

# Public Communication and Behavior

## Volume 1

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# ***Public Communication and Behavior***

VOLUME 1

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# *Public Communication and Behavior*

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VOLUME 1

*Edited by*

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## *Preface*

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In 1964 in Volume 1 of *Advances in Experimental Social Psychology*, Leonard Berkowitz, the editor, wrote of the “tremendous growth in the number of articles, journals, and books relevant to social psychology” as “testimony to the vitality of the science and the energy of social psychologists.” He continued: “Quick to question . . . social psychologists are accumulating observations and research findings at an impressive rate. Thus, as facts multiply, the problems of their storage and integration become even more serious. If scientific research is to be conducted as efficiently as possible, information must be stored and made readily available when needed. . . . We hope that many people interested in the behavioral sciences will come to regard *Advances* as an important repository of information. However, as necessary as information storage is the integration of facts with which we shall be primarily concerned. . . . The papers in this series, then, will do more than report research findings. Interpretations and generalizations will also be offered so that we can see the ‘significance and consequences’ of the data and (hopefully) can go much further.”

There was an important caveat: “There is no claim (at least as far as the editor is concerned) that the theoretical statements presented in these volumes are the last word and will remain unaltered as additional information is obtained. We can be assured that most of the hypotheses listed in these pages will be found wanting in one way or another as the years go by. By presenting their hypotheses, the writers have contributed to the data collection and theory development that will question their own formulations. Their theoretical statements will help social psychology go further.”

*Advances in Experimental Social Psychology* is unabashedly acknowledged as the model for the present series. It has been superbly successful at what it set out to do; in its nineteenth volume at the age of 22, it is today

a venerable institution still under the editorship of Berkowitz that has been lively and provocative, occasionally brilliant, and very frequently the best single source for a critical and comprehensive review of a body of research. The promise to emphasize theory without ignoring empirical fact has been kept. So, too, has a promise not to ignore "observations and behavior in 'real-life' situations" despite the *Experimental* in the title because of the joint dependency of field and laboratory investigation in which the former may sometimes be the more valid means of inquiry, may suggest the hypotheses for laboratory experimentation, and may document the generalizability of laboratory findings to everyday life.

The present series is devoted to the study of communicatory behavior that has a public or social character. It will cover those portions of research and theory development so concerned within a wide range of disciplines and fields—advertising, child development, education, journalism, political science, sociology, and wherever else such scholarly activity occurs including, of course, social psychology. Thus it will embrace as broad a range of topics and perspectives as social psychology, for which almost every human endeavor imaginable has had some interest—as the scope and size of the various editions of the *Handbook of Social Psychology* testify. Otherwise, its ambitions and intentions are identical to those of *Advances* 22 years ago—theory, guided by empirical fact—and it is a response to a comparable growth in articles, journals, and books. Whether *Public Communication and Behavior* will be able to parallel its model in achievement and longevity is of course moot; this is one of those questions unsuitable for short-term laboratory experimentation and one which can only be answered with the playing out of events over time in real life. We shall have to wait and see. Every undertaking of this kind depends on a favorable intellectual climate and financial support. The editor would like to thank Edward Stephens, Dean of the S. I. Newhouse School, for the former, and the endowment established for the S. I. Newhouse Professor in Public Communications for the latter.

# *An Evaluation of the Models Used to Evaluate Television Series*

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## I. INTRODUCTION

This chapter is about metaevaluation. It seeks to evaluate the evaluation of educational television series that have been designed to modify the

knowledge, attitudes, or behaviors of persons who view at home or in educational settings. Buttressing the chapter is the assumption that it is important to evaluate how educational television series are evaluated because past evaluations may have helped educational television grow both by stimulating higher quality productions and by providing clear evidence of effectiveness. To attribute such consequences to evaluation may seem unusual to some, since until recently the evaluation literature was replete with complaints about how infrequently evaluations were used by practitioners or administrators at the federal, state, and local levels (see Cronbach, 1980; Weiss, 1980). Evaluations of the earliest Children's Television Workshop (CTW) products, particularly *Sesame Street*, stand out as exceptions, and it is important for evaluation theorists to ask why these evaluations attained this special status.

This theoretical issue may be less salient to practicing evaluators who, working within particular organizational contexts, constraints, and goals, have to get their job done and may not care how their work and its consequences compare with what occurs in other sectors, in other substantive areas within education, or even in other evaluations of educational television series. Nonetheless, we believe there is a useful role for those scholars who are willing to stand back from everyday practice in order to use logic and experience to identify and probe the assumptions undergirding the most salient current models of evaluation practice, irrespective of whether these models emphasize formative feedback to improve educational programming or summative feedback to describe the effects a series has had.

