AN EXPLORATION OF
CITIZEN PARTICIPATION IN THE
MEDIA
INCLUDING A BOOK ON COMMUNITY RADIO

by

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ABSTRACT

The purpose of this study is to explore the nature of, potential for and limiting conditions of citizen participation in the media. The study is in two parts.

In the first part, it is suggested that "community" in the context of community participation is best understood as a response from a group of people to a definition imposed from outside. Community comes into being around specific social and political issues. People belong to more than one community, and can therefore be expected to have ill-defined and fragmented loyalties to any community organization. As a result most community organizations are short-lived, and community media organizations which require sustained and long-term commitments from their members will have difficulty maintaining organizational strength.

A paradigm which outlines conditions under which high levels of citizen participation will occur is suggested. A basis of participatory behavior is a value system which defines participation as important, a social definition of a situation which suggests that participation is an adequate means to an end, in which participatory behavior is seen as possible and accessible.

It is commonly assumed that communication breaks down social isolation, that access to information contributes to higher levels of participation in public life, that an animator can act as a catalyst for participatory behavior in a community, and that participatory behavior increases citizen access to power. A re-examination of these assumptions demonstrates some of the limiting factors of community participation in the media.

The second part of the study is a book on community radio, detailing, among other things, the process of programme design, research for the media and radio skills. The book is written for people with no knowledge of media, it contains no technical language.
The skills of radio production are discussed as they would contribute to and facilitate citizen participation. The book presents some guidelines, as well, on methods of intervening at public hearings on broadcast policy and for setting up a community broadcast or production facility. The book is presented as an on-going experiment in citizen participation in the media.
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This study, and the project which follows it, grew from the experience of working to create a sector of the communications industry which was both open to, and used by ordinary citizens. It is an attempt to explore in a more controlled and theoretical way the questions which grew out of these experiences.

In 1965, I collected taped interviews with Cree people for radio production, and returned with those with the completed productions to the Cree communities to record their comments on the finished programmes. For 3 years I worked with Kenomadiwin, an Ojibway community radio station in Northern Ontario. That station was the first community broadcast effort to be licenced by the Canadian Radio and Television Commission in Canada. I have since worked extensively with citizens groups to encourage direct participation in media through the production of programmes, and with other community media groups to ease licencing regulations, provide more access to broadcast channels for public use, and to develop adequate means of the dissemination of public opinion and information both from and to citizen groups.

These experiences, combined with the great number of experiments in this area, generated a series of questions about the nature and potential for community participation in the media. Why, for example, are people so reluctant to participate in the media? Studies show that the level of participation in any form of public life (including media) is less than 4% in the U.S.A. (1) Is the creation of sources of information for community groups, the creation of simple technology for widespread media use, the creation of many "community channels" for programmes, in any sense adequate to encourage the development of significant participation in the media? And finally, why is it that when a community channel has been created, and even widely used by citizen groups, it commands so small an audience?
This study and the project which completes it are, in some senses, an attempt to answer these questions.

The study deals primarily with what appears to be the inherent problems of community participation itself. It raises the question of whether we have treated "community" as a static concept, representing a set, self-defined pattern of social relationships. "Community" may tend to reflect a constantly shifting social reality, a reality shaped as much by external forces as by internal social dynamics. Secondly it raises the question of whether the reluctance to participate in all forms of public life, particularly in community media, is based on intrinsically rational decision-making on the part of citizens. A paradigm which outlines the parameters of such decision-making is provided. The fourth section of the study presents an exploration of some of the social variables which affect decision-making in the area of community participation in media.

The function of the study as a whole is to attempt to provide a conceptual frame of reference with which to evaluate the potential for encouraging participation in the media.

The project which follows the study deals with the questions which arise in the relationship between participation and the media form itself. The work is centred on radio, though many of the points which are explored in relation to radio might well provide some insight into the effectiveness of other media forms. What are, for example, the ways in which a media form can act as a catalyst for individual or social action? What is the relationship between the technology of the media form and participation in it? At what point does skill or competency in a media form tend to cause a shift in values towards professionalism? And finally what is the relationship between ideas or research and their expression in a media form.

The project has been written in the form of a citizens manual on radio. (2)
The foregoing questions are raised as part of an on-going process of experimentation and discussion with those who will use the book in the development of citizen participation in the media. The project is written in the same manuscript form as has been submitted to a publisher.
Notes

Introduction


SECTION ONE

1. TWO EXPERIMENTS IN COMMUNITY PARTICIPATION

There have been a number of experiments in community media in Canada. For the most part they fall into four categories. In the first category are the attempts to set up and licence a community broadcast outlet in a populated area. The second, closely related to the first, are the attempts to set up and licence broadcast outlets in the Native communities primarily in isolated areas. The third is the many and varied efforts to develop community programming for existing broadcast outlets, including community cable stations. And finally there have been experiments to use media within the social processes of changing communities. The Film Board experiments fall into this latter category.

I would like to talk about two specific experiments in the field of community broadcasting, Kenomadiwin, and Neighbourhood Radio. I chose these in part because I have first hand information on their development, but also because in some ways they represent experiments in all four categories listed above.

KENOMADIWIN

a. a social history

The idea of Kenomadiwin was born out of a sense of failure. I had come to Thunder Bay in 1967 with the specific task of training a group of Native young people in the techniques of radio production with the explicit purpose of documenting a series of scandals concerning the Department of Indian Affairs. The people in Thunder Bay were part of a summer project established by the Company of Young Canadians. They were all from rural areas in northwestern Ontario; no one had had any experience outside their community, or with Native organizations. The
radio project offered the opportunity of something concrete to do for the summer; the idea of using radio for political purposes seemed to fit well with an underlying hostility to the Department of Indian Affairs and to white men's society in general. The radio programmes did not materialize however. When people returned to their home communities with the tape recorder they found people reluctant to give interviews on subjects which were specific to the community. Several more general subjects were covered, and these more general tapes became the basis for a series of radio programmes carried over a local station to a primarily white audience. It was at this time, and out of the summer experience that the idea developed for a community radio station.

The idea of a community radio station was defined in specific ways from the beginning. It had to be mobile, to go the people. It had to include programming that was local in origin, produced in Ojibway. It had to be inexpensive, and it had to be financed primarily with the resources at hand. (The CYC and donations from friends) The technology had to be simple; people had to be able to approach the station, use it without fear, build and fix things on their own. It had to look like it belonged in the community, speak for the community, and educate people to political activity within the community. All of these needs were defined in casual discussions with people involved in the summer effort, and all were points on which consensus was reached. When, at a later date, offers from private broadcasting companies, and the Department of Communications were made to finance a large scale experiment in community broadcasting in northwestern Ontario they were refused by the Native people involved on the grounds that what was suggested did not meet the stated criteria for a community broadcast unit. There was, until late 1970, never any question about refusing this kind of help.

The model then, was a van, travelling from community to community on a regular basis. The van would carry all broadcast
equipment, including the transmitter. The antenna system would be a simple wire strung between two pine trees. The van would come to the community once every two weeks, plug into the antenna system. It would broadcast for one day with material brought in from other communities and from Thunder Bay. On the second day, broadcasting would be live from the community and include everything from talent shows, language lessons, to public discussions about the possibility of establishing a fisherman's cooperative. It was this programming concept, and this physical model that was eventually licenced by the CRTC.

But the process of licencing took more than three and a half years, and by the time the licence was granted, all of the original group had moved elsewhere. The people who were licenced to broadcast did not share the same style of work, the consensus on goals, the political perspective of the original group. The Kenomadiwin that was licenced bore little resemblance to what the original group had wanted.

During that period of almost four years, the people who were involved went through a number of changes, and an understanding of these changes will illustrate some of the problems of developing community participation in the media.

In the first place, because they were Native, they had to learn to deal creatively with their deep felt hatred of white people and white people's institutions. Some of the CYC people were white; the idea of a radio station came from a white society; the people with whom they negotiated for a licence were white. Much of the hostility came out against fellow members of the group. In fact, it was only after they had begun to accept working with white people that the hostility came out against the whites. This hostility made the day to day tasks almost impossible but it seems possible to suggest that no work on the actual community radio could proceed until these problems were dealt with. It was largely a matter of time; Kenomadiwin was not ready to submit
an application until 19 months after the idea first developed. Everyone in the original group felt good about taking the time to develop trust and group solidarity.

Work on the radio project forced these people out of their home communities and introduced a kind of barrier to social relationships in those communities. In the first place, work on the project involved learning a new language, a language which could communicate effectively with the white world in getting donations, support and a licence.

The new language was more than a way of talking about their work, their expectations etc. It was also a kind of double talk consciously developed to facilitate donations and licencing. The idea of "political activity" became the language of "communication" and "community development". "Information" became something neutral, not a critique of government programmes but an explanation of procedures in two languages. The original people never were fooled by this double talk, but the new people who joined the project joined on the basis of the public language, not political goals of Kenomadiwin. It was in this shift of language that Kenomadiwin got redefined, and because the public priorities had shifted, the agreement on the first principles was broken. The new people welcomed all the technological help and outside programming help they could get.

In the second place, project people had to learn to deal with success, to reorient their expectations so that success, as they enjoyed it, was believable to themselves and their friends. In the end they decided to take the radio stations to other communities than their own; they developed a new set of friends among people who had experience in Native organizational politics.

Native people in northwestern Ontario have experience living in a dependent relationship with the government, but in that relationship they have no expectation of working, and no means of translating what they do from day to day into an "acceptable" activity to those people who give out the money. In working for the Company of Young Canadians, they were still in a dependency
relationship with the government. In some ways that dependency relationship was not different from welfare. The amount of money was small, the standards of pay were inconsistently applied, the money was not always forthcoming when it was expected. But in some ways it was a very different relationship, since work was expected in return for money. The Native people continued to follow their own patterns of work (in conflict with the Company administration), appearing at any time of the day, orientating themselves to tasks rather than hours. When the project was being held up by licencing, and make work projects were devised to occupy the time, most of this original group did not show up to participate. The Company responded by hiring some white people to work on the radio project. Those white people did the sustaining work over a period of more than a year, work like short information documentaries, letter writing etc. The original group continued to work at such things as taking live broadcasting (loud speakers) to community gatherings but avoided the day to day appearances at the office, but they began to lose the faith that Kenomadiwin was a possibility.

Finally they had to shift their own expectations about the nature of their own political activity. In their home communities, political activity constituted a kind of hostile withdrawal from the expectations and programmes imposed by white people and a white administration. In the initial stages of the project, they moved into a "politics of opposition". The final stage of development of political consciousness was the transition from a "politics of opposition" to a "politics of creating alternatives". They had to learn to say "We want this". Learning to think of constructive programmes was a hard step for many people to take, and a number of the original group dropped out along the way.

In summary then, the people in Kenomadiwin had to learn to believe that such a project was possible, they had to learn to translate their own anger against authority to a feeling that
radio could be a significant way of affecting change, and they had to feel that creating a station was important both personally and within the context of their community. The delay in getting a licence however, acted to make this learning seem almost obsolete. In the third and fourth year most of the original group came to believe the project was impossible or not worth doing and left Kenomadiwin. All of them returned to their home communities.

b. the problem of licencing

Kenomadiwin approached the Canadian Radio and Television Commission early in 1968 with the idea of a community radio station. It was not the only group considering a community broadcasting outlet, but it was one of the first times that such a proposal had come before the CRTC. Interestingly enough the CRTC welcomed the new concept of community broadcasting though, as it has been noted, it was very slow to act. The Department of Communications on the other hand was very reluctant to permit licencing of these efforts. In 1970, for example, a scant two months before Kenomadiwin got its licence to broadcast, the Department of Communications wrote in a public report that Kenomadiwin could not be licenced under existing regulations. (1) The pressure from the DoC was to create a community broadcast unit which used more complex technology, and a dependency on "more competent" outside help for programming.

Kenomadiwin corresponded with the DoC for two years. The DoC suggested than an FM rather than AM frequency be used. Such a proposal would have meant the purchase of FM receivers for people in the community so that they could receive broadcast. No other FM stations were within reception area. The cost of FM receivers was beyond the capability of people in that area, many of whom were on welfare. The DoC suggested that they would
facilitate the distribution of FM receivers free to the communities through a cooperative arrangement with the Department of Indian Affairs. The Kenomadiwin group refused suggesting again that the technology used had to be that which was readily available to people in the area.

The DoC also held up other experiments as an example of what could be done. They talked about the CBC MacKenzie network where a Native person (who, as it happened spoke a different language than the people in MacKenzie) collected tapes for broadcast out of Inuvik. They talk about cooperation with such organizations as the Indian and Eskimo Association (with a largely white membership). (2) In general, the DoC was asking Kenomadiwin to reject some of their more fundamental criteria for community broadcasting.

Although the DoC was later, under pressure from the CRTC to help Kenomadiwin, to approve the makeshift equipment for broadcast, to use their engineers to correct problems with the antenna system etc. they were at the same time working on another model of community broadcast which they considered more satisfactory. The DoC experimented with the idea of two way, and broad band radio in northern communities, providing the technological concept, equipment and receivers to the people in the north. They have actively supported the CBC effort in Espanola, providing, with the CBC, a complete studio, transmission facility, technical aid, and a community development worker to activate the community in the media experiment. Finally they suggested in a major report on the subject that any community effort should be kept under the control of established communications institutions. In that report in 1971 they state:

One of the factors in support of combined CBC community operations is that the need for Native organizations to establish their own private networks would be avoided. (3)
Like the CRTC, they had concluded in 1971, that community stations were a good idea. But the DoC concluded such stations should be set up in areas where there were no other outlets for broadcasting. Stations should be set up in cooperation with the CBC, should incorporate national programming, and should draw upon established resources for technical help and equipment. (4)

NEIGHBOURHOOD RADIO

Neighbourhood Radio was established early in 1971 in Vancouver. The original radio group sought to establish a city-wide FM community station. The original discussions focused around problems of licencing.

Within several months the idea of neighbourhood radio had undergone a change and many of the original group had left. It seemed difficult to find the kind of funding necessary for a city-wide station. The problems of getting such a station licenced seemed insurmountable.

In the summer of 1971 the CRTC was approached by Neighbourhood Radio with a more closely defined concept of community radio. The idea was a series of neighbourhood stations connected by cable. The stations would broadcast the same programming throughout the city for 3/4 of the day, local neighbourhood programming for the rest.

The concept discussed at that time was "producers" radio. Neighbourhood Radio would attempt to build up large community groups to produce for radio in each area of the city. As they succeeded a "mini-station" would be located in that community. The audience would be based first in the producer group and around them. Hopefully the group felt programmes produced in this manner would be exciting to everyone.

A number of community groups were approached at meetings. People seemed interested but nobody seemed to have the time or inclination to produce radio. Later experience showed that many
of these "community" people belonged to a number of organizations and spent a great deal of time attending meetings. It also turned out that often these people seemed to represent no one but themselves and a conceptual unit called a community area. Finally it appeared that unless there was a specific issue at the time, members of "community" groups had difficulty conceptualizing any ideas to present on radio. The experience of Neighbourhood Radio and other groups attempting the same thing, was that once a group had made a general programme about the work of their organization, they did not feel the need to continue using a media form to express their opinions.

Neighbourhood Radio then attempted to work with labour unions. The union had a range of immediate programme ideas, they seemed to know what they wanted to say. But with a few exceptions it was very difficult to convince union people that radio was a significant enough way to say it.

In summary, the Neighbourhood Radio group concluded that it was very difficult to approach groups offering "help". The groups either had no need for help as they defined their priorities, or doubted the efficacy of the medium. (5)

Neighbourhood Radio has again shifted its emphasis to the definition of concepts of "community programming". They approach groups now only on the basis of sharing critical data and have their facilities available for community groups on a demand basis. They are working on a number of direct challenges to more established media on the question of what is "community programming"; they consider themselves a "community" in presenting these challenges.

In the development of all work with community groups, they have appeared to come to the conclusion that while the production of a community programme does help a group define its problems and work out better means of internal communications, this process does not necessarily mean a greater efficacy of the group within
the community it represents or on the issues of its concern. In several cases, this concentration on the internal dynamics of the group weakened its efficacy. (6)
Notes

Two Experiments in Community Participation

1. Department of Communications, Northern Communications Study, Ottawa, 1971, pg. 74. Kenomadiwin was in fact licenced early in 1971 by the CRTC.


3. Ibid, pg. 65.

4. Ibid, pg. 53

5. Radio was seen, by a number of the approached groups, as being less effective than television. Radio, however, required less time and commitment.

6. The experience of Metromedia, a citizen participation organization working primarily with video, has tended to confirm these observations.
2. TOWARDS AN UNDERSTANDING OF "COMMUNITY" IN THE CONTEXT OF COMMUNITY PARTICIPATION IN MEDIA

Sociologists have tended to treat "community" as a constant social reality, a set, self-defined pattern of social relationships which persist over time and which is recognizable to outside groups by a set of specific characteristics.

The concept of "community" first achieved sociological significance in the context of a specific historical and intellectual debate. (1) Under pressure from the industrial revolution, social relationships were undergoing a transition. Toennies described that transition as a shift from "community" to "society". "Community" was couterposed against "society". He defined "community" in the pattern of primary group relationships, based on what he called "natural will". "Community" was being destroyed by the introduction of a factory system, by large bureaucratic and rational organization. In its place, new patterns of social relationships were developing, patterns which grew out of institutional structures, the imposition of rational values, the factory as workplace. These new social relationships constituted "society".

The concept of community was a tool for understanding not only the broad social and cultural forces of the time but the accompanying change in ethos, in personal stability and orientation. Toennies concepts of "community" and "society" were not unlike Durkheim's "mechanical" and "organic solidarity". (2) Both he and Durkheim were motivated at least in part by the study of the rootlessness which this new social order engendered. For both, though for Durkheim more than Toennies, it was a study motivated by moral questions.

The basic theme of this early debate on "community" and "society" survives in recent sociology and seems to give shape to the discussion of community participation. But the debate
has been cut off, for the most part, from the historical and social analysis which gave it significance. The terms "community" and "society" have shifted from analytical concepts to sociological tools of observation and investigation. The broad transition from "community" to "society" is represented in the specific transition between country and city. (4) Rural areas have been viewed as "communities", cities as "society", though within cities "community" has asserted itself. In neighbourhoods and rural enclaves "community" as a sociological concept rather than an analytical tool is characterized by either a set of geographic boundaries, a set of correlated social characteristics, or recognizable face to face relationships. The moral question that was so important to 19th Century theorists seems to survive only in an underlying assumption that there has been a past era in which men and women were less alienated, more happy, more integrated into a sense of belonging to a whole. (5) Suttle suggests for example, that sociologists tend to treat community as if "there was a golden age during which communities achieved almost total consensus on their membership and personal identification on the part of their residents". (6) He attributes this to a kind of nostalgia rather than accurate social or historical observation and suggests the data give lie to the dream. In a Canadian context, Clark would agree that this nostalgia is misplaced, but would further argue that in Canada no development of urban society has historically been the result of a transition from rural society to urban society, that the "community-society" model is less useful here. (7)

The problem with the transition of "community" from an analytical concept to a sociological category is that it tends to obscure some of the more important questions which must be raised. For example, why is it that some "communities" are characterized by a high level of self-awareness, while others with similar social historical or geographic characteristics are defined on paper alone? Suttles found for example that:
Some of the most heterogeneous resident groups have been among the most vociferous in demanding recognition as a social group. At times communities seem to force themselves upon administrators when they are least prepared to expect it. At other times, the community is least able to mobilize itself when it is expected to. (8)

Why, for example do community organizations and participation efforts come and go with alarming frequency?

