PROGRAMMING HEALTH PORTRAYALS: WHAT VIEWERS SEE, SAY, AND DO

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January 1981

Prepared for Television and Behavior: Ten Years of Scientific Progress and Implications for the 80's, the National Institute of Mental Health update of the original report of the Surgeon General's Scientific Advisory Committee on Television and Social Behavior.

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by

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It is most appropriate that this volume of scientific progress since the original report of the Surgeon General's Scientific Advisory Committee on Television and Social Behavior include research on health. Although investigation of television's contribution to health-related conceptions and behaviors has lagged behind violence, sex, social roles, and other concerns, several policy and research developments, not to mention salience to the public health mission, make such attention timely as well as needed.

One development is the Surgeon General's recent call for a reordering of health priorities. Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention (1979) concluded that culturally sustained behavioral and lifestyle factors account for as much as half of U.S. mortality.

A shift in health priorities to cultural and behavioral research highlights the central role of television in socializing individuals and stabilizing lifestyles. The success or failure of educational and informational campaigns depends largely on the broader cultural context into which they are injected. Few campaigns can succeed without knowing what they are up against. Today that means knowing what messages and images television as a whole discharges into the mainstream of common consciousness.

Our long-range project, called Cultural Indicators, was given its first major impetus in the research for the original report to the Surgeon General. It has tracked the messages and images embedded in network television drama (and recently commercials), and viewer conceptions and behaviors, in many

areas of life. A pilot study of health-related messages and images, drawing on the entire Cultural Indicators data bank, was commissioned for this report by the National Institute of Mental Health. Finally, a new theoretical formulation emerging from our research and consistent with the results of a wide variety of independent investigations enables us to cast our review of findings on television's cultivation of viewer conceptions and behaviors in a coherent framework.

Unlike other media, television is used relatively non-selectively. Most viewers watch by the clock rather than by the program. Television is like a ritual. It involves the average American household for 6 1/2 hours a day in a stable and repetitive world of shows, news, and commercials designed to hold and sell the largest possible public at the least possible cost. Its entertainment programs and commercials, with potential health (and other) lessons embedded in them, reach tens of millions of viewers. Even more importantly, these messages reach viewers who would otherwise not expose themselves to such information.

Single programs and isolated messages or even campaigns may be submerged in the daily and weekly rhythm of the television ritual. But the recurrent patterns of health information in many types of programming become parts of the inescapable mainstream of our widely shared symbolic environment.

This is a report of what we know and what we need to know about these patterns and their lessons for viewers. The evidence is fragmentary and uneven. It is more indicative of the potential and promise of such research than complete or definitive. Nevertheless, it is suggestive of the problems that must be taken into account in designing health education efforts and in addressing television directly as a central sector of the new frontier in health promotion and disease prevention.

Our pilot study was conducted as a preliminary step in the full development of indicators of health-related messages embedded in television programs and of their relation to viewer conceptions and behaviors. It utilized the cumulative Cultural Indicators data bank and included a special study of one week's network dramatic programming analyzing portrayals of selected aspects of medicine, illness, nutrition, drinking, smoking, body weight, and safety. The source of research results not otherwise cited or specifically identified will therefore be the pilot study and the Cultural Indicators data bank of television content and viewer conceptions of social reality. (For details of methodology and other findings see Gerbner, et al., 1978, 1979, 1980b.)

WHAT VIEWERS SEE

The average viewer spends about 30 hours a week with the television set. Health-related concepts and behaviors appear many times in programs and commercials. Dramatic, social, and sales functions, rather than therapy or science, govern the presentations.

Health-related portrayals cover such a wide range of subjects and behaviors that there is no reason to assume that television treats them in any particular manner except as they fit its dramatic conventions and economic and social functions. The only codified mechanisms affecting production are the television codes.

Each network, many major stations, and the National Association of Broadcasters (NAB) all have similar codes governing the acceptability of programs and commercials. These standards have developed over the years in

response to the interests of and pressures upon broadcasting as a government-licensed business.

Health-related portrayals have long been sensitive and troublesome. Lengthy sections of the NAB Code regulate the advertising of medical products and practices, generally discouraging the portrayal of ailments, distress, "morbid situations," and sweeping claims. Medical professionals, or actors representing them, should not sell products but may present institutional messages. Laboratory settings should be genuine and research claims should stick to the facts. "Appeals involving matters of health which should be determined by physicians should not be directed primarily to children." Hard liquor is out, beer and wine commercials should be in "the best of good taste and discretion." "Personal products... must be presented in a restrained and obviously inoffensive manner." "Representations which disregard normal safety precautions shall be avoided."

Program standards are less stringent. They urge "responsible" handling of violence and its consequences, avoiding agony and gory details. "Narcotic addiction shall not be presented except as a destructive habit. The use of illegal drugs or the abuse of legal drugs shall not be encouraged or shown as socially acceptable." "Special precautions must be taken to avoid demeaning or ridiculing members of the audience who suffer from physical or mental afflictions or deformities." The NAB Code urges producers to "deemphasize" the use of liquor and the depiction of smoking. And: "Professional advice, diagnosis, and treatment will be presented in conformity with law and recognized professional standards."

Adherence to the NAB Code and to similar provisions of the network and station codes (which is by no means universal) no doubt tends to inhibit some and direct other types of health-related representations into less troublesome directions. However, many presentations still cast serious doubt upon

the efficacy of the codes and of the concept of self-regulation itself, at least as far as certain health-related portrayals are concerned.

The risks of prime time and weekend daytime

The world of prime-time (8 to 11 p.m.) and of children's weekend-daytime (8 a.m. to 2:30 p.m.) network dramatic programming is by and large a man's world of action, power, and danger. Our annual analyses since 1967 of nearly 5,000 major and some 14,000 minor characters, in over 1,600 programs, reveal these consistent patterns: Men outnumber women at least three to one; young people comprise one-third of their real numbers; characters over 65 make up 2 percent of the television population but 11 percent of the real world's; professionals, law-breakers, law-enforcers, and entertainers greatly outnumber all other working people; crime is at least 10 times as frequent as in the real world; and an average of 5 acts of violence per hour of prime-time and 18 acts per hour in children's weekend-daytime programs victimize half of prime-time and over two-thirds of children's time major characters.

Pain, suffering, or medical help rarely follow this mayhem. Its function is not preventive or therapeutic but dramatic and social. Symbolic violence resolves conflict, and demonstrates who can get away with what against whom. Hardly anyone dies a natural death on television.

The structure of that demonstration provides a clue to the dynamics of television's distribution of resources, including bodily and mental integrity. Adult white males are most likely to get involved in violence and, along with older males, the most likely to get away with it. The balance of powers can be seen in the ratio of those who inflict to those who suffer violence within each social group. Old, young adult, and minority women, and young boys (children-adolescents), are the most likely to be victims rather than victimizers in

violent conflict. Children's programming increases their unfavorable ratio of risk, especially for young women. In terms of fatal victimization in prime time, we found that old women involved in violence are the most likely to get killed, followed by lower class men and old men. (There is virtually no killing on children's programs.)

Over the 11 years (13 week-long samples) we have monitored trends in television content, on the average, only 6 to 7 percent of the major characters have had injuries or illnesses that require treatment. About 3 percent of the major characters have been portrayed as mentally ill, and about 2 percent in each sample have been physically handicapped. The average prime-time viewer sees about 9 ill or impaired major characters each week.

In children's programs, despite the greater mayhem, only 3 percent of characters get injured or sick enough to require treatment. Mentally ill and handicapped characters appear very infrequently.

Physical illness and injury seem to affect heroes and villains, males and females, and other groups of characters alike. The physically handicapped characters, although few, tend to be older, less positively presented, and more likely to be victimized. However, the most peculiar dramatic function characterize those who are presented as mentally ill.

