Abstract

Discussions of the use of new media in education have almost always been limited to questions of efficiency and effectiveness. Little thought has been given to the consequences of these uses for notions of curriculum and pedagogy. In this paper the *Sesame Street* planning documents are analysed. The assumptions about television, curriculum and pedagogy are discussed in relation to the program which has initially developed.

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Sesame Street: The Packaging of a Curriculum

Introduction

Sesame Street was one of the first educational programs whose developers suggested that there could be a profound difference between classroom teaching and teaching by television. They assumed that any attempt to create a preschool educational program which was to be delivered by television into homes should be very different from ordinary school-based preschool education. As Gerald Lesser, the Chairman of the Board of Advisors of the Children's Television Workshop and a professor of education at Harvard University, wrote

...classroom teaching and televised teaching each has its own integrity; there is no reason to believe that successful techniques in one can be applied in the other...[1]

This paper is an examination of how the use of a particular model and medium of communication influenced the conceptualization of a particular educational program. The model of communication is the advertisement, the medium is television. I shall show the educational limitations of a pre-school program which is based on models of commercial television and mass advertising.

It should be noted, that most of the literature to be examined covers the planning for the first season of the program, and the first year in which the program was broadcast in the U.S. Since that time there has been a systematic revision of both instructional goals and program methods. In fact, viewing the series being broadcast in the U.S. since then suggests that many of the techniques which were a major feature of the initial season have not been modified in significant ways. This is especially true of the program's use of the television commercial as the basis for teaching letter and number recognition. The more recent series' do not seem to utilize that method of teaching as frequently as did the first series.

Because these changes have been made, it might be argued that the following discussion loses some of its force. But the discussion is not intended as a critique of the program, at that time or now. Rather the discussion is intended to present a way of understanding the various consequences of introducing new media of communication as part of the educational process. The planning phase of *Sesame Street*, and its first programs are of interest because they illustrate how an educational program can be significantly influenced by assumptions about the medium.

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Sesame Street - The Background

The Children's Television Workshop, and its first project *Sesame Street*, grew out of two concerns. The first was the National Educational Association, Educational Policies Commission's recommendation that all children should have the opportunity to go to school at public expense beginning at the age of four. Setting aside the capital costs of building new classrooms, the cost of educating all four year olds in public schools would have come to about $2.75 billion.[2] The other concern was that experiences during the first six years of a child's life are critically important in the child's future development, and that the differences between the academic achievement of disadvantaged and middle-class children appear in the early school years and increase dramatically in the higher grades. Taken together, these facts suggested that new approaches to preschool education were worthy of consideration. These new approaches were to attempt to reach the disadvantaged child with preschool education at a price which both the government and the recipient could afford.

It was against this background of pressing financial, educational, and social concerns that Joan Ganz Cooney, with the support of the Carnegie Corporation, began to investigate the possibility that Broadcast television might be an effective device for meeting the challenges.[3] But it wasn't just that *television* might be an effective method for teaching preschoolers, but that a *particular kind of television programming* would be worth investigating. This television programming was to have what was described by Cooney as "production values", that is, meaning, pace, humor, professional performing talent, film inserts, animation, and so forth. And the television programming which epitomized this approach was the television commercial. She noted that:

> Anyone who has small television viewers at home can testify to the fascination that commercials hold for children. Parents report that their children learn to recite all sorts of advertising slogans, read product names on the screen (and more remarkably elsewhere), and to sing commercial jingles. It is of course open to serious question how valuable the content is that these commercials teach, but they do prove a point: children can and do learn, *in the traditional educational sense*, from watching television.[4] (Emphasis added)

Cooney then went on to argue that if we accept the premise that television commercials are instructionally effective, it is important to be aware of their characteristics. These are frequent repetition, clever visual presentation, brevity, and clarity. She noted that:

> ...their [television commercials'] success is not due to any magic formula. Instead television commercials appear to have adopted what have always been effective teaching techniques; unfortunately for our children, many teachers have forgotten what Madison Avenue, with consumate skill, has cribbed from them.[5]

So from the very earliest conceptualizations of what was to become known as *Sesame Street*, television advertising was presented as a model to emulate. The educational consequences of this approach will be discussed in this paper.