America (and it could be Canada too) is a graveyard for community councils under what name or sponsorship they may have appeared. (9)

Thirdly, when the concepts of "community" and "society" (rural and urbanized) are applied carelessly they tend to obscure the fact that rural areas are often the resource base for urbanization; that this supplier relationship has an effect on the social relationships both within the rural areas and in relation to urban areas. For example, in Fogo Island, a Newfoundland fishing area which was involved in a number of experiments in "community participation in decision-making" and "community participation in media", (9) the fact that the outports supplied fish for companies operating outside of Newfoundland on the basis of world capital and market demands had a great deal to do with the success or failure of Local Committee, its composition and the relationship between that Committee and the people it was set up to serve. The relationship of this area to the outside world tended to make easy use of the idea of "community-society" impossible. This situation is discussed in more detail below.

And finally, as well, the use of "community" in this context tends to obscure the internal dynamics within a local area which affect among other things the level of "community participation" in any project including media. McCrorie put the problem well.
"The presence of groups (communities) is often of less interest than the conflicts within them" (10) In his study of participation at the local level in programmes of social and economic development he found that:

programmes which concentrate on participation, but only involve the middle class obscure the formidable barriers that exist between the poor and these programmes. And because it obscures these problems, it may exacerbate their existence. (11)

To take the example from Fogo Island again, participation on the "community" committee, the Local Improvement committee, tended to block participation from other people who lived in outport towns. The Committee was "in theory at least in a position to present a false image of community solidarity to outsiders". (12) The effect of conflicts within the community on the participation effort were not recognized, but in the end they acted to mitigate the effects of that effort both in shaping the future of the community and in shaping the participation in media.

What is needed then, is a concept of community which can contribute an answer to these questions and provide some guide to understanding the dynamics, potential and limitation of participation in public life.

So what is community? Suttles provides an interesting concept and one which may help explain the fierce emotional commitment many people feel to a past "community" era in which they never actually participated. (13) He suggests that were we to trace the patterns of children within a geographical area, where they go, and where they are forbidden to go for many reasons, we would have established what are the geographical limitations of community in some concrete way. For, he claims, community is first and foremost a social definition and the limitations set upon the movement of children reflect a real consciousness of the separation between "we" and "them".
He takes this concept much further. Community as a social definition is a consciousness developed not within an area, but in relationships to other areas or jurisdictions. What creates the relationship is the impositions of power, authority and jurisdiction from outside the "community", to which the community responds.

As counterparts to one another, neighbourhoods seem to acquire their identity through an on-going commentary between themselves and outsiders. "The community is defined from outside, but that definition is reinforced from within." (14)

He gives an example:

Block clubs originate because they can bargain within a political structure which is similarly divided into small spatial units. (15)

The consolidation of community, the acceptance of a self-definition of membership within a community occurs in relation to external adversaries or advocates. And because of that, in some ways, different communities exist in similar geographical areas around specific issues.

To create a Canadian example: People living north of Hastings between Renfrew and Nanaimo are members of the Hastings townsite at the time when the resident organization (defined in that area) bargains with city hall to prevent the rezoning of a street to allow for hotel development. In that fight, people living in that area become conscious of a group membership, although they may not either participate actively in the struggle or have face-to-face relations with any of their neighbours.

But on the issue of getting a hospital in the east end of Vancouver, they defined their community quite differently. They relate
to the Provincial government, not the planning board. They view themselves not as "homeowners with a stake in maintaining a residential area" but as the "poor east enders" who always get the worst services in terms of hospitals etc.

Janowitz takes this idea even further, and gives a guide to understanding some of the dynamics of community organizations and participation in community politics. He suggests a term "a community of limited liability". A community is like a corporation with limited liability. The board, or the articulate spokesmen (appointed, self-appointed or elected) speak for the whole and in speaking shape the definition of the whole. The community is treated like an "individual". The members of the community are spoken for, may participate in community politics, but they are protected by a limited liability which allows the "community" to function in relation to outsiders as a unit without necessarily implicating any or even involving all of its members.

If Suttles and Janowitz have provided a useful framework for understanding "community" we would be able to reach some tentative conclusions about the potential for participation in any form of public life including media. First, if community is a response from a group of people to a definition imposed from outside, no discussion of community participation can be complete without a concomitant discussion of those power relationships that are exerted from outside. Secondly, if people belong to more than one community, and if these communities take the form of "limited liability corporations" people can be expected to have ill-defined and fragmented loyalties to their community. Such fragmentation will work against the potential (though not make impossible) for long term community participation experiments succeeding. And, if it is true that communities come into focus around specific issues, and disappear with the resolution of those issues, then the relationship of most people who participate in a community organization will be sporadic, community organizations
in general will be short lived, and community media organizations will have difficulty mobilizing long term support and commitments from an area.

Finally, it becomes almost self evident that someone speaking for the whole of a "community" is not necessarily speaking for all of its parts. The middle class participant in a community media programme only speaks for the unemployed in a very specific sense. The miner who runs a music programme on the Community radio station in Espanola, may say the same things as a middle class housewife, while participating in the radio effort, but act as a spokesmen for a group of "young turks" within his union later the same day. (17)
Notes

Towards an Understanding of Community in the Context of Community Participation in the Media


3. For a summary of the sociological treatment of "community" see Poplin D., Communities - A Survey of Theories & Methods of Research, N.Y., MacMillan, 1972, esp. pg. 112.


7. Clark, opcit, pg. 219.

8. Suttles, opcit, pg. 15.


14. Ibid, pg. 51
15. Ibid, pg. 57.


3. TOWARDS AN UNDERSTANDING OF "PARTICIPATION"
IN THE CONTEXT OF COMMUNITY PARTICIPATION

If in the 19th century, Toennies and Durkheim provided an analytical framework for a sociological discussion of "community", it was not until the middle of the 20th century that any sociologist attempted to do the same in a systematic theoretical way for a discussion of participation. That sociologist was C.W. Mills, and while his work stirred up excitement in small circles both within and outside the university, he wrote to a primarily unsympathetic audience of sociologists. (1) His approach was like that of Toennies and Durkheim; his concern was to provide an analytical framework for the broad historical and cultural trends of his society. Like them, he was consciously directed by questions of moral values.

What he described was an intensification of the processes that Toennies and Durkheim had analysed. He suggested that the process of institutionalization of social relationships had, under the development of 20th century capitalism, become intensified to the point where the individual was subordinated to a "mass society". The anomy that Durkheim had suggested was a side effect of a new and potentially liberating social order, had become so widespread that, Mills claimed man's personal biography had been cut off from his cultural history. (2)

Durkheim and Toennies had suggested that community was a pre-stage in the development of the new social order. Mills suggested that community must be counterposed as an alternative to that order. Community meant that people must participate in the decisions which affect their lives (3) in spite of the development of industrial society, and if that participation meant the transformation of all forms of social and economic relationships within industrial society, then that transformation was necessary. Participation was for him a moral imperative growing out of an analysis of social conditions. (4)
Mills discussion of participation generated debate both within the discipline of sociology and far beyond those limiting confines. Among sociologists however, that debate quickly was cut off from the historical analysis. Participation tended to become a subject of observation and investigation much in the same way that community had been. Like the study of community it retained some of the value implications which had been part of the original discussion.

There were a number of studies to determine the variables of citizen participation. (5) Sociologists discovered for example that higher income level, education, home ownership affected the level of participation positively. (6) But they were caught up in the double dilemma in attempting to explore variables which might encourage greater participation. In the first instance, even when these variables are taken into account, the level of participation in public life is very small. (7) When this participation is broken down, when registration in an American political party is discounted as a significant form of participation, the level of participation among citizens in public life becomes insignificant.

Secondly, even though higher education and income affected the level of participation, retraining and education programmes which attempted to contribute to higher education level did not. Suttles suggests that:

The results of education and retraining programmes as a basis for participation were so negligible that one must doubt the utility of such programmes. (8)

In their studies, Bloomstock and Rosenstack found that no matter which variable they manipulated, they still could not account for a rise in the level of participation.

So much of the variation in participation among the people remains unexplained that no one model or theory can be held
exclusively as doctrine on how to activate the poor or facilitate their continuing and maximum feasible participation. (9)

McCrorie and Abell ran into the same dilemma in studying the factors which influenced participation levels in Canada. In her study of participation experiments within developmental programmes in Northern Saskatchewan, Abell found, for example, that none of the projects were successful even in their own terms, that economic development was not accompanied by social development in the affected community. (10) McCrorie provides an insight into the data that Abell collected, and at the same time his work offers some ideas which may contribute to a larger understanding of the problem. He suggested that the argument advanced within the programmes themselves for participation was not the result of an objective analysis of the situation, but rather a statement of values on the part of the planners. Their programmes of participation, he suggested, bore no more organic relationship to the communities that they sought to develop than the economic programmes of which they were a part. It was, he said, no wonder that the call for participation fell upon deaf ears. (11)

The problem of determining the variables has been approached from two other quite different angles. Studies have been conducted to facilitate the technology of participation as a means of increasing the level of participation. (12) While it is too early to assess the results of the experiments to provide a complex technology to facilitate direct participation, it is important to note that even the proponents of such work are not predicting a major change in general public levels of participation. Umpelby, for example, is quite cautious. As he states in a discussion of his model:

...consequently a kind of volunteer participation to the extent of the individual's time and interest might develop.
Such exercises (computer polling) could provide a theatre of activity for those who would like to be more politically involved than simply reading a newspaper and voting but who are not actually decision-makers and who may be less interested in group organizing than the present political process requires.

...Recognizing that some people are simply not interested in politics an additional factor is the marginal cost of participating in terms of time and energy. (13)

Umpelby's caution is justified. A discussion of how people might better participate does not take into account either who are these "decision-makers", and under what conditions are they willing to expend the energy, however minimal, to participate. Nor does it take into account the unpredictability of the results of increased participation. Lowenstein found for example that:

Once you involve citizens you can no longer expect to be able to control and predict their behavior. (14)

The Canadian government has taken a more direct approach to determining the variables which encourage participation and in the interest of increasing participation have instituted a number of direct granting programmes for this purpose. Again it is early to assess the results of these grants on the level of participation. Preliminary data suggests however that the granting of large sums of money to citizen organizations (through the Department of Citizenship) or to small groups of people (through LIP and OFY) has had the effect of diffusing the level of participation and the social and political efficacy of these groups. (15) It seems, at this early stage, to be possible to suggest that money grants have forced the shift in attention within the group to group processes and direction from participation in society at large. (16)
If none of these studies or experimentation provide an adequate explanation of levels of participation or how to affect them, it seems necessary to go back again to the analytical approach of Mills for help. The first thing to note is that the decision to participate, while indeed affected by social and historical factors is a personal one. It may well be made on a more rational basis than the sociologists who would manipulate social variables would suggest.

Metzler found for example that Indians refused to participate in self-help programmes because they felt that such programmes were simply a device to take away their land. (17) Without question, they had some evidence upon which to base this belief. Farmers in the Buckmire and Rogers study refused to participate in self-help programmes (other than accepting economic subsidies) because their self-image of farmers was under attack. (18) Outporters in Newfoundland refused to move into urban centres to find employment because the economic cost of locating in a larger outport was less than locating in an urban centre. (19) The result of the Federal Government White Paper urging Indian people to participate in the mainstream of Canadian life, and presenting a number of participatory programmes to achieve that effect was to encourage a higher level of participation in organizations which opposed the White paper. (20)

An analysis of participation then must include a study of social values. That study need not be based on a psychological frame of reference. It asks of us that we create a theory of action which can take into account not just social variables like education, class participation, not just social facts like the level of information and the channels of access to participatory activities, but the values which people hold, and the rational criteria which guide decision-making and action.

Willhelm has provided a paradigm of a social theory of action which takes into account the values which motivate action. (21)
That paradigm can be adapted to provide some help in understanding the level of participation in public life, including participation in media. He suggests that there are six factors which shape action: means, social conditions, values, cognitive data, ends and norms. In the light of the problem under discussion the paradigm would become:

People will tend to participate in public life, including participatory media experiments when:

**ends**: They have reason to believe that they will be able to achieve some goal by participating. That goal might be to affect a decision being made in the political process, but as well it might be no more than the opportunity to associate with people of a higher social status.

**norms**: Their behavior in participating is not out of line with what is expected of someone in their political persuasion, values, social or economic status, or in relation to the particular problem. The norms affecting participation are complex; participation in public life may be seen as a threat to in-group solidarity.

**means**: There are courses of action available.

**social conditions**: There are no limiting conditions which prevent action. Those conditions might be the cost in time or financial resources of participation, participating social groupings accessible to the individual, vocabulary or social skills required for participation.
values:  They want to. In part, what people want, or value, is culturally determined. In part, it is determined in the nexus of individual will, life history and psychology, and those cultural values.

cognitive data:  They have the information on which to base a decision to participate. But an individual does not weigh information as if it were cheese. New information is incorporated into a subjective definition of a situation. It may shape the subjective or be shaped by prior assumptions and information.

Such a paradigm might explain for example why few people might turn out to participate in a cable television programme on determining a national energy policy for Canada, (22) why there has never been a housewife (for a housewife) or a logger appear before the Canadian Radio and Television Commission public hearings on broadcasting, (23) why women may be reluctant to participate in politics directly (as opposed to women's committees) and why their husbands may resent participation in any form of political life at all. It might help us understand why Fogo Islanders who became involved with the Local Improvement Committee were those who already had loyalties to the island as a whole rather than to specific outport communities. (24)

The paradigm also explains why for the most part the power of public pressure is negative. (25) The hotel zoning can be blocked; the freeway stopped. But attempts to involve people in planning the kind of city they want (through perhaps a media programme) or even what kind of broadcasting they want have usually lacked passion or commitment from the general public. As the Van Tills suggest:

People in the mass do not produce positive systematic programmes...but the negative decision is a simple decision
and the required power of the grass roots is incontestable. The grass roots has the power of veto.

The power of veto should not be underestimated as a force in directing social change. A decision not to build a freeway or third crossing is in some senses a decision about the kind of transportation system or city one wants. But at the same time, if one examines "systematic programmatic" decision making in the light of the paradigm discussed above, the conclusion that people do not easily become involved in "constructive" decision making may be a rational one. People seem to know how incredibly difficult it is to find the means and power to achieve their ends which constitute constructive transformation of existing institutions.

What is being suggested here is that people make the decision to participate on a rational basis, but that the parameters of that rationality are self defined and are in part determined by an internalized value structure, and in part by previous learning experience. If this is true, then one could argue that while it is true that poor people seldom participate in experiments in community media or other forms of public life, they can be moved to participate by a number of factors; the most significant of these are a change in their depth of feeling about the issue, a new sense that participation will achieve some desired result, and their access to means of participating which are conducive to achieving those results.

What is also being suggested, then, is that the manipulation of the means of access to participation (usually through technological invention) is not, in most cases, adequate to increase the level of participation to a significant degree. This is a point of controversy among theorists of participation. It has been claimed for example that:

The complexity of our civilization, in part a reflection of the complexity of modern technology, is often cited
as a partial explanation of the increasing distance between the citizen and his government. It has also been suggested that the technology can now be used to overcome to a large degree barriers that now isolate the citizen from the decision making process. (27)

It is also claimed that by making the "marginal cost of participation in terms of time and energy lower (can) put the citizen in a more competitive position with the lobbies of wealthy interest groups". (28)

What this approach seems to neglect is that on many issues the citizen knows from experience for example, that while he may be able to prevent the rezoning of a lot in his area he is unlikely to be able to do very much about the problems of unemployment and inflation which affect his life at least as seriously. His participation in a local citizens organization, or his appearance on a community cable debate is circumscribed by these limitations. (29) People learn by experience not to overestimate the power of any specific group representing their "community" to engage the "wealthy interest groups" in negotiations, not to underestimate the importance of "interest groups in decision-making". To put it most strongly, if you cannot call someone to the negotiating table, you are not in a "competitive position". Most of the time, people cannot find out where the table is. Community broadcasting, interactive technology, or computer feedback systems have not in the past been very much help with these problems.

If this is true then once a situation has been defined in which "participation" has been ruled out by a group of people, it will require exceptional and/or external factors to change their mind. Such external factors must make participation seem newly important, possible or significant.
Notes

Towards an understanding of "participation" in the context of Community participation


5. Rossedes, D., loc cit.

6. Ibid, pg. 41 - 9


8. Suttles, opcit, pg. 15.


10. Tremblay, opcit, pg. 199.

11. Ibid, pg. 334.

12. The most ambitious of these studies is the Minerva Project, directed by A. Etzioni & S. Unger, Centre for Policy Research, New York, Columbia University, 1972.


16. Experiences in Hamilton, Halifax and Calgary tend to confirm the observation that large grants to citizen organizations shift attention away from community priorities.


20. The Indian Association in Alberta, for example, gained strength and cohesiveness in the preparation of a response to the Federal White Paper on Indian Affairs after June 1969, when the Paper was released.


22. Estimated audience for community cable on the North Shore in Vancouver ranges from 500 to 1000 viewers in an evening according to Wm. Nemitin, Executive Director Metromedia.

23. Conversations with Pat Pearce, Commissioner CRTC, December 1972, indicate that even with relaxed procedural regulations, the Commission has heard very few submissions from "ordinary citizens".


25. Programmes stressing community controlled and planned redevelopment have had difficulty getting off the ground in Calgary and Toronto, although citizen participation in city-run planning committees is very high.


27. Department of Communications, opcit, pg. 69.

28. Umpelby, opcit, pg. 69, see also L. Legall, "Discovering Community" from The Greening of the Wired City, Bell Northern Research, Ottawa, 1972.
4. TOWARDS AN UNDERSTANDING OF CONTRIBUTING AND LIMITING FACTORS OF COMMUNITY PARTICIPATION

If decision-making is based on experience then to change a decision, something must happen which changes either the experience itself, or the interpretation of it. There are at least three ways in which this process of redefinition might occur. The first is in the redefinition of the issue, raising it to a new level of importance, and the second is in the redefinition of the action as having potential for change, the third is in the redefinition of the means of action as adequate to affect change. The first is the traditional role of journalism; the second is often the role of the "agitator", the third is often attributed to increasing communication potential. But in the context of a discussion of increasing levels of participation in media, all of these need closer examination.

a. Redefining the issue: broadcasting as a journalist medium

There is a tradition in newspaper journalism of redefining issues on the basis of new information. The reporter considers it a part of his job to uncover information, piece it together into an intelligible form, to answer questions. Not all reporters do an adequate job; many newspapers allocate few resources to newspaper journalism. But this tradition forms a kind of an ethos which permeates much newspaper work, and provides the basis for specific expectations by readers. In one sense, an adherence to this method tends to make newspapers openly "partisan".

This same method does not permeate private broadcasting, particularly cable broadcasting and radio. There, the function of the broadcast medium is to perform a "public service", to provide information without comment, to give a whole range of opinion regardless of the relationship between information and opinion. Broadcast stations for example consider that public service announcements constitute their community service. (1)
They consider that the talk shows allow people to participate in community issues. (2) They generally have no reporters, no researchers, although they operate on the same business principles as the daily newspaper which does allocate resources to these functions. Only in rare cases does a broadcast station take an editorial position.