Mental Illness

To the extent that the behavior of mentally ill persons violates some social norms, they suffer the fate of all those whom culture labels deviants. But the cultural image of mental illness has some additional ingredients. Among these are unpredictability, danger, and sin. Anyone might go berserk, and being once so labeled means danger forever. Earlier studies of mental illness in popular fiction, news, and other materials suggested that some

moral flaw tends to justify brutality toward the persons depicted as mentally ill. These studies (Nunnaly 1961; Gerbner 1961a, 1961b, 1962) showed that the image of the mentally ill in the mass media was farther removed from the characteristics established by mental health professionals than was the image of the general public. In other words, instead of mediating between the experts and the public, media imagery pulled the public image away from the image of the experts in the direction of traditional prejudices.

Our current studies found that about 17 percent of prime-time programs involve some significant depiction or theme of mental illness. About 3 percent of major characters are identified as mentally ill, mental patients, ex-mental patients and so on. In the late evening, with more violent programming, the percentage doubles.

Although relatively small in numbers, the mentally ill is the group most likely to both commit violence and be victimized in the world of television. Out of all prime-time dramatic characters, 40 percent of--if we may use the term--"normals" are violent but 73 percent of those characterized as mentally ill are violent. Forty-four percent of the normals but 81 percent of the mentally ill become victims of violence.

Ten percent of the normals are killers and 5 percent are killed. But 23 percent of those characterized as mentally ill are killers and 23 percent are killed. The treatment is a tooth for a tooth; no other group in the fictional population suffers (and is shown to deserve) such fate.

While "only" 24 percent of all prime-time female characters are violent, 71 percent of mentally ill prime-time female characters are violent. The label of mental illness not only makes women almost as violent as men but it also makes women more vulnerable to victimization. For every 10 normal male victims of violence there are 17 mentally ill male victims; for every 10 normal female victims of violence there are 25 mentally ill female victims.

The most "mental-illness-prone" television occupations are clerical, sales, manual laborers, criminals (a large group in the world of television) and scientists. The least "mental-illness-prone" occupations are owners and proprietors, policemen, farmers and ministers.

Television doctors

A typical viewer of prime-time television will see a large cast of dramatic characters in well-defined roles. The cast will include about 68 major and 272 minor speaking parts every week. Children who watch weekend daytime programs (which take up only 10 percent of their total viewing time) see 42 major and 98 minor dramatic characters each weekend. Their television exposure to roughly between 400 and 500 vivid characterizations each week can be seen as a compelling curriculum in human behavior.

Professionals play a disproportionately large role in the world of television. Health professionals (doctors and nurses) dominate the ranks of professionals, numbering almost five times their real-life proportions. They outnumber clerks, sales people, lawyers, or teachers. Only criminals or law enforcers are more numerous than health professionals in the world of television, despite the paucity of sick characters.

The typical viewer sees about 12 doctors and 6 nurses each week on prime time alone, including 3 doctors and 1 nurse in major roles. By comparison, the same viewer will see only one scientist in a week's prime-time viewing, and a scientist will be cast in a major role once every two weeks. Visible as health professionals are in prime time, they are virtually absent from weekend-daytime (children's) programs.

About 9 out of 10 television doctors are male, white, and young or middle aged. Nearly all nurses are female and young or middle aged; 9 out of 10 are white.

Doctors probably fare best of all occupations on television. Compared to other professionals, they are relatively good, successful, and peaceful. Less than 4 percent of television doctors (major characters) are evil, which is half the number found in other professions. Personality ratings show doctors a bit more fair, sociable, and warm than most characters. Doctors are also rated smarter, more rational, stable, and fair than nurses.

Two studies focusing specifically on "doctor shows" (prime-time series featuring medical professionals) illuminate the world of professional medicine on televison. McLaughlin (1975) found that doctors "symbolize power, authority, and knowledge and possess the almost uncanny ability to dominate and control the lives of others." They are easily accessible to patients, command nurses (who never disobey their orders), advise each other, but rarely receive advice from patients or orders from superiors and, when they do, often disregard them. Yet they are seen as "ethical, kind, responsive to the requests of their patients, honest, and courageous." In 40 percent of medical cases, television doctors risk status or prestige to perform an unusual or dangerous treatment; in 13 percent the doctor disobeys a rule, convention, or advice, always succeeding, against odds, to treat or cure some disease or settle some crisis.

The typical male doctor confronts the typical female nurse and the usually female and younger patient from a position of daring and authority. "Female patients are twice as often bedridden as male patients. An image common (46 percent) of female patients is that of a bedridden woman with a strong man--husband, doctor, or romantic partner--at her bedside."

The work of the television doctor is one of individual and almost mystical power over not only the physical but also the emotional and social life of the patient. "If he just followed the rules," concludes McLaughlin, "or left private matters to the patients themselves, or did not risk life, limb, love, or money, things would not work out."

Warner's (1979) study of another sample of prime-time "doctor shows" confirmed these findings and also noted that 61 percent of the doctors' duties were performed during house calls or in the field. The television physician, Warner found, thrives on private relationships with patients, and wields absolute authority over auxilliary medical personnel, but is rarely shown at home or with a spouse or family of his own. Television doctors give advice and orders twice as frequently to female patients or to patients' wives as to male patients or to patients' husbands.

Conflicts arise when the young doctor confronts the more traditional and conservative stance of the senior physician or administrator, or the female doctor. The few female doctors on prime-time television are shown as more emotional and less professional than their male counterparts. Of all professionals, only nurses and women doctors appear to have any emotional problems of their own.

In Warner's sample of 45 male and 5 female doctors, only one was shown at home--a woman (the only one depicted as middle-aged), who lived with her cat. Coming home after a trying day at the hospital, she advised her pet: "Don't ever become a career cat."

The turmoil of the daytime serial

The world of the daytime serials is one of interior turbulence, both physical and psychic. Over half of the daytime (10:00 a.m. to 4:30 p.m.) weekday television schedule is devoted to a dozen or more serials playing to an audience of over 55 million viewers. Each serial drama presents 260 original episodes per year. A stable cast of about 350 characters, well known to millions of devoted daytime viewers, is about evenly divided (unlike in prime time) between women and men (BBDO Report 1977).

Cassata, et al. (1979) studied all daytime serials aired in 1977 and found that "sickness and injury is a most important and pervasive problem," with nearly half of all characters involved in health-related occurrences. Specifically identifiable occurrences were psychiatric disorders, heart attacks, pregnancies, automobile accidents, attempted homicides, attempted suicides, and infectious diseases, in that order. The principal killers were homicides, car accidents, and heart attacks. Although men got sick and hurt more often, women were more likely to die, especially of a bad (if not broken) heart. Four times as many women (2.3 percent) as men died of cardiovascular disease. Half of the pregnancies resulted in miscarriages and 16 percent in the death of the mothers.

Mental illness strikes women most frequently and usually results from guilt, trauma, and inability to cope. Katzman's (1972) study of one week's daytime serials found 6 cases of mental and psychosomatic illness, 5 cases of physical disability, 4 pregnancies, 3 successful medical treatments, and 2 instances of important medical research.

In a world in which "good" characters are likely to recover and "bad" characters deserve their fate, death, note Cassata, et al., "is almost always swift and sure, with little suffering involved. In fact, the longer one suffers, the better one's chances for survival seem to be...; suffering has more to do with an individual character's dramatic nexus than with the nature of his or her particular affliction."

Although women and men are about equal in number in the world of daytime serials, they are far from equal in status. Katzman found 60 percent of the men but only 5 percent of the women in high status professions (doctors, lawyers) or in business; 60 percent of the women were nurses, secretaries, housewives. Despite 7 female professionals (5 doctors, a judge, and a businesswoman) most

women were patients, clients, wives, or service workers to male bosses.

Not only are professionals greatly overrepresented in daytime serials but, as Downing (1975) found, 68 percent of all professionals are in the field of medicine, and as Perloff observed, roughly 80 percent of the men are doctors. Many of them work in hospital settings in such long-running shows as "The Doctors" and "General Hospital" and others come in for the rescue when life is at stake and other forms of help and healing fail.

