wanted to find out what the educational system was from the inside out, to the point where I can then operate effectively when it comes to designing for educational institutions or whatever they evolve to. That's the way in which I feel this total effort on my part relates to my situation as a professor of architecture.

"What I hope I've communicated with my simple little group of seven is that it doesn't take much. Any one of you could take that much, and get it going and make something good out of it, and tie into a network of people who are doing the same kind of thing."

Harry Parnass is an Instructor in the School of Architecture at the University of Montreal. He is one of the developers of the concept of Metro/education which utilizes Montreal's new Metro transit system as the basis for city-wide learning centers.

Parnass "What I'm going to be talking about is the new Montreal Metro system which was made operational in 1967. Those of you who have been there have seen it to be a quite efficient, fast, fairly noiseless, pollution-free movement system. Because it was built very recently, it was able to join the areas of greatest density in Montreal. While I talk about the physical aspect of city building related to the education process, I'd like you to keep a certain thing in mind. What I'm also talking about is an emerging role for the designer. More specifically, I'm speaking about the role of the designer as synthesizer, as packager of things not necessarily physical. The designer, through his unique training in synthesis, stands in a fairly unique position when faced with the problems that occur in our cities. He can watch the disparate elements in the society, and through an intuitive ability to synthesize, give back to society certain packages.

"I think I should explain what I mean by packages — because the Metro Education System is one of these packages. I'm talking about packages in the sense that connotes a possible state of being. This is different from a project, because this kind of future state of being is a vehicle for discussion, a vehicle for dialogue.

"The basic principle which generated the Metro/education project was the almost motherhood kind of notion that if you can increase the performance level of the infra-structure of the inner city, you can also increase the performance level of the people who live and work in that city, and I use the word performance level advisedly; I mean performance in terms of self-realization, which is what the city is all about. Achieving something, a sense of joy, of fulfillment, all the reasons why we live in cities. If you talk about infra-structures in the city, and increasing performance level, one of the first things that comes to mind, is efficiency. A lot of our cities, notably Montreal, are enormously inefficient. If one looks at the density which is something like eight people per acre, in the area of metropolitan Montreal, compared with a density of about 100 in Paris, the level of urban joy and efficiency in Paris is far greater than in Montreal. I think there is a correlation between this notion of density and fulfillment.

"What this means for the learning process is obvious. If we can densify the city, and the interpretation I give to densification is miniaturization, what will happen is analogous to what happens in an automobile engine and what goes on in the back of a computer. The miniaturization which is related to



John Dollard, a practicing architect, is Executive Director of the Knox Foundation, which is devoted to the building of neighborhood projects in cooperation with neighborhood groups. As advocate planner for the South Arsenal Community Council in Hartford, Connecticut, Mr. Dollard is completing plans for a renewal project that incorporates the concept of multi-instructional areas within residential buildings.

efficiency produces a higher level of output. This is design in the purest sense, to achieve this level of efficiency, through miniaturization. I think this is what's going to happen to our cities, they are going to become miniaturized, densified, and our lives will be richer.

"In the Metro system we have, at present, twelve cinemas which handle groups of from 99 to 300 people. It seems ridiculous for a school system to go out and build auditoria and classrooms, when there are already in existence, in a position of accessibility, empty every morning, these cinemas, built at great cost, air-conditioned, carpeted, comfortable, easily available. Therefore, we went out and spoke to developers, property owners, cinema owners, and said to them, what if we took over your cinemas every morning? I can get the kids to them very easily because the subway system has a population accessibility time of thirty minutes for one million people in Montreal. They said to us fine, great, what a different way to get additional revenue, and cover our overhead. We eventually came down to a figure of one dollar per seat per month, for the school system to use these incredibly equipped facilities.

"In the Metro there are 13 miles of underground movement systems. There are very elaborately built shopping centers, activity centers, and hundreds of restaurants. We said to some of the restaurant owners, how would you like an additional 15,000 kids to plow through your system and come into your restaurants? The thing snowballed from being a high school project to being something like total education, a recycling of manpower input in the city.

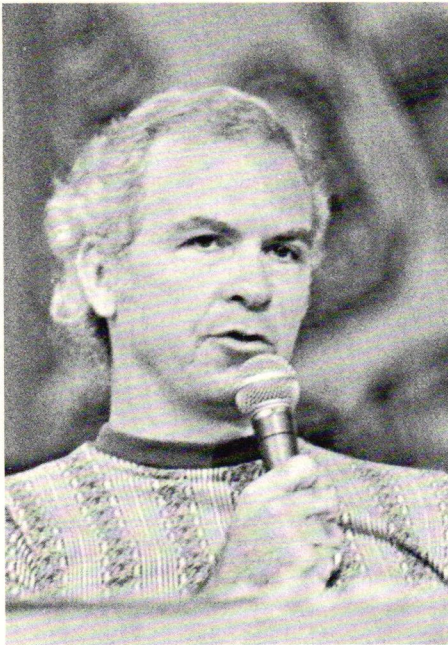
"Each Metro station was developed into a home base. There is a mezzanine level in each station which easily could be accommodated with food machines, lockers, an office area. Once you start programing, or in this instance super programing the Metro station, a lot of other things start happening. A mother who drops her children off at a station for a school activity might be amenable to retail activity at that station, anything from dropping off her laundry, or using the library, to picking up some bread. Nodal points throughout the city may become super spaces where you would have everything from computer terminals to telephones, to all of the goodies that give a sense of community to a given area.

"The project was very loosely structured when it was presented to fifty interest groups, unions, businessmen, government officials. We allowed each of these people to feed back their response to the project, and then it went out to the next group. So this is where I talk about this top down rather than bottom up planning, and where we've achieved a kind of synthesis."

Jack Dollard, an architect, is advocate planner for the South Arsenal community in Hartford, Connecticut. The community is currently completing plans for 1000 housing units, a recreational area and a school system aimed at community as well as childhood education.

Dollard "We started in 1965 organizing a neighborhood under threat of an urban renewal clearance project in order to fight for their rights under the renewal process. What's come out of it is one of the first neighborhood development corporations in the state. Their charge to the architect was to redesign and rebuild the neighborhood and to try to fuse the living and learning places.

"The place that I knew that was most like South Arsenal was Yale University. Everybody lived there, worked there, played there. The difference was that people at Yale were there to get ahead politically, sexually, socially, sometimes educationally and intellectually. The people at South



Ronald Barnes, Director of Educational Planning for Minnesota's Experimental City, is responsible for the development of a lifelong learning system for the entire community. He is currently Assistant Director of the Experimental College at Mankato State College, Minnesota.

"While the heading was the invisible city, the people and ideas represented in Aspen remained relatively aloof from the true hidden city. . . the ghetto. As a result, there was a great deal of attention in discussing mechanisms by which students could use all the nice things in a city . . . the museums, the universities, the businesses . . . as their learning environments, but little thought given to how students could be made more aware of and more concerned with helping to implement solutions to the ugly realities of city life—the starving welfare children, heroin addicts, drunks sleeping in the streets, underemployment, racism."

Arsenal were there because they were left out of it; there was no other place to go. The difference between Yale and South Arsenal was a learning experience. What we did was take apart the local school system and redesign it. In a place like Yale, education was everywhere, it was on street corners, in corridors, stairways; in South Arsenal they wanted it to be the same way, so they started with the notion that education should be everywhere, everyone should participate in it."