The CRTC tends to reinforce a concept of private broadcasting as a public service rather than journalist medium. They licence the air waves; consider them a public property to be managed in the public interest. In most cities there are fewer newspapers than broadcast outlets, and many of the broadcast outlets are owned and managed by companies with a financial interest in publishing. They will not licence "partisan" programming even in the area of "community radio", and feel that a station must "be above the demands" of citizen pressure groups. (3) The stations licenced must present a balance of opinion. (4)

The effect of this legislation, and the operation of the broadcast industry outside of the ethos of journalism is to make broadcasting appear to many people to be a poor context for exerting political pressure. To take some specific examples, if every opinion must be balanced against opposite opinions, it would be very difficult to mount a crusade through a broadcast medium to stop a large development along the waterfront. The hot-liner might take action to rectify a late unemployment cheque, or uncover a scandal, but neither he nor anyone else within the station has the resources to research the question fully, to present a continual, consistent and coherent picture of the pressures against haphazard land zoning.

And if it is true that people do not expect private broadcasting to be a journalist media, then it will tend to be true that they will not use it as a journalist media, that community broadcasting, private broadcasting, radio etc. will not have the power to redefine an issue as important, to be a catalyst for
participation. Community programmes which do attempt to redefine issues will not have that impact when set in the context of cable or radio broadcasting.

b. Redefining the potential for action: the agitator vs the animator

The second way in which a situation may get redefined is in the introduction into the community of an agitator.

Agitation is not a word which sits lightly with many sociologists and communicators. The term requires definition. An agitator, in the sense I use it is a "persistent and uncompromising statement of grievances through all available communications channels with the aim of creating public opinion favourable to a change in some condition". (5) An agitator is someone who is able through information, expertise, the strength of his own feelings, or the power of his personality to convince people that action is possible.

Not all people who work with community media experiments are agitators, and it may be helpful at this point to make a distinction between "an agitator" and an "animator". (6) The agitator and animator work on the basis of a different concept of community. The agitator identifies "community" in a relationship between "we" and "they", and in the imposition of power on a specific issue. (7) The animator identifies community in a set of shared characteristics or affinity relationships within a group of people. (8) The agitator attempts to redefine a situation as having potential for action or participation by the identification of power the means of confronting power. He hopes in this process to contribute clarity to the self-definition of community, and a shared confidence in the ability to take group action. The animator attempts to redefine the situation within the group so that people have both the individual confidence, the group communication and mutual support to take action. The agitator locates the focal point of any community problem in the
relationship between "we" and "they". The animator tends to locate the problem, or at least the potential for dealing with the problem in the internal dynamics of the "we".

What is being suggested in this paper is that the concept of community tends to reflect a social reality only the "we-they" relationship, that the "we-they" relationship is not a constant in definition or time either for the individuals involved or the people in any one area, that it comes and goes in the nexus of issues. If this is true, then one might expect that the process of animation would have little to contribute specifically as a catalyst of participation, although in some situations, animation would contribute to the sustaining power of on-going community media institutions.

c. Redefining the means: the limitations of communication as a means of action

There are a number of assumptions which underlie the idea that improved communications, and particularly participatory media can be a catalyst for action. It is assumed for example that improved communication tends to contribute to overcoming isolation. (9) It is assumed that improved access to information will provide people with more power to act. (10) It is assumed that leadership which develops within a community tends to take that community "with it" in the exercise of power (11) and finally it is assumed that in the act of participation in social planning, people gain a measure of power over their lives. (12) While it is clearly true that there is truth in these assumptions, it is also true that they require closer examination; improved communication has many latent functions. Some of them appear to mitigate the potential impact of participation and community participation experiments.
Communication overcomes isolation:

All reports and discussions assume that communication is necessary to overcome the isolation of communities and individuals in the North. (13) While it is certainly true that communication can result in better medical care and the spread of literacy, it may not be true that communication ends isolation. Isolation is not just, or even necessarily, a physical description, it is a social reality. And as a social reality, it can be argued, it is created by as much as bridged by the development of communications. (14) Brox makes this point well in his study of the impact of new technology and transportation systems in Newfoundland. (15) He argues that isolation is determined not by the distance to the next town, but by the need to go there. Communication, by introducing newly valued needs for certain patterns of living and material goods, creates the need to bridge what was before an insignificant social distance.

The Northern Communications Study, for example, assumes that communication will end isolation:

Broadcasting properly used can help promote the social change necessary to bring Native peoples into the mainstream of Canadian life......(16)

But that mainstream as portrayed by Family Affair, includes first the television set required to receive the programmes, and thus the income level necessary to guarantee purchase of the television, and later a whole collection of other material goods. For the Northerner who is able to move into the cash economy, who is willing and psychologically capable of working for an exploration or mining company, communication does indeed mean the end of isolation, the integration of himself and his family into the mainstream of Canadian life (at whatever cost).
For the Northerner who for any number of reasons is unable to make this shift, communications technology only serves to heighten the sense of isolation and relative deprivation. He becomes, in Whyte's definition, poor. (17)

(ii) information provides people with increased power to act:

It is generally assumed that access to information can act as a catalyst for social action or participation. When "action" is viewed in relation to the problem of gaining power, the role of information as catalyst becomes unclear. Coser suggests, for example, that it is only in the operation of a conflict situation that "groups become aware of their specificity", of the "boundaries between themselves and outside". (18) The "we-they" relationship, in providing an understanding of what is happening around an issue, who is acting, and what is the nature of that action, defines a context for information. The conflict situation provides the questions which information or data must answer. Individuals have always had access to more information than they could use through the daily newspapers, the library and other media. The fact that more information becomes available either through data banks or through sophisticated technological means of access says nothing to the problem of how or whether that information will be used. In a conflict situation, at the point where "community" becomes recognized, individuals have some means of determining what information is important to have, and how it should be used. In a non-conflict situation, the information is likely to remain stacked on library shelves, microfilm or videotape. (19)

Coser makes a second point which is helpful to this discussion. In his exploration of conflict he suggests that conflict serves as a means of "appraising the relative power" of the antagonists. (20) In the "we-they" relationship which
I have suggested defines community, conflict would then serve to delineate the nature of the relationship, the parameters of the operation of power, the potential for counterposing community to authority. In this context, information becomes clearly a tool of action. Information seen in this light is not a cause of action, but a result of action. And as a result of action, a factor in a power relationship, the question of who shapes the information (who decides what is available, in what form, in a data bank) becomes very significant.

(iii) leadership from with a community contributes to increasing participation from that community:

One of the functions of a media " animator" or " agitator" is to find and strengthen local leadership. In the case of community media experiments that leadership must not only have the capability of carrying on the day-to-day functions of an experimental project, they must also continue overtime to represent and speak for a large segment of the " community" they serve. They must themselves provide the impetus for involving continually more people, but what they say must be consistent with the needs of the community as it has been defined.

But working within a community media experiment demands skills which are not generally useful in day-to-day life. These skills involve a vocabulary, a language which will raise money, make simple ideas acceptable in briefs to government. The experience in Kenomadiwin showed that as people learned the language of participation, the language of dealing with funding institutions and the broadcast industry they became increasingly cut off from their own communities. What seems to be involved is a shift in reference groups, but what underlies this shift is often an accompanying shift in values.
As was noted in the discussion of Kenomadiwin, the goals of facilitating communication which were developed in the conversations with funding and broadcast institutions tended to replace the political perspective of the original group. This shift in reference group meant that the new leadership felt and was received with a certain degree of hostility in their home communities. It is not clear whether this process of shifting reference group necessarily accompanies the development of leadership. What is being suggested here is that when this new leadership is forced to deal with outsiders in the definition of its work, the shift will occur. This would be true of most community media experiments.

(iv) increasing participation increases the access of citizen's to power:

It is generally assumed that an increased level of participation represents an attempt to create a shift in the power relationship between the community and the work it faces. This is not always true. Selznik found that citizens who got involved in the TVA, (Tennessee Valley Authority Project) often found themselves deciding "how" the programme was to be carried out, but not "whether" it should proceed at all. (21) In a study conducted for ARDA, McCrorie found that community participation meant "an attitude of mind that has to be developed if this programme is to be successful". (22) In other cases it appears as if participation is intended to serve as a kind of palliative for disrupting and dislocating effects of economic planning. The Northern Communications Study for example states that:

"Traditional culture has been and continues to be destroyed by the impact of modern technology. A part of that technology can be used to help restore the balance". (22) 

In any case, it seems fairly clear that participation itself
does not necessarily mean a significant input in a decision-making process. When one is talking about participation in media, this becomes even more clear.
Notes

Towards an understanding of contributing and limiting factors for community participation


6. The derivation of "animator" and "agitator" as sociological concepts is my own, but is based on conversations with Wm. Nemtin, Metromedia and others with extensive experience in the field.

7. Suttles, opcit, pg. 57.

8. Poplin, opcit, pg. 112

9. A full exposition of the idea that communications overcome isolation is found in the Department of Communications Study *Communication and Regional Development*, Ottawa, 1971.


12. Lowenstein, E. opcit, pg. 289.


14. The process is similar to Thomas' concept of the social definition of the situation, see E. Volkart, *Social Behavior and Personality*, New York, Social Science Research Council, 1951.
The use of community prepared programmes is very limited. There are no means of ensuring distribution; most people do not have access to equipment to view programmes in their homes.


SECTION TWO

INTRODUCTION

In England they call radio "audible wallpaper", and what a comedown that is for the medium which "brought the world into your home".

That world which came into the home has become something which can be packaged on tape, something preplanned, something first and foremost entertaining to everybody, and personal to nobody.

Like television, radio was always a commercial medium. It is only in the creation of the Canadian Broadcasting Corporation, and recently in some community media groups, that radio is seen as a public utility, a resource for people and groups to use to express their viewpoint. Radio station executives have always talked about "markets" not people. Nothing about that has changed. Television represents the "hard sell", and radio, because it has the potential to be spontaneous and directly human, the "soft sell". As much as anything else, radio sells friendship, intimacy, shared confidences in a market of lonely and alienated people.

This is no less true for advertisements than for programming. The fact that some radio stations purchase their format, pre-packaged, from an agency in the USA, that in many radio stations a computer comments lazily on the time and weather between songs and commercials does nothing to change the basic appeal of radio. The directness of the verbal contact with an abusive "hotliner" more than compensates for the few times when no one was in the control room and tape played music backwards for four hours.

People remember the old radio with a good deal of nostalgia. Radio represents a world of the imagination which is so vivid, individual and personal that it is a little like an old love affair. Mention radio drama, and people's eyes light up.
Maybe this old love affair with radio hasn't been embellished with time. The old drama form could still be powerful today but the problem is no one can afford the costs of producing it. True, people then were better prepared to allocate time and concentration. But radio today still offers the same appeal. Because of the cost of producing professional radio, the marketing realities of the large corporate industries which own most stations, the lifestyle and expectations of a television-reared audience, radio does so through presenting music, running commentary, and small dramatic or documentary packets.

In some sense, public broadcasting is not very much different from commercial broadcasting. With the exception of "specials", a few documentaries, and some serious music programming, the "new radio" of the CBC is as fast moving and capsulized as commercial radio. Mini-documentaries, phone shows to people behind the news, satirical sketches and Cross Canada call-in shows may represent a "radio revolution" within the CBC itself, but to the outsider they only represent the more serious side of "Hotline", "The History of the Beatles", "News Every Hour on the Hour" and "Captain Midnight".

The power of radio hasn't changed. It still hinges on the contact between a faceless voice and a lonely listener. Radio has less social and political impact than television (it would be difficult to create a national scandal or political issue using radio) but to the millions of people who listen to radio every day, it may have more personal impact.

No one admits the power of radio, or even recognizes it, except perhaps for the advertisers who are dependent on it.

But something about radio has changed. It is no longer the province of professionals. Not many people have the skill, time or resources to produce a full scale documentary or drama (few radio stations do), but anyone can create a good mini-documentary, a five minute commentary, a satirical sketch.
You don't need training, or even a long apprenticeship to produce for the new radio. The graduates of the myriad of small radio schools never learned basic production skills in their course. The young station executive may never have spliced a tape. Local stations, the CBC, schools, community groups need all the good taped programmes they can get, and there aren't many people producing them.

Non-professional radio is for ordinary people who are excited about the medium and want to use it for any purpose. That is what this book is about.

This book is in the nature of a guide or reference book. To get started in radio, you don't need to know more than simple recording and editing technique. You can learn those in an afternoon. Many people have produced good short documentary programmes with no more than these skills. Some of these short programmes have been heard on the air. You probably should begin with these sections of this book.

The more you produce, the more you will want to know about radio technique. Every time something doesn't work, you will need a point of reference to discover what went wrong. You may want to move into special effects. You may want to go to record music, conferences, your own educational programmes, or even at some point, experiment with radio drama for children, a group meeting, for fun.

Use the book as a reference; go back and explore what is here, and then experiment on your own.

This book is by no means an academic radio text (technical terms have been omitted). It was written specifically for people with a social conscience: journalists, students, citizen or political groups or ordinary people who have no intention of becoming professional radio producers.

The information will be helpful, but it can't represent a complete guide to radio production skills. Each section has grown from the experience of several people and community groups.
using radio for their own purposes. You may have different experiences, use radio differently, develop other skills.

This book is in some senses an invitation to experiment, to find out what radio can be.

There are few real careers in radio. The skills of radio production won't necessarily qualify you for a job in radio. The people who "graduate" from the myriad of franchised radio schools paid a lot of money for off-air practice in ad libbing. They didn't learn radio production, and usually they can't even find work. Even graduates from recognized technical schools and community colleges find it tough to break into radio.

The professionals in radio got there by any and every means. There really are some who started as mail boys in the CBC. More people graduated in business administration and moved from finance to programming. There are some technicians who got seduced by the more artistic side of radio production. But most people in radio got there from some unrelated field, or by fluke, or because they knew someone at the right time.

Nonetheless access to air time is easily arranged.

The CBC welcomes freelance material. They have two main outlets for freelance work: for their own information programming, and for syndicated material to affiliated stations.

Syndicated material is usually "information" and "behind the news" interviews, simply produced and general in perspective. The "syndication" department wants consumer items, human interest material, short commentary on regional events and reporting.

Material for CBC itself is usually more seriously produced. There are a number of information documentary type programmes soliciting short material on current issues. There are a few time slots available for half and one hour documentaries and the occasional "special".
If you listen to the programmes on air, you can usually judge which programme would be receptive to your material. A few notes on dealing with freelance will be helpful:

* You do best with the CBC if you develop a contact with a single producer and let him circulate your programme to the appropriate time slot. You can send in short material "on spec", without a prior commitment on the part of a producer. You should follow your material with a phone call, or take it in person. Before you prepare a long programme, discuss the outline with a staff producer. Once you are an established freelancer, you may get a cash advance. The CBC is interested as well in news commentary or satirical items. You should discuss these in advance, providing a pilot tape if possible.

* Commercial stations will use some freelance material - usually "behind the news" interviews. Occasionally you may be able to interest a staff programme director in longer programmes.

* Cable stations will consider a slide-sound production, particularly on a local community issue.

* Cable stations have recently been forced by pressure from community groups and the CRTC to carry regular community radio programming on an empty channel.

University stations will occasionally carry outside community programming. There are now established community - university stations in Edmonton, Saskatoon, Waterloo and Quebec City. University Stations and the CBC will carry material which is "political" in content. Cable stations are the most conservative, insist on hearing all material in advance of air-time, and on avoiding controversy.
Only the CBC pays any significant amount for material they use. CBC rates are $10 per minute of edited on-air programme, $1,000 or less for an hour documentary. The CBC rarely buys unedited tape. Private and university stations pay a small fraction of this amount for material. Expect $15 for short material, $125 for an hour documentary.

Cable stations regard air-time as a "privilege". They won't pay or provide technical services.

You may want to use radio-tape production for your own purposes.

a) recording a conference:
   It is difficult to listen to unedited tape - tape lacks the dynamics of real communication. Conference recordings are seldom useful. Instead, conduct interviews during and after the conference with participants, antagonists and observers. Conduct interviews with an eye to how material will be used, and cover relevant points in the conference discussion by summaries from the participants.

b) recording to replace note-taking:
   Unless you plan to transcribe the tape to paper, you should avoid taping speeches and presentations. Most speakers have copies available of their speeches. Tape is a poor medium for selective transcription since it is especially difficult to locate a particular interchange on a completed tape.

c) recording interviews for print journalism:
   An interview recorded for print is a very specific technique of journalism. It works well when you intend to build a portrait of someone - when, who they are or how they respond, is more significant than what they say. Interview material can be used as proof of a particular
statement (or information). In any case interview material needs to be cut down and shaped as carefully as any written article. Taping an interview is no short cut to effective journalism.

Community Radio

When Eugene Steinhauer walked into radio station CKUA in Edmonton, he had two 15 minute programmes (of edited interviews and music from native peoples). Immediately, CKUA set up a weekly 15 minute Cree Radio programme, produced by Eugene Steinhauer alone, and shortly thereafter several other stations (covering a wider area in Alberta) made use of the programmes. Today the Alberta Native Communications Society, set up and for a long time directed by Eugene Steinhauer, has programmes throughout the province in several native languages and is negotiating for an Indian-run local radio station in a northern community.

Eugene Steinhauer's work is certainly exciting, but it's not the only experiment in community radio. Raven uses SSB radio to transmit information to and from 50 West Coast communities. Kenomadawin has a mobile transmitter mounted in a van travelling to six Northern Ontario communities, broadcasting on low power AM. The Department of Communications has set up an information message station in the north. The CBC has experimented with community radio in Espanola. And there are "community radio" groups in Ottawa, Montreal, Toronto, Kitchener and Vancouver. Several of these groups are actively negotiating for an FM licence at this time.

In Montreal a group is seeking a licence for a 10 watt FM station covering a small multi-cultural area in the centre of the city. They now broadcast daily through Radio McGill
(University) on cable. They have prepared an extensive brief on community radio and appeared before the Canadian Radio and Television Commission to argue for the potential of community radio in a number of communities.

In Kitchener a group has set up a "community radio" house in the centre of town. They have provided broadcast facilities, community meeting area, National Film Board movies and even free beer. Their efforts have gone into discussions with the Department of Communications on the problem of locating radio frequencies for community radio and they plan to submit a formal application to the CRTC soon. They have enlisted the support and donations from a wide variety of community groups and business and plan to support the station through local sponsorship of radio drama etc. Details on their discussions with the Department of Communication are available on request.

The Ottawa group have run into more difficulty. Under the encouragement of the CRTC they have tried to work to broadcast through the commercial cable system. The cable company has indirectly charged them for broadcasting and censored much of the material. This group like many others has come to know the difficulty of subsisting on government money (LIP-OFY) once the grants run out. They publish a newsletter.

Still it really is not easy to get a community station licenced in Canada. (It is much easier in the USA.) New legislation giving provinces the right to finance independent organizations in "educational" broadcasting may make licencing easier in the future. Until now, all licencing has been firmly in the hands of the Canadian Radio and Television Commission. They have made their priorities clear: "a balancing of interests, both economic and social, within an integrated cable, broadcast and closed circuit system". What this means in practice is that the only basis for establishing a community radio station is the lack of access of broadcast reception for a significant group of people.
The Department of Communications must also licence broadcasting stations. If anything, they are significantly harder to deal with than the CRTC. They like modern technology and base their recommendations on precedents.