I will argue that the adoption of television advertising techniques proved to be a double-edged sword. That is, on the one hand the novelty and immediate appeal of the program guaranteed wide publicity and a relatively large audience from those groups which were consumers of traditional mass communication media. On the other hand the use of television advertising techniques proved to be the major bone of contention for some critics of the program. While the specifity of the criticisms varied, one recurring theme was that it was inappropriate for television advertising techniques to be used for an educational program.[6] The challenge posed by the criticism is whether or not children do indeed "learn in the traditional educational sense" from television advertising techniques as claimed by Cooney.[7]

Television Advertising - Techniques and Assumptions

Television advertising is only one part of a complex mass communication system which

operates according to a number of assumptions or principles. Wright describes these operational principles. First, "mass communication is directed toward a relatively large, heterogenous and anonymous audience". Second, "mass communication may be characterized as public, rapid, and transient". Third, "the communicator in mass media usually works through a complex corporate organization embodying an extensive division of labor and an accompanying degree of expense".[8] Any activities within the mass communications industry are guided by these operational constraints. The television advertising industry operates according to an additional set of assumptions about its tasks and method. First, the objective of advertising is to have its target audience act in a particular way, or believe in the truth of a particular proposition. There is little or no concern for the nature of the intervening processes of argumentation or persuasion beyond their success in fostering particular acts of beliefs. This focus on outcomes with little regard for the nature of the 'learning' process differs quite radically from the way it is held that educational programs should be judged. For educational theorists argue that both the *processes* and *objectives* of education are subject to evaluation.

Second, television advertisements must compete, not only with each other, but with the many activities which can occur in the vicinity of a television set. This plus the time constraints under which advertisers work, encourages the use of dramatic audio and visual devices. At best, such a situation allows for the presentation of a single, often simple idea, or the presentation of a mood or feeling. Rational argument or explanation is not the strength of the television advertising commercial. In contrast with this, argument, explanation and reasons for believing are an important part of the educational process.

Third, television advertising involves the transmission of discrete and unconnected attitudes and behaviors. Advertisers are interested in presenting a particular point of view on a subject rather than to encourage reflection upon it. This differs quite radically from an educational presentation of a subject. For example, while mere consumption of a product is the goal of patent medicine advertising, other things such as the appropriateness and various consequences of use would be a part of an educational program. For example, the use of patent medicine might be related to the issue of symptoms - both real and imagined, the need to seek medical advice, and the danger of habituation and cross-drug reactions. The program might be designed to enable the student to make reasoned decisions about the use of patent medicine, at that time or in the future.

The goal of television advertising is to change behaviors and attitudes. Advertisers spend large amounts of money promoting differences between products which on closer examination are meaningless or have insignificant differences for the purchaser. For the advertiser it is important not whether the consumer made a reasoned and self-conscious decision, but that the decision designed by the advertiser was made.[9] This focus on specific outcomes to the exclusion of concern for the many processes of 'coming to know' is one way of distinguishing television advertising from the educational experience.

The fourth major assumption made by television advertisers is that the audience for television commercials is homogeneous. Or at least, if the viewing audience are not really homogeneous, there will be an attempt to discover those characteristics which are shared. This is why so many advertisements depend upon general appeals such as the need for affection, good health, or prestige while they ignore the various ways in which people differ. Again, it is possible that educational activities involve attention to the development of individual differences as well as similarities, teaching techniques deriving from mass communication can deal adequately only with the development of similarities.[10]

The Choice of Program Goals for Sesame Street

The goals and objectives for *Sesame Street* were formulated during five seminars

conducted by the Children's Television Workshop staff with experts in preschool educa-tion, psychology, and communication. Each seminar was to develop goals and objectives in a particular area. The areas were social or moral and affective development, language and reading; mathematics and numerical skills; reasoning, problem solving and perception. Each seminar, which lasted for three days, resulted in reports of appropriate goals and suggested methods for achieving those goals. These reports were further distilled into a statement of instructional objectives for the first year of the program.[11]