Wurman "What resources do you think are in this one community, and how much would you have to go out of the neighborhood in order to make an enriching experience?"

Dollard "It's difficult to answer. I would prefer to find resources in an existing neighborhood, where you weren't clearing it and rebuilding it. We're totally rebuilding South Arsenal and the only thing we'll have left is an existing warehouse which will be an art center. In that sense we've taken a group of facilities that used to be lumped in one place, like a multi-purpose space in an elementary school, and have separated them out and made them nodes in the neighborhood."

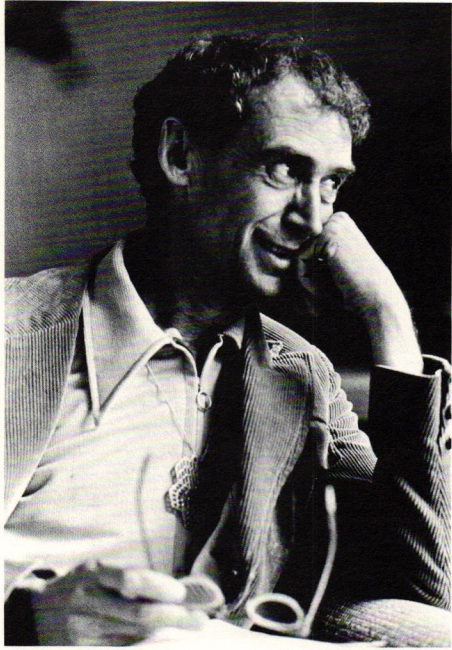
Wurman "What is your role in this project as an architect?"

Dollard "I guess I've been a guide through the whole thing. As an architect I'm supposed to have a conception of what constitutes the city, the region. I've used that sense to structure the neighborhood plan and to restructure the educational program."

Ron Barnes is Director of Educational Planning for the Minnesota Experimental City.

Wurman "What's the relationship of learning to the design of the Experimental City?"

Barnes "The learning system for the city is defined as a birth to death system. Others who are developing a system will rebound off what we're doing and attempt to make learning the central focus of the city. We see the learning system as the city; that permits us to fantasize and construct some scenarios that make it different. The key to the city as a learning system is information access, at least this seems to be a key for us. There are three primary resources: people, tools and equipment, and facilities. We're going to try to access this through a computer network, and catalogue the information throughout the city. One of the ways we thought of entrance to the city is what we call a 'door center' — disorientation, orientation, reorientation center. People who are learners in a situation in which they're told what to do, really have problems moving into a system in which you have responsibility for finding your own information. The staff is an even bigger problem, because they've had more years of conditioning. So the disorienting and reorienting through which everyone would pass. When a family comes into the city, the first thing we say to them is, we care about you, then we ask if they would consider being a resource person. We ask, what skills do you have, what are your interests, your hobbies, what can you share with others? This goes into a computer which can be accessed later by learners. We're dealing with the experimental city concept to try to develop new systems, economic, technological and social, that will enable all of us to take some different looks. We're only talking about an alternative which we can design to enable people to look and see what works and what doesn't, and we may bring about new understanding of what it means to live, work and play."



Paolo Soleri, architect and planner, headquarters at the Cosanti Foundation, a non-profit urban research organization in Scottsdale, Arizona. "Arcosanti," a self-teaching community for 3000 in North Central Arizona, is currently under construction. The Architectural Vision of Paolo Soleri, published in conjunction with an exhibition of his work, traces the architectural ideas of Soleri over a twenty year period.

Conversations: City Structures

Prospects for new urban structures and systems which improve the physical environment of the city and increase its potential as a classroom were the subject of conversations with several architects and planners. Planners Michael and Susan Southworth with Pat Mogan, Director of the Education Component of Model Cities in Lowell Massachusetts, described their effort to make the existing environment of Lowell "visible" to its residents through a "Discovery Network." The project design concept incorporates physical enhancement of the area through an open space system centered on the region's historic canals, and a chain of discovery centers, places which communicate the history of the city, its institutional organization and its industrial processes.

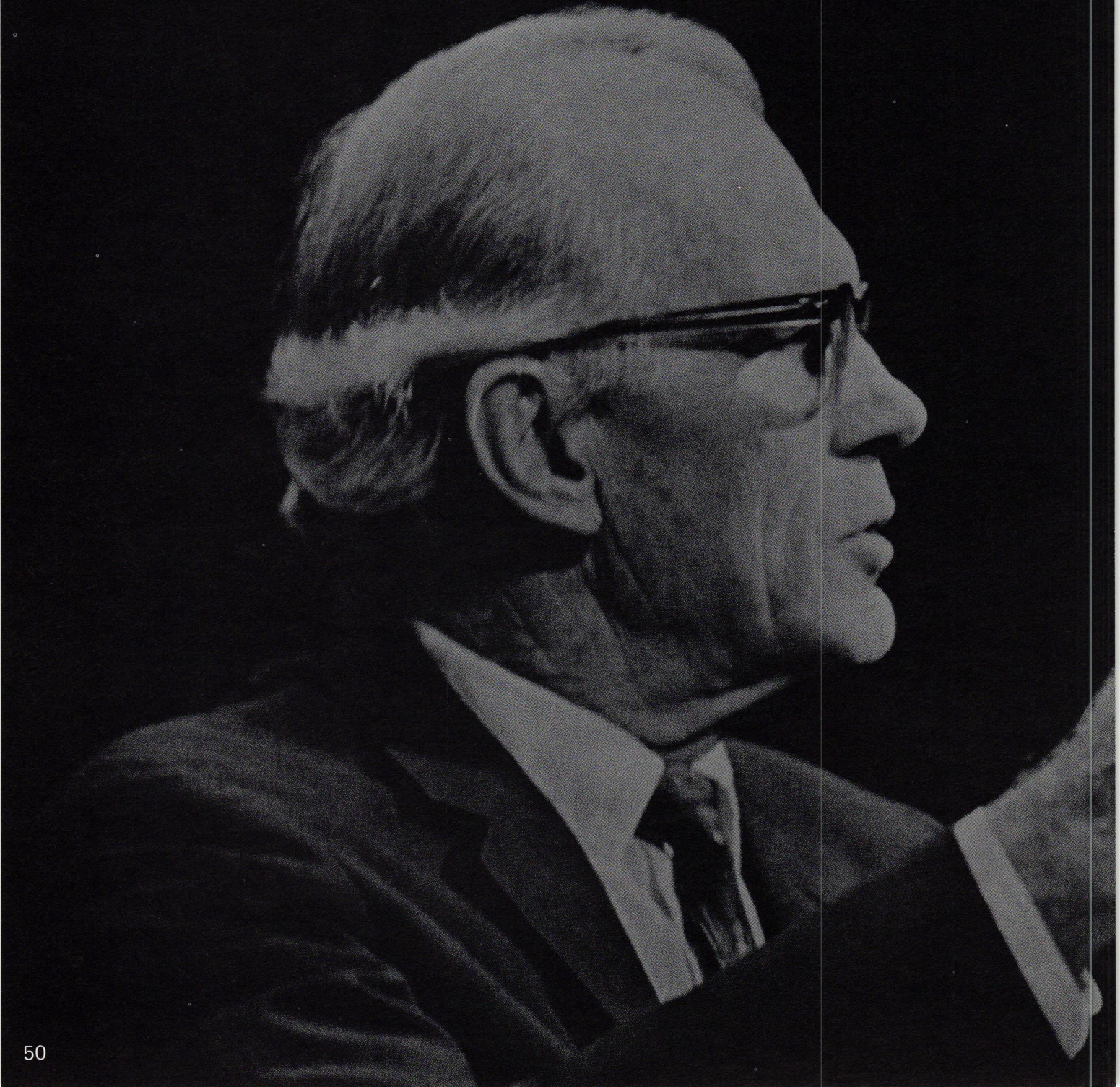
Another project which utilizes the concept of an educational corridor in the city is being developed by architect Harry Parnass in Montreal. Parnass related to IDCA participants the process through which he has worked with various interest groups to develop the concept of Metro/education. "The entire process began with the idea of using the new Metro transit system as a corridor for the school learning centers. This idea acted as a catalyst for a series of interviews with groups who had an interest in the city and consequently for the development of a new catalyst package, and then a new series of dialogues." Through his "scenario approach to planning," Parnass made the process of education visible to a range of decision-makers and available to the entire city of Montreal.