As in prime-time doctor shows, women doctors in daytime serials are strong and long-suffering characters whose professional sacrifices often go at the expense of personal happiness. Downing (1974) cites the case of Dr. Williams in "General Hospital" who "treats her patients with love, achieving miraculous results. She has risen above the personal tragedies of losing her husband and child without residual bitterness, having in fact recommended the woman to whom she lost her husband for a permanent position on the staff" (p. 136).

Needless to say, all this medical activity requires a large staff of health professionals, many of whom are personally involved in the action. Katzman cites a representative example from "Another World:"

> Steven Frame, who was once engaged to marry Alice Mathews, has been in an accident and is awaiting surgery. Alice Mathews, a nurse currently dating Chris Tyler, and her brother--Russ Mathews, M.D.--are involved in Steven's case...Steven undergoes successful surgery for his skull fracture; however, in his post-operative state he seems to have partial amnesia. He believes that he is still engaged to Alice Mathews.

Perloff (1975) cites another example from "The Young and the Restless" in which Jen Brooks, wife of a busy newspaper executive, is on vacation at Key Biscayne where she meets Bruce Henderson, a cardiologist and her husband's best friend, whom she loved some 30 years ago before she married Stuart Brooks. "Jen," Bruce whispers in her ear, "We've brought up our families. Now we owe it to ourselves to live a little." And he adds: "I could practice cardiology

in Key Biscayne." But back home Stuart has a heart attack in the office and his son-in-law, who works for him but is really a neurosurgeon, saves his life. And now Jen must decide between duty and love.

Almost all the action in the world of daytime serials takes place indoors and consists of talk. Katzman's analysis of 844 conversations found 277 in living rooms with health as the most frequent topic. The second ranking location was a doctor's office, and the fourth a hospital room (a business office was third). Overall, aside from small talk and general business or professional conversation, health was the largest single topic of conversation. Men talked to women more than twice as frequently as men to men and women to women put together. "Housewives were paired with doctors, lawyers, and businessmen more frequently than the marginal totals would have predicted." And "The glamorous professional men, many of whom are unmarried, spend more time talking to women than they spend talking to their colleagues" (p. 19).

What do they talk about? Although it is clear that most of the talk is not strictly business, it may well be that daytime serials comprise the most prolific single source of medical advice in America. The content and nature of that information has not yet been studied. The general structure of the advice, however, has been analyzed by Turow (1974) who compared it with the pattern of advising and ordering in prime time.

Turow classified advising episodes between men and women as stereotypically "masculine" (business, law, government, crime, professional medical advice), "feminine" (love, family, home, the arts, and health in a nonprofessional or business context), or neutral and coded them by the sex of the advice-giver. In prime time, 53 percent of the advising revolved around "masculine" subjects and 70 percent were given by men. Women gave most "feminine" or neutral advice, even when they were cast as professionals.

In daytime serials, only 4 percent of all advising dealt with "masculine" subjects while 60 percent was neutral and 36 percent was "feminine." Nevertheless, men still controlled most cross-gender advising by giving 56 percent of all directives (68 percent on neutral, 26 percent on "feminine" and 6 percent on "masculine" subjects). Turow concluded:

> Another way in which men maintained control of the action was through the accentuation of the role of the medical doctor... . Doctors, who learn professionally what women are supposed to understand "instinctively," could be shown to direct women in stereotypically female areas while still maintaining the traditional compartmentalization of knowledge. The importance of male doctors is seen in the fact that they initiated 71 percent of their sex's "feminine" advising and ordering episodes.

Even in this world of strong and capable women, when things get rough, the ultimate miracle healer is the male doctor.

Nutrition in programs and commercials

Children's programming and commercial messages broadcast during children's program hours have long been the subjects of research and regulatory and legislative concern. During the 1970's, many studies documented the relatively profitable, exploitive, and unchanging nature of children's programs and commercials. The Federal Communications Commission's 1974 Policy Statement on Children's Television Programs reemphasized the special obligation of broadcasters to operate in the interest of the child audience, and directed broadcasters to make a "meaningful effort" toward compliance. The Task Force appointed to monitor the effort found insignificant compliance and recommended various regulatory options. Meanwhile the Federal Trade Commission concluded its investigation of television advertising directed at children and proposed to regulate it. Furious industry response and heavy lobbying in Congress stymied both FCC and FTC action and for a time even blocked approval of the FTC's annual operating budget.

The establishment of the factual basis for citizen concern and regulatory action received major initial impetus with the publication of Volume IV of Television and Social Behavior (Rubinstein, et al., 1971) sponsored by the Surgeon General's Scientific Advisory Committee. Four reports in that volume by Scott Ward and his associates explored cognitive developmental trends in children's perception of commercials. One critical finding was that young children often could not differentiate between programs and commercials.

The quantity and quality of food commercials on children's television were also well documented in research conducted through the 1970's. During a year the average child viewer will see about 22,000 commercials, 5,000 of them for food products, over half of which are high-calorie, high-sugar, low-nutrition items (Choate 1975, 1976).* Barcus found that 67 percent of Saturday morning commercials (1971) and over half of general children's program commercials (1978) were for sugared cereals, candy bars, and other sweets, usually presented as snacks to be eaten between meals. In the second part of the same report, nutritionist McLaughlin pointed out that while dietary goals recommended by the U.S. Senate Select Committee on Nutrition and Human Needs (1977) urged reduction in the consumption of refined and other processed sugars, most food commercials directed at children promote the use of such sugars. Masover and Stanler's 1978 report for the U.S. Senate Select Committee (1977) found that 70 percent of food ads promoted products high in fats, cholesterol, sugar, and salt, while only 3 percent were for fruits and vegetables. Another study by Mauro and Feins (1977) found that only 7 percent of commercials

*Advertisements for medicines or drugs virtually never accompany "children's" programs (Barcus, 1977). In fact, our data show that they comprise only about 6 percent of all television commercials (N=2556). "Illicit" drug use rarely appears in television drama (Fernandez-Collado, et al., 1978). Greenberg, et al. (1980) confirmed this finding but argued that, given the amount of time people spend watching television, even a phenomenon with relatively low frequency may have powerful, cumulative consequences. This fits with Milavsky, et al.'s (1975-76) finding that while teenagers' degree of exposure to drug advertising is negatively related to their use of illicit drugs, those who see more drug advertisements are more likely to use proprietary drugs.

promoted dairy products, fruits, and breads, and that most of the rest were devoted to the easily mass-produced and profitably marketed, but low-nutrition, packaged products. A comprehensive review of much of the relevant research (Jeffrey, et al., 1980b) concluded that "television advertising researchers have developed a sophisticated technology aimed not only at selling products to children, but also aimed at socializing these children to eventual consumer roles."

Food products, however, are not found only in commercial messages. Our pilot study* of a typical week's prime-time network dramatic programs reveals that eating and/or drinking occur about 10 times per hour. Three-quarters of all dramatic characters, or some 15 each night, eat, drink or talk about it, often more than once. Weekend morning programs present an additional 28 instances of eating and/or drinking, or nearly 4 per hour. (Interestingly, this is less than half the prime-time rate, although food and drink commercials dominate "children's" advertising).

Prime-time nutrition is anything but balanced or relaxed. Grabbing a snack (39 percent of all eating-drinking episodes) is virtually as frequent as breakfast, lunch, and dinner combined (42 percent). In weekend-daytime children's programs, snacks go up 45 percent and regular meals decline to 24 percent with "other meals" making up the rest. The snack is fruit in only 4 or 5 percent of these episodes.

In episodes involving drinking, the most prevalent beverages are alcoholic. Coffee and tea are next. When eating and drinking occur simultaneously, more than half of the episodes are a meal with coffee, tea,

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*The pilot study examined the portrayal of eating, drinking, nutrition, and safety in a week-long sample of prime-time and weekend daytime (children's) programming. It was conducted as part of the 1979 Cultural Indicators annual message system analysis. This pilot study isolated episodes of eating, drinking, or talking about food/drink only in the 1979 sample of dramatic programming.

alcohol. A similar analysis of a week's prime-time programs by White and Sandberg (1980) confirmed that one-third of the prime-time program diet consists of alcohol and coffee.