For this study, the actual choice of goals and objectives is less interesting than the criteria which were used to decide on the inclusion of some goals and the exclusion of others. For as noted by Gibbon and Palmer, participants in the seminar on language and reading consi-dered a far wider range of goals for inclusion in the curriculum than the series could possibly treat.[12]

The goals which were finally adopted were those "which appeared to be suitable for television treatment" and which were thought to offer the greatest potential benefits to the principle target audience of preschool, urban, disadvantaged children.[13]

The Television Commercial Model and Program Focus

The goals of number and letter recognition, and the recitation of the alphabet took up over half of the program time allocated to instruction. It was in these goal areas that the television advertising format was the most obvious. Letter and number recognition was taught using short 'commercials' for each number and letter, and these were repeated a number of times during the series. It should be remembered that the use of these production techniques had been mentioned from the very beginnings of the program, even before an organization had been set up to produce the program.

It is important to consider how the choice of these letter and number goals was influenced by the adoption of the television commercial as the model for teaching and learning. It is reasonable to conjecture that instructional goals of number and letter recognition were stressed in the program because, as relatively small and discrete units of information, they were admirably suited to a television commercial treatment. It is interesting to note that language instruction based on rote memorization and alphabetization has been banished from the school for years. The method used by schools now is based on structural linguistic research. This method favors the teaching of phrases rather than the memorization of individual letters.[14]

A sweeping criticism of the commercial advertising model chosen by the producers of *Sesame Street* came from Monica Sims, the Head of Children's Programs of the British Broadcasting Corporation (BBC). In justifying the BBC rejection of *Sesame Street* for broadcast in the United Kingdom, she asked:

> Do we really have to import commercial hard-selling techniques into our own programs because *Sesame Street* researchers tell us that in America children will not watch anything quiet or thoughtful?[15]

In answer to her own question she suggested that *Sesame Street* was the outcome of a different "philosophy" of programming. Where the American child watched television for hours on end and was a passive "box-watcher", the BBC philosophy of programming aimed to encourage the imagination, creativity, and activity of the child. The implication was that the *Sesame Street* approach and the BBC philosophy were fundamentally opposed.

It would be too easy to dismiss Monica Sims' objections as being motivated by territorial loyalty, where imported programming constituted a threat to the activities of the Children's Programme Department of the BBC. It would also be too easy to dismiss the objections as mere cultural independence, even though there are elements of this thinking in her argument. Sims claims, for example, that the target audience of the program in the U.S. is

socially, educationally, and culturally different from that in England, so that no program could be of value to children both in the ghettos of the U.S. and the cities of England.

Sims is making two kinds of claims. One set of claims refers to target population characteristics. It would be possible to discover whether, in fact, the differences between children in the U.S. and Britain are great enough to warrant the design of separate educational programs. It may be that variation of children in social and educational situation *within* America is greater than variation *between* children's situations in the United States and Great Britain.

Monica Sims writes that the producers of *Sesame Street* started with a correct assumption about the viewing habits and expectations of young children in the United States. These children were accustomed to watching "endless cartoons, commercials, soap operas, and crime series". She believes that children in Britain have been more fortunate because they have had the opportunity to watch a variety of high quality programs which were especially made for them. Children in England have not watched the kinds of programs which are watched by their American counterparts. Again, this is a claim which can be verified by investigation.

Another quasi-empirical point made by Monica Sims is her equation of the viewing of certain kinds of television programs with "passivity". She contrasts this with the BBC intention to "provide an imaginative and intellectual stimulus and to encourage creativity and activity" in the design of its programs for children. Whether or not particular kinds of programs produce particular kinds of effects is open to examination and investigation.

But the claim she makes about the BBC view of the educational use of television is more than an empirical claim. It reflects a basic difference in attitude to education and television, and involves a particular view of the educational process and the place of television within that process. The issue is the educational validity of taking over the commercial advertising model of television production.

When the producers of *Sesame Street* pragmatically decided to take the program preferences of their target audience as given, and to attempt to design a program which had a similar format, they made particular assumptions about the educational process.