For these reasons, and not to interfere with the "market" interests of CBC or commercial stations, community radio has, to date, only been licenced in northern and native communities. The CRTC has permitted several university stations to broadcast into the community (a recent experiment). But it remains to be seen whether licences will become available for community radio stations urban areas.

If you are interested in establishing a community radio station, there are several factors to keep in mind.

Licencing is a 3 stage process:

1. A decision by the Canadian Radio and Television Commission. You must answer the questions:
   - What services do you provide which are not now, or even at some future date likely to be provided by the CBC or commercial radio?
   - What is your community? Why does this community require a special service?
   - How can you expect to support a community station without government funding over a long period?

2. A decision by the Department of Communications based on your transmission facilities, quality of equipment and service and competition with other radio frequencies. The DoC will require a technical submission, signed by an authorized Radio Engineer (they supply a list of authorized names). They will assign a frequency for which application may be made. The DoC will not licence low power in the cities, and controls the spread of FM licences very strictly.
3. **The CRTC retains a legal arm.** All licencees must be incorporated. Ownership and control must be 80% in the hands of Canadian citizens. Other than provincial government funding for educational broadcasting, no station may be funded directly with government money. (Northern stations constitute an important exception.)

4. Licencing takes time - years in fact. The usual process:
   - organization within the community to create a financial and programming base, community support and interest in radio.
   - general correspondence with CRTC and DoC on questions of conception and procedure. The CRTC may ask you to come to a public hearing to state your views.
   - in cooperation with a radio engineer and the DoC you may be assigned a frequency to apply for.
   - submission of an application and technical data.
   - submission of a "social" brief and a technical survey approved by a licenced professional radio engineer (list available from DoC).
   - correspondence over details of brief, discussions with members of the commission and the DoC.
   - public hearing on application.
   - there are no appeals except to the Supreme Court.

The best you can hope for at any stage is a green light to proceed with working through the problems. You will be told (gently) to stop if you go into an area where CRTC is unwilling to licence.

General notes:

* The CRTC will not usually licence new AM stations sponsored by community groups.
* The CRTC will not licence a Canadian group fronting for Americans.

* The CRTC will not licence a station without strong guarantees of financial stability - they expect (but can be convinced otherwise) that a city wide FM station is beyond the financial ability of most community groups.

* The CRTC wants to push cable operators into serving the community. Radio groups can negotiate air time with cable companies for radio programmes. This scheme has the obvious disadvantages of:
  - necessitating co-operation with the tightly controlled money-oriented, controversy-shy, cable companies.
  - putting all your energies into a weekly or daily taped cable programme.
  - providing community radio to those who can afford cable.
  - demanding the public establish new and radically different listening patterns.
  - potentially costing you money to provide this service for cable companies.

* The DoC and probably the CRTC too is anxious to experiment in joint community broadcasting ventures with the CBC. They see this happening primarily in the north, in areas which do not now have broadcast service.

* New possibilities for community broadcasting are rapidly opening up. Under new legislation, provincial governments will have jurisdiction over educational broadcasting, and will be able to finance broadcast efforts as long as they are established independently of government. Community stations are subsumed under the idea of educational broadcasting.
* Cable radio is also a new possibility. Radio can be transmitted through telephone, hydro, or any other form of carrier current wires. Under new legislation, and in certain provinces it may be possible to negotiate an agreement with the telephone company or Hydro to carry community broadcasting. Cable broadcasting will soon have to be licenced, but the CRTC views this licencing as a means of controlling Pay TV not community broadcasting.

There are several other approaches to community radio:

a. You can produce community journalism, or amateur citizen productions for existing stations. These programmes are marketed like freelance material. No matter how controversial, they are usually welcome.

* A group of fishermen with no previous experience in radio production created an hour long documentary on conditions in the fishing industry. The programme was no compromise of their ideas; they talked about the monopolization of the industry, and the man responsible in their opinion for the fact that small fishermen were being forced out. It was clearly a partisan programme, but it served as a balance for all the information which is regularly broadcast from the Department of Fisheries spokesmen. That programme was carried on the CBC.

These same fishermen then used radio on a sporadic basis to raise issues in conjunction with their union. They produced a number of short programmes all of which were broadcast.
b. You can establish your own research and production group to bring information to the public around controversial issues.

* A group of people in Vancouver have established an organization called Muckrakers. They clip local, provincial, national and trade publications and make these clippings available as a service to citizen and political groups in the cities. The clippings are organized so that ordinary people involved in the citizen action will have no trouble locating what they need in the files.

Based on the clippings, a number of specific stories are researched each week. These stories when complete are then produced for radio. A number of stations have expressed interest, and now made commitments to take material on a regular basis.

c. You can use tape production to demonstrate ideas to other people, as a tool of education for grown ups and kids alike.

* A community radio group has just completed a "liberated" version of Cinderella and the Three Little Pigs. Cindergirl discovers that she can create her own magic and that she has other alternatives than growing up to marry the prince. The three pigs learn that by cooperating they can build a wolf-proof house. The wolf is plagued in the end by self-doubts.

These are full dramatic productions distributed on a non-profit basis through commercial bookstores and craft cooperatives and through women's groups and day cares.
d. You can, with a little effort use tape as a means of communication among group members.

* Indians on the reserves in Saskatchewan use tape cassettes to relay information from reserve to reserve. Old Salish legends are being collected from older people on tape on Vancouver Island.

e. You can influence broadcasting directly by discussion and confrontations with established broadcasters in your city and through the hearings of the CRTC.

* You can do this by presenting a statement or brief to the Canadian Radio and Television Commission.

A statement is a general comment or complaint about broadcasting service or a suggestion for broadcast policy. You need only notify the commission two full days in advance of a hearing to get permission to appear. You will be given a maximum of 10 minutes. Your comments will not be entered into the record, but like discriminatory evidence at a trial, they certainly can enter the minds of the Commissioners. You may submit at that time, or separately, documentary evidence to the commission, although on receiving this evidence the commission may request that you appear as an "intervenor" at a later hearing. The commission may request a copy of your "representation" before you appear.

If you wish to lodge a formal complaint against an existing station, or company applying for a broadcast licence, the procedure is more complicated.

One month before the hearing you must submit a completed "brief" to the commission (two copies) and to the company or
station against whom you have an objection. Your brief should be sent to both by registered mail. The company or station has 10 days to reply to your charges.

The commission will then decide whether to hear your brief at a public hearing, in which case your brief will constitute an intervention. The CRTC may request a conference with you, or documentary material and under some conditions may allow you to subpoena witnesses.

The hearings themselves are grand drama. The Commissioners sit above the audience, usually on a stage and behind long tables. Witnesses speak through microphones; every word is transcribed and translated on the spot. The commission has a bank of technical and legal staff to question people. The commission hearings are usually held in upper-class hotels.

If you present controversial data, attempt to challenge the status quo you can expect to be questioned heavily. You may not deviate from the points raised in your brief, may present no new information. You do best if you can demonstrate a certain naivete, (your lawyers can't compete with those from the broadcast industry) a strong community support, and a lot of feeling for your position. You may, in fact, be ever encouraged by suggestions and gentle questions from the Commissioners if they support what you are trying to do and respect the community you represent. In any case, the Commissioners grow weary from listening, no matter how significant the information, how important the decision. They want you to be brief, straightforward and funny. You have to decide whether and how you want to perform.

Decisions of the commission are made behind closed doors.
after the public hearings. There is no appeal except to the Supreme Court.
A tape recorder is a simple piece of technology designed to look complicated. It has the usual on/off switch, play, fast forward and fast rewind switches. Tape is placed on left reel and when finished taken off the right reel. Tape passes through a central section which contains a recording head, and a playback head. Usually tape will not record unless a special switch is on, and often tape recorders have a red light to show when tape is recording.

When you record tape, you automatically erase everything on the tape before.

Tape goes through the tape recorder at different speeds. Broadcast tape recorders record tape at 15 inches per second, and $7\frac{1}{2}$ inches per second. Professional tape recorders record tape at $7\frac{1}{2}$ and $3\ 3/4$ inches per second. Home tape recorders, cassettes and cartridges record at lower speeds; some record as low as $15/16$ per second.

Speed of tape recording determines quality. The higher speeds produce better sound. 15 inches per second is used by recording studios to do music and concerts. $7\frac{1}{2}$ is used by people making radio programmes and tapes for general listening. $3\ 3/4$ is a compromise - under good conditions it will produce radio quality sound, under poor conditions, it won't. Never use a lower speed.

Speed of a tape also determines the amount of playing time on a tape:

- at $7\frac{1}{2}$ inches per second, on a 600 foot reel, you get 15 minutes.
- at $7\frac{1}{2}$ inches per second, on a 900 foot reel, you get 20 minutes.
- at $3\ 3/4$ inches per second, on a 600 foot reel, you get 30 minutes.
- at $3\ 3/4$ inches per second, on a 900 foot reel, you get 40 minutes.
Cassette tape recorders record at 1 7/8 inches per second. They are used in radio for short "on the spot" interviews. They cannot be edited, and in making a copy of a cassette tape on a reel to reel machine, you lose quality and (especially on the cheaper machines) pick up a hiss in the background. A good cassette machine, one costing several hundred dollars, will produce broadcast quality tapes under good recording conditions. An inexpensive one, one costing less than 100 dollars, will produce poor tapes not fit for broadcasting. A cassette machine may be convenient; it is not less expensive.

Every time you rerecord tape, you lose some of its quality. Increasingly the sound becomes flat, the background sounds hollow and there is hiss and background noise.

Each successive recording is called a generation. Rerecording is called dubbing, and the loss due to dubbing is called generation loss.

The finest tape recorders lose 2% quality on each successive dub. Most professional machines lose about 5% in each generation. For this reason, you attempt to keep the number of successive recordings, or generations to a minimum.

To achieve this, record only on one side of the tape, and edit from the original tape (unless you want the original as a programme in itself.)

There are a number of recording problems that reduce quality that can be corrected if they are recognized in time. To find out if something is going wrong, always do a test in every recording situation for quality. Usually an innocuous question like "How long have you been living here?" will do.

Play the test question back listening closely for record-
ing problems. If the quality was poor, correct the problem and do a second test question.

If you are embarrassed with your clumsiness in handling the equipment, confess to it. Most people share fears about complicated technology, and your confession may turn out to be an ice-breaker.

Problems show up in distinct noises on the tape. Use the check list below:

1. **High Pitch Squeal**: The playback volume is turned on, during recording and the machine is recording itself. This is called feedback. Turn off the playback volume.

2. **Hiss in the background**. Behind the voices there is a hiss or shuffle noise which increases when volume is turned up or on each successive generation of the tape.
   - Tape recorded at too low a speed will have a hiss dubbed onto a higher speed tape.
   - Recording at a low volume will produce hiss. Needle should register high on vu-meter at all times when recording.
   - If you use a stereo tape, the channel not being used must be turned off. If you are recording from another machine using a patchcord, the mike record volume must be turned off. In either case, if a second input channel is left on, the tape will show hiss.

3. **Hum in background**: The tape recorder is picking up the sound of its own motor. The machine should be placed behind you (and never between the mike and the person talking) when you are recording.

4. **Machine noise**: A consistent hum in the background. Usually these noises are present in the recording situation - air conditioners, office machines and refrigerators. These noises cannot be avoided or filtered out electronically. Move mike closer to voice being recorded so that machine noise is clearly far into background.
5. **Banging noises**: When mike is left resting on a hard surface, that surface transmits all other close vibrations. These are heard as banging; the sound is usually muffled. Often this banging is no more than someone tapping their fingers on a desk when the mike is resting on a book on top of the desk. For this reason, it is better to hold the mike for recording.

6. **Static**: A tape sounds like a bad quality radio in an electric storm.
   - if batteries are running low, there is static. Recharge batteries or switch to another power source.
   - The mike cord must be kept still during recording. Stepping on the cord, wiggling it, playing with it while you are interviewing will create a static sound on tape.
   - Also playing with the mike itself, rubbing your fingers on the side while interviewing will produce this static. Keep mike very still.

7. **Crackling noises**: Wind on the mike will create a crackling sound on the tape. Cover the mike with a scarf or heavy cloth when recording out of doors.

8. **Fuzzy sound**: Words are indistinct.
   - distortion creates a fuzzy sound. Distortion is caused by recording at too high volume, or with mike too close to the speaker.
   - If the tape recorder needs cleaning, the sound will be slightly distorted. Check machine before going out.
   - Some people have fuzzy voices. (If they have no front teeth the problem is compounded) Usually this can be corrected by using a filter in final dubbing.

9. **Chipmunk effect**: Voice appears to go faster, and pitch gets higher.
   - Battery may be running low. Use another power source.
   - Something is holding tape back. Check if "Pause" is on or if something is impeding the flow of tape past the heads.
- Playing tape at the wrong speed produces either a chipmunk or rumbling effect.

If voice is only marginally affected by the chipmunk effect, it can be corrected by rerecording after wrapping a single layer of electrical tape around the capstan. This should be done only by someone with a good deal of expertise and tape should be removed immediately after use.

10. **Hollow sound with slight echo**: Voice comes from a distance and sounds hollow. Move mike closer to speaker and make sure it is pointed directly at the person who is talking.
DESIGNING A PROGRAMME

Imagine a telephone call, one person talking, the other just listening. The listener is sitting in a bright room where other things are going on. Occasionally he comments upon them. If you can understand the dynamics of communication in such a call, you understand the problem of radio. For the most part, whatever could overcome the limitations in a phone call, will work on radio. Radio is a medium of shared confidences.

Extend the analogy. A phone-in show is much like a conference call. Although people can talk to each other, they find it hard to communicate. They can't anticipate what will be said, or who will say it. They have no means of deciding what is important and what trivial. A conference call, particularly when the participants don't know each other, is a very frustrating experience.

A phone-in show isn't communication at all. The people who talk have an audience, but that audience is powerless. They can't even participate in the give and take or genuine conversation.

A phone-in show quickly becomes a chance for people to eavesdrop on a verbal sparring match.

But for the man or woman with something to say and nobody to listen, the show acts as a valve to let out some internal pressure to act. It's a mockery of communication. Nothing comes of the talk, not action, not response, not even further conversation. But it still is the only opportunity many people get to have any power over a situation which bothers them.

As a broadcaster, you speak to one person at a time. The listener is alone, if not in fact, then with his thoughts. If you ask that person to respond by doing something, you break the links of concentration and lose him as a listener.

You don't talk to a person, really, but to his imagination.
If you are successful, he will continue the dialogue with you long after he has turned the radio off.

Sound has its own logic, and it is different from the logic of written material. People can't remember a succession of points you make to support an argument. They can't progress with you through the logical steps from point A to B to C. They can't even refer back to what has just been said. (Nobody takes notes). If they miss something on radio, they miss it.

All of this makes radio primarily impressionistic. If you give the listener a series of facts, he will take away an impression of the totality of the information and a few random thoughts to support that impression. He may go further than you ever did exploring the idea in his own mind, very soon, he may not remember what you gave him and what he developed himself.

The impact of radio is at least in part emotional. A good programme leaves you with a definite feeling. Good programme design recognizes that. There are a few techniques which are useful in creating a strong feeling from a programme:

* A short programme is built around one idea and one impression. Use more than one idea and you diffuse the impact of your programme.

* A longer programme holds together as one unit. It may be built around one impression (for example using a narration to provide a consistent thread throughout) or a number of complementary impressions. Usually a long programme is constructed in sections, but each section only adds a new dimension to colour the final single impression.

* A key element in creating emotional impact is drama. The programme must build to a climax and leave the listener with a sense that the point "has been brought home." Sound is used to heighten the drama. Sections of the
programme may be set in contrast with each other in length, style, mood, but the total result is a series of steps towards the climax - you have to know that something is going to happen. A programme should never move along lazily at the same pace.

* Radio needs no warm up and no summary. Every sentence, every tape excerpt should contain real information (not necessarily data) to contribute another side to the story. Good radio has sharpness, conciseness, nothing extra.

* Repetition is an important part of the logic of sound. A point is made, then reconstructed in a different way, then echoed by someone else, then explored in depth. The same words or sound patterns can be used repetitiously to strengthen an effect even though the words themselves have different meanings in their context.

* Because radio demands concentration, you need to give your listener a break, time to gather his thoughts, relax, and take a fresh approach to new material. Breaks are usually supplied by music, sound effects or narration.

* You want the listener to share your feelings about a subject, but you don't want to embarrass or overwhelm him. He can't just start crying, sitting there in that bright room. If you ask this much, he will get up and move away. He doesn't have to be uncomfortable, (even though you might want him to be). He just turns off the radio. You can go too far in a documentary.

You make a programme, You are talking to an audience of one, several thousand times over. What do you want to do? Make a convincing case for an idea of programme action? Are you interested in presenting information, or in providing good fun and entertainment? Do you seek to broaden the horizons of thought, or let people share an experience with you?
If you chose one approach, you will have a good idea of the style and format that your programme will use. If you use the style well, a convincing programme will also entertain, a shared experience will also present information.

Style is shaped by research, information, narration, special effects or participation. There are a number of established radio formats and although you will experiment, these formats will help you sort out where to begin and what you will need.

Style:

1. Research:

Not every documentary requires research. But if you are seeking to convince, research is a good tool. Good research, breaking new data in a newsworthy way, will do more to convince others than a skillfully exposition of opinion on the same subject.

But research is more than the collection of data from any and all sources. It is the systematic attempt to track down the relationships between different, diverse pieces of data. If you succeed, you may create more than a radio programme; you may create a local or national issue.

You can use research on another basis, as a means of building your own traditions of investigative journalism. You read the newspapers, talk to people, with a questioning attitude. You use radio as a journalist, feeding your programming ideas with a constant stream of new data. You produce "stories behind the news" on a regular basis, and once in a while you get a story which breaks a scandal or exposes a racket.

To be an investigative journalist, you need to work at it consistently, keeping clippings of the local press and
following up every possible lead. You need to be very careful. One misleading or incorrect story and you lose your image as a good researcher-journalist.

2. Information:

Information gathering is not the same as research, and most programmes require information. A few statistics about the number of people affected by a problem, the size of the problem, the amount of money involved etc. give a touch of reality, a sense of time, place or significance to the more loosely explored ideas and opinions.

But data like this is just one element in a programme which might be an exploration, historical or biographical documentary. You don't need much data, just enough to give a sense of proportion to the material you are using.

And because you don't need much, you won't need to spend days in a library, bogged down in statistics, financial reports, clippings etc.

You want information which is sharp and can create an impact. Contrasting figures (for example the money spent on hospital care vs. the money spent on freeway construction - one year), specific historical or practical examples, a date which has significance, all of these would work.

3. Narration:

Narration gives the audience a hook on which to hang their impressions. It makes complicated material more simple, contrasts and opinions more clear. Narration tends to create the "context" of the material you present. It certainly sets the tone.
Usually narration is a major component of entertainment and information programming, but is not used in any programme whose purpose is to expand thought or explore new ideas. In these programmes, you want to force people to think so you give them as little guidance as possible through the material.

When a subject has been treated widely in terms of set stereotypes, and static visual images, you may want to avoid narrative comment or description. Description makes it easy for the listener to fall back on what he thinks he knows. When you say an Indian is poor, you impose a set of expectations on what you hear.

4. Scripting:

Unless the programme represents real conversation between people on the air or in the studio, you do better with a script for narrative or commentary.

It is easy to ad lib when someone is really listening to what you say, when they respond by facial expressions or comments, when they give you cues about where to go next. It is very hard to ad lib when you are alone or talking to a producer who has heard it all before.