The first section of this chapter deals with *Sesame Street* and describes its catalytic role in developing new educational television series and upgrading prior estimates of what educational television might accomplish. Evaluation helped *Sesame Street* achieve these effects because of two claims to which the series contributed. The first was that it was successful because independent evaluations had demonstrated that it met most of its objectives and even had some unintended desirable consequences. The second claim was that some of the success of the series could be attributed to a unique blend of production, research, and evaluation that improved producers' decisions and came to be called the "CTW model," after the Children's Television Workshop which produced the series and conducted the research on production.

The second section of the chapter analyzes the CTW model. Major emphasis is placed on formative evaluation designed to provide producers with feedback about the effectiveness of filmed segments, pilot shows, and production formats. The analysis is important because some theorists of media evaluation believe that the CTW model provides a generative

mechanism that can be used with any new substantive topic and audience to produce higher quality programming, perhaps of the level of *Sesame Street*.

The third section of the chapter deals with summative evaluation for assessing the accomplishments of whole series. We concentrate on the goal-centered model developed to evaluate *Sesame Street* and *The Electric Company* (Ball & Bogatz, 1970, 1973; Bogatz & Ball, 1971), but also examine two other models. This comparative strategy permits us to contrast the procedures and assumptions of each model and to examine the kinds of information they generate and the kinds of information they require. All three models have been used in past media evaluations and are among the most viable alternatives from which the evaluators and sponsors of educational television series have to choose today in deciding on an orientation for their work.

## II. *SESAME STREET'S ACCOMPLISHMENTS*

### A. **Conceptual Foundations of *Sesame Street's* Success**

By almost any criterion, *Sesame Street* has been a success. It has won numerous awards from professional groups in television and education and has received rave reviews from media critics; the series has been adopted and adapted in many countries and languages; countless parents attest to its wholesomeness, particularly when compared to the alternatives available on commercial television; and product spin-offs have been numerous and commercially lucrative. The series has also passed perhaps the most difficult test of all. It has survived for more than 15 years in an era in which most other educational television programs aimed at national audiences have not been renewed after a few seasons of production. *Sesame Street* is a national institution, and arguably a global one.

*Sesame Street* had a dramatic impact on thinking about educational television because it demonstrated that certain problems that had earlier seemed indomitable could be overcome. One of these involved the relationship between entertainment and instruction. The series showed that the content of educational television need not be so dull that only a meager audience of voluntary viewers is reached. It also seemed to show that reaching a large percentage of the target viewing audience does not require so much entertainment that learning gains are trivial.

Further, *Sesame Street* demonstrated that a program can fit into one of the special niches educational television must occupy in the United States, where the formal educational system is highly decentralized and

the federal level plays a minor role compared to state and local levels. However, for a small number of educational issues the federal government plays a much larger role, especially in (1) protecting the interests of minorities who are potentially educationally disadvantaged because of language barriers or because they live in communities whose schools are not as good as those elsewhere; (2) exercising leadership in bringing new educational issues to the attention of schools and citizens and in providing technical assistance related to these new initiatives; and (3) financially supporting much of educational television because it is not otherwise commercially viable. Because of these federal functions the content of educational television reflects a special interest in minorities and new educational issues. Thus, *Sesame Street* has a special target audience of economically disadvantaged preschoolers; *The Electric Company* is aimed at second through fourth graders who have difficulty in reading—a group that includes a greater percentage of children from poor homes; and the many productions funded by the Emergency School Assistance Act (ESAA) are aimed at helping a diverse group of ethnic and language minorities. *Freestyle* was developed due to national concerns about sexism and *Over Easy* out of concerns about ageism, while fears about future shortages of scientists and technologists underlie *3-2-1 Contact* and a heightened consciousness of the role prevention might play in reducing health care costs underlies *Feeling Good*.

*Feeling Good* excepted, all of the above-mentioned series target viewers in particular age groups. To broadcast developmentally appropriate material to such groups creates problems for network and station officials whose commercial needs dictate large audiences, as well as for television producers who probably consider audience size one of the major criteria of personal success. From the perspective of television professionals the federal interest in age bands must seem all the more perverse because priority subaudiences are usually specified within the already narrow age bands. Thus, for *Sesame Street* economically disadvantaged children constitute the priority subaudience among all preschoolers; slow readers constitute the priority audience among 7- to 9-year-olds for *The Electric Company*, and Spanish speakers get the highest priority for *Carrascolendas* and *Villa Alegre*, although all elementary school children are targeted.