The BBC had a different approach. The *Play School* program is designed as a stimulus and a guide for activities which will take place after the program has concluded. the educational process is modelled on the nursery school. *Play School* encouraged manipulative, exploratory, and social activities; in contrast with this, *Sesame Street* was obviously biased toward the development of discrete, specific skills such as letter recognition and counting.

Testing the Program Materials

So far the discussion has focussed on the planning and goal setting for the program. It is revealing to consider the methods which were developed for testing the program materials while they were being written and produced. An examination of those procedures provides additional information about some of the assumptions about teaching and learning which were made by the program designers and producers.

When the program was being designed, very little was actually known about the viewing habits and preferences of the target audience. In order to fill this void it was decided to conduct some experiments which would give some idea of the viewing habits and preferences of children between the age of three and five. Although never acknowledged in the literature, the method devised for testing the appeal of various elements in the program derives quite directly from methods used to measure the impact of television commercials.

These methods have been developed to assist in the design of commercials which arouse and keep the interest of audiences over their entire length.

Experimental portions of the *Sesame Street* program were shown on one television screen while another screen displayed distractor images. The distractor images were changed at regular intervals and each change was accompanied by an audible 'click'. This meant that the child participating in the experiment was aware that a new visual diversion was available at the slight twist of the head.[16]

The assumption was that the program material which was most interesting for the child would be most likely to keep the child's attention for the longest periods of time. This method was used to measure the attention-getting and attention-keeping abilities of various kinds of production techniques and content. Based on the results of this set of experiments, program material and production techniques were ranked according to their ability to gain and hold the attention of preschool children. It was found that there were dramatic changes in visual attention from child to child, program to program, and moment to moment within a program. Animated segments tended to gain and keep attention, while segments which showed adults talking rated low.

Of most interest to this discussion is the finding that television advertising commercials brought the attention level of the children near to the maximum. This finding, and the way it was used is worthy of some discussion. In the first place, the result should not be surprising because the method used to measure the attention of the preschool children was very similar to the method used to evaluate the television commercials. But it is the underlying assumption that program material should be rated on its ability to gain and maintain unwavering attention which needs to be discussed. Why should this be a criterion to be used in the design of the program?

There is a difference between keeping viewers attention and attempting to maintain rapt attention throughout the program. For example, the long running children's program, *Mister Roger's Neighborhood* scored relatively badly when tested in this manner. But this is not to say that over the years it has not been able to keep its audience involved in the program, and that children who watch the program have not learned. Perhaps attention does wander, and eyes do move from the television screen, but it is possible to envision instances where that might be of value and importance. For assuming that television viewing is not always solitary, it is possible that interpersonal communications such as talking or touching or moving about might be educationally appropriate.

Utilization as a Determinant of Content

Television in the home is a resource which can be monopolized by various members of the household. As there are usually fewer television sets than members of a household who are home at any time, a decision has to be made about which program will be watched at a particular time. Producers of educational programs cannot remove competing programs from the air, or guarantee that the program will be watched by the target audience. For the producers of *Sesame Street* this meant that they needed to design programs which appealed to family members who might compete with the four or five year olds for use of the television set.

Even though research showed that children between three and five years old were able to understand plays on words and puns or double meanings in the *Sesame Street* program, these elements were regularly included in the program for the benefit of older brothers, sisters, and parents.[17] This decision makes an appraisal of the programs somewhat more complicated. Because material was presented for audiences other than the original target group, it becomes necessary to decide which material is included for which group. The program was not simply a program for preschool children.

Thus, the preschool child is being presented with material which it is not expected to be able to assimilate at this particular stage of development. This diversification of content derives from the common television viewing environment, and the way television is used in the home. For it is obvious that if *Sesame Street* was designed for use in the classroom where attention of children could be controlled, where a relatively homogeneous audience could be guaranteed, and where there would be no need to satisfy the interest of any non-target audiences which happened to be present, a program tailored to the developmental level of the target population would be possible. As it was, the interests of other non-target audiences had to be satisfied.