Although most of the attention of nutritionists focused on television commercials, Kaufman's (1980) comparative study found that, in fact, there are more representations in programs than in commercials. Furthermore, the nutritional value of program references is no greater than that of commercials.

Kaufman analyzed 10 top-rated prime-time programs and the commercials included in them. She found that by far most references to beverages (particularly alcoholic) and to sweets were in program content. On the other hand, commercial references to fruits and vegetables outweighed program references to these foods by a ratio of better than three to one. A point-by-point comparison of televison eating behavior along nutritional guidelines exposed the contradictions between the dramatic requirements and motivations (such as reward, punishment, bribe), and recommended eating habits.

Our analysis of prime-time and weekend-daytime commercials found that food advertising accounts for more than a quarter of such commercials. Furthermore, food-related activities (including mention of food or drink) occurred in over 40 percent of commercials. Sweets, snacks, and non-nutritious ("junk") foods made up nearly half of food commercials.

Nutritional appeals were noted in only 9 percent and stressed in another 7 percent of food commercials. A study of such appeals on children's programs by Mauro and Feins (1977) found taste first, followed by texture, fun, convenience, and peer status, with health and nutrition last.

Impairment, obesity, safety

Prime-time characters are not only healthy (though often vulnerable to inflicted injury) but, despite all the mayhem, are also relatively safe from accidents, stay slim at all ages, hardly ever need glasses (even in old age only one in four wears them), and rarely suffer impairment of any function.

Obesity, a problem that plagues from 25 to 45 percent of the American population depending on the estimate, claims few victims on television. The dramatic functions of being fat are limited to certain characterizations, often further aggravating its prejudicial associations. Our analysis of the 1979 sample week of programming found fewer than 6 percent of all males and 2 percent of all females (none of them leading characters) obese. Overweight male characters are somewhat more likely to be found in food and medicine commercials, with the largest number (13 percent) in "junk food" (sweets, chewing gum, etc.) advertisements.

In Kaufman's (1980) study of 537 prime-time television actors whose weight could be clearly coded (as obese, overweight, average, or thin), 12 percent were overweight or obese, despite the fact that these characters rarely ate a balanced meal or gave full attention to what they ate. Children, teenagers, and young adults were never obese. A disproportionate number of black (16 percent) and oriental characters (80 percent) were overweight or obese. Ninety percent of all obese people on television were black--a figure clearly disproportionate to their representation (10 percent) in the sample (or population). Although obesity is related to age, ethnicity, and poverty both on television and in real life, television exaggerates reality.

Despite all the violence on television, the leading causes of violent injury and death in America, industrial and highway accidents, are rare.

Moreover, television characters rarely take precautions against them. Only daytime serials realistically reflect some of the lethal consequences of the excessively mean and dangerous world of television.

Driving and riding cars are shown as by far the leading means of transportation. (Public transportation is hardly ever used.) Our pilot study found only one instance of characters using a seat belt; that was followed by wild stunt driving without a belt.

Many commercials, more than one in ten, involve driving or other car use in which seat belts could be shown. Our analysis of commercials found 283 such situations; seat belts were shown or used in only 65 (23 percent).

Smoking

The impression of some that television characters smoke a great deal is unwarranted and may have been derived from old movies. Greenberg (1980) observed that the average viewer had to watch television for two hours to observe someone smoke a cigar, cigarette, or pipe. Our pilot study found that only 11 percent of male and 2 percent of female major characters smoke in prime time. There is less smoking in situation comedies, more in crime and adventure programs, and the most in serious drama (including movies): 13 percent of men and 4 percent of women smoke.

There is no information on any characters refusing to smoke or expressing anti-smoking sentiments. Clearly, as we see below, the dramatic uses of smoking are more limited than those of drinking.

Patterns of alcohol use

Alcohol on television is hard to escape. Dillon (1975) found it shown or mentioned in 80 percent of prime-time programs (not counting commercials).

Futch et al. (1980) observed it on 12 of the 15 "most popular prime-time programs" analyzed. They noted an average of 2.1 drinking scenes and 4.8 verbal references per program. The mean duration of these scenes was 93 seconds, considerably longer than the mean duration of scenes where non-alcoholic beverages are consumed (40 seconds).

In a recent review of research on alcohol use on television, Greenberg (1980) concluded:

> During no hour of the evening does the alcohol usage rate on fictional television series average less than 1 1/2 acts per program hour. And during the later hours of prime-time--9-11 p.m.--no hour goes by with an average of less than three instances of usage. One can find no program type, save Saturday mornings, with less than one or two instances per hour, and the more heavily watched types of situation comedies and crime shows exceed four acts per hour during the most recent season analyzed. Conservatively, a youngster, too young to drink, will be exposed to 10 drinking acts on television during a day's viewing; perhaps it is excessive to indicate that this can be projected to more than 3,000 in a year's period (p. 145).

Nor is all this drinking a casual affair of a glass or two. Breed and DeFoe (1981) analyzed 233 scenes about alcohol in prime-time drama and found that 40 percent were "heavy drinking" (five or more). An additional 18 percent involved chronic drinkers.

Garlington (1977) found the world of daytime serials, turbulent and troubled as it is, even more saturated with alcohol. "The soap operas averaged almost three 1-minute intervals per 21-minute program during which an alcohol-related event occurred." This would amount to a rate of at least 6 per hour.

Breed and DeFoe (1981) found that alcoholic beverages not only outnumber other beverages consumed on television but that the pattern of drinking on TV is virtually the inverse of the pattern in daily life. Alcohol drinking acts were more than twice as frequent as the second ranking coffee and tea, 14 times as frequent as soft drinks, and more than 15 times as frequent as

water. Of all identifiable alcoholic beverages, 52 percent were hard liquor, 22 percent were wine, and 16 percent were beer.

Who are the drinkers? Greenberg's study confines them to about 6 percent of the total television character population. Our analysis of prime-time major characters found that 36 percent (39 percent of men and 32 percent of women) are drinking. The proportions go down slightly in situation comedies but rise in serious drama. In crime and adventure programs, the percentage of women drinkers (48 percent) is actually greater than that of men (41 percent). (It should be recalled, however, that men outnumber women at least 3 to 1, so the absolute number of female drinkers is still lower than that of male drinkers.)

> All in all, the drinkers in significant alcohol scenes occupy important places in the prime-time world. Most drinkers are adult males--settled adult "good guys" with considerable rank, who play leading roles and are seen weekly by many millions of viewers. Very few are "bad guys" or bit players. (Breed and DeFoe, 1981)

Characters seldom decline a drink or express disapproval of drinking. When they do, the disapproval tends to be mild, ineffective, and to come from women. It is also directed mostly at women and teenage drinkers. Breed and DeFoe also sum up the evidence on justifications:

> Heavy drinking was very seldom excused or rationalized in the dramas, but it often was--39 percent of the time--in the situation comedies. The chief mechanism was humor. The episode would end with the alcohol abuser suffering a hangover, while others (and sometimes the drinker) would deliver a joke or a series of jokes. In other cases, intoxication was excused by rationalizations, usually based on acute stress preceding the bout.

The most frequent reason given for drinking on television is a personal crisis, according to Breed and DeFoe. Drink was a means of dealing with crisis or tension in 61 percent of significant incidents. Leading guest actors in prime-time series drank in a crisis 74 percent of the time. Lesser characters drank for social and other reasons. Only a few "bad" characters

used alcohol to manipulate other people. Futch, et al., found "stress reduction," hospitality, celebration, and just enjoyment the leading reasons given and observed no consistent behavioral consequences of alcohol use.

Breed and DeFoe's larger study, however, did find some consequences. They were "strained relationships" (in 43 percent of "significant incidents"), harm to self or other (19 percent), embarrassment or hangover (15 percent), and loss or threat of loss of job or status (8 percent).