If you and your producer have worked out "your image" you may find your mind wandering from content or the effect of words. Your words will begin to sound flat; they will lack real emotional content.

(A disc jockey ad libs all the time. He knows however that he has to cover a very short time between songs. He has material prepared to read. He also spends a lot of time practicing.)
5. Participation:

You may want to explore techniques to involve your audience directly in radio. Usually people think about phone-in shows and hot-line programmes as a means of doing this. These are not always the best way, and in the case of some hot-line programmes may well work against real participation.

To make "participation" work well, the audience must have information to contribute, the context must allow them to be taken seriously, and there must be some means of following up leads or taking action on specific problems.

There are several techniques for including participation:

a. The first is live, spontaneous broadcasting, preferably on location at an event or meeting. To get more than vague comments from "the man on the street", the event you are sharing should have its own significance, and you should contribute a few well thought out opinions or comments.

b. What is usually meant by participation are phone-in and talk shows. To prevent these shows degenerating into cliches and cruelty, you can provide new and specific information to respond to. You may prepare the information yourself, have a guest. Don't be surprised if fewer people phone in. It takes time to formulate a question or opinion on new information.

c. Participation used to mean studio participation, large audiences who came as much to participate in the production of radio as the content of the show. These shows have been dropped. They were costly and they became rigid and unspontaneous. Without the glamour of production, it is hard to attract an audience.

d. It is time for a revival of audience participation shows, with new format, new style, but a revival
nonetheless. The content must be exciting enough to attract people. A chance to confront a recalcitrant public official perhaps, an open press conference with a popular celebrity.

e. You can build a kind of limited participation into pretaped programmes. Most live programming on the CBC for example is pretaped and the response is included the next day as "followup".

f. You can take a tape and play it to people recording their response and including it in the final programme. It is a gimmick, but sometimes a good one.

6. Special Effects and Drama:
(see sound effects)

Format:

1. Interview:

An interview is the simplest programme to produce. The subject must be newsworthy, the person interviewed, someone worth listening to. Usually the person interviewed is someone with power to influence the situation, someone affected directly, or someone with inside information.

An interview is usually cut down and presented in a different order than it was recorded. Some very clear means of establishing the identity of the person being interviewed, his claim to authority, and the subject of discussion, should come up right at the beginning.

Unless the person is a figure of some note, cover only one topic in an interview programme. If you cover more than one topic, your programme shifts from the subject being discussed to a study of the character of the man or woman who is talking.

You can use narration for continuity, but if you substitute
narration for the actual interview questions the programme will lose its sense of "directness".

Interviews are usually produced simply, without sound effects or music.

2. **Documentary**: (To convey information, research, explore a topic etc.)

In most documentaries you work closely with the taped interview material, letting the content of the interviews shape the programme. Although effects and music are often used, the integrity of the interview material is left intact. A documentary is seldom impressive as a sound picture - but its information, content and characters are "trustworthy". There is, however, no excuse for a boring documentary.

In any documentary you have to make a distinction between the information and the way it is presented. Information must be presented in an intriguing or exciting format - only the censor and the CRTC listen to radio out of a sense of duty.

There are definite steps in producing a documentary.

1. You don't work from written notes or a complete outline. You work with tape, with sound. No matter how effective two statements look together on paper, all that counts is the final sound.

2. You listen to all the material. You work out a series of themes for your programme (one theme for a short programme). You will construct each theme separately.

3. Select and cut out excerpts from the taped material on one theme.
4. Pick one selection which is a particularly good statement of the theme. Add material onto it, both in front and after. The material you add might be a restatement of the theme, an analysis of its content, an echo of the sentiments, an illustration, example, story or amplification.

5. Arrange them in order so that any two side by side excerpts might be part of a conversation between the people talking - you won't really know until you hear what it sounds like, but tape excerpts should "follow" each other. The first and last excerpt in any programme or programme segment should be strong and clear.

6. The tape excerpt part of a short programme wouldn't be more than six to eight minutes. You can break up a longer segment by the introduction of short selections of music or sound effects.

7. When all segments in a long programme are complete, experiment to find the order which builds the most dramatic effect. The ordering should not be logical.

8. Join segments with music or sound effects. (Prepare sound and/or music tape for mixing and cue sheets.)

9. Decide on narration. Write narration to complete transitions, to introduce speakers, to set the scene, etc. Tape narration and insert in edited programme.

10. Mix music, sound and dialogue tapes.

11. Time programme - cut out fluff or extra words and noises. Time programme again.

**Stylized documentary**: (expansion on ideas or concepts, participation, exploration of general information.)
A stylized documentary differs from a documentary in that the sound is itself a major component of the programme content. A stylized documentary is centered around the dramatic effect of creating a whole picture. It is, then, the classic case of the medium being a part of the message, if not the whole message.

Interview material, music, narration and sound effects are viewed in terms of how they can be used, as components of a total picture. Interview material is not necessarily more important than a particular sound effect or piece of music.

A general procedure can be followed:

1. A stylized programme is planned in advance much more carefully than a documentary. You must visualize the sound you want in enough detail to guide you in collecting it.

2. Interview material is collected with regard to what will actually be used.
   - you might set up an interview with someone you have already talked to, and plan with them their answers or ask specific enough questions to get the answers you want.
   - you select articulate people to interview - people who can make a point with brevity and clarity. You use "experts" and spokesmen. (Conscious or unconscious ones)

3. Sound and music is collected.

4. Each segment of the programme is constructed as a unit. Some segments may be only sound patterns. Some involve narration or special effects (echo, repetition, speed up of voices) some interview material. Some may involve drama - vary lengths and styles, moods and approaches. Don't attempt continuity of content.
5. The segments are arranged. This stage may be scripted, like a drama presentation. (see drama) This stage requires the most time.

Two examples might help:

1. A programme about free schools:

   1. You will want some interviews with articulate student critics about the school system - the mood is angry.

   2. You may want an interview with someone in the school system who is trying to change it (hopefully) or who has ideas but difficulties - putting them into practice (frustrated)

   3. For contrast (and journalist tradition) you will want an interview with someone who represents the old order. A pompous, authoritarian principal would be just the thing. You might want to attempt to catch authoritarianism in action - a teacher barking in the halls, perhaps.

   4. You will want a variety of sound pictures which suggest these emotions and your own perceptions.

      - military music and marching.

      - the drone of children reciting a poem, prayer or french verbs.

      - the excitement of little children, their questions and laughter.

      - the bells of the school hour, whistles at recess etc., sound of chalk on a blackboard, shuffle of feet, murmur of conversation in a lunchroom or bathroom, sound of an illicit radio, etc.

   5. You may want music -

      - songs which convey the same idea as your programme.
- music used as sound effect.
- children's street music, etc.

You would construct sections at a time. The students talking about authoritarianism, mixed with the sound of whistles and bells, mixed then with some military music.

2. You might go further in stylizing a documentary, for example to try a documentary on the dehumanizing aspects of the city.

1. Collect city noises, wind at night, metallic sounds, a policeman directing traffic, a traffic jam, the sound of a bulldozer.

2. Collect other odds and ends - music, poetry, quotes from the street, some interviews.

3. Work with individual sounds -
   - traffic sound gets louder and louder until it hurts.
   - a bulldozer then an artificially created sound of houses falling. (see sound effects)
   - a series of comments about the good life of the city ending in a series of explosions.

4. Work out continuity - a story would be excellent. Narration, music, an interview would work. Arrange it as if it were drama.

5. Edit for pacing and conciseness of effect.

Narrative or personal commentary: (exploration, information, biography and history and entertainment)

Most short programmes are narratives or personal commentary. Narrative is the most personal and direct way to present information, and works best when you include the full range of your perceptions and feelings - when the narration is sharing an experience.
1. Collect information, research, data, etc. first, work out a general approach to the material. Your own feelings should be made explicit at this stage so that they don't emerge unconsciously in the programme.

2. The basic narration is written first. It contains information, feelings and personal perceptions. It is the framework of the programme.

3. Interview material is injected into the narration to explain, or demonstrate. Both sides of any question are aired but your own opinion directs the placing of interview material so that a point is made.

4. Never argue with interview material. (It's hardly fair, they can't respond) in narration. Demonstrate how you feel by the use of other interviews or by presenting other information, etc.

5. Tighten narration so that each excerpt is introduced, and, if the material is unclear, the subject is explained in advance. Don't be afraid to repeat points made in an interview narration.
Equipment:

Having appropriate equipment helps. But the sound experts take along several suitcases of recorders, mixers, microphones and cables to capture a single event. Most people don't have access to that kind of equipment.

You won't achieve a concert hall standard using improvised techniques for recording. There are certain compromises and limitations imposed on your recording when you have little equipment. You won't for example, be able to do a full recording of a conference or large meeting with one tape recorder.

Even accepting the limitations however, it is possible to get broadcast quality material in most situations. The microphone can be hung from a lighting fixture above a concert performance if you are brave enough to climb the ladder. Some good interviews with the main participants in a conference will turn out to be more valuable in the end than a faithful recording of the whole proceedings. If you know how the material will be used, you can work out in advance the best way to get broadcast quality recordings with any equipment.

You will need a good microphone and a long microphone cable.

a. A "dynamic" microphone is more appropriate to most casual recording situations than a "ribbon" mike. Ribbon mikes must be handled with a lot of care.

b. You will want either an "omni-directional" mike or a "hyper-cardiod" mike for almost all recording situations.

An omni-directional mike picks up sound from all directions with equal clarity. It is useful for recording sound effects, small meetings, crowd sounds and music, and can be used for interviewing.
A hyper-cardioid mike will pick up sound mainly from directly in front of the mike, but some as well from directly behind the mike. Sounds in the room, to one side, will be picked up poorly or eliminated. A hyper-cardioid mike is good for interviewing, or recording any single source of sound. A hyper-cardioid mike will cut down background noise but not eliminate it.

Directional mikes are used mainly for studio or dramatic work. Voice shadings, people coming and going, are created by actors moving to different positions in relation to the sound pick up of the mike. Directional mikes can be aimed (some even look like guns); many reporters use them to catch comments at a press conference.

There are some points to remember:

1. Most mikes will pick up sound from handling. Wrap the stem of the mike in soft cloth to reduce noise. The most important rule in recording is keep your hands still on the mike.

2. Mike cables will also transmit sound on to tape. Don't wiggle the cable, step on it or play with it while recording.

3. If you are recording outside, take along a scarf or loose material to wrap the head of the mike. Even with the baffling built into most mikes, you will need extra protection against wind and weather. If you miss, some wind noises can be filtered out.

4. The tape recorder itself makes a noise, and the mike will pick it up. Keep the mike as far as possible from the tape recorder. Under no conditions should the tape recorder be between the mike and the speaker. If the tape recorder is transistorized, you can put a pillow over it to block the noise. If it is not, or if you don't know for sure, then build a sound barrier with books, foam or a pillow between the recorder and the recording situation. Alternatively keep the tape recorder behind you on the floor during an interview.
5. Tape is cheap and can be reused. Start with clean tape, take your time, make test runs, and don't hesitate to do something over or take a break between selections.

**Sound environment:**

Every room has its own sound. It isn't the same sound as silence and often it's loud enough to affect the quality of recording you do. Even a studio has a sound, a kind of "deadness" which is distinct. You will have to learn to sensitize yourself to the sound of the environment and to compensate for any interference.

Some sound environments make good background. The sound of an ordinary room is more pleasant than that of a studio. The echo and reverberation of sound in an ordinary room adds colour and depth to the voices. A dog barking, a train, children in the distance all contribute a sense of "presence" to an interview. A clock can be a good sound as long as it doesn't act as a metronome to the conversation. A general rule of thumb: if the sound is distinctive and recognizable, and quiet, it makes good background to recording.

Some rooms have more than sound, they have noise, indistinct loud or constant background. The worse noises for interference are machine noises like air conditioners, refrigerators and office copy machines. These noises usually cannot be filtered out in a studio. Even someone washing the dishes in the next room will interfere with your recording. You compensate for noise by keeping the mike very close to the source of sound, and keep record level at maximum acceptable level (just below where loudness will cause distortion.)

Sound reverberates and echoes. This reverberation adds to the richness of the sound in a concert hall, or sometimes even in an ordinary room. It will however interfere with recording in an empty room. People or furniture absorb some of the echo and can create a good atmosphere for recording. To test a room for
echo, clap your hands or snap your fingers. The sound should be distinct. If you can hear a kind of "repeater" effect, or if the sound is hollow, the room is too empty for recording.

What you want in your recording is a sense of presence, a feeling that the main voice is "up front" in relation to its environment. Every voice on a finished tape should sound as if it was right in the room, the background on the tape, part of the background sound of the listening room. The key to getting presence in recording especially in poor recording situations is to get the microphone very close to the main speaker or source of sound.

In any case, because all environments sound different, and any silence is really the sound of a particular environment, record extra tape of the background when no one is talking. This extra tape can be used for continuity, creating pauses or breaks in a programme. Blank tape or leader tape must never be used to create pauses or breaks. Blank or leader tape lacks the sound quality of a human environment.

And for the same reason, record material which must flow together in a final programme or narration in the same location and preferably at the same time. Tape recorded with the same person in different locations or even at different times will sound quite startlingly different.

There are some basic steps in recording:

A. Before you go:

1. What is your source of power for the tape recorder:

   If possible use a long extension cord and a regular electrical outlet. Then you can avoid all the troubles involved in using batteries.
Most battery tape recorders can use both their own special batteries and regular flashlight batteries. Regular flashlight batteries will supply power for a little more than one hour constant recording. Magnese batteries (they cost 3 times as much as regular batteries) will usually give about 10 hours recording time. Flashlight batteries cannot be recharged, and must be removed from the tape recorder immediately after use. (they leak)

The battery which comes with the tape recorder must be treated gently. With care, it will give about 6 hours recording time at a time. It must be recharged after every use and recharged occasionally if it has been stored over a period of time.

To measure the level of charge in a battery, use the vu-meter. If the meter registers the level of the charge in the red, the machine is ready for use. If it measures the level of the charge in the black, recharge the batteries or use an alternative source of power.

Batteries run out quickly. Even if they are low, the tape recorder will still function. For these reasons check the battery level frequently during an interview. If the power is low, the tape you record will have static; the voices will sound high and fast. You cannot "just finish this question" on low batteries. If the batteries run low in the middle of an interview switch to new batteries or a regular electrical outlet immediately. Take along a long extension cord just in case.

2. **Set up the tape recorder**

   Tape should be threaded on reels. (take along plenty of tape) The playback volume should be turned off. The recorder should be set in gear at the right speed, and if you have recording tone controls they should be set before you go the interview (more treble than bass for most interviews)

   When you walk into an interview you should have nothing more to do than turn on the power and adjust the recording volume level.

3. **Set up the recording situation**

   Listen for background noises. The more noise, the closer you will have to get the mike to the main speaker or source of sound.
Eliminate all the extraneous noise you can. Curtains mask outside noises and cut down echoes in the room. A radio or tv can be turned off. A door to an adjoining room can be closed, and air conditioner shut off. Don't hesitate to ask permission to cut off any offending sources of noise.

Set up the room so that it is possible to get the mike close to the speaker or main source of sound. Obviously you can't ask someone to move a couch or shift a piano, to accommodate your interview. But two chairs close together or a small table at which several people can sit make good recording conditions. If the situation is casual, perhaps you can sit on the floor. In an office, you can place your chair beside the desk, rather than on the other side opposite the person you are interviewing. That way both of you can lean on the desk, and you can talk less formally. Perhaps there is a table in the office where you could both sit.

4. Set yourself up:

If possible two people should work together. One can play technician and concentrate on the tape recorder. He should sit as close as possible to the speaker, but keep out of the direct line of sight, and not interfere in any way with the dynamics of the communication. The other person is then free to concentrate on the interview itself.

If you are alone, try to have time to practice with the tape recorder first. In any case, don't be afraid to confess to your inadequacies with the equipment. Since almost all people share the same fear of machinery, you will have established an instant rapport.

B. Recording:

In every recording situation you have to make some decisions about what is background and what is foreground. If you are interviewing one person, your questions will be background, the speaker, foreground. The mike should be held as close as possible to the speaker. It should not be moved under any conditions. The questions from the interviewer should remain constantly background sound. If you move the mike to catch the interviewers questions, the balance between the voices is destroyed; the questions to the speaker will sound more important than his response.
The equipment you have limits your ability to record groups and conferences. You can record a small group with one tape recorder by gathering people around one end of a table. But to record a large group with one recorder requires a decision about what is or is not important. You can make a choice and record some of the people as foreground, some of the people as background. But the choice is difficult. If on the other hand you chose to record everyone with one mike placed at the centre of a large room, you will record everyone equally badly. If you single out several people as foreground and place the mike near them they may say nothing worth recording. You could use two mikes as long as the room was large enough that both are not recording the same sound at the same time. As you see, the problem is very difficult.

In the end you have several poor choices and perhaps one good one:

* you can decide to record only some of the people well and let everyone else be background.

* you can decide that the complete record of the proceedings is more important than having useable tape for future broadcast or tape production.

* You can ask for help from someone with more equipment but expect it to cost a good deal.

** You can listen, then record participants afterwards in an interview format. You can record the conference as a series of individual speeches and reactions to them or a series of approaches and opinions. In any case, a good interview that sums up the proceedings is probably worth more than hours and hours of unuseable tape.

C. Afterwards:

Label tapes the minute you remove them from the tape recorder. Place them in a box and label box as well. (The most heartbreaking moment comes when you discover you have recorded over your best interview)

Make sure the machine is turned off as soon as the interview is complete. If you leave it running, you risk destroying the battery.
Specific Notes on Recording:

1. Recording narration and script:

1. Never try to record script alone. If someone else is present, your voice will sound more "alive".

2. Mike should be set up on stand, not held in hand. If it is an omni-directional mike, some form of baffling should be placed behind the mike to stop background noise. A piece of foam, or even a stack of books will do.

3. Script should be read from about 18" from the mike. Move closer for quiet or more intimate tones, and away for louder sections. Volume levels should be regulated by the speaking itself. The depth and colouring of the voice is reduced if the volume is regulated electronically.

4. If you are tired, or have had a few beers, you will speak more slowly. Every individual word will be stretched out. You can't use tape recorded later at night alongside tape recorded in the morning. The sound quality (or even the same voice) is too different.

5. When you read, hold your copy behind the mike. Pause between paragraphs to catch your breath and get a sense of the whole. Pause between pages and let each page drop to the floor as you finish it. You will be less comfortable but will read better if you stand.

2. Recording an interview:

1. Hold mike within 2 feet of person being interviewed, closer if there is background noise. Hold the mike below eye level so that the natural contact of communication can be maintained. Never rest mike on table or the arm of a chair. In the first place, it will be too distant from the source of sound for good recording. And what if the speaker begins tapping his fingers?

2. When testing for voice level, people tend to speak louder or softer than they do in conversation. Test
3. If you come to a natural lull in the interview, you may want to check on the quality of recording. (You can't do anything about it once you have left the interview.) Play back a small section, and correct for any mistakes (see: "Using the tape recorder"). You may then have to ask some of the important questions over again. If so, rephrase them so they sound like different questions. Otherwise the original passion will be gone from the interview.