Part of *Sesame Street*'s importance derives from its demonstrated ability to capture large numbers of viewers in its special disadvantaged target audience while not losing its more general audience (all preschoolers) and even capturing the loyalty of some older children and parents. After *Sesame Street*, series developers felt more comfortable claiming they could

gain and hold significant numbers of viewers, and some federal funders were probably heartened by thoughts of the attractive cost-benefit ratios that follow from a series achieving large regular audiences.

The success of *Sesame Street* also probably helped to revise prior estimates of what educational television might achieve. In discussing factors that might improve educational outcomes, few educators or education theorists assign more than a minor role to educational television. This is because many educators find they cannot easily fit television into busy school schedules, and believe that its attention-holding techniques detract from teaching. Television may even threaten their sense of competence and control, an effect which has already occurred outside the United States, when educational media have been asked to play a very expanded role in school-based education (Schramm, Nelson, & Betham, 1981; McAnany, Oliveira, Orivel, & Stone, 1983). It is also possible that many teachers have attitudes toward educational television that are heavily influenced by what they think and feel about the medium in general. If so, educational television may be inadvertently associated with the low pedagogic quality of commercial programming and with the undue influence it may have on children's lives.

The low salience of educational television leads its advocates to justify it in ways that complement teachers without threatening them. Advocates seek to attract to educational television populations (1) that schools rarely want (e.g., the very young of *Sesame Street* and the very old of *Over Easy*), (2) that have fallen out of the normal grade progression of schools (second through fourth graders who cannot read), or (3) that schools cannot readily accommodate for reasons of culture (e.g., the target audiences of ESAA series) or staff availability (e.g., the current lack of science teachers at the elementary level). To complement schools even further, educational television is sometimes positioned so that its intended benefits are in curriculum areas to which schools assign low priority (e.g., the sex role antistereotyping of *Freestyle*, the self-concept change of the ESAA series, the excitement about science of *3-2-1 Contact*, or the health education of *Feeling Good*).

*Sesame Street* embodied the successful discovery of an important niche for educational television within the context prescribed by educators' attitudes about television. The series is not obviously threatening to teachers and involves content of obvious importance. Exemplified here is complementarity without descending to substantive topics most commentators would consider trivial or to the extreme audience segmentation that occurred with *La Bonne Aventure*, aimed only at Franco-Americans in northern New England.

## B. *Sesame Street* as a Catalyst

It is one thing to arouse hope about television's educational potential with an unprecedented success like *Sesame Street*; it is quite another to know why the success came about. *Sesame Street* is especially important because some of its developers have claimed to know *why* it is successful, and valid explanatory knowledge makes it possible to identify the causal forces responsible for success. If general enough, these can then be used to generate new programs with different subject matter and target audiences that also stand a good chance of being successful (Cronbach, 1980, 1982). The model advanced to explain *Sesame Street*'s high-quality programming came to be called the "CTW model" (Palmer, 1974, 1978). It incorporates three major components: (1) the availability of creative production staff who value research, (2) the presence of researchers knowledgeable about the subject matter being taught, and (3) the availability of formative evaluators whose job it is to provide producers with feedback about the material they plan to shoot or have already shot.

No feature of *Sesame Street* was adopted with more enthusiasm by funders of educational television, production companies, and media scholars than the claim that continuous formative evaluation, substantive knowledge, and production skills could together increase the quality of media production. Crane (1980) reported that soon after *Sesame Street* the Agency for Instructional Television was using the model in its many productions (see Rockman, 1976), as was the Ontario Educational Communications Authority (see Nickerson & Gillis, 1979). Crane even alluded to commercial companies using it, citing Quiroga and Crane (1978) and Rushnell (1980). In discussing the origins of *Freestyle*, Johnston and Ettema (1982) first mentioned the success of *Sesame Street* as a catalyst that helped to obtain funding from the National Institute of Education (NIE). They went on to say:

The example of *Sesame Street* also had impact on NIE's plans for the way the series would be developed. Following the production model so successfully used by the Children's Television Workshop, educators, formative researchers, and television professionals were all to work together closely to produce the series . . . . The educators were to draw up a curriculum plan that would guide all later work, and then . . . three experimental pilot television shows were to be produced and tested. Based on the lessons learned . . . the series and supporting materials were to be designed, produced, and distributed. (pp. 28–29)

In providing funds for a version of the CTW model, NIE officials were presumably betting that the model would enhance not only the technical quality of the series but eventually also the major outcomes—sex stereotyping and career choices among a very large audience of viewers. A

similar bet was presumably made by the government agencies that funded subsequent CTW productions—*The Electric Company*, *Feeling Good*, and *3-2-1 Contact*—each of which had resources to implement some form of the CTW model in the hope of reaching and teaching large audiences.