Distribution and Cost Influences on Design

The program's stress on a particular set of skills can be related to other aspects of the use of television. As was noted earlier, one of the goals of the television-based programs which was being proposed by Jan Ganz Cooney was economy of scale. It was realized that the production of a well researched and professionally produced program would be very expensive and that this could only be justified if the program was viewed by larger numbers of children nationwide. This meant that the form and content of the program had to appeal to a wide variety of children and parents from different cultural and economic backgrounds. It also had to be acceptable to the managements of television stations which would eventually broadcast the program. If any one of these groups did not approve of the program, the overall success of the program would be jeopardized.

Because the economics of national television distribution placed these constraints on the producers of the program, it was decided to emphasize a particular set of skills. As Lesser notes:

> Because television reaches a mass national audience, we had to aim to teach only certain universal goals that we hoped all children would achieve. We assumed that all children would learn to read and write, for example, but we did not expect each child to play the violin or to become an architect or a poet, these being particular goals defined by the individual child's aptitudes, interests, and experiences.[18]

The emphasis on particular activities is also evident from the content analysis of all 130 programs in the first season of *Sesame Street*. While almost 20% of the total program time was found to be taken up with entertainment, about 24% of the total program time was spent with letter and number goals. But if one combines the Letter, Number, Geometric Form, and Self goals which primarily involved labelling, and recitation, 33% of the total program time, and almost half of the time devoted to instructional activities was spent on specifically cognitive objectives. Socially oriented goals which involved teaching about social institutions and cooperative activity accounted only 5.8% of the total instructional time.[19]

It should not be assumed that the amount of time devoted to various instructional goals is an adequate measure of their importance to the program designers. Some instructional goals take more time than others to achieve, but the focus on cognitive goals is confirmed by a number of different sources including one of the major participants in the program's conceptualization.

In some ways Gerald Lesser is justified in rejecting professional training for *preschool students*. Most preschool programs do exactly that. But there were other goals and objectives which could have been included in the first season. Gerald Lesser notes that many critics thought that the goals of the program should have been oriented to the development of children's feelings, self-esteem, curiosity, persistence, and self-confidence. Lesser's rationale for not including these objectives as a part of the program were that the program was to be a supplement to other educational activities. In addition there was an uneasiness about raising social, moral, and emotional issues on a medium that reached anyone who cared to watch. There was no guarantee that the child would have

ready access to a competent adult or older child with whom to work through any feelings aroused by the program. Even so, there was a hope that children would learn from the social behavior that was demonstrated on the program. There was the hope that children would learn how to act with "kindness, warmth, and even simple courtesy" as a result of watching the program.[20]

The producers' reluctance to include social, moral, and emotional goals must be understood within the context of an educational system whose constituency varies widely from place to place. In addition, local communities reserve the right to control the ideas which may be taught within the schools. Note for example community reactions and outrage at attempts to introduce sex education and the theory of evolution into schools. But again the subtle influence of the perceived characteristics of the medium intrude on the development of the program. For while particular subjects and views might be acceptable in some communities, those communities are in fact receiving a program which is designed to be acceptable for the greatest number of communities.

Seasame Street and Educational Theory

Given that *Sesame Street* was a self-conscious effort to design and implement a preschool program using a particular set of techniques, our task is now to discuss this innovative program with reference to some general propositions about educational theory.

Educational philosophers have argued that education can be thought of as a *task* as well as an *achievement*. For example, "hunting" can be thought of as a task, while "finding" can be thought of as an achievement. But "education" is a word which can be thought of in either way. As R.S. Peters notes:

> ...to educate someone implies not only some sort of achievement, but also one that is worthwhile. It also implies that the manner of doing this should not be morally objectionable.[21]

Now this is not to say that education as both task and achievement has operated by fixed canons or rules throughout history or across cultures. Obviously the form and content of education has, and still does vary widely from time to time and place to place. The study at hand is in part, an attempt to understand how the introduction of new communication technologies can influence not only the task of eduction but also what is considered to be an educational achievement.