The role of the architect in shaping the city was discussed from a philosophical and practical perspective. Louis Kahn decried the more recent role of the architect as "an assembler of parts," contending that in order to construct buildings and cities worthy of the "spirit architecture," the architect must maintain the expressive quality of his profession.

Another prominent critic of existing city systems, Paolo Soleri, described his attempts to discover alternative structures and systems in a new city being built under his guidance by the Cosanti Institute in Arizona. The city exemplifies a distinction Soleri makes between process manipulation by exterior decision-makers and technological growth induced by interior personal decisions. Thus, physical structure of the projected city reflects radical changes in life style patterns such as the concept of co-users, the use of dwellings and facilities at different times by different people.

The problem of improving the environment of our existing cities was explored in a conversation with Jaquelin Robertson, Director of Planning for Mid-town New York. Robertson explained the concepts he is utilizing to make Manhattan "work" for people who live or visit there. Like Soleri and Parnass, Robertson believes that to operate effectively, the city must be miniaturized; there must be a compaction of uses. His planning schemes emphasize combining professional office, commercial and residential uses in a way similar to the galleria concept prevalent in European cities.

Critics

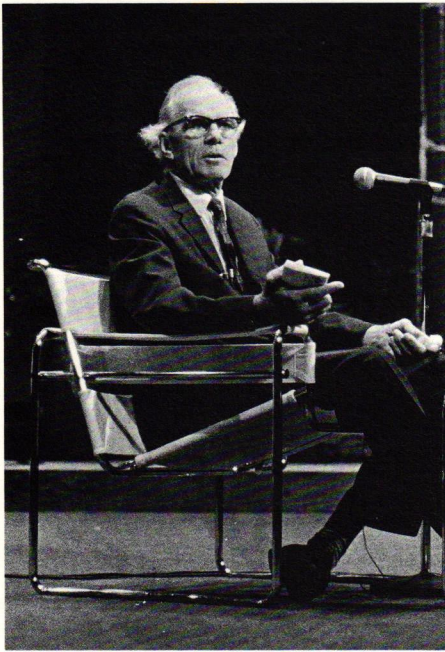


"This is only the second design conference I've attended, the first was in 1966 in Puerto Rico, a different conference called by someone to see what could be done about improving the design curriculum in the schools of Puerto Rico, the universities and public school system. I was invited to that conference only because I was a newly appointed secretary of a committee on human resources who was supposed to be invited to educational things of that sort. It was a one afternoon meeting, very dull, and I began to cast about for something to liven up the proceedings, and I discovered that one of the people attending, the Vice Rector of the Catholic University, was a bit more lively than most of the other people in the group and, besides, I had something on my mind it seemed I might be able to take up with him. I'm a North Dakota boy, raised in a country where there are a few Catholics, but not enough for it to be part of the culture. Puerto Rico was my first experience with a Catholic art store, where they sell bleeding hearts and marble angels and figurines of Mary in the form of garden ornaments or ash trays, and I had an extremely negative reaction to those kinds of art objects, those kinds of stores. So at the intermission of the design conference I sidled up to this man who was representing Catholic University. I said, father, isn't there something that a Catholic school could do in this design business that would be a little special, couldn't you do something about this Catholic art? He looked at me a minute and said, '... that isn't Catholic art, that's Irish-American art.' This was my introduction to Ivan Illich. I said, father, maybe we should go out after this conference and have a drink, and we did, and became acquainted and began to talk about various things that interest us, focusing on education because he was at a university and concerned with Catholic education on the Island, and I was in a planning role for public education.

"After I had been with the Alliance for Progress a couple of years I discovered that in 1960, the latest year we had total figures for Latin America, the dropout rate in Latin America as a whole was 75%. Half the kids that entered the first grade never entered the second; half the kids that entered the second never entered the third; so that by the beginning of the third grade, before the normal child really begins to learn to read, 75% of the kids had dropped out. I had learned some other things about schools, and I said to Illich one day, there's something I can't reconcile — two beliefs I have that I can't reconcile. One is the notion that there is some kind of survival of the fittest among organizations, and the law of survival applies to institutions as well as it does to individuals and that, therefore, inefficient institutions should tend to die out. On the other hand, schools are the most inefficient institutions that anyone could possibly conceive. And he thought a minute and said — isn't the church the same — and it was one of those 'aha' experiences. I think we both saw at once — not only that schools and churches were the same in this respect, but also why. It was because the original purpose in the case of both church and school had been superseded by bureaucratic, totally contradictory functions.

"I don't really want to talk much about school systems tonight. It seems to me deschooling has become almost a cliché."

Reimer differentiates between our existing educational institutions and the need to provide an "education" which will serve human needs. In order to get to the basic questions which face man and upon which his education should be based, Reimer suggests a detour which encompasses analysis of the whole of human history. Only by putting our human experience in historical perspective can we begin to make sense of it.



Everett Reimer has worked for many years with Ivan Illich at the Center for Intercultural Documentation in Cuernavaca, Mexico, where he has led yearly seminars in "Alternatives in Education." Mr. Reimer is a member of the Committee of Human Resources in Puerto Rico, and the author of *School is Dead*, which questions the necessity for and the negative societal implications of obligatory schooling.

"At the time when man was last in balance, there were about ten million human beings. With the invention of agriculture this number was increased about a hundred times, over about ten thousand years. The numbers of human beings doubled about every two thousand years with the benefits of agriculture. In only 200 years of the industrial age, man has multiplied four times. That's four times in 200 years as opposed to doubling every two thousand years.

"Man's efficiency, of course, has more than kept pace with his increase. It's estimated that during the agricultural age the per capita amount of energy of man increased about five times. Man, the hunter, held only the energy of his own body, he didn't have any energy converters. With the energy converters agriculture gave him he was able to increase his per capita use of energy about five times, the 3500 calories of energy the human body uses every day. In just the last century of the industrial age, per capita energy use on a world scale has increased twenty times and that's mostly concentrated in the affluent parts of the world. To understand man's total impact, multiply his numbers times his energy, then multiply his total impact on the earth and on the ecology, which has increased over his history. This increase is forty thousand times that of the time there were ten million of him. That number would again be increased by a hundred times forty thousand, if present energy levels in the United States and Europe were world wide. This increase is without any new inventions, with just the application of modern technology to the whole world. So you see that man has become a kind of cancer on the earth, really out of control, and this cancer will have to be controlled either by the earth, or by man himself.