The "harm to self or other" was mostly from accidents or fighting. Out of 18 drinking and driving episodes analyzed, four involved accidents, five near misses, and nine were problem-free. Of the six "good" characters shown drinking and driving, only one met with an accident; the others were spared.

Our own results show that although over one-third of all major characters are shown drinking, only about one percent are portrayed as having a drinking problem or being an alcoholic. At any rate, drinking on television is not only prevalent but also generally condoned, and often part of the generalized "background" of a program. The portrayals certainly do not reflect the policy of sensitivity and caution demanded by the codes.

WHAT VIEWERS SAY AND DO

There is substantial evidence that mass media campaigns can succeed, although many of them fail. Solomon's review of "Why Mass Media Health Campaigns Either Succeed or Fail" (in this volume) explores the difficulty of finding satisfactory criteria for success as well as acceptable and comparable methods of evaluation. Nevertheless, he isolates careful analysis of the goal, media selection, message design and a strong evaluative component as important to achieving and measuring success.

Axelson and DelCampo's (1978) experiment in improving teenagers' nutritional knowledge through mass media further concluded that special incentives

and personal appeal to specific groups are necessary if the campaign is to break through the usual defenses and to achieve even partial success.

The effects of regular advertising campaigns, typically consistent with the general media current, are more easily demonstrated. Alexis Tan (1979) found, for example, that even short-term laboratory exposure to cosmetics commercials significantly enhanced the respondents' judgment of the relative importance of beauty for success. Jeffrey, et al. (1980a) experimented with the effectiveness of low-nutrition and pro-nutrition television commercials and found that the low-nutrition ads were the most effective in increasing total caloric consumption of child viewers as well as the consumption of specifically advertised foods. Yet, the pro-nutrition commercials had no apparent effect. It seems that the motivations, incentives, peer-group rewards, and other appeals cultivated by television could not be so easily utilized to achieve pro-nutritional objectives.

Jeffrey, et al.'s comprehensive review of studies on the impact of television advertising on children's eating behavior (1980b) concluded that advertising researchers have developed sophisticated techniques aimed not only at selling but also at socializing children to consumer roles that, stabilized by a lifetime of television reinforcement, may well resist attempts at modification.

It is essential, therefore, to learn what such attempts are up against. What are the health implications of television viewing per se and of exposure to health-related messages, such as those we have discussed above, embedded in daily television fare? What informational states, conceptions about health, and practices relating to health does televison viewing tend to cultivate in different groups of viewers?

Types of associations with viewing

Answers to these important questions are scarce, and our understanding of the processes of cultivation is just beginning. While television is of course only one of the many influences on life, it may well be the single most common and pervasive source of certain conceptions and actions. As such, it enters in one way or another into every type of life. However, its contribution to what people think and do may well depend on how exposure to its recurrent patterns, which cut across most types of programming, is integrated into different ways of life.

As we noted above, the principal characteristic of television that distinguishes it from other media is its relatively non-selective and ritualistic use by most viewers. Television presents a coherent world of drama, news, and commercials whose common patterns form the mainstream of the shared symbolic environment. Information embedded in its popular entertainment patterns reaches those who otherwise do not select out such information. Television is, therefore, the most pervasive source of information (of whatever quality) on health and other subjects prevalent in its programming.

It would be misleading, however, to attribute to television alone the amounts and types of information (or misinformation) held by its viewers. The situation is much more complex. We know that television tends to monopolize the cultural participation of the less educated, lower income groups. These are the groups also most deprived of reliable information about many subjects and the most mistrustful of and alienated from many other sources of information. A General Mills report (1979) shows that these groups have the poorest health and nutritional opportunities and are the most in need of valid information about health. The question is not whether television

"causes" the vicious cycle of ignorance and poor health but whether it uses its vast and compelling power to perpetuate or to break it.

A further complication is that television viewing as a physical activity (or inactivity) has certain characteristics that may affect, or even counter, its content-related lessons. The relaxed ritual of viewing provides special occasions for resting, eating, smoking, and drinking. We do not know how the physical circumstances interact with the informational content. We do know that those who watch more television are more likely to be complacent about what they eat and drink, to smoke (despite the relatively low level of smoking on programs and the lack of tobacco commercials), and to drink no more than others (despite the abundance of alcohol consumption on television); but they also derive less satisfaction from health than those who spend less time watching. (These overall results will be examined in terms of important subgroup specifications and further elaborated in the next section.)

The General Mills study notes that a major factor underlying Americans' attitudes about health is "denial and unwillingness to believe that catastrophic illness could attack one's own immediate family." It is quite possible that spending a large amount of time "living" in the world of television, a world in which illness is rare, might help cultivate this denial.

Finally, an extremely high level of public confidence in doctors and the medical profession in general may be behind the "philosophy of denial" and the "live for today" attitudes the General Mills study found to be so widespread. The cultivation of the idea that doctors are omnipotent saviors may begin at an early age. Arenstein (1974) and McLaughlin (1975a) both report that young children who watch more television are more likely than are lighter viewers to hold images of doctors and medical professionals that

resemble television presentations. Even for adults, confidence in doctors is more likely to be found among heavy viewers (Gerbner, et al., 1980c) and heavy viewers of doctor shows in particular (Volgy and Schwartz, 1980.) Television thus may also contribute to a syndrome in which high levels of confidence in the medical profession may justify "live for today" attitudes and lack of interest in preventive medicine; if a problem arises, a doctor can provide the cure.

Information and attitudes

There are some indications that heavy exposure to television's portrayal of health matters may indeed contribute to the public's health-related knowledge and behaviors. It should be stressed that although these findings are preliminary, they unquestionably affirm the idea that television has tremendous potential impact on health and that this problem merits concentrated and sustained research.

Among children, Leaman (1973) found that fourth and sixth graders who watch more television have lower levels of nutritional knowledge. Moreover, the nutritional value of the children's diets seemed to vary inversely with amount of viewing.

Other, more indirect, pieces of evidence suggest that unhealthy practices may accompany greater reliance upon television for health information. In the General Mills study (1979), respondents were given a list of sixteen information sources (e.g., doctors, friends, families, television programs, popular books on health, etc.), and asked which were their "two or three main sources" of health information. "Television programs" were the second most-cited source (chosen by 31%), led only by "doctors and dentists" (chosen by 45%). All other sources were chosen by less than 30% of the sample.

More importantly, those who did choose television programs (vs. those

who did not) manifest a distinct profile. Table 1 shows that in most demographic groups (defined by sex, social class, and place of residence), those who chose television programs are significantly more likely to be categorized as "complacent" (vs. "concerned") on health attitudes; as holding "old" (vs. "new") health values; as being a "non-exerciser" on physical fitness; and as being "poorly-informed" (vs. "well" or "somewhat-informed") in terms of health information. The latter two--not exercising and being less informed--show particularly strong and consistent associations with choosing television, across subgroups.

These data cannot support the argument that television contributes to poor health routines and lack of awareness of health information (although they are consistent with such a notion). But they do suggest that those who credit television as a main source of information, even with other things held constant, are not among the more health-minded segments of the population.