4. If you are alone, and the person you interview is nervous or suspicious, try to arrange to sit corner-wise at a table. You can then rest your arm on the table, holding the mike, and leave your other hand and your face free to respond naturally with gestures to what is being said. In any case, position yourself comfortably. If you feel awkward because of the way you are sitting, or the unnaturalness of being so physically close, the person you interview will be positively frightened. For this reason it is hard to do an interview from a couch or easy chair in a living room. To get the mike close enough, you will have to lean far forward, or sit side by side. Neither are natural conversational positions.

3. Recording a group:

1. With one mike:

You may decide to focus on one main speaker or group of speakers sitting close together. Other people become background, but usually they are clearly audible.

If the table is small, long and thin, you can record everyone within 3 feet quite comfortably or you can pass the mike to everyone as they begin to talk. In a casual meeting, this works well. The passing quickly becomes automatic, and the sound quality is excellent. You will have to watch the record level very closely, and you yourself should not be involved in passing the mike.
2. With two mikes and a stereo recorder:

This works only in a large room where the sound from one recording mike does not interfere with the sound from another. Set up the mikes as above, concentrating on getting good sound recordings from two small groups of people rather than the gathering of people at large. If you plan it right, you will get most people quite clearly. But to plan it right, you have to arrive before everyone else and set up the mikes and recorder beforehand. Watch the positioning of the tape recorder so that the motor noise does not interfere with your sound recordings.

You will be able to edit the programme on a mono full track tape recorder directly, or can dub the stereo tape to a mono recorder later for playing on any machine.

4. Recording a crowd:

It is hard to record a speaker from a sound system. The sound you get will often be fuzzy and distorted. If it is possible, set up the mike directly in front of the speaker. Be bold. All public speakers are accustomed to it.

Record extra crowd or meeting noise for splicing and sound effect. Don't attempt to record sound from the audience at the same time as a speaker. Sometimes a speaker will repeat the questions from the floor before he answers them. In any case, a faint but shouted question from the floor adds a sense of drama to your recording.

5. On the scene:

Isolate any one speaker from the background sound by bringing mike within close range and adjusting volume for the speaker. He should have "presence"; his voice should stand out in relation to his environment. Record background sound or your own commentary later.

If you are using batteries keep a constant check on the level of power. If it is low, you will lose your recording, even though the machine keeps running.
6. Drama:

Actors usually stand around the mike in small groups. They move away from mike to allow room for someone else to say their parts.

Producers of drama keep a constant check on the recording they are getting by using earphones. Only by listening through the electronic channel are they able to separate aural perceptions from what they see.

7. Recording music:

The best results in recording music live involve experimentation. Here, as in no other recording, the equipment imposes real limits on the quality of sound recording.

a. **vocal solo**: If you are in a good studio, you can record from 3 feet away and avoid the breathing noises and any overly bassy sounds in the voice. If, however, you are recording outside a studio, you will have to place the mike between 8 - 16 inches from singer. Use mike stand if possible and have mike just slightly above singers mouth pointed directly at him.

b. **singer and guitar**: Often the problem is that the music from the guitar drowns out the voice of the singer. You can’t use two mikes without a mixer unit since each picks up and in part cancels out the sound from the other. (If you have a mixer, adjust levels so voice "rides over" music, and keep mikes close to the sources of sound.

Usually you can get a good recording by placing mike close to the voice, slightly above the singers mouth. If this fails, then record the music first without the lyrics. Play music back to the singer through earphones and record a second tape of the lyrics without music. The pacing of music and lyrics will be identical, and when mixed, the quality of the music should be excellent.

c. **piano**: If you have access to a grand piano, hang mike under the fully raised lid, closer to the treble than the bass strings. If you are using an upright piano, move piano out from the wall and record from behind the piano. Keep mike closer to treble strings than bass.
d. **stringed instruments**: In many cases it is possible to record sound a few inches from the instrument. How close you can get is in part determined by the noises from the fingers on the strings themselves. The more twang and squeeking sounds, the further away you will have to place your mike.

e. **orchestras and choirs**: Hang mike as high as possible above the orchestra (12 feet is good) and in front of whole group. You can use a lamp fixture, a tall ladder, a coat rack or just about any device for getting the mike into the right position. You will need to set up your equipment beforehand of course.

For stereo recording, mikes should be from 6-12 feet apart and 7-8 feet away from the front of the group.

Instrumental groups and small music groups can be arranged in a tight semi-circle.

In most cases for recording music you will want a directional mike with a wide frequency response. (A piano has low frequencies of less than 50, a violin has high frequencies of more than 15,000. You will need a mike with wide enough frequency range to cover the instruments playing) If you can't get close, or haven't got a high fidelity directional mike, then try for a concert hall effect and record further away from the musicians.

8. **Recording from an electronic source**:

Patch equipment together making sure that impedances match (see buying equipment) Set the source machine at a comfortable level and tone. Make sure the heads of the recording machine are clean. (see : maintenance)

If the original recording is noisy, cut back tone control (more bass than treble) or use a filter. You will lose something musically but get a cleaner recording.
INTERVIEWING

Interviewing is the basic tool of the radio. A good programme can include a perhaps full range of perceptions, or maybe a juxtaposition of fact and fiction, statement and contradiction, based on interview material. Interviews give a programme depth, take a subject beyond the narrow confines of the announcer-listener relationship.

Interviews also provide the basic component of information. And for the most part it is information you are entitled to know. Like with charity appeals, no one ever gives more than he can afford to give. More generally people give only as much information about a subject as they feel confident about sharing. And whatever they give, you are entitled to use, as long as you don't distort the meaning or context. You may feel shy about interviewing someone, feel that you are imposing, exposing or something. Most people feel good about the opportunities of spreading their opinions and perceptions beyond their immediate circle of friends.

It may sound silly, but people respond primarily to you, not to your questions or the purpose of your visit. You must therefore find ways of overcoming the distracting effects of tape recorders. You must be comfortable in the interview situation, and must establish yourself as someone worth talking to.

Most interviews are done to collect stories, perceptions and opinions about a topic. These interviews work best when they are genuine give-and-take encounters. If, for example you interview someone on immigrating to a new country, then, bring in stories you have heard or experiences about similar situations. If you ask for strong opinions, don't be afraid to include some of your own in the conversation. If you are collecting data, share some of your own information, and if
you want someone to give you a sense of his own life and values, then contribute some of your own. You could, of course go too far, overwhelming anyone you interview with your own opinions, perceptions and the like. It is more likely you won't go far enough.

There is a general rule in interviewing: the more specific the question, the more specific the answer. If you ask for example whether someone likes a new housing programme, you can only get an answer of "yes", "maybe" or "no". If you ask on the other hand what happened to people living in the block between Main Street and Maple Avenue when the housing project first came in, you are likely to get some interesting data. If you follow the specific questions by a request for example, of how individual people were affected, you have the basis for an interesting and useful interview.

To be specific, however, is to be well prepared before an interview. You must know the subject well enough to ask detailed questions, to engage in a real conversation. Read up on a subject in the local newspaper clipping files, have names of people to check out, talk to people casually before doing the interview, etc.

There are some interviews in which you want only specific information. Any sharing of experiences will distract from the purpose of the interview.

If you want to get the "official" statement or public ideology, you should go to the interview knowing what to expect. Take with you a list of specific questions and don't pursue any topic beyond asking for examples.

**Confrontation interviewing**

To use an interview as a tool of confrontation is very difficult. Most people, especially officials, watch themselves
very carefully when they talk. When the tape recorder is going, they are downright tight-lipped about any controversial matters. Interviews contain few genuine surprises.

There are two basic techniques to a confrontation interview:

1. You may try to catch someone off guard by asking a question which is entirely out of context. It might be an emotional question to a public official like "Do you believe in love?" Or more simply, a question of a welfare official on a new highway development. If it works, you may get a tight-lipped official to begin talking, you might get beyond the polished words to real feelings and real emotions.

2. You can use the material you get from an ordinary interview in a confrontation situation within a programme. This technique works when you use:

   - statements used in juxtaposition with information which proves them false.
   - an answer which is too weak to deal with the impact of other material in a programme.
   - a statement in one interview contradicts a statement made by the same person in another interview.

You must give anyone you interview the chance to answer any question in full. You don't need to argue with the person you interview. You only provoke hostility, or vague generalities. An example will help:

not: Mr. Jones, a citizen has suggested you did not favour this zoning change at a public meeting last January. Is that true?

but: Do you favour zoning changes? Has this always been your position - say, even last January?
RESEARCH

It is common to talk about a glut of information, a mass of data that surrounds and drowns people. And because there is so much "information" from so many sources, people don't think it is possible to understand what really goes on in a government or corporate world.

Good community journalism provides information. It is a special kind of information, though. It is convincing information but not education, "analysis", or propaganda. It is information which is specifically useful to people who have to deal with government bureaucracy, local officials or big business. It is "critical information", and it is not easy to gather.

Gathering critical information is not the same thing as reporting, not even reporting with a radical analysis, or "hip" interpretation. It is not what passes for news in most newspapers, nor even on young people's FM radio stations. It is new information, the product of carefully integrating a lot of data into one coherent picture.

But good critical information is simple (only the lazy journalist gives us the impression of complexity). It is the end product of doing thorough, but sometimes boring research. It is a conclusion not a summary of everything that can be known.

That is why good research is so fundamental to media journalism. A radio programme that can only handle one idea, one impression at a time, requires research to place the myriad of impressions and the mass of data into a single perspective. All data is an important part of the programme, but it is useful as supporting evidence for a central idea.

Do you get a stunned look when you walk into the business section of the library? That's good; you should! Research
does not originate in a library, though, obviously, researchers use a library regularly. A general list of where to find most kinds of information won’t do you much good, but a librarian who is presented with a very specific problem to research can direct you immediately to the source of that information. (not necessarily in the library itself) You may never get to know all the kinds of directories available, but may use them nonetheless with the help of a librarian.

Schools make research into a mystery. But the problem of dealing with a greedy developer isn’t much different from dealing with a stalled car.

To extend the analogy. Your car stalls. You check the obvious (is it out of gas?) and take it to a mechanic. Eight hours later he gives you a single sentence summary of what is wrong. You’ve got a clogged gas line.

To get to this point the mechanic used a checklist and his intuition, and carefully eliminated all the possible reasons for your car stalling. When something he checked looked suspicious, he checked it further. His final answer to you wasn’t a catalogue of all the data he found in checking, it was a conclusion.

You will do the research yourself (the librarian won’t present a bill). The process is, however, exactly the same. First you will need a general checklist for any research problem:

A. What are you looking for? Never start research to find a topic. You must have some reason to begin looking.

eg: Small stores along a slum street "closing out"
Why is this important?

eg: It may indicate new kind of development which would change area and displace people who have nowhere else to go.

To whom else is this important? - or to put it more bluntly, who are the "winners" and who are the "losers" in the present situation, and in any changes which are now or might take place?

eg: People who live there - they lose their homes and patterns of life.

People who work there - they lose their battle to make that area a better place to live in.

Neighbouring areas: people who are forced to leave this area may move into neighbouring areas bringing with them social problems associated with their old area and their dislocation.

Other Developers - this development may represent a new power base of a particular developer in the city.

The city - potential development represents a new tax base in a dilapidated area, tourist attraction could bring in dollars, personal financial gain for selves, or friends in real estate or building etc.

B. Based on the answers to the above questions, can you visualize a completed news story on this topic? What would your headline be? If you can't visualize a good headline, your research topic is too vague or general. As you discover more information you may change the "headline" of the story you are working on, but in research you always work towards a "headline".
not:  "Joe Blow, Developer, acquires more property", because that is not really "news".

but:  "People forced out of their homes by city developer clearing slumtown."

C. What do most people now believe is going on? What is the conventional wisdom on this one?

eg: Stores and houses in this area are always falling apart or being sold and people who live there would be better hidden away in some kind of home. This is change or progress and change is natural.

Why are you uncomfortable with this wisdom?

eg: There are more stores closing than normally and you have read a number of articles in the local newspaper which indicate that the city wants this area "cleaned up."

Now go talk with the people you have identified in A and find out why they are uncomfortable with the conventional wisdom:

eg: More people being arrested, small crime is invading neighbouring areas. Hotel housing derelicts closed down "for repairs" but no sign of repairs going on.

D. Test out your idea, and the headline by talking to anyone and everyone. Read as much as you can on the topic. Read unrelated material if any of the same names or problems are discussed.
E. Determine how you will use the information when you get it? The answer to this question will demonstrate how thoroughly you will have to research. It will set limits you need to have confidence to proceed.

a. For a citizen's action committee publicity?
b. For a single radio or Video programme?
c. To create an election issue in the city?
d. To prepare a brief to the Zoning board or city council?

For c. or d. you will need to gather just about everything you can on the subject.

For a. or b. you will need to find only one example which can demonstrate what is going on in a microcosm. You won't need to research everything.

It could be a victim - an old man with nowhere to go?

a small shopkeeper with no means of establishing a new business?

It could be a specific scandal - Health regulations being applied on a new basis?

A zoning decision which was made behind closed doors?

A resale of property which cost the taxpayers money and benefitted a developer?

A conflict of interest on the part of someone involved in making decisions?

F. Only now you should get into practical information-gathering. Go through all the reasons, and the consequences of what you suspect is happening. Taking each one, make up a specific
list of questions to ask a librarian.

eg: We think a developer is buying up properties in a certain area. How can we check recent sales? How can we check who are the buyers?

We think a new zoning decision is in the making in this area. How do we check the history of zoning? When and where are zoning decisions made? Who makes them? Who are they?

We think there have been more building inspections in the past few months, how do we check this? More arrests?

You are looking to document a history, a very complete history, of what has happened as a guide to what is happening now. Although the total picture is a closely guarded secret in many cases, the facts which comprise the picture are often readily available. The clipping files at the library are your best source and it helps when you go through them to keep this task of historical documentation in mind. Once you know the history of any situation, you will be able to judge the significance of any data you discover.

You certainly won't always get clear answers. For a long time you will just have lists of people, meetings, decisions, property transactions. At some point, if there is any truth in your original question, you will begin to see a pattern, the same names in several places, etc. You have struck gold.

G. But the best information comes from people. You want to check your original question among people who should know. They may correct the question, the data, or more important they will tell you the significance of anything you find in library research.
a. The librarian (A librarian completed a two year course after a BA to do more than check out books) can often tell you if some piece of data is significant. (The "same lawyers", the "same addresses" "recent incorporation", etc.)

b. The higher placed people in the corporate or government structure are willing to talk - that is if they feel they are talking to someone who already knows a great deal. They aren't ashamed of what they do (they view their actions from a different perspective than you). They will go to great lengths to correct mistaken data or conceptions. Some officials have their own doubts about specific programmes, and if they respect what you already know, they may share these doubts with you.

Junior officials won't give you any data. Their sole function in an organization is to protect information from the public (and their job). They will however give you a good statement of "conventional wisdom".

c. The victims know best. The people who are directly affected by a situation have the clear set perspective about what is going on. Oppositional groups, unions, etc. make it their business to collect data, though not always in a systematic way

d. The experts and professionals will usually talk with you if they are convinced that you already information to get behind the facade of professional confidence, enough information for a real dialogue of shared experience and perception.

e. Reporters from the established press know a good deal of the background information and rumor. They will share it as long as they are not working on a story themselves. Columnists will not share information; they are in the same business you are. They sometimes have research assistants who are glad of contact with fellow researchers.

H. By this point you either have a story or you don't. A lot of good insights never result in a conclusive story. In any case, you never get the whole picture, an airtight case. You can present more piecemeal data as supporting evidence.
At this point you are ready to revise your headlines to correspond to the data you have collected. To present a story to the public, through any media form, you might ask yourself the following questions:

a. What is my headline
b. What exactly can I prove, and how can I prove it?
c. What other data lends credence to the headline (although not in itself adequate for proof)?
d. What do others think? What is the other side of the story?
e. What significance does this data have.

1. If you are working in radio, you should then turn to the problem of programme design, separating the presentation of the information from the information itself. Your job now is to create a programme which is fascinating and authoritative. Relaying the results of your research, no matter how thoroughly compiled, will not assure you such a programme.
EDITING

Sound tape captures everything in the environment. It is like the poor photograph that faithfully reproduces the telephone wires with the same clarity as the soulful child's face.

Radio production is a process of abstraction, of making a separation between what you want to say and a background of sound and information. Editing is the mechanical operation of making that separation. It is a very deliberate act, and works best when the idea, rationale, or theme of the programme is well thought out. It is hard to think with an editing razor in your hand.

No matter how closely you work with others and their ideas, the final programme is your own creation. It is much easier to produce a programme, to listen to and edit endless interview material, if you take a proprietary interest in the material. It is yours, to do with whatever you will. You have the power to say anything, in any way you want, for any effect.

In the end of course, you are accountable to other people, the people you have interviewed, the people about whom the programme speaks, the people who will listen. But you are accountable only for the final and completed programme.

The people whom you interview won't remember what they said. They will judge whether they have been misquoted by the total effect of what you have used from the interview, and by the context in which you use it. They mistrust media not because their sentences are shortened but because their meaning was misquoted, their ideas exploited, their words set in a context which altered or distorted their definition.

But, to risk a cliche, you can't be fair to all the people...
all of the time. The irate school principal may not like a programme exploring ideas of free schools. He may think the students who complain should be disciplined. As long as he recognizes his own words (and he probably considers himself the only island of sanity in an otherwise nonsense programme) you have done an honest journalist's job.

All of this is by way of suggesting that it is very easy to get bogged down in material, in the process of editing. You will be more successful, or at least less discouraged if, for the most part, for the moment of editing, you can convince yourself to forget the people you interviewed, forget the dynamics of that communication, forget the commitments you made at the time.

That will enable you to make the hard editing decisions based on how things sound and on your conception of the programme as a whole.

Editing Tape:

If you could see words as they are recorded on tape, they would look like a single line of typewriting. Short words take about an inch of recording tape. Longer words stretch about two inches. Editing is the process of cutting out what you want from an interview or longer tape for use in a programme.

What you cut out should be guided by the question: "Do I really need this?" You won't need what has been said before, or better by someone else. You won't need material if the sound quality of the tape is poor, if the speech has a rambling quality, or if the speaker has used jargon or rhetoric.

But you will want to cut selections which contain stories, illustrations, examples, description. You will want a concise summary of an important point. And most important, you will select a statement when the speaker has some colour in his voice, some passion for his topic.
*It takes very little material to produce a finished programme, maybe eight sentences complete one minute of programme without the addition of music, sound or narration.

*One double spaced typewritten page takes about 3 - 4 minutes to read.

*Every tape splice, every piece of tape you decide to use, takes about ten minutes to edit out.

For all these reasons, you select out only the excerpts you want from the original. Never attempt to cut down the original interview material to make a programme. Use judgement, selecting as little as possible. Remember you can always go back to the original for more material. Nothing is so discouraging as thirty unused tape selections hanging from your editing rack like diapers on a clothesline after you have completed the programme.

The Mechanical Process:

Set yourself up before you begin.

1. You will need a tape recorder which allows you to move the reels manually. (this is called "rocking") An editing tape recorder should allow easy access to the playback head. (picture) Usually the cover guard over the playback comes off, but even that won't give you easy access in some tape recorders. A Uher, for example is a poor editing machine.

2. You should have good speakers. You won't hear distortion or background noise on the speakers of most tape recorders. When your programme is played on air, these noises will be apparent - you will be unpleasantly shocked. If you haven't good speakers, try to arrange to use someone's stereo set to hear the tapes before editing, then don't use tapes with distortion or loud background hiss.