"Man has developed a cancer control, a pretty effective one which, peculiarly enough, is very similar to one of the most effective physiological cancer tools, namely radiotherapy. I refer of course to the atom bomb, which is radiotherapy multiplied. Man can easily remove himself from the earth by means of the atom bomb. The problem is, he'll probably remove most other forms of life at the same time. I don't know the actual ratio of overkills but the last time I read them they were three or four hundred, they might be three or four thousand by this time. The really frightening thing about these overkills is they keep increasing and increasing, no end in sight. The Russo-American treaty doesn't put any limit on these things either, because it doesn't put any limit on the size of warheads and insofar as I know, there's no physical limit on the size of the hydrogen bomb, except the capacity of the rocket that's going to carry it. So I think it's still true that this overkill ratio keeps increasing without any, at present, definable or discernible limit.

"This is not because we lack more selective means of dealing with people. We have a bomb, if we want to wipe out a village; we have tranquilizing drugs if we want to deal with aggressive children in the classroom; we have lobotomies for patients who disturb mental hospitals; we now have, I am told, a great possibility of genetic intervention in developing the character of man; we can change man, if necessary, to suit the needs of the environment. The only thing we don't have is a means of controlling these efficiency devices. These horror stories I know are common cliches, but I want to make a point. The point is that all of the solutions that are proposed to all these problems are still scientific solutions. The solutions that anybody in a policy making position listens to are still scientific solutions. The point is that scientific solutions don't solve anything.

"The general belief, or, at least, the belief among a lot of people is that Malthus is proved wrong by the scientific revolution.⁽¹⁾ Malthus's

⁽¹⁾ *Malthus (1766-1834) held that population tends to multiply faster than its means of subsistence, and that, unless an increase of population is checked, poverty is inevitable.*

prediction that as men kept multiplying they would die off in large numbers from starvation, is assumed to have been disproved by the wonders of modern science. It hasn't been disproved at all, we simply move to a different level. In Malthus's day, there were roughly half a billion starving people, there are today roughly a billion and a half, three times as many. If the green revolution succeeds, the most we could expect is that this number will again multiply by three or four and in thirty years we will have five or six billion starving people. This is how science solves problems. The efficiency experts tell us that the green revolution will give us time for more fundamental kinds of intervention, that it will give us time for the application of birth control. The birth control bit made a lot more sense before people became aware of ecology.

"Through the ecology movement, we became truly aware of the problems of affluence — we know now that one American pollutes to the equivalent of 50 or 100 East Indians and it's not only numbers of people, but the affluence of these people. The amount of energy per capita that these people have is really the important thing in terms of ecological effect. Affluence is equally fundamentally related to birth control and numbers. It's necessary to have a certain amount of affluence before one can begin to talk about voluntary birth control. People won't stop having children when most of their children die before they are two or three years old and this is what happens with a billion and a half people of the world. They have infant mortality rates of about 300 or 400 per thousand per year, and most of their children do die. They're not going to be sold birth control under those circumstances. The efficiency experts' answer to that, of course, is economic development—let these poor countries develop according to the development history, and under 'the guidance and the help' of the developed countries, and we'll eventually bring a sufficient level of affluence to everybody so we can begin to introduce effective population control. One of the problems with that is that at present rates, by the time the poorest people have reached levels of affluence compatible with birth control there might be some thirty to sixty billion people on earth, which is quite a few.

"Economic development simply hasn't worked in the last ten years, and all experts now agree that in the last ten years, the poor people, the poorest at least, have actually gotten worse off rather than better, and that the development that has occurred has been confined to what was already the more affluent half of the society. It's impossible for the number of affluent people to increase, and the level of affluence to increase at the same time, which is what is happening, without the total demand that the affluent sector makes on the total resources of the world increasing faster than the resources increase. This is what has happened in the past decade — the size of the affluent sector, plus the level of affluence, has reached the stage where the demand on world resources by the affluent people has increased faster than the resources have increased, leaving less for the still growing underprivileged population. This demand on total resources has to increase more and more. So I think realistically there is no hope, under current circumstances, of affluence ever reaching the billion and a half to two billion starving people, people who are today responsible for most of the increase in the world's population. You've got a double increase, you've got an increase in affluence, you've got an increase in population; they take place at different ends of the spectrum of the privileged distribution. Increasing one makes it impossible to ever reach a stage of ever doing anything about the other; that is population control. Unless, of course, you enforce population control. Unless you simply take away from people the right or means to continue to have children.

“The affluent sector takes not just things like oil, electricity and minerals, but also things like proteins. The protein available to the poorest half of the world’s population has actually decreased over the last decade while the shipment of protein from Africa, Asia and Latin America to the United States, Europe and Australia has increased over the past decade. The poor people were protein starved in 1960, they are more protein starved now than they were then. This is the result of continued economic development under present circumstances with present institutions. These, I submit, are not scientific problems, they’re not problems capable of being solved by science — they are essentially moral problems. But, they are moral problems in an amoral world — or in an immoral world.

“I define two premises on which the industrial world is based, and two types of institutions. The premises are, first, that science gives us an unlimited means of dealing with our environment, with our physical, psychological environment, that there’s no limit to scientific discovery and scientific potential for altering or coping with our environmental problems. The second premise is that economic and political rationality are sufficient means for the guidance of human policy. They are sufficient means for guiding the policies of science and the application of scientific studies — that is for the guidance of science and technology. Admittedly there’s more to the world, there are other premises, but I would submit that it’s on these premises that the world actually operates; on this basis that significant policies are made. I would submit further that the most influential of today’s philosophers and today’s rationalizers of public policy actively defend these principles as necessary and sufficient.

“The institutions of today’s world I divide into two types: one type is exemplified by nations, unions, professional associations; institutions which are designed to protect the privileges of their members and advance the privileges of those members. The other type of institution, the specialized institution of which today’s world is made up, find their prototype in Weber’s definition of the firm: institutions whose main objective is to maximize output in terms of input, that is, to maximize the output-input ratio. Granted there are few classical firms in today’s world, even among producing corporations and trading corporations, but I think that Weber’s concept of the firm applies equally well to bureaucracies. Although bureaucracies are not designed to maximize profit as the classical firm was, they are equally committed to the notion of maximizing output, whatever they define as output, that is of maximizing output-input ratios. They’re dedicated to the notion of efficiency and their rationale, their basis for policy making, is in terms of that principle.”

Reimer makes reference to the intellectual sources which have shaped his thinking about man’s experience, socially, economically and politically. He notes that Hannah Arendt’s definition of education closely parallels his own thinking.

“She defines education as ‘. . . the point at which we decide whether we love the world enough to assume responsibility for it; and by the same token save it from ruin, which, except for renewal, except for the coming of the new and the young, would be inevitable. And education, too, is where we decide whether we love our children enough not to expel them from our world and leave them to their own devices, not to strike from their hands their chance of undertaking something new, something unforeseen by us, but to prepare them in advance for the task of renewing our common world.’ I think it would be hard to find a more beautiful definition of education than that.