As Crittenden has noted, the means and ends of education are not related in a merely contingent way, as a mode of travel is related to arrival at a destination. The choice of one method of education over another involves not only questions of expediency, but questions of moral responsibility for the consequences which arise when particular methods are chosen. For example, one can be taught multiplication using techniques of conditioning, explanation, or discovery. The choice of one method over another involves judgements about what is an appropriate educational practice.[22]

Green for example, discusses the similarities with, and differences between some of the activities associated with teaching. He discusses teaching, instructing, indoctrinating, conditioning, and training. The key "ingredient" which distinguishes these various learning processes appear to be the use and manifestation of intelligence.[23] So while the outcomes of many different teaching processes might superficially appear to be similar, the difference between the various processes can be seen in the ways the intelligence of the student is catered to and developed.[24] Reasoning and questioning are an important part of what we call intelligence. Green makes a related point about indoctrination. Even though it might appear that indoctrination involves the passing on of beliefs, it does not involve the presentation of reasons in support of those beliefs. One can be indoctrinated without possessing good reasons, evidence or even knowing the truth.[25]

Scheffler makes a similar point, but in so doing he adds something which makes the issue infinitely more complicated. He argues that,

To teach is thus, in the standard sense of the term, to acknowledge the reason of the pupil as his demand for and judgement of reasons, even though such demands are not uniformly appropriate at every phase of the teaching interval...[26]

He is presumably suggesting that the use and encouragement of reasons is to be encouraged wherever possible, yet it cannot be an ingredient of every teaching situation. This point becomes important because it raises the possibility that some educational tasks might be approached without acknowledgement and encouragement of the child's reason, judgement, and intelligence.

It is possible that *Sesame Street* might be dealing with children at a developmental level where it is inappropriate to expect the child to use judgement or formal reasoning. Furthermore, it is important to ask whether the television advertising commercial normally informs the viewer and presents reasons and evidence in the manner which Green describes. Or does the commercial in fact involve indoctrination, or the mere transfer of beliefs and attitudes without the kinds of supporting reasons which develop or assume the existence of intelligence? Admittedly it is difficult to characterize all television commercials as fiting one particular model. Some advertising may involve the exercise of intelligence by the viewer. But it can be argued that many television advertising messages are designed to produce a particular response by means of one narrowly conceived type of process. Accordingly television advertising methods might not be considered "educational" in nature.

Discussion

The series of conferences which were convened in order to arrive at *Sesame Street's* instructional goals show clearly that goals as well as techniques were considered in the planning process. But the program producers who interpreted the goal statements were committed to the commercial advertising format from the outset. So in a very important sense, it can be argued that *Sesame Street* is an example of technological or technicist thinking - where technique becomes an overarching consideration influencing the choice of instructional goals.[27]

Therefore, even while the achievements of children who watch *Sesame Street* can be pointed to with pride by parents and producers, there is always the possibility that the achievement of these goals in this particular way might change our view of education. Put another way, evaluations of effectiveness are little help in understanding the broader consequences and assumptions of a particular educational program. An educational program might be effective while being inappropriate from an educational point of view. As Crittenden notes, educators have a primary duty to ensure

that education in all its phases does resist the temptation to compromise its primary concern with those instruments of explanation, interpretation, and evaluation that provides the basis on which it can perform a detached, critical (and unique) role in society.[28]

Any set of techniques which undermines that primary concern becomes questionable as an educational experience.

Thus the problem of the educational application of a new communication medium is not simply a technical problem of transferring some "educational content" to some new medium. Complications arise when the technological contraints and social expectations which are associated with each medium of cummunication intrude to the point where they influence the ways in which both the educational process and the content of education is construed.

Les discussions sur l'emploi des nouveaux media en éducation se sont toujours limitées aux problèmes de rendement et d'efficacité: On a très peu envisagé les conséquences de l'emploi de ces media sur l'établissement des programmes d'étude et sur la pédagogie. Dans cet article, nous analysons les documents qui sont à la base de "Sesame Street" et nous discutons les hypothèses concernant la télévision, le programme et la pédagogie en relation avec l'émission qui a été produite.

Notes

[1]Gerald S. Lesser, *Children and Television: Lessons from Sesame Street* (New York: Random House, 1974), p. 191.

[2]This figure is quoted in Joan Ganz Cooney, "Television for Preschool Children: A Proposal" (New York: Carnegie Corportation, February 19, 1968) (Mimeographed) p. 5, and the authority cited is *Time*, June, 1966

[3]For a description of the genesis of the Children's Television Workshop and *Sesame Street* see Richard M. Polsky, *Getting to Sesame Street: Origins of the Children's Television Workshop* (New York: Praeger Publishers, 1974).