3. You will need a grease pencil to mark the tape.

4. The best splicing tape is $\frac{1}{4}$ inch tape. Other splicing tape requires trimming. You might accidentally "trim" your programme.

5. Tape is cut on a splicing board with a single edge razor.
It is cut at a 45 degree angle. The best splicing board is a plastic unit made by Editall. (They also make a metal board, but it is costly) There are many unprofessional splicers on the market. Some are very fancy, but few are much good. A good splicer should not cover the tape being edited and should not require levers to hold the tape in place.

Tape can also be cut with scissors. Cut the ends that will be spliced together, at the same time and on an angle.

Both scissors and razor can become magnetized during editing. If they do, you will hear a small click at every completed splice. Demagnetize your scissors or razor with a demagnetizer, a bulk eraser, or simply drop them on the floor from a height.

6. You will almost always edit directly from the original tape. Few tapes are important enough to save in their original condition.

7. Before you begin, check that the tape is ready for editing.
   - If it has been recorded on both sides (check: turn it over and play through on mono player) you will have to make a dub of the original tape on a blank tape.
   - If the original was recorded on stereo and the other channel has sound (check: play tape on mono player and listen for two conversations running simultaneously or a mumble - jumble) you will have to make a dub of the track you want or alternatively erase the extra noise on the second channel. (See erasing tape).

8. You will need an editing rack or board to hold the tape excerpts as you cut them. You can use a peg board and nails, a row of large tin cans or a clothesline, or any combination of these, to hold tape pieces.

Steps in Editing:

1. Locate the playback head on your tape recorder. (Usually the centre most head in the unit.) As the tape passes the midpoint on this head, you hear the sound of each word. If you move the tape very slowly over the playback head (Push 'pause' or 'instant stop' button and move reels manually) you can hear each word as a single sound, and the silence or break between each word.
You mark and cut tape from the shiny side of the tape, in the break between words.

2. Locate the selection you want to use in a programme. Note the last word of the previous sentence and stop and mark tape between that word and the first word of your selection.

3. Play tape through until you hear the last word of your selection. Stop tape immediately, make a break between the last word and the first word of the next sentence.

   - Hang selection on a peg or nail closeby.
   - If the selection is very long, you will want to wind it on an empty reel. It makes things simpler if you wind the rear end of the selection on the empty reel first. To do this, replace left tape reel with the empty reel, wind on end of selection, rewind tape until you reach the cut at the beginning of the selection. Remove reel and hang reel on peg.

5. Join the original tape, minus the selection you have made, by placing the cut ends in a splicing board. Ends must touch. Splicing tape is pressed firmly but gently on the shiny side of tape. Ends should meet and no splicing tape should show through on the other side. (picture)

6. To make a programme, join tape selections in a predeter-mined order using splicing board and tape.
NARRATION

Radio voices have no faces, no bodies. That gives them a certain authority, an authority which exceeds personal magnetism, and personal expertise. People turn to radio in times of emergency and for crisis news and immediate information.

Narrators are "experts" in their field, no matter who wrote the programme notes, or how bland they are. The authority of radio is inherent in the medium and the voice. Television broadcasters substitute visual effects, actuality films, charts and experts for the authority of the radio voice to get the same effect.

The classic example of the power of radio as a medium was the Orson Wells broadcast of an invasion from Mars. Mass panic! Of course, that was before television could act as a check to radio information. But even today, an announcer could suggest that the sky was falling down and half the audience would check out the window.

But to be so effective, radio narration must have the power of direct speech. And direct speech requires a specific audience. People who do "talk" or phone-in shows focus on a clear mental picture of one person in their audience. They talk directly to that person. Some broadcasters go so far as to know the colour of the "listener's" hair or eyes, and others claim they "dry up" unless they feel they are talking to someone in the studio with them.

Because of the closeness of the relationship between narrator and his imagined or real audience of one, the narrator cannot pontificate, make a speech, lecture to a crowd, or campaign. He can present a work of art, but in the first moments he must make contact with a listener and catch his interest, and for the most part, the real or imagined listener is a very prosaic person.
Most people can do narration. It is unwise to assume however that writing a narration is any preparation for reading it. In fact it may be harder to read narration if you wrote it yourself because you may put too much force or narration in your voice. There are "good radio voices" but as long as your voice isn't distinctive (very high pitch or very rasping) you can do an adequate job. Practice on tape before doing final recording. Have someone else listen and criticize your practice tape.

Narration ties the material in a programme together, and provides continuity. Narration gives the listener a relaxing break, and acts as a guide to the material being presented.

Not all programmes require narration. In some senses narration is the lazy persons way to break up and explain a programme. The narrator is "an expert". He invokes the stereotyped visual pictures, and in turn the stereotyped attitudes, of the listener. Because narration makes listening easy, it also removes the need on the part of the listener to think, figure out, struggle to understand etc. Some programmes need the colour, the sense of whole, the emotional colouring of narration or commentary. Others don't.

If however you decide not to use narration, you must provide breaks for relaxation, and a sense of direction to the programme in other ways. Music, sound effect excerpts, short snatches of dialogue and special effects all help.

Planning Narration:

If you decide to use narration it should be simple and direct. Narration works best as description, explanation or personal account. It works best when it sounds like information you would share with a friend.

It does not work when it sounds preachy, analytical, like a speech, or pompous.
*Everything should be understated, and underemphasized.

*Leave the direct emotional impact to the tape excerpts or interviews. Your description of a situation, including your feelings on being part of it, are useful to the listener. Your opinions are only as interesting as you are to the listener. (Most narrators are nameless).

*Be direct. If you are recounting your own feelings, what you saw, then use the first person singular. Use "we" only if you were a part of a group involved in an event.

*Radio is a concise medium, and narration even more so. Every sentence should contain data. You do not need a general introduction or a summary conclusion, or any form of connecting narrative between points.

*Narration should be short. Four sentences is a longish piece of narrative script. It takes four minutes to read one double spaced typewritten page.

*Narration should be written in the active tense:

not
but

Represented were four companies...
Sun Oil was there, Imperial Oil sent their Vice President...

*Narrative sentences should be complete in themselves:

not
but

I talked to John Smith who said...(tape excerpt)
I talked to John Smith about his experience...
(tape excerpt)

*Clauses indicating time, place or situation should be placed inside the sentence. Never begin a narrative sentence with "Although," "But", "With" or "Because"...

not
but

Although they have been here 4 days, they still feel uneasy.
They still feel uneasy, although they have been here 4 days.

not
but

Because of this, the Premier said he would withdraw legislation.
The Premier said he would withdraw legislation and he gave these reasons for doing so.
*Use simple sentences. What you write will look choppy and simplistic on paper, but the rules of oral speech are very different from those of written prose.

*Never turn pages in the middle of a sentence. In writing narration, sentences should be complete at the bottom of a page. Each new page should begin with a new sentence - or preferably even a new paragraph.

Your natural tendency is to drop your voice at the end of each sentence and to read with great emphasis. Radio narration must be read with a flat voice, a voice used in conversation not reading aloud. Your own emotions should not creep out around the words. Nothing sounds worse than sarcasm, cynism or enthusiasm.

To get the right voice tone, mark copy as shown and attempt to read without any expression whatsoever. Use a soft voice to level voice tones. Use pause marks for breathing and for pacing. Take your time, read very slowly, and take long breaks between paragraphs. Practice several times, holding the script on the side of the mike, and letting pages drop to the floor as you complete them.

The first Ugandans / are arriving in Vancouver///
We went out to the air port/ to greet them// and to offer our help /// But all we got / when we got there / was a runaround./// Two men // dressed in grey flannel suits / sorted out the immigrants // like they were grading eggs./// "you go here, // you go there."/// We never got near the people./// We had a car / waiting to drive the immigrants / into town // but the officials / ordered cabs.///

When you read narration for the first time, leave space on the tape between paragraphs and repeat difficult sections several times. You can choose the best for your final tape.
MIXING SOUND

Mixing is the process of bringing sound from different sources together on one tape. That sound could be interviews, drama, sound effects or music.

The effects created by mixing sound are seldom what you have expected. A new dimension is added; mixing is a creative not a technical process.

Most short documentary programmes don't need to be mixed. In making a final copy of an edited tape, you can adjust volume levels, compensate for noise or weak voices, and even create some special effects. You can incorporated sound effects in a programme without mixing. (see sound effects)

In any case mixing is usually the final process in preparing a tape. A completed edited tape is prepared. (see editing) A sound effects or music tape is prepared. (see sound effects) In making the final copy for broadcast the effects and music are mixed with the documentary.

If mixing is a final process, you may not need access to your own mixing equipment. Either you can arrange to borrow equipment, get the programme mixed by the station that will carry the programme or you can use two tape recorders for mixing purposes.

If, however you are thinking of a more complicated sound production, one involving drama, the extensive use of sound effects, special effects etc. you will need access to mixing equipment on a regular basis.

That mixing equipment may be no more than two tape recorders, one stereo, one mono, of very high broadcast quality. Or it may be a professional mixing console or board. The process of mixing is explained in detail for both.
Using someone else's equipment:

You should come fully prepared with a script or cue sheets. Know beforehand exactly what is the effect you want to achieve and how to explain it in terms someone else can understand. A good technician can judge how to fade or bring up sound to achieve a certain effect.

You won't be able to do anything very fancy if you use someone else's technical resources. The technician will not re-do a mix again and again until it meets your satisfaction. Usually his technical skill will compensate for his unwillingness to experiment. You can't expect someone else's technician to prepare complicated special effects, apart from mixing your final programme tape.

A sound studio will have filters and equalizers.

- Most mixers have individual tone controls for each input. A tone control acts as a filter blocking either high or low frequencies.

- A filter is a more sophisticated piece of equipment, which will block a range of sound frequencies. Most background hiss is of a high frequency so when you filter a programme you may reduce some of this hiss. A filter is not magic. It won't reduce all background noise.

- The CBC and some professional sound studios have very extensive filter units or "equalizers". These filters will block a wider range of frequencies. If your tape has machine noises, the filters will reduce the annoying effect of these noises. But filtering will not eliminate these noises. But because filters work by blocking sound frequencies, extensive filtering of a tape will reduce the quality of sound in the dialogue or music. The voices begin to sound "thin".

Voices are sometimes filtered if they are quite high pitched, or have many bassy (fuzzy) overtones. Filtering high voices
makes them a little more pleasant. Filtering low tones makes the words stand out more clearly.

Your ability to use other people's technical equipment and their technical help is dependent on the station producer and his relationship with the technical staff. (In the CBC producers are forbidden by union regulation to do any of their own mixing). Any extra demands you make may jeopardize this relationship, so it is in your future interest to come well prepared, with a minimum of work, and only that work you could not do yourself.

B. Using your own equipment:

1. A mono and stereo recorder:

The tape recorders must be of good quality, and the machines in good order. The heads should be aligned and the patchcords tight (see maintenance)

The process might be described quite simply:

- **step one**: record dialogue from mono to stereo tape recorder, using channel one.
- **step two**: record music or sound effects from mono to stereo tape recorder using channel two (if you are using a tape recorder with "sound on sound" you will be, able to hear what you are doing. If not, you will time everything (see below) and be surprised.)
step three: rerecord stereo tape back on a mono-recorder adjusting the volumes of dialogue and music to give the right effect (eg. music fades in or out).

To get the timing of dialogue and music right, you will have prepare cue sheets for "step one" and "step two".

You prepare two cue sheets. The first is for the recording of dialogue and tells you how much space should be left between the segments of dialogue for the music. The second cue sheet is for the music and tells you when to begin recording music and how long the music should play.

Cue sheet 1

3 minutes, 12 seconds  
**Narration**: "He came to this country ..............several years ago. He won't go back"
**Music**: (under "He won't go back")

15 seconds  
**Music alone**  
(under "There are other people")

2 minutes, 3 seconds  
**Tape Excerpt**: "There are other people who came at the same time. .............here many times over, but that won't last."
**Music**: (under "But that won't last.")

1 minute, 10 seconds  
**Music alone, music ends and a two second pause**
2 second pause  
the dialogue begins without music.

4 minutes, 15 seconds  
**Tape Excerpt**: "I said to the old man........"

In this example, you would record the dialogue first, leaving 15 seconds between "he won't go back" and "There are other people" and one minute, 10 seconds between "many times over" and "I said to the old man."
You then prepare a second cue sheet.

**Cue sheet 2**

<table>
<thead>
<tr>
<th>Duration</th>
<th>Narration</th>
<th>Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 minutes, 10 seconds</td>
<td>&quot;He won't go back.&quot;</td>
<td>(under &quot;There are other people&quot;)</td>
</tr>
<tr>
<td>19 seconds</td>
<td>Music alone (under &quot;He won't go back&quot;)</td>
<td></td>
</tr>
<tr>
<td>2 minutes only</td>
<td><strong>Tape Excerpt</strong>: &quot;who came at the same time... But that won't last.&quot;</td>
<td></td>
</tr>
<tr>
<td>1 minute, 12 seconds</td>
<td>Music alone (under &quot;But that won't last&quot;)</td>
<td></td>
</tr>
<tr>
<td>2 seconds</td>
<td><strong>Pause</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Tape Excerpt</strong>: &quot;I said to the old man....&quot;</td>
<td></td>
</tr>
</tbody>
</table>

You will need a cue sheet for step three. This cue sheet will tell you how to adjust the volumes on both stereo channels (playback volume) when you record your programme back to a mono taperecorder.

This cue sheet looks like the following:

**Cue sheet 3**

**Narration**: "He came to this country......He won't go back."

**Music**: fade up under "He won't go back"

full volume 15 seconds

fade down quickly under "There are other people..."

**Tape Excerpt**: begin at full volume "There are other people..."

reduce volume after "what can I say."

hold reduce volume from: "He didn't do anything..." to: "and nothing got done."

full volume "There came a time....."

"...but that won't last."

**Music**: fade up quickly under "But that won't last...."

cut at full volume.
Rerecord your mixed tape from stereo to mono using these volume changes. You finish with a mixed sound tape.

If you are using both sound effects and music, the process is the same, but you have to go through an extra stage of mixing. First mix your sound effects with the music using the cue sheets one and two to get the right spacing and volume adjustments.

Then mix this tape (sound effects and music) onto channel two of the final stereo tape (channel one has dialogue) as if it were a music tape. Use cue sheets as above.

A picture might help:

2. Using a four track machine and a mono recorder:

The process of mixing with a four track machine is simpler.

Edit dialogue.

Using cue sheet 1 put dialogue on channel 1.

Prepare music tape (see sound effects).

Using cue sheet 2 record music on channel 2. You will be able to hear both channels at once as you mix so you can do volume fades etc. all in one step.
Prepare sound effects tape (see sound effects) 
Using a cue sheet 2 for sound effects, record sound on channel 3. 
You will be able to hear all three channels at once. 
If you have other sound mixing, (a second music tape to be mixed with the first, several simultaneous sound effects) you can use the fourth channel. Always put dialogue on tape on channel one, often sound and music can be added to other channels in any order. 
The process looks like this:

3. Using a mixer:
A mixer has two component units, a patchboard and a mixing unit. 
The patchboard directs the sound. It connects the appropriate mikes, tape recorders, turntables so that you get the sound mixture you want as a finished product. It is like a transportation terminal. 
Sound goes through the patchboard in two stages.
A connected patchboard will look like this:

![Diagram of a patchboard](image)

A simple mixer looks like this:

![Diagram of a simple mixer](image)

The mixer unit determined what kind of sound effect you will get. Each output has its own volume. Adjusting these controls will give you the right balance of sound. You adjust the controls with a "pot", a large knob which registers the amount of sound output from any source.

Each output also has an on-off switch, and a "cue" control. The cue control (usually a location on the pot switch) will allow you to hear the sound in the control room without having it affect recording or broadcasting.

Before mixing every source of sound should be "cued up". Tapes and records should be ready to start instantly when the switch is turned on.
- With tapes, this will mean that the tape is threaded on the recorder and set at the first word of the dialogue.

- With records, the needle is set at the first word of the dialogue. With records, the needle rests lightly on the record at the first sound of music. You can hear the first word or music by moving the tape or record slowly by hand and listening on the monitor switch. This is called "cuing".

The board has a "master gain" or total volume control, which measures the sound of your final programme. The volume control is connected to a vumeter and by watching the vumeter, you will know if your programme is loud or soft enough. Adjust the master gain control so that needle of vumeter peaks at loudest sounds at 100 db.

Finally the board is equipped with a general monitor switch, allowing you to hear what you are getting.

A more sophisticated board might look like this:

![Diagram of a sophisticated board](image)

If you are working with a studio you will need to be able to communicate with the people in the studio from the control room. You will need a separate intercom for that purpose, but remember that all sound from a studio, even the voice coming
over the intercom will be recorded.
If you take it slowly, you can mix your own programme even though you have never used equipment before. Have a station or technical person check your patchboard arrangements and explain the idiosyncracy of his system. Since sound systems are not standardized, there is no guarantee even the labels on the patchboard will be consistent.
The cue sheet for mixing, using a mixing unit, is a combination of all three cue sheets used before:

<table>
<thead>
<tr>
<th>Time</th>
<th>Cue Sheet Description</th>
</tr>
</thead>
</table>
| 3 minutes, 12 seconds | **Narration**: "He came to this... country... several years ago. He won't go back."  
**Music**:  
fade up under "He won't go back." |
| 15 seconds | full volume  
fade down under "There are other people" |
| 1 minute, 15 seconds | **Tape Excerpt**: "There are other people... what I say."  
Reduce volume after "What I say." |
| 20 seconds | "he didn't do anything...  
...and nothing got done."  
full volume after "...and nothing got done." |
| 28 seconds | "There came a time... but that won't last."  
**Music**:  
fade up quickly under "but that won't last." |
| 1 minute, 12 seconds | full volume till end of song.  
Pause |

If it gets too confusing take it step by step.
SOUND EFFECTS

A sound effect must bring an immediate visual picture to mind. Because of this, a sound which is symbolic of an event or picture often works better than a faithful recording of the event itself.

For example, a rhythmic squeaking from inside a boat motor may sound more like a boat on the water (and someone getting seasick) than a clear recording of boat, waves, wind and people on deck. And if a foghorn will suggest a lonely coastal scene, the foghorn is sufficient as a sound effect. You have to choose your sound symbols carefully. Many sounds don't suggest a visual picture.

If you decide to record sound effects "live" concentrate on getting single sounds which can suggest a location or a mood. If you can visualize clearly the scene of action, it will be easier to isolate one sound which expresses the mood instantly.

You can buy sound effect records or get tapes of specific sound effects from recording houses. The material on record, or prepared by the recording house is copyright. It cannot be used in amateur, on-air productions. (see "Odds and Ends")

Many sound effects can be created at home or in a studio. (A side note: in the old radio drama productions, sound effects were created simultaneously with a live production. That made production more exciting than it is now, but a good deal less predictable.)