“The world as I’ve defined it is an ungoverned expansion system operating

against the limits of a finite ecology, a finite physiology, and a finite human psychology. There's nothing to limit scientific discovery, in the economic rationality and political rationality as applied to firms and as applied to nations. There are no limits to the aspirations that a nation can set for the affluence of its members, or to the means which it can adopt to secure these levels of affluence. There are no limits set to the profits of the firm, to the scope of the firm, and by the firm I'm including governmental bureaucracy as well. There are no limits either in the assumptions or the nature of the institutions or in the actions which institutions governed by these assumptions can take. The modern world, then, is a system which according to its logical dynamic, would grow and expand without limit. This, against a world, an earth, an ecology, which clearly has limits, even though flexible. I submit then, that a system expanding without limits, as our industrial society does, against a finite physical environment, against a limited human physiological system, against a limited or finite human mind, can have only one outcome, and that is catastrophe. Well, what is to be done?

"I deliberately choose Lenin's words because I think he had the right question, and the right type of answer, although I don't believe he had the right specific answer. I think revolution is clearly the right answer. I don't see that anything except a very fundamental change in the character of the assumptions, in the character of the institutions which constitute the world, can avoid the dilemma that I've described. It seems to me that revolution has to be the answer. My quarrel with Lenin is not that he was a revolutionary, not that he was too radical, but that he was not radical enough. His revolution was too limited, it was too reactionary, it largely consisted in a seizure of power, in fundamental changes in a few institutions, but leaving most social institutions invariant. And very significantly, leaving the school system invariant. So that today the privileged structure of Russian society is reproduced layer by layer by the operations of the Russian school system just as this is done in non-communist countries. It's the failure of the communist revolution to come to grips with the need for fundamental institutional change that I quarrel with — not the need for revolution.

"We don't have to plan for catastrophe. It doesn't make any sense to think about odds. Being human beings, we've got to assume that we can solve problems, that we can create a new world. If we do, it's obviously going to be the joint creation of all of us, to which the ideas of one person can make only a minuscule kind of contribution. So I'm not going to stop, I'm going to make a few suggestions.

"It seems to me that one of the sound things to do is to begin to build a new world, while the old one is breaking down, and I think it's quite clear that the old one is breaking down. The old structure is still there, dominant, the room for the creation of the new is still pretty small; the opportunities available for building a new world, when the old one is still as much with us as it is, are pretty limited. In the face of this, it seems to me that what has been done is pretty respectable. First, there has been substantial withdrawal on the part of radical youth from the major institutions — economic and political — of the modern world. A second thing is the attempt to form communities, to reestablish community — whether it's a community of two people or larger, but still a small, face to face community. There is also a very essential, important task, of building a new world, because it seems that a viable world will have to be built from the bottom up, not from the top down. It will have to rest on personal relationships among small numbers of individuals, in small communities, and then perhaps there can be hierarchy built — maybe small groups can federate and constitute larger groups for limited purposes, but the building has got to be really from the bottom up rather than the way it is now.

The third is a little more controversial, I refer to what is called 'ripping-off,' and I use the term in a broad sense; of living on the establishment without participating in its production processes.

"I think, to a point, this is inevitable. I remember some crime statistics, presented before Senator Hart's Senate subcommittee, in which it was estimated that the annual loss from ordinary crime, robbery, burglary, theft, was in the order of seven to eight billion dollars a year. The so-called Mafia crimes, prostitution, gambling, various rackets, were estimated to account for about 14 to 18 billion dollars a year, and monopoly prices, the effective monopoly pricing return from monopoly pricing was estimated at the order of 250 billion dollars. So that the combined take of organized and unorganized crime was a ten percent return of the rip-off of the public from prices over and above what they would be assumed to be in the absence of monopolistic or oligopolistic policies.

"Fundamentally, there is no justification for any of these crimes because I think the new world can only be built on the basis of the moral leadership of those who take the lead. I think it's clear that this lead is being taken by the radical youth of the developed countries. I don't think this leadership can be followed, can be fully effective, unless it is a thoroughly moral leadership. So that while there is justification from an old-fashioned moral point of view I think there is justification from a forward-looking, practical, tactical, strategic point of view. The kind of revolution I'm talking about is closely related to education. To build a new world we've got to learn how to build it, and then we've got to educate others in how to build it. My definition of education is considerably broader than education usually defined. I'm thinking of nothing less than the whole process of formation, organization, and dissemination of knowledge. If you take education in these terms, you can divide it into research, curriculum and teaching.

"The problem of research is largely that modern research resources are dominated by 50 institutions and that modern research is therefore dominated by 50 institutions. What we need for creation of a new world is research which is not dominated by the assumptions and interests of the old world. The problem of curriculum making could probably be better put in terms of the problem of communication, the question of how knowledge is organized and presented. It seems to me the key thing here is the thing that Barzun said; 'Knowledge has become fragmented, there no longer is a common knowledge, common language, precise language in which we can talk about things that cut across different disciplines.' There are two aspects to this. The modern world rewards specialists, rewards them for creating specialized languages, and doesn't particularly reward people who translate specialized language back into common language.

"There is also a more fundamental philosophical language problem and that's the problem that's the result of divorcing economic and political action from moral considerations. We've come to separate moral and ethical language from scientific language. The philosophers of science, the strict positivists, claim that you can't even discuss ethical and esthetic matters in a sensible way, that all statements about ethics and esthetics are statements of someone's opinion. You're not really making propositional statements that can be true or false, you're simply making emotional statements. Now, if this were true, there would be no possibility of a common language, there would be no possibility of the kind of education I'm talking about. One of the really fundamental problems is to repair this gap, between language which talks about what is, and language which talks about what ought to be, the language of facts and the language of values.

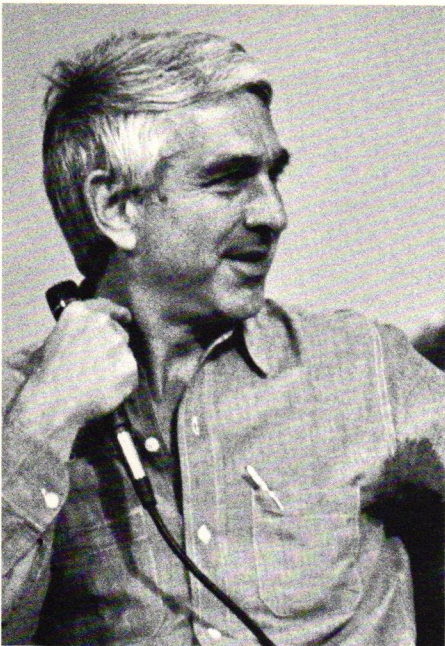
"The final job, the job of teaching, is a job again for repairing a split between education and action. It's very clear that you can't act upon what you don't know. It seems to me equally true, if not as obvious, that you can't know what you can't act upon. This is what Leon Festinger is saying in his 'cognitive dissonance concept.' In a more practical way, this is what Paulo Freire is saying when he teaches Brazilian peasants to read, by utilizing words that have deep emotional meaning, words like water, land, respect, and freedom; peasants learn to read these words immediately.⁽²⁾ But, they no sooner learn to read, than they organize themselves for action to get water, to get land, to get respect, to get freedom. So that the educational problem that I'm talking about is a problem of putting together not only a language of research and values, the language of science and the language of ethics, but also putting together learning and acting.