[4]Joan Ganz Cooney, "The Potential Uses of Television in Preschool education" (New York: Carnegie Corportation, October 1966) (Mimeographed), p. 10. It appears that Cooney and Lesser *op.cit.* are at odds - with Lesser arguing for the special nature of television teaching as opposed to classroom teaching, while Cooney argues that television advertising uses good classroom teaching techniques.

[5]*Ibid.*

[6]See Jeanette Veatch, "Program Review of *Sesame Street*", *Educational Broadcasting Review*, No. 4 (April, 1970), pp. 57-60, the Letter from Monica Sims, Head, Children's Programmes, British Broadcasting Corporating to the Editor, *The Manchester Guardian*, December 22, 1970 and Lesser *op.cit.*, pp. 174-181.

[7]What it means to "learn in the traditional educational sense" will be discussed elsewhere.

[8]C. Wright, *Mass Communication: A Sociological Perspective* (New York: Random House, 1959), p. 19.

[9]An account of this process by a highly successful advertising executive can be found in Rosser Reeves', *Reality in Advertising* (New York: Knopf, 1961). A critique of that position is presented in Jacques Ellul, *Propaganda: The Formation of Men's Attitudes* (New York: Vintage, 1973).

[10]The derivations of the words *information* and *communication* reveal some interesting differences. The Oxford English dictionary shows *information* to be derived from the Old French *enformer* which meant to shape, to fashion or to mould. On the other hand *communication* is derived from the Latin, *communicare*, to make common, to share and to divide among. This suggests that *information* technology might be thought of as technologies designed and used to shape, to fashion or to mould audiences in particular ways without significant feedback from the audience, while *communication* technology might describe technologies which allow for the sharing of responsibility for interactions between people. For example, a Public Address System or Television Network might be considered to be an information system because audience feedback is extremely limited while a telephone system might be described as a communication system because the role of sender or receiver of information may be exchanged between the two communicators.

[11]"Statement of Instructional Goals for the 1970-71 Experimental Season of *Sesame Street*" (New York: Children's Television Workshop, n.d.) (Mimeographed).

[12]Samuel Y. Gibbon, Jr. and Edward L. Palmer, "Pre-Reading on *Sesame Street*" (New York: Children's Television Workshop, June 1, 1970) (Mimeographed), p. 13.

[13]*Ibid.*

[14]Samuel Kliger, "Fog Over *Sesame Street*", Teachers College Record, 72 No. 1 (September 1970), p. 48.

[15]Sims, *op.cit.*

[16]Barbara Frengel Reeves, *The First Year of Sesame Street: The Formative Research* (New York: Children's Television Workshop, December 1970), pp. 7-10.

[17]*Ibid.*, p. 18.

[18]Lesser, *op.cit.*, p. 233.

[19]S. Ball and G. A. Bogatz, *The First Year of Sesame Street: An Evaluation* (Princeton, N. J.: Educational Testing Service, 1970), p. 45.

[20]Lesser, *op.cit.*, p. 62.

[21]R. S. Peters, *Ethics and Education* (Glenview, Illinois: Scott Foresman and Company, 1968), p. 3.

[22]Brian S. Crittenden, "A Critique of the Bereiter-Engelman Preschool Program", *School Review*, 78, No. 2 (February, 1970), p. 162.

[23]Thomas F. Green, *The Activities of Teaching* (New York: McGraw Hill Book Company, 1971), p. 25.

[24]*Ibid.*, p. 74.

[25]*Ibid.*, p. 30.

[26]Israel Scheffler, *Conditions of Knowledge: An Introduction to Epistemology and Education.* (Glenview, Illinois: Scott Foresman and Company, 1965).

[27]For a discussion of the concept technicism, see Manfred Stanley "Literacy: The Crisis of Conventional Wisdom", *School Review*, 80, No. 3 (May, 1972), pp. 372-408.

[28]Crittenden, *op.cit.*, p. 164.