Other surveys, which include a measure of amount of daily television viewing, echo these patterns and provide more hints about the possible consequences of television on health. A 1979 study conducted by the Roper Organization for Virginia Slims asked:

> Here are some statements different people have made about their weight and eating habits. Which one of these statements comes closest to being right about you:
>
> I'm not concerned about weight, I eat and drink whatever I want, whenever I want (31%)
>
> I'm not concerned about weight but I'm a little careful about what I eat and drink (31%)
>
> I diet occasionally to keep myself trim (23%)
>
> I pretty much stay on a diet all the time (15%)

The first choice clearly represents the most complacent outlook on diet and nutrition. Our analyses lend support to the notion that television may

Table 1

Health Values, Behaviors, and Information for Do and Do Not Select Television As One of Two or Three "Main Sources of Information," from a List of Sixteen Sources

	% who are COMPLACENT			% with OLD HEALTH VALUES			% who are NON-EXERCISERS			% who are POORLY INFORMED			BASE N
	TV Chosen	TV not Chosen	gam.	TV Chosen	TV not Chosen	gam.	TV Chosen	TV not Chosen	gam.	TV Chosen	TV not Chosen	gam.	(± 5)
SOCIAL CLASS													
Lower	63	70	.14	7	11	.24	62	60	-.04	24	48	.49***	(380)
Middle	69	76	.17**	14	18	.14*	55	73	.38***	18	29	.30***	(1207)
Upper	70	80	.27**	7	14	.34**	50	60	.21**	13	24	.36***	(539)
RESIDENCE													
Central City	70	72	.04	10	30	.57***	60	68	.18*	22	43	.46***	(704)
Urban	68	77	.22***	15	16	.02	54	65	.22***	16	26	.28***	(978)
Rural	66	76	.22**	8	4	-.37*	56	73	.36***	13	21	.30***	(702)
SEX													
Male	73	72	-.04	13	20	.24***	51	69	.36***	23	33	.25***	(1026)
Female	64	78	.32***	11	13	.12	60	68	.16***	13	26	.42***	(1359)

* $p < .05$
** $p < .01$
*** $p < .001$

Data Source: General Mills/Yankelovich, Skelley and White, 1979

cultivate this perspective. Those who watch more television are significantly more likely to select the first response (see Table 2).

"Mainstreaming" health conceptions

While this association holds up within most subgroups, there are interesting exceptions. The baselines and the intensity of the relationship do show some fluctuation across a range of groups, much of which may be explained by a process we call "mainstreaming" (see Gerbner, et al., 1980b.) "Mainstreaming" implies that some differences deriving from other factors may be reduced or even eliminated among those who watch more television (heavy viewers).* Groups who share a relative commonality of outlooks cultivated by television (the "mainstream" view) will often show weak or no associations between amount of viewing and a given perspective. But strong relationships may be found for those groups whose lighter viewers do not share that outlook. Thus, cultivation may often imply a convergence into a more homogeneous "mainstream," rather than absolute, across-the-board increments.

Figure 1 presents a graphic illustration of the concept of "mainstreaming" in this context. The figure shows the relationship between amount of viewing and being particularly unconcerned about diet and nutrition, by respondents' income levels. We see that the association is essentially zero for low income respondents; if anything, they show a slight negative relationship. In other words, within the most complacent (i.e., low) income group, television may be associated with greater awareness.

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*"Heavy," "medium," and "light" viewers represent relative rankings, according to the distribution of amount of viewing in a sample. In a report on health, it is worth noting that the term "heavy viewer" refers to the quantity of viewing, and not to the quantity of the viewer.

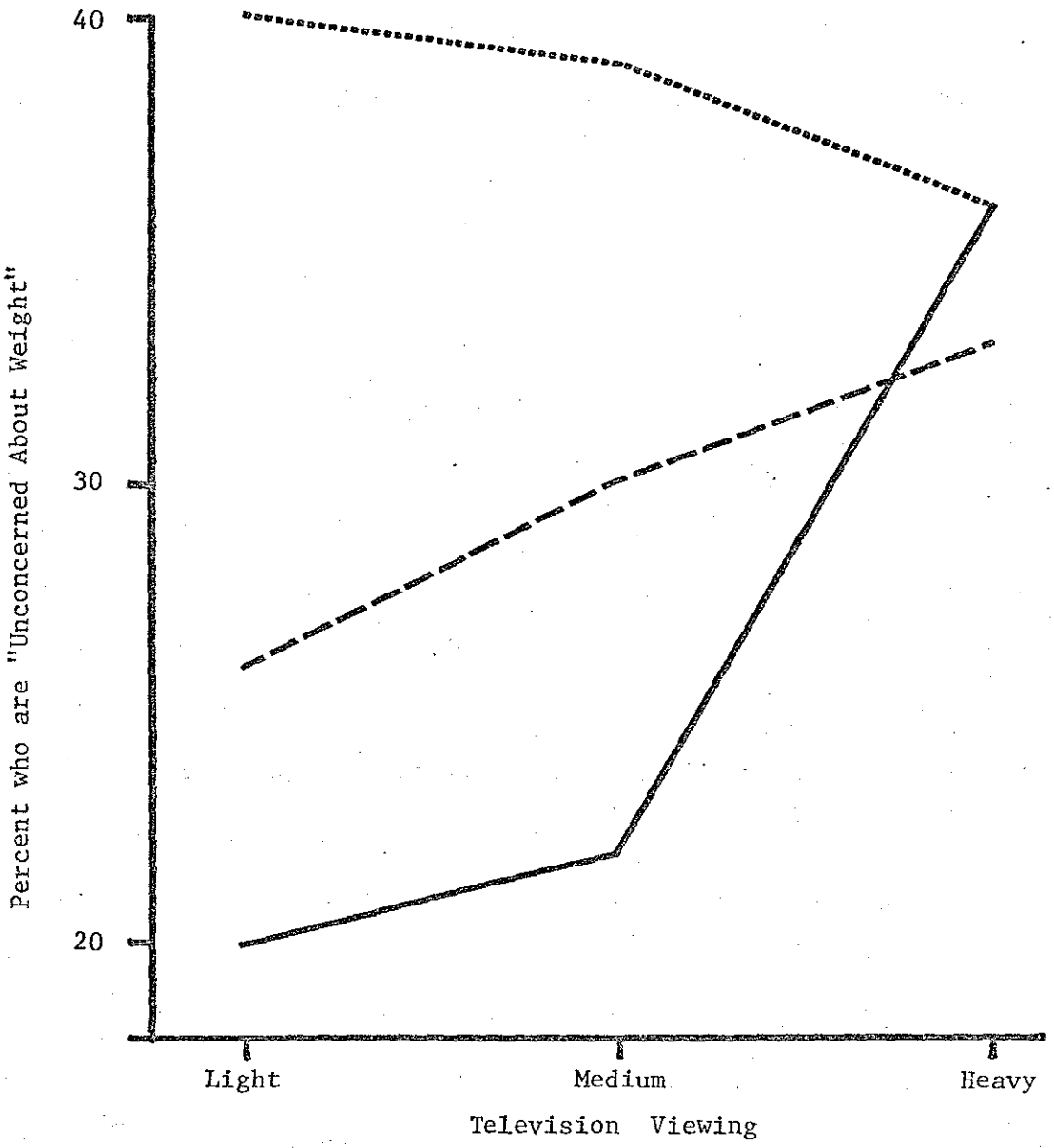
Table 2

Relationship between Amount of Television Viewing and Nutritional Complacency

	Total		Television Viewing: Light		Medium		Heavy	
	%	N	%	N	%	N	%	N
I'm not concerned about weight, I eat whatever I want, whenever I want	31	(1142)	28	(284)	31	(510)	35	(348)
I'm not concerned about weight, but I'm a little careful about what I eat and drink	31	(1132)	33	(335)	30	(489)	31	(308)
I diet occasionally to keep myself trim	23	(842)	24	(242)	25	(408)	20	(192)
I pretty much stay on a diet all the time	15	(535)	16	(166)	14	(234)	14	(135)
TOTAL	100	(3651)	100	(1027)	100	(1641)	100	(983)

$X^2 = 21.42$, d.f. = 6, p = .001
gamma = -.07, p = .001 (tau)

Data Source: Virginia Slims/The Roper Organization, 1979



KEY:

= Low Income

= Medium Income

= High Income

Figure 1

Illustration of "Mainstreaming": Association between Amount of Viewing and Nurtritional Complacency, by Income Level

Light viewers with middle or high incomes are relatively less likely to be complacent about their eating habits, yet we find strong relationships with complacency within the higher income groups. Clearly, heavy viewing goes with a more homogeneous "mainstream" of relatively strong nutritional complacency. While a group with divergent views (i.e., low income) may even show a slight negative relationship, the overall result is a dimunition of other differences among heavy viewers. The "farther" away from the "mainstream," the stronger the cultivation.