"Now there is one last problem that I want to leave with you to which I don't see an answer. That is how to organize the revolution I'm talking about on an international scale. The real masses are not in this country or in Europe, they're not the blacks, they're not any of the underprivileged groups of this country. These people are all, on a world scale, privileged people. The really poor people are way out there, they're not even in the city—in India, and South America, and Africa, but out in the villages, out in the bush where they're almost never seen. This is the majority of the people of the world. The leadership has obviously got to be by privileged people, it can't be taken on by these unseen people, and yet the revolution has got to be made on behalf of them, and ultimately, I suppose, by the power of these men. How to bridge this gap which goes across national boundaries — which goes across enormous geographical, ethnic and cultural boundaries?

"There may be some kind of an answer in the leadership of the ethnic minority groups of the privileged countries. It may be that the radical black leadership of the United States can be a bridge to some parts of the population of Africa. It may be that Chicano leaders can be some kind of a bridge to the population of South America. I can't identify groups, but possibly the same thing could happen with respect to Asia. This is only the vaguest kind of a thought about how this problem might be solved, I leave it with you as a problem."

(2) Paulo Freire, "The Adult Literacy Process as Cultural Action for Freedom," *Harvard Educational Review*, Vol. 40, No. 2, May 2, 1970, pp 205-25.





Warren G. Bennis, President of the University of Cincinnati, has written fourteen books, primarily in the field of organizational behavior and institutional change. His most recent books are: *Conflict and Change*, 1971, *The University in Crisis*, 1972, and *Who Sank the Yellow Submarine?*, which focuses on the architecture of social institutions.



John Bremer is Director of the Institute of Open Education at Newton College of the Sacred Heart, Newton, Massachusetts. He has been on leave this year completing two books to be published in 1972: *A Matrix for Modern Education* and *Open Essays in Education*.

Critics Look at the System

Bennis "Each of the people I will be talking with has, one way or the other, not just criticized, as other people have done. Each has created something real, and probably each is still working toward his own utopia."

John Bremer, educator, author and first Director of the Parkway Program in Philadelphia, one of the oldest successful open schools operating in the public school system, describes the ways in which school curriculum plays essentially a socializing function by reflecting existing societal values.

Bremer "In any group, and in particular in school, there is one curriculum — and that is the social and administrative organization of the group and the people involved in it. There is a public curriculum, a visible curriculum, which we call by the names of its various parts, English, mathematics, et cetera. But, there is an invisible and private curriculum which is the social structure of the school, in particular, the role of the student. As you go through the life of the school, I think you come to see that most of the problems are concerned with behavior, with discipline, with control. And all of the difficulties that we have in the teaching of subject matter, stem in large part, in my opinion, from the fact that intellectually they're worthless, not worthy of our attention. They're not difficult, but they become difficult when they are used as instruments of social control. 'It is only if you will kneel at my feet, because I am a teacher, that I will be kind enough to tell you what it is that you will need to know. Unless you adopt that social role as a student, we're not going to help you.' I think we can translate that picture, which is real, into a large context.

"When you are born into the city, you have to learn how to behave in it. When I say that, of course, the word behave is highly ambiguous. What it means, probably, is that you have to follow the patterns of social organization which are laid down for you. You are not, of course, invited to scrutinize that structure. You are not invited to reflect upon it and see whether or not it gives you a chance for fulfillment and satisfaction, whether it gives you a chance to give a creative contribution to the life of the city. That is why it is invisible. It has to be invisible, because the moment you have a conference like this, which tries to bring out into the open the invisible city, you begin to see the reason for the invisibility. The invisibility is due to the fact that it is a private possession. It belongs to somebody, and not to us. It belongs to somebody else.

"Over and over again I begin to see myself running into the fact that we live in a non-democratic society. The problems arise, not because democracy is good, bad or indifferent, but simply because you cannot carry on the work of society now, given the amount of energy required to maintain the divisions. And schools, for example, are very good cases in point. You spend more energy in the school maintaining the system than you do in doing the work that the system was set up to achieve.

"As long as there is an unequal distribution of wealth, to the extent to which we now have it, and as long as it is reflected in social and class divisions, there is no hope for us, and I will just conclude by saying, our major problem which happens to take priority over everything, is creation of community. And your problem and my problem is how, in our work, to pay sufficient lip service to the social divisions that exist so we may continue to work, and also provide opportunity for the furtherance of community."

Bennis "If the problems of schools are the problems of society, how do you change one without the other?"



John Sullivan is Associate Director of the Union for Experimenting Colleges and Universities at Antioch College. He has worked for three years, along with Sam Baskin and Goodwin Watson, on the new undergraduate process called, University Without Walls, in which the community is an essential participant and resource.

Bremer "The easy answer, of course, is that you can't. The fact is that our problem, as I see it, is not in the parts; the parts that we have of the world are perfect in their own way—they just happen to constitute a whole that is not viable. So unless we can reconstruct the total system, there is very little point in expending energy in doing things. What that means, from the point of view of an individual professional like myself, is that you begin to work at a point where you can work, and other people will work at points that they see are possible for them. In the long run, what I see is a transformation of our society. We are working in a very slow and pedestrian way, and you can't do everything all at once. I do believe that we've been done a disservice by all the 19th century liberals that seem to hang around. I'm kind of tired of them, not least because many of them turn out to be dictators just out of office. What they've left us with is a misunderstanding of the word change. In fact, many of them don't understand what the word change means. Change means two things. Funnily enough, it means permanence or continuance, it means continuity, it means also novelty — but, it means the two at one and the same time. A lot of the people who talk about change don't talk about change at all. They mean replacement, substitution. They want to abolish the past and put in something in its place."

John Sullivan is Associate Program Director of the Union for Experimenting Colleges and Universities headquartered at Antioch College in Yellow Springs, Ohio. The Union is a loose affiliation of approximately twenty colleges and universities which sponsor individualized learning projects, such as the University Without Walls. Sullivan discusses the activities encouraged by the Union and the experience of individual students in some of the programs.

Bennis "Could you describe what it's like for an individual student in the University Without Walls program? There's no such thing, probably, as a model or typical student, but what happens to a student—they apparently don't have their residence in Yellow Springs."

Sullivan "We do several programs — we have a non-residential Ph.D. program that is very similar to the University Without Walls, called the Union Graduate School. Then we have the University Without Walls which is our major project, because it involves the largest number of persons; and finally, we have a number of field study centers that are left over from several years ago when colleges were first trying the water in terms of off-campus study.

"We asked each college participating to identify University Without Walls curriculum which they administer. They approve their own students, appoint their own faculty, and award credit and degrees in that college's name. We're the only higher education consortium considered an institution of higher education for degree purposes. Some of the schools have different emphases, almost all have a director and a core faculty separate from the regular faculty. They've also identified as faculty members not just those persons traditionally chosen, but also professional persons who may be working full time as medical doctors or architects or attorneys, as well as a third category of persons without a college background, who have competence in information that we need. We're not interested in duplicating the resources of the city in an arbitrary and confined area on a campus. What we're looking for is learning and some degree of competence in areas of interest to the student, and the location is irrelevant to that. In fact, a college campus is a very limited contributor to that, so we've not eliminated the opportunity for students to take courses, but we've asked him to work with a core faculty advisor, at his or her own university, to develop learning episodes or activities that are consistent with his over-all objective."



Alan C. Green is Secretary/Treasurer of Educational Facilities Laboratories Inc., a research corporation primarily concerned with the physical setting in which education takes place. An architect, Mr. Green is the author of numerous articles and books in the field of educational planning.

Bennis "How often do students get together from the various institutions?"