The crucial role attributed to continuous in-house research, content expertise, and first-rate production is evident in written and oral testimony presented during the 1971 United States Senate hearings on the educational television component of ESAA. Lloyd Morrisett, Chairman of the CTW Board, and James A. Perkins, Chairman of the International Council for Educational Development, tried to calm three committee fears. First, they cited evidence from Ball and Bogatz (1970) and Bogatz and Ball (1971) which suggested that *Sesame Street* helped racially isolated youngsters because it narrowed achievement gaps between children from richer and poorer homes. They then cited the same studies to reassure senators that educational television would have significant affective and social, as well as cognitive, outcomes. Finally, in the brief discussion period, Senator Javits asked how high-quality programming could be assured. Perkins deferred to Morrisett who stated verbally:

Section 10 of the bill includes language requiring that recipients of such funds conduct appropriate research and evaluation. In the development of "Sesame Street" and in the production of it, one vital element in it has been continual research on the effects that small segments of the show and total shows have on groups of children of the same kind that will be subsequently viewing it over the air.

So with this form of research and continuous evaluation, it is possible for the producers of the television show to assure themselves in advance that it will have the kinds of positive effects that they desire and are demanded in the act. (U.S. Senate Committee on Labor and Public Welfare, 1971, p. 576)

Senator Mondale later asked, "So it has been the quality of production, the planning, the quality of performers, the sophistication of education input that made the difference in *Sesame Street*?"—to which Morrisett replied, "Definitely."

When ESAA-TV was finally approved, the authorization contained provisions mandating "effective evaluation" and state-of-the-art production. No more than 10 new series were authorized per year, suggesting a preference for a smaller number of high-budget productions with continuous evaluation rather than a larger number of productions with smaller budgets and less input from research. The congressional intent for ESAA-TV reflects the influence of *Sesame Street*'s pedagogic success and the claim that a particular production model was responsible for the success and could be used to produce new series with novel goals and target audiences. Indeed, since *Sesame Street*, some form of formative evaluation has been considered necessary for nearly all educational television productions.

Evaluation has clearly contributed to the success of *Sesame Street*. The summative evaluations of *Sesame Street* were used both to provide an independent source of legitimacy for the series' widely perceived pedagogic success and to document achievements that individual parents or decision-makers could not easily detect because they were more subtle (e.g., changes in the ability to classify), smaller (e.g., changes in conceptions of justice), or dependent on group comparisons (e.g., conclusions about narrowing achievement gaps between children from poor and richer homes). Although many in evaluation bemoan the low frequency with which their findings are used by policymakers or service deliverers, this was not the case with *Sesame Street*. Evaluation contributed in as yet not fully understood ways to the show being used as a catalyst for new educational series and as an impetus to revise previous modest assessments about the educational potential of television. Because these impacts were so positive and so unique when compared to the achievements of evaluation in other social service sectors, it would be useful to evaluate the models of evaluation that gave rise to these beneficial results. But to do so requires greater explicitness about what we mean by evaluation.

### C. The Logic of Evaluation

Evaluation is concerned with assigning value. Once a decision has been made about what to evaluate, the logic of assigning value is relatively clear-cut. Scriven (1981) has described it as a four-step process. First, criteria of merit are established. For example, if one wanted to buy an automobile, one might list the attributes of assumed importance: cost, gas mileage, interior space, noise level, repair record, etc. Second, standards of comparison have to be set, such as when purchasers compare one automobile model with others of similar price and size. (It rarely makes sense to evaluate a Toyota against a Rolls Royce, although purchasers do sometimes have to decide whether to buy a car instead of a motorcycle or Jeep.) Third, measurement somehow has to be made of each criterion for each comparison. To do this, prospective auto purchasers might ask other consumers about their experiences with the models they own, or they might test-drive models, consult automobile magazines, or combine several of these data collection methods. The final step in the logic of evaluation involves synthesizing the data and deciding what to do—in the case of an automobile, what to purchase. This same metatheoretic logic is involved in traditional social science, where the criteria of merit are called dependent variables, standards of comparison are called comparison groups, data collection has the same name, and the final synthesis is a product of statistical testing. However, hypotheses are usually the target