Collect more of any sound effect than you will need. Use clean tape, and test what you have recorded on location to make sure that the sound is clean (no wind or loud background noises) and distinct.
Sound Effects:

a. a brook: move a straw through a pan of water.
b. chopping wood: hit a piece of wood with a jacknife and hold mike close to wood.
c. autumn leaves: use cornflakes. Move fingers through the flakes at an appropriate rhythm.
d. fire: crackle cellophane, for large fire, break up small berry boxes at the same time.
e. ice cracking: twist an inflated balloon. Hold mike close to balloon.
f. squeeks: move cork which has been moistened in mouth of bottle.
g. breeze: sway strips of newspaper in front of mike.
h. chimes: tap glass with water in it.
i. bird wings: flap canvass near mike.
j. horses: beat fists against chest in appropriate rhythm.
k. river: draw flat wooden stick through water in a non-metalic container.
l. bones rattling: suspend wooden sticks by string from a board and move board gently.
m. iron door: sound made with roller skates on iron or metal.
n. fight: whack a rubber sponge with fists.
o. rain: drop birdseed on a glass plate or on paper held in your hand.
p. hail: drop rice on a glass plate.
q. auto brakes: slide glass turned upside down along another plate of glass.
r. shots: hit padded cushion with stick, or prick balloon with pin.
s. snow: put cornstarch in thin cloth and squeeze in appropriate rhythm.

t. crash box: fill light wooden box with nails, bits of class and metal. Turn over to effect sound of crash.

u. breaking wood: crush berry boxes.

Verbal Sound Effects:

a. echo: place mike into waste paper basket and talk into basket from behind mike.

b. ghost: cup hands around end of pipe, talk through pipe and hold mike at other end.

c. muffled voice: cut out place for mouth at one end of shoebox (closed) and talk into box. Record at other end.

d. voices fade into distance: move to side of mike and away at the same time as talking.

e. voice from distance: talk from side of mike.

f. loud voice or shouting: stay close to mike but turn head to one side.

Using Sound Effects:

The listener knows you weren't standing on the bow of the clunker boat during the storm, that the old man you interviewed didn't have the roar of the sea just outside the window. The listener isn't stupid, and in some way, sound effects make a programme less realistic.

What you gain in depth and colouring by using sound effects, you lose in the sense of directness and immediacy in the final programme.

Deciding to use sound effects should be a matter of creative
decision, and not a factor of equipment, however. You can create sound effects within a documentary with the simplest equipment. (see mixing)

a. using one tape recorder:

Splice sound effects directly into tape at the appropriate place. The sound will be "choppy" but there are several ways to compensate for the choppy ness.

- use a longer selection of sound effect so that the listener will get into an appreciation of the effect in its own right.

or - play sound effect through at a low volume so that sound becomes background to the programme.

or - cut sound effect very close to words with splicing, or leave definite (1-2 seconds) pause for effect.

or - allow enough sound effect for fading. In making the final copy of the tape (either on your own equipment or at the station before broadcast) arrange for fade in and fade out for each sound effect. You will need a cue sheet (see mixing) before making the dub.

- vary your programme, use any or all of these methods in the same programme.

b. preparing sound for mixing:

You will have to prepare a sound effects tape and a cue sheet if you plan to mix the sound effects with your programme. (see mixing)

Arrange selections of sound effects in an order to match your programme. Use a good deal more sound than you will need for any insert in the programme. Separate the selections with leader tape. Then make up a cue sheet noting the sound ("gulls") the time of the selection (30 seconds) and the amount you will want on the programme (12 seconds).
Producing radio drama presents more of a challenge. Not everyone can write good drama or act before a microphone. Moreover, union regulations demand the use of professional actors, musicians and script writers for radio production. While these regulations mean that "professionals" might earn enough to eat and pay the rent, they also prevent the on-air production of radio drama by amateur groups.

There is some room for experimentation, however. Commercial stations may carry amateur drama, as long as none of the cast, writers or producers is a member of the union. Occasionally the union will grant a "waiver" to allow amateur groups to perform on radio. Creating taped drama is fun, worth more as an educational tool than many other forms of education. Taped drama can be made available on cassette to many people.

Nevertheless, drama is the area where this book can give the least guidance. What is written here is from the point of view of drama as fun. Although it may serve as a preliminary guide to radio drama, it is more or less up to you to experiment.

There are some good radio scripts available at the public library. These come from a different era in radio production, are based on what seem to be outdated concepts, but then that is part of their fun.

If however you decide to create your own script there are some general rules to follow:

* Work out the play in great detail before you begin writing. You will need a clear story line, points of conflict between the actors or the situations, high points of tension, some resolution of the problems created, some action, people doing things, some quiet moments......
After you have the general story line, you will need to **discuss** each scene in detail. For each scene you might answer a series of questions:

- what is the real purpose of this scene? (each scene should serve only one purpose)

- is this purpose achieved as quickly as possible?

- how is the purpose achieved - an action, a conflict between actors? etc.

- how does this scene fit into the rest of the play? is it necessary? a change of pace? a heightening of tension? etc.

Only at this point, should you begin writing. Radio demands an efficiency of words; every point must be made quickly. Every line should be examined to see if it is necessary to the flow of the drama.

Because radio works in the listeners' imagination, your script need only present the necessary details to stimulate imaginary dialogue and pictures. You will need to give immediate sound cues as to the time and location of each scene, have clearly recognizable characters, but you have no need to sustain action for a full dramatic scene. Sometimes a few lines between two characters will convey what on stage would have taken ten minutes of dialogue and action.

Because you are working in this imaginary realm, you can use thoughts and emotions as if they were dialogue. One of the finest radio techniques for tying a dramatic play together is the use of an internal monologue of thoughts and impressions to surround the dramatic action. These thoughts are as much a part of the build up of conflict as any action between characters.
Generally radio drama uses only a few principal characters. Eliminate all subplots which would confuse the flow of action. Often the drama is built around one character with whom the listener identifies and becomes emotionally involved.

Radio drama needs some action too. Part of that action is suggested by the background sound. The characters move from a room, into the street, to a meeting, and back to a church. But as well, it makes sense for them to do something in the drama more than talk. All action should not be background to conversation. The actors themselves should do things which further the drama itself.

Radio drama more than anything else is made or broken in the pacing. Fast moving scenes placed beside longer expositions, narration, silence, music, dramatic sound effects and above all an efficiency of words and effects make radio drama stimulating to listen to. If your mind wanders, cut the script, no matter how far into production you have gotten.

General Hints on Production

* **perspective**: Perspective is the arrangement of actors and actresses so that people sound like they are talking from different places in a room. Sometimes it is a useful technique, but it can take away from the sense of presence of the drama if used too often.

* **balance and contrast**: Voices must balance each other, in strength and pitch. At the same time there must be enough contrast in tone and pitch to make different
characters clearly distinguishable and to lessen the sameness of the production.

- it is difficult to use scenes where everyone is the same sex. If you do, use other variations like differences in accent, voice tone or age.

- if you use the same actors in more than one role in the play, they should never appear in different roles in two consecutive scenes.

- you may want to use a deliberate imbalance of voices to suggest strength and weakness of character.

- avoid overlapping of voices. On radio these scenes come out more a mumble jumble than as heights of dramatic impact.

*acting*: Actors don't have to memorize their lines, of course, but they do have to work as hard to get inside the character. In part they convey life to the character by using gestures and facial expressions as they read the part. Even body stance will be reflected in the voice and acting. You can't play a young enthusiastic teenager hunched over a mike like it was your last hour on earth.

The most serious pitfall of radio acting is that the characters will become flat and stereotyped. As an actor you are working in one dimension. You add a second dimension by the shading of the characters in your own imagination. For this reason, the less description of the characters you are given in the script or by the director, the more likely you can develop some roundness of extreme character types.

As a producer, if you are using amateur actors, you should accept that they will probably be unable to hold the dialect (a character) consistent.
sound effects: A sound effect can be a suggestion of time or location or it can itself be a dramatic effect. A door that is constantly being slammed, a telephone which keeps ringing, all add to the build up of tension. Music can be used as a sound effect, as a bridge between scenes, as a consistent theme throughout the drama, as a backing for dialogue, or as an event itself. Music and sound effects should be written into the original script, not added at a later stage.

production: The producer should separate himself from the actors and listen to the acting and the total effect on monitor earphones. Only through earphones will he pick up the imbalance of voices, inappropriate sound patterns and the total effect.
ODDS AND ENDS

You can lower your voice, and the listener will move closer. You can let great surprises fall with an apparent lack of concern and see their effect magnified by your own cool demeanor. You can ask your listener to move over, write a letter, look up or out the window and he will. All of this is true of a smooth production - a few technical and practical details will help iron out some of the more distracting problems.

A. Technical

* Making a loop: A loop is a technical way of creating a lasting sound effect from a short bit of sound tape. You also use a loop to extend a sound or to create an effective (though somewhat artificial) repetition of effects or words.

- Use tape recorder with pressure pads.
- Slip sound effects tape around the reels and join ends in front of playback head. A loop is a circle of tape which fits tightly between playback heads and reels.
- Mark tape while it is tight on reels.
- To remove tape, or loop once it has been made, remove reels first and slip tape carefully out of playback position.

* Erasing tape: Tape can be used over and over. It can be erased by holding it close to a bulk eraser or by recording with no input. All "record levels" should be set at zero. You can record on to used tape. The recording will automatically erase what is underneath. But to avoid picking up extra noise, or messy editing problems (indistinguishable old and new recording) erase tape before using it.
* **Creating an echo**: You can create an echo by recording with volume playback turned on. Record with mike at maximum distance from tape recorder to avoid feedback.

### B. Non-technical

You can gossip about the more sordid facts of human existence, share confidential information, watch an event from the sidelines. You create good radio, but you may find yourself in trouble.

* **Obscenity**: Broadcasters are more relaxed about obscenity than they used to be. Several years ago, a single "damn" would be blocked from the air-waves. Still, what you hear on radio has passed through a five second delay, the five seconds being enough time for a control room operator to prevent obscenity and libellous statements from reaching the public. Obscenity is now defined in its context. When legitimately a part of the content or dramatic speech in a programme, it may be allowed. When used as an expression for anger, for shock, or out of context, it is not. There are still many words which are not allowed on the air-waves under any conditions. Theoretically at least, a station operator could lose his licence for permitting gross "obscenity".

* **Copyright**: You can't use someone else's material without paying for it. If you are freelancing material to a radio station, the station arranges copyright payment directly. Because they have to pay, they may restrict the amount of copyright material on any one programme. Written material is copyright for twenty-eight years after publication. Copyright may have then to be renewed for a second twenty-eight years. After that, written material is in "the public domain" and may be used by anyone without charge.
* **Libel and Slander**: Your facts must be correct, and you must be able to prove it - otherwise don't say anything. If someone can prove damage to himself, or his business on the basis of your false information, you are in a lot of trouble. If you get caught doing sloppy work, offer to make a public apology.

* **Unions**: Writing, acting, music and technical production is under the jurisdiction of union regulation. To know what those regulations are in detail is to tie yourself up in an impossible situation. Several general rules will do.

1. You can't mix union-covered and non-union material
   eg. a. live and recorded music.
   b. live and recorded sound.
   c. freelance production and professional.
   d. professional actors and amateur actors.

2. Whatever you produce yourself, or among your non-unionized friends is okay.

3. No musician may perform more than twice annually on air without joining the musicians union.

4. Most producers cannot be technicians for their own material. And, officially at least, CBC technicians are not supposed to perform technical services for freelancers or non-staff producers.

5. Unions will grant actors and musicians a "waiver", permission to act at lower than union rates. The waiver will cost you money.

This last rule can be bent by working with a friendly producer and technician or with a private commercial station. Bent, but not easily broken - take care, and take nothing for granted.
Buying and keeping equipment:

There are two approaches to buying equipment: buying the best or doing it cheaply. A compromise between them will probably give you fancy equipment with poor durability, high repair bills and poor sound quality.

If you opt for the best, you'll need a good technician and maybe even a sound engineer. This book won't help much. You will be looking for "broadcast" equipment from Ampex, Shure, McCurdy, Gates and Electrovoice. Occasionally this equipment is available through surplus outlets, Crown Assets Corp. (Canadian government surplus) or from radio stations selling out or changing over equipment. You will need a technician to design a system to meet your broadcasting needs and integrate the equipment you purchase.

Many other companies make "broadcast" equipment, but they are aiming for the stereo market at the same time. Their equipment generally represents a compromise between style and quality. Quality usually loses.

A good sound studio and control room will set you back about $15,000 - $50,000.

Don't despair. There are ways to do it very cheaply. The general rule of thumb: do with less equipment rather than less quality.

You will need at least one good portable tape recorder and a professional mike. The most common broadcast tape recorder is the Uher 4000 Report L, a good buy for sound quality but it requires a lot of maintenance. A good mike is Electrovoice 634 or 665.

Many people have made a career in broadcasting with no more equipment than this. If you decide to stop here, you will need access to a good stereo music system, and to mixing facilities.
Colleges, schools, large church organizations often have sound equipment. A small or community-minded station may let you use their facilities, especially if they can do it in return for free programmes. The CBC will sometimes let freelancers use their technical facilities but this must be arranged through a producer. (see mixing)

For most mixing (and even the occasional complicated sound programme) two tape recorders will do. A good quality mono and stereo tape recorder will allow you to create programmes with music, sound effects and dialogue. Sony makes a good pair (Sony TC 105 and Sony TC 210)

If you have some money, a four track recorder will allow you to record and mix any kind of programme without a mixer unit.

For editing you will need a tape recorder that allows you to move the reels manually and hear the sound. An old tape recorder, without a recording head, will work well. If you plan to produce drama or complicated documentary programmes, you should have access to a good speaker system.

You don't always need a studio. You do need a quiet place to record, one with no loud interfering noises, no interruptions etc. You should have a place which you can use consistently so that sound recorded at different times will have the same qualities. If you are working from a home, you can do without a separate studio (though you will need a place to work, since production work can get messy) if you can arrange quiet recording time. If, however, you are working in a busy building, you might decide to build a studio just to minimize interruptions and cut off the recording area from other activities.
To make these suggestions is to leave you with a pretty "unprofessional" looking set up. But what is important is that you don't substitute the "image of radio" for the actual needs you have in producing it. To build an adequate control room and studio you need very good equipment, a technician and a lot of money. Rather than build a poor substitute, choose equipment which will meet your real needs in programming.

(A four track machine, two tape recorders and a highly directional mike etc.)

Most radio stations will only accept programmes recorded on 1.5 mil tape. You can use 1 mil tape for your own recording and editing. If it is good quality tape it won't stretch or break. Milar tape is not affected by heat. You must buy good quality tape. Several of the best tape manufacturers (Ampex) put out a second line of "industrial" or "seconds" tape which is adequate. (Shamrock and Charter) The myriad of cheap tape brands with fancy names are no bargain.

Building a studio and control room:

a. studio:

There are 3 variables in studio construction.

- a low noise environment. Don't expect to block out all sound. Highway or traffic noise, lots of foot traffic overhead, or laughter and loud talk in an adjacent room will not be blocked out by most studio construction.

- heavy construction: sound travels best through air and is blocked by a mass concentration of solid material. But sound also travels through solid material. Studio walls must incorporate solutions to both problems. Studios are usually constructed with heavy constructed exterior, and a second inside wall which is not connected
directly to the outside wall. Neither acoustic tile, nor simple double wall construction will eliminate noise.

- low reverberation and echo: sound bounces off the walls in an empty room. Studios are equipped with material, tile, etc., to reduce the movement of sound. But some reverberation adds color to sound and makes the voices sound alive. Usually a studio is constructed so that at one end, the room is dead (or no reverberation) and at the other quite alive (much reverberation).

To construct a studio, then, find an area away from the general living and working noise in the building. If there are natural heavy walls (like concrete partitions in a basement) so much the better. If not, build an outside wall with plaster board attached to a frame of 2" x 3" wood.

Inside the studio build a second wall. That wall could be no more than heavy material or drapes hung from the ceiling to the floor, preferably at an angle. It could be fiberglass insulation covered with burlap hung from a frame of light wood.

If you want to build a sound studio with more solid construction, build a second frame inside but not touching the outside walls. Line the inside walls of the studio with plaster board. One wall should be covered by drapes. Acoustic tile is not, contrary to its claims, good soundproofing material. Neither are egg cartons.

You can buy studio window units complete from a manufacturer. The construction of double glass windows for sound studios is more difficult than most people can manage since the window glass must be floating within the window jam.
b. **control room**:  

A control room is no more than a place to work and keep your equipment. If you have a studio, you will need to be able to see what is going on there. But if you plan to do without constructing a studio, then any room will do for a "control room".

The equipment should be arranged so that you can work with everything you need without moving around. Usually that will mean that the tape recorders should be close to the mixer (if you have one) the patchboard, the turntables (if you have them). Otherwise they should just be close to each other.

A control room needs no soundproofing.

A control room needs a silent clock or watch and a stopwatch.

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**General rules for buying equipment:**

1. Don't buy retail. Make arrangements with an organization, church or school to use their name and get an organizational discount.

2. Never buy at a stereo shop. Use a sales outlet that stocks more than one make of equipment and ask the salesman for detailed comparative descriptions.

3. Check for durability. There should be no light weight or breakable plastic ornamentation, no extra gadgets or switches to break.

4. Make sure all equipment you buy is compatible. Can you use everything together without costly and inefficient adapters? Is the programme you make on one machine, playable on any other? Do the impedances of tape inputs and mikes match? (either both "high impedance" or "low impedance) Are patchcords interchangeable? It is possible to adapt any equipment to make a complete integrated unit. It is costly, requires technical expertise, therefore it makes sense to buy with compatibility in mind.
Buying tape recorders:

Ask yourself eight questions before buying any tape recorder:

1. Does it run in any position?
2. Are the heads and controls easily accessible?
3. Does it run on AC and DC power source? A "nickel cadmium" battery will outlast rougher treatment and is worth the extra money. You may decide to use disposable cheap flashlight batteries since they require no upkeep.
4. Does it record at 3 3/4 and 7 1/2 inches per second?
5. Does it have wide frequency response? (40 - 18,000 Hz is good)
6. Does it have limited distortion wow and flutter? (.03 is minimum)
7. Does it have a low signal to noise ratio? (48 db is good and anything more than that is better)
8. Is the machine easy to clean? Do you have a warranty to cover repairs and will the outfit guarantee that parts are readily available? It may make sense to work out a repair contract for annual cleaning and maintenance at the time of purchase.

Cleaning and maintaining a tape recorder:

Keep the machine closed, and the heads covered except when in use. Carry the machine in its case at all times and store in a dry place. Keep the batteries charged. Batteries which are not being used will require periodic recharging. A tape recorder battery will play for about 6 hours without requiring recharging. Flashlight batteries are good for 1 - 1½ hours. Manganese batteries are more expensive but give almost 10 hours. Flashlight batteries cannot be recharged.
Clean heads after every ten hours of machine use, or after the machine has been used for editing

- To clean heads use cue-tips and denatured alcohol. Gently wipe tape residue from record and erase heads. Clean pinch roller and tape guides in same manner.

Demagnetize the heads two or three times a year.

- Run demagnetizer over heads very slowly being careful not to touch heads in passing. Also demagnetize other metal items in the tape path. Move the demagnetizer slowly about 10 times vertically and 10 times horizontally over each area. Then slowly move demagnetizer to a distance of 2-3 feet from machine before you unplug it. If you move too quickly or unplug it too soon, you may cause the transfer of the magnetic fields back to the heads.

Once a year, take machines in for servicing. Heads should be aligned, the fan belt checked and the internal workings of the machine thoroughly cleaned. This should be done by a technician.

Repair bills can eat away all money for new equipment. If you can, develop a relationship with one technician who will service your equipment regularly. The technician will get to know your equipment and needs and the cost will be cut down, if not by his friendliness, at least by the smaller amount of exploration time involved in making repairs.
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