Sullivan "Some of the universities have students located 1000 or 2000 miles from them, but most of them have a core of students who meet two or three times a month. Often that's an information and personal reinforcement kind of session. The real dependence for the student is with the core faculty advisor and the utilization of an inventory of learning resources, finally, with the adjunct people with whom he works in the community."

Bennis "Innovation of almost any kind, because of its ambiguity, is a very amorphous projected screen, and it's very seductive, and it's also very threatening to others because of its unknown shape. I've noticed that the people who get attracted to it are two kinds, the very good and the very bad — an extremely bi-modal thing. I wonder if you discovered those same things about those interested individuals who want to work with University Without Walls."

Sullivan "Yes, Jim Dixon, the President of Antioch College, remarks that one of the difficulties involved in participating in alternative movements or organizations is that one tends to attract those who are already dissatisfied, and who are already emotionally distraught and sometimes immobilized, because they haven't been able to do well in the existing structure system. So, in addition to good and bad, one also finds a large number of persons with great needs for therapy and reinforcement. There are too many persons who need too much support themselves, in addition to those you identify as those you want to support, that is, a student body of some sort. We've been extremely lucky — when we first talked about the program, doing something coast to coast, people told us we were crazy, and the Office of Education and the various endowments, when we first tried to get money, said, how can you manage such a thing? No one has done this before, you're trying to do it too fast, in too many places. That is the only way I think you can do things and, surprisingly enough, we predicted eight or ten of our programs might be so mediocre as to be a failure, and we're now in a situation where I think with the exception of one or two programs more slow to develop, we've attracted a surprisingly large number of competent persons. And the interesting thing about the competence is they weren't competent in anything we're doing now, because it hadn't been tried before."

Alan Green, Secretary/Treasurer of Educational Facilities Laboratories, Inc., relates EFL's interest in helping educators re-think the nature of facilities in which learning takes place.

Green "EFL is a very peculiar and funny place. We're a small foundation, established fourteen years ago by the Ford Foundation, and it so happens that our concern is with the physical aspects of the education system. We readily admit that people and ideas are far more important, place ranks way down as a third. It just so happens that our fostering of change is supportive research and invention, and so is on the issue of place. We try to support, at the most local level, research, investigations and implementations which will cause change. Within the last couple of years, some conditions have come along which have suggested that we cannot continue to cast in concrete the same old educational institutions that we've known in the past."

Bennis "What makes a good facility?"

Green "First of all, no facility is any better than the program in it, the



John Holt, lecturer and author, has been an outspoken critic of the traditional system of education and an advocate of individualized learning. His books include: How Children Fail, How Children Learn, and most recently, Freedom and Beyond. He has taught and consulted on the problems of educational change in various schools, including Harvard University and the University of California.

“Schools without walls were named as one sure way to step into the invisible city and make it visible. In the discussions it became clear that if this step is undertaken via television and other electronic gadgets, then one has to use a new educational model. New gadgets and old models do not go together. If one has money to invest, one should invest in people, not in gadgets.”

process that we're trying to house. I think one of the things we're beginning to learn is that we don't cast in concrete or mortar things that are too precise in interpretation, program or process at that moment. The good old arrangement of a teacher confronting 25 to 30 students, 25 if you are in a rich district, and 35 or 40 in a poor district, that that arrangement is no longer appropriate in response to some of the changes in education. And we're beginning to deal with much more malleable, rearrangeable kinds of places, that are good for people, and places that are good not only for kids, but are good for adults as they come into the school. I'd like to take that for a moment and suggest that as we talk about the invisible city and talk about education moving out into that city, and as we begin to participate and take advantage of the people processes in the city for learning, don't forget that one of the invisible parts of the city for everybody except those who operate in it, are schools and colleges. So there's another side of this invisibility, and that is a notion of making more visible our colleges and universities, institutions of all sorts, by bringing the community and its needs into the programs of these schools. There's a two-way street that we haven't explored before and perhaps should explore.”

John Holt, educational critic and teacher of teachers, notes changes in his thinking about the educational process as he has moved out of the environment of the classroom and school building.

Holt “I think one of the reasons that, generally speaking, schools are having so much trouble and are in so much trouble, is that all kinds of tasks have been laid on them which are not properly theirs. Society, in effect, has asked schools to do a whole lot of things, many of which schools cannot do, many of which they cannot do alone, many of which they ought not to do even if they could, and in any case, many of which conflict with others. Schools, to be specific, have this task among others: they are a place in which society puts young people for many years because it has no other place for them, and no use for them. Schools are institutional expressions of the uselessness of young people in modern society. And you cannot reconcile that custodial function, that jail function, that ‘get the brat out of the way function,’ with functions which involve trust, confidence, hope—the two jobs can't be done in the same place.

“In the last few years I have talked to quite a number of groups of high school students, and one of the things I have very often said is, it seems to me, that one of our most important and difficult life tasks is to find our work, by which I don't mean a job or career, some kind of stepladder, but something to do that we can put our energies and imagination and heart into. This is not easy, in fact it is never done, it is a search, but it seems to me one of the things older people might help younger people in if they wanted to. I should add, almost all of these schools are in upper middle class areas, suburban, very high income communities. When I talk to young people about the possibility of finding work to do that's worth doing, that you can feel proud of, can throw all of your energy into — about 95 percent of them look at me as if I'd just come in from outer space. Now, whether this perception of young people about work in modern society is correct or not (I think it is largely correct), is not nearly as important as the fact that this is what they think and feel. And to talk about meaningful education in this context, the context of a situation in which most young people do not believe that in their lifetime they have more than a tiny chance of finding something to do really worth doing — this is silly — it is not something that can be remedied with curriculum reforms, or schools without walls. I have given up the feeling I once had that if we could just figure out the right way to do things in schools we could do anything and everything.”

Aspen Visible

Every afternoon, as an alternative to small conference sessions, IDCA participants were presented with opportunities to discover Aspen, an atypical Colorado town, as notable for its imaginative craftsmen and educators as for its skiers and spectacular scenery.

Aspen is a growing tourist community, experiencing compounding assaults on its natural environment. Local planning, to deal with the problems of Aspen's tremendous growth, was discussed at City Hall in a session with Herb Bartel, city-county planner for Aspen and Pitkin County. Bartel used a series of slides to portray the new development patterns that a comprehensive zoning code for the area will bring about.

A number of tours were organized to enable IDCA conferees to see Aspen through the eyes and perspectives of its townspeople. A few conferees were able to explore the natural environment surrounding the town on a jeep tour of the area. There were chats with Aspen's old-timers, tape recordings, and a chance to talk with local history buffs.



Aspen's innovations in education include projects directed at the adult members of the community as well as some for its children. Some specific attempts to demonstrate games and simulation exercises which aid children and adults in identifying urban and environmental issues were demonstrated with the help of children from Aspen's community schools. Frank Gehry and Doreen Nelson demonstrated the concept of Purium City, a simulation exercise that exposes students to the political, social and time constraints of the planning process.

Community media tools were discussed in sessions with Bill Dunaway, Editor of *The Aspen Times* and John Smith, Director of Grassroots TV, Aspen's fledgling cable television station. Grassroots video-taped all of the tent sessions and they were transmitted in the tent and later, via cable, to Aspen. Troy West, Pittsburgh architect, directed a project in map-making. Working on the streets, conferees and community people drew segments of the town on long rolls of paper, to be put together later as a grand view of Aspen through many eyes.