The data for a number of other key subgroups are shown in Table 3. A similar "mainstreaming" pattern is evident for different age groups. There is virtually no relationship between amount of viewing and being unconcerned about diet and nutrition for older people; yet, older people are more likely to be unconcerned regardless of viewing; they are already "in" the "mainstream." Younger and middle-aged respondents, on the other hand, show evidence of the cultivation of nutritional complacency. Again, the farther away from the mainstream, the stronger the cultivation.

While "mainstreaming" may explain these specifications, it is worth noting that the relationship does remain fairly consistent across most other subgroups. Thus, television may cultivate a general neglect of good eating habits and healthy outlooks for most groups. Groups who are more likely to be complacent regardless of amount of viewing are joined by the heavy viewers of other subgroups in their relatively complacent television "mainstream" perspective.

We have mentioned above that the act of watching television per se, as opposed to exposure to the lessons embedded in its content, may have implications for viewers' health. One thing viewers do while watching is

Table 3

Relationship Between Amount of Television Viewing and Nutritional Complacency[1]

	Television Viewing: Total %	Total N	Light %	Light N	Medium %	Medium N	Heavy %	Heavy N	CD[2]	Gamma	Base N
OVERALL	31	(1142)	28	(284)	31	(510)	35	(348)	+7	-.11***	(3651)
Controlling for:											
SEX											
Male	47	(429)	41	(120)	49	(205)	51	(104)	+10	.13**	918
Female	26	(713)	22	(164)	25	(305)	31	(244)	+9	.14***	2733
AGE											
18-29	33	(357)	28	(86)	32	(151)	40	(120)	+12	.17***	1085
30-49	30	(357)	24	(94)	31	(173)	36	(90)	+12	.18***	1203
over 50	31	(428)	33	(104)	30	(186)	32	(138)	-1	.00	1363
INCOME											
Under $10,000	38	(313)	40	(62)	39	(126)	36	(125)	-4	-.05	826
$10-25,000	30	(472)	26	(116)	30	(227)	33	(129)	+7	.10*	1575
Over $25,000	23	(152)	20	(52)	22	(67)	36	(33)	+16	.20**	667
EDUCATION											
No College	35	(832)	33	(176)	35	(374)	37	(282)	+4	.06*	2369
Some College	24	(306)	22	(108)	24	(134)	29	(64)	+7	.09*	1273
RACE											
White	30	(957)	27	(257)	29	(428)	33	(272)	+6	.09**	3206
Non-White	42	(175)	36	(24)	40	(76)	48	(75)	+12	.15*	413

* $p < .05$
** $p < .01$
*** $p < .001$

Data Source: Virginia Slims/The Roper Organization, 1979

[1] Dichotomized as "I eat whatever I want, whenever I want" vs. all other responses (see Table 2)

[2] CD = Cultivation Differential; % heavy viewers who are complacent minus % light viewers who are complacent

eat. Our study of adolescents* found that about 83% say they "usually eat" while watching television. The tendency to eat while viewing increases as adolescents mature: 74% of sixth-graders, 82% of seventh-graders, 84% of eighth-graders, and 91% of tenth-graders say they eat while watching television.

An equally plausible accompaniment of the physical act of watching television is smoking. Preliminary analyses of the 1977 and 1978 NORC General Social Surveys show that smokers--and especially cigarette smokers--report watching significantly more television. Non-smokers average 2.65 hours of viewing a day (N=1802) while cigarette smokers average 3.01 hours a day (N=1128; $p < .001$). Table 4 shows the percentage of light, medium, and heavy viewers who smoke, overall and within key subgroups. We see that the positive association between smoking and amount of viewing holds for almost all groups, with two exceptions: non-whites and those whose self-reported current health is only "fair" or "poor."

The second exception is particularly intriguing and consistent with "mainstreaming." Among light viewers, those who say they are in "excellent" or "good" health are less likely to smoke than those in worse health, by twelve points. But the heavy viewers of these groups differ by only one point. In fact, the relationship is somewhat negative for those in the worst health--whose light viewers are extremely likely to be smokers.

Table 5 shows that the positive association between smoking and amount of viewing holds up when simultaneous controls are applied. It also shows that there is a simple negative association between viewing and drinking alcoholic beverages--overall, heavy viewers are less likely to consume alcohol--but this disappears under multiple controls.

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*This sample consists of 649 sixth through ninth graders attending a public school in suburban/rural New Jersey. Details of the sample's characteristics can be found in Morgan and Gross (1980).

Table 4

Percent of Light, Medium, and Heavy Television Viewers who Smoke

	Television Viewing:										
	Total		Light		Medium		Heavy				
	%	N	%	N	%	N	%	N	CD[1]	Gamma	Base N
OVERALL	41	(1248)	38	(297)	39	(546)	47	(405)	+9	.12***	3050
Controlling for:											
SEX											
Male	49	(650)	44	(172)	48	(305)	57	(173)	+13	.15***	1332
Female	35	(598)	32	(125)	32	(241)	41	(232)	+10	.15***	1718
EDUCATION											
No College	44	(912)	42	(183)	41	(389)	49	(340)	+7	.10**	2083
Some College	35	(331)	33	(113)	35	(154)	40	(64)	+7	.09	2756
RACE											
White	41	(1108)	38	(271)	39	(486)	49	(351)	+11	.14***	2687
Non-White	40	(131)	37	(22)	42	(56)	38	(53)	+1	.00	332
INCOME											
Under $10,000	40	(411)	40	(88)	35	(150)	45	(173)	+5	.10*	1030
$10-20,000	45	(450)	39	(104)	44	(206)	52	(140)	+13	.15***	1005
Over $20,000	38	(333)	34	(93)	39	(169)	46	(71)	+12	.14**	869
PRESENT HEALTH											
Excellent/ Good	42	(459)	40	(119)	38	(196)	49	(144)	+9	.11*	1107
Fair/Poor	45	(186)	52	(44)	39	(67)	48	(75)	-3	-.01	414
AGE											
18-29	44	(343)	39	(66)	41	(139)	51	(138)	+12	.16**	775
30-64	44	(784)	40	(210)	43	(366)	53	(208)	+13	.15***	1780
Over 65	24	(116)	21	(18)	21	(40)	29	(58)	+8	.18*	481

* p < .05
** p < .01
*** p < .001

Data Source: NORC General Social Surveys, 1977 and 1978

[1] CD = Cultivation Differential; % heavy viewers who smoke minus % light viewers who smoke

Table 5

Partial Correlations between Amount of Television Viewing and Smoking and Drinking

	Smoking[1]	Drinking[1]
Simple Correlation	.09***	-.07***
Controlling for:		
Sex	.10***	-.05***
Age	.09***	-.07***
Education	.08***	-.02
Income	.09***	-.02
Occupational Prestige	.08***	-.05**
Race	.09***	-.06***
All Controls	.09***	.00
Final d.f.	(2806)	(2804)

[1] 1=yes, 0=no

** p < .01
*** p < .001

Data Source: NORC General Social Surveys, 1977 and 1978

Still, as seen on Table 6, there are some intriguing subgroup differences, most of which are consistent with the notion of "mainstreaming." For example, those with some college education are more likely to drink; comparing those who have and have not attended college, we see that light viewers differ by 24 points, while heavy viewers differ by 14. Whites are more likely to drink than non-whites; but a 28-point difference between white and non-white light viewers is reduced to a ten point difference among heavy viewers. Finally, those in better health are more likely to drink; but a 25-point difference between light viewers in better vs. worse health is only eleven points among the heavy viewers.

Thus, even though the overall association between amount of viewing and the tendency to consume alcohol is zero under simultaneous controls, there are a number of subgroup differences; the relationship may be positive for one subgroup yet negative for another. In these cases, we again see that television may be "absorbing" viewers of "otherwise" divergent behaviors and outlooks into its "mainstream."

The consequences of these patterns on viewers' actual state of health are difficult to determine, particularly with cross-sectional data. A partial explanation is that people in worse health simply watch more television. Indeed they do; but these data also suggest that television can help perpetuate unhealthy beliefs, values, and lifestyles.