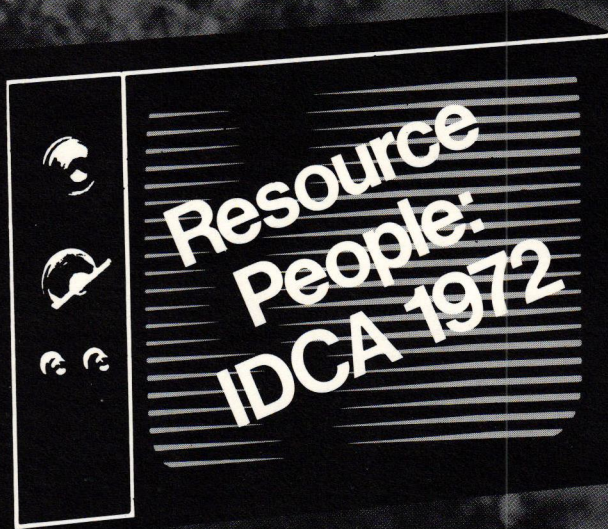


"Do next year's program in precise outline now, and let groups all over the place do their own Aspens in hundreds of beautiful, reasonably remote places, using their own resource people. This way, we can make yards and remove the inherent exclusivity of Aspen, and in short, make the conference a tool for desirable change."

"Because it is still called Aspen Design Conference, we expected a more direct relationship between the problems and designers acting in their role as designers. Instead, I would describe the program as focusing on theoretical concepts of radical education."

"Programs must touch upon critical areas, create structures where people can act for themselves as alternatives to what exists. Couldn't we be more penetrating, sharper in our analysis?"

"It is useful to retreat and to brainstorm, but then . . .? Is there anything that IDCA can do as an institution to be more open, more visible, more forceful? Is the present formula of one annual meeting for relatively few the best to preserve? Perhaps there are other possibilities: smaller regional conferences, regularly published articles and brochures, circulating exhibitions and workshops, pressure groups."



Those listed here by name only are identified elsewhere in the text.

Penny Bach is a staff person for the Parkway Program in Philadelphia, and a specialist in art education.

Ronald Barnes

Saul Bass

Ellen Perry Berkeley is Senior Editor of *Architecture Plus*.

Warren Bennis

Peter Blake

John Bremer

Gilles de Bure is on the staff of *Architecture d'Aujourd'hui* in France.

Ivan Chermayeff

David Clarke is Executive Secretary for the Association of Collegiate Schools of Architecture.

Donald Cressey is Chairman, Sociology Department, University of California at Santa Barbara, and a consultant to the National Institute of Law Enforcement and Criminal Justice.

Bruce Davidson is a photographer and filmmaker.

John Dollard

Richard Farson

Leonard B. Finkelstein

Marcus Foster

Frank Gehry is an architect, furniture designer and co-developer, with Doreen Nelson, of Purium City.

Milton Glaser

Farnum Gray is Director of the Aspen Community School.

Alan Green

Ronald Gross

John Holt

Nicholas Johnson

Louis Kahn

Joel Katz

Bernard Kohn is a practicing architect in Paris and a consultant to the Ministry of Cultural Affairs in France.

Ruth Kohn

Bill N. Lacy

Jacob Landau, painter and printmaker, is currently teaching at Pratt Institute.

Eliot Levinson is the author of *After the Air is Clean, Then What?*

Alan Levy is Director of GEE! and a partner in the architecture and planning firm, Murphy Levy Wurman.

John Massey

Patrick Mogan is Director of Lowell Model Cities Component.

George Nelson

Simon Nicholson, an environmental designer, is currently a lecturer for the Open University's Faculty of Technology in England.

Pat Oliphant is a political cartoonist for the Denver Post.

Harry Parnass

Albert Eide Parr, zoologist and marine biologist, is Director Emeritus of the American Museum of Natural History, New York.

Lisa Ponti is Assistant Editor of *Domus*.

Hans Proppe

Everett Reimer

Jaquelin Robertson

Charles Rusch

Sharon Lee Ryder is Associate Editor of *Progressive Architecture*.

Alan Sandler is an environmental education consultant in Florida, and a member of GEE!

Judy Seidenbaum

Paolo Soleri

Michael and Susan Southworth

John Sullivan

Jivan Tabibian

Bruce Webb is a graduate student at Virginia Polytechnic Institute and a member of the AIA Committee on Environmental Education.

Lawrence L. Wells

Troy West, President of Community Design Associates, Pittsburgh, is Assistant Professor of Architecture at Carnegie Mellon University.

John Whitney, Jr. supervised the audio-visual program for IDCA 1972.

Henry Wolf

Richard Saul Wurman

Samuel Yanes

Annette del Zoppo created the slide program on the architecture of Paolo Soleri.

Afternoon Activities

Anderson Ranch: a community of artists

Aspen architecture tour: Fredric A. Benedict

Aspen Center for Physics: George Stranahan

Aspen wilds jeep tour: Robert Albouy

Austrian cooking: Golden Horn Restaurant

Community education: George Strickler

Community journalism: The Aspen Times

Environment: Bob Lewis

Gemology and jewelry-making: H. K. Adams

Grassroots TV: John Smith

History of Ute City-Aspen: Aspen Historical Society

Local planning: Herb Bartel

Map-making: Troy West

Natural objects: Doreen Nelson, Frank Gehry

Planning and zoning: Robin Molny

Pottery: Paul Soldner

Silk-screening: Thomas W. Benton

Walking tour: Robin Mols

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Program Chairman's Comments

The 1972 International Design Conference in Aspen, *The Invisible City*, was concerned with what and how you can learn from and about your city.

In the theme statement for the conference I wrote: "The most extensive facility imaginable for learning is our urban environment and the people in it. This is school without walls offering a boundless curriculum with unlimited expertise. This is the open university for people of all ages. If we can make our urban environment observable and understandable we will have created classrooms with endless windows on the world."

As program chairman, my goal was the legitimization of this conviction reached through my own work (with GEE! Group for Environmental Education Inc.), and observed in Philadelphia's Parkway Program and in other isolated examples. Finding that an incredible number of people were already involved in exciting, worthwhile projects that make the invisible city visible, allow public information to become public, and use the city as a classroom, was a happy discovery.

The format for the conference presentation was designed to orchestrate the plethora of available resources, drawing from a wide range of existing examples, thereby illustrating the conference theme as broadly as possible. In this way, the definition of making the invisible city visible could be seen as an ongoing process, beginning, for many people, with the conference but hopefully extending, for all, far beyond it. The response to this idea was enthusiastic and gratifying. A record number of conferees participated in a program containing more resource people, more international participation and more events than any previous Aspen conference.

Our definition included a wide range of forms, just as the subject itself takes many forms; the vitality of the subject is corroborated by the richness and diversity of its expressions. Some manifestations of the theme at the conference were in books, conversations, guides, posters, slides, films, reprints, exhibitions, in conferee participation projects and in the generous involvement of the citizens of Aspen as they described what, why and where they were working.

My hope for this theme—and what I believe is the only hope for our cities—is that these resources and experiences will contribute to the initiation of a crucial change of attitude: a recognition of the power of the release of information from our urban environment for establishing the city as the major vehicle for learning, and for encouraging its citizens, as its co-owners, to participate in the wealth of constructive life experiences available in our urban world.

Richard Saul Wurman