Heavy viewers are significantly less likely to derive a "great deal" or a "very great deal" of satisfaction from their health (see Table 7). This relationship essentially holds in all groups. Although it is reduced, it even holds when controlling for respondents' current state of health.

To conclude, television viewing is deeply integrated into different styles of life, with powerful implications for health practices. A variety of findings, though preliminary and often indirect, lend credence to the notion

Table 6

Percent of Light, Medium, and Heavy Television Viewers who Drink Alcoholic Beverages

	Television Viewing:										
	Total		Light		Medium		Heavy				
	%	N	%	N	%	N	%	N	CD[1]	Gamma	Base N
OVERALL	72	(2202)	73	(577)	74	(1036)	68	(589)	-5	-.08**	3049
Controlling for:											
SEX											
Male	79	(1053)	80	(311)	80	(511)	76	(231)	-4	-.06	1330
Female	67	(1149)	67	(266)	69	(525)	64	(358)	-3	-.05	1719
EDUCATION											
No College	67	(1403)	63	(276)	70	(667)	66	(460)	+3	+.01	2083
Some College	83	(795)	87	(300)	83	(367)	80	(128)	-7	-.15*	953
RACE											
White	74	(1985)	76	(538)	75	(945)	70	(502)	-6	-.09**	2685
Non-White	58	(193)	48	(29)	60	(81)	60	(83)	+12	+.11	333
INCOME											
Under $10,000	60	(619)	59	(130)	63	(270)	57	(219)	-2	-.05	1031
$10-20,000	78	(780)	76	(200)	78	(368)	79	(212)	+3	+.04	1003
Over $20,000	85	(734)	84	(232)	85	(371)	84	(131)	0	+.01	869
PRESENT HEALTH											
Excellent/ Good	77	(854)	79	(235)	79	(409)	72	(210)	-7	-.13*	1107
Fair/Poor	59	(243)	54	(46)	58	(102)	61	(95)	+7	+.09	415
AGE											
18-29	80	(623)	85	(142)	83	(280)	75	(201)	-10	-.21**	775
30-64	75	(1333)	75	(394)	76	(652)	73	(287)	-2	-.03	1779
Over 65	49	(236)	40	(35)	52	(101)	51	(100)	+11	.09	481

* $p < .05$
** $p < .01$

Data Source: NORC General Social Surveys, 1977 and 1978

[1] CD = Cultivation Differential; % heavy viewers who drink alcoholic beverages minus % light viewers who drink alcoholic beverages

Table 7

Percent of Respondents Reporting that they Derive a "Very Great Deal" or a "Great Deal" of Satisfaction from Their Health, by Television Viewing

	Television Viewing: Total		Light		Medium		Heavy				
	%	N	%	N	%	N	%	N	CD[1]	Gamma	Base N
OVERALL	60	(2712)	66	(719)	61	(1267)	54	(724)	-12	-.15***	4519
Controlling for:											
SEX											
Male	64	(1264)	68	(367)	65	(618)	57	(279)	-11	-.15***	1992
Female	57	(1448)	64	(352)	58	(651)	52	(445)	-12	-.14***	2527
EDUCATION											
No College	57	(1773)	61	(372)	59	(822)	53	(579)	-9	-.11***	3107
Some College	67	(935)	72	(345)	66	(447)	59	(143)	-13	-.16***	1396
RACE											
White	61	(2415)	67	(661)	62	(1153)	53	(601)	-14	-.16***	3994
Non-White	57	(277)	60	(50)	57	(108)	55	(119)	-5	-.07	490
INCOME											
Under $10,000	51	(836)	57	(189)	52	(347)	47	(300)	-10	-.11***	1647
$10-20,000	66	(1014)	71	(265)	66	(493)	61	(256)	-10	-.12***	1543
Over $20,000	68	(776)	71	(248)	67	(389)	64	(139)	-7	-.09*	1144
PRESENT HEALTH											
Excellent/ Good	76	(1658)	77	(417)	78	(807)	73	(434)	-4	-.08*	2170
Fair/Poor	19	(154)	21	(31)	18	(62)	18	(61)	-3	-.10*	826
AGE											
18-29	67	(791)	78	(192)	64	(323)	65	(276)	-13	-.13**	1174
30-64	61	(1585)	66	(461)	63	(795)	52	(329)	-14	-.17***	2597
Over 65	44	(322)	44	(59)	48	(147)	40	(116)	-4	-.05	730

* p < .05
** p < .01
*** P < .001

Data Source: NORC General Social Surveys, 1975, 1977, 1978

[1] CD = Cultivation Differential; % heavy viewers minus % light viewers

that television may have a considerable impact upon the public's images, knowledge, and behaviors. Television programs are a frequently-cited source of health information; those who choose them, and/or heavier viewers, seem relatively neglectful and complacent about their physical well-being, are less informed about health and exercise less. Heavy viewing also goes with getting less satisfaction from one's health. In addition, the very act of watching television may generate behaviors and habits with clear health implications in the areas of smoking, eating, and drinking.

A complex but fairly consistent pattern found in these studies is that respondents in "otherwise" divergent subgroups respond similarly if they are heavy viewers. Many of the exceptions and specifications in these data can be explained by a convergence into a more common, shared, homogeneous "mainstream" of beliefs, values, and actions about health.

With regard to health-related program and commercial content, only in the portrayals of illness, doctors, nutrition, obesity, driving safety, smoking, and drinking is there enough research evidence to report with some degree of confidence. Most of it reveals a serious conflict with realistic guidelines for health and medicine. Research on the contributions of these portrayals to specific conceptions of health and medicine is scarce. But the pattern of findings, including our own pilot study, indicates that television viewing is associated with a convergence of the heavier viewers upon paradoxical and disjointed "mainstream" conceptions and practices. Characteristic features are poor nutritional knowledge and behavior, general complacency about health and high confidence in the medical community.

The cultivation of ignorance and neglect, especially among the otherwise relatively enlightened viewers, coupled with an unrealistic belief in the magic of medicine, is likely to perpetuate unhealthy lifestyles, hurt patients

and health professionals, and frustrate efforts at health education. If culturally sustained health hazards are the new frontier in health promotion and disease prevention, there is a need for greater mobilization of effort and resources in a central sector of that frontier. The first step toward such mobilization is the fuller, broader, and more sustained study of the messages television conveys about health and a refinement of their contributions to health conceptions and behaviors of various groups of viewers.

BIBLIOGRAPHY

Alley, Robert S. "Media Medicine and Morality." In Richard Adler and Douglass Cater (Eds.), Television as a Cultural Force. New York: Praeger, 1976.

Arenstein, Howard L. "The Effect of Television on Children's Stereotyping of Occupational Roles." Unpublished M.A. thesis, The Annenberg School of Communications, University of Pennsylvania, 1974.

Atkin, C. and G. Heald. "The Content of Children's Toy and Food Commercials." Journal of Communication, 27:1, Winter 1977, pp. 107-114.

Axelson, Julein M. and Diana S. DelCampo. "Improving Teenagers' Nutrition Knowledge Through the Mass Media." Journal of Nutrition Education, 10:1, January-March 1978, pp. 30-33.

Barcus, F. Earle. "Saturday Children's Television: A Report on TV Programming and Advertising on Boston Commercial Television." Newtonville, MA: Action for Children's Television, 1971.

Barcus, F. Earle with Rachel Wolkin. Children's Television: An Analysis of Programming and Advertising. New York: Praeger, 1977.

Barcus, F. Earle and Lucille McLaughlin. Food Advertising on Children's Television: An Analysis of Appeals and Nutritional Content. Newtonville, MA: Action for Children's Television, 1978.

Barnard, Christian N. "Medicine and the Mass Media." The American Journal of Cardiology, 30, 1972, pp. 579-580.

Barnum, H.J., Jr. "Educating the Public About Health: Mass Media and Health Communication." The Journal of Medical Education, 50:1, 1975, pp. 24-26.

"BBDO Report on Daytime Network Television 1977." New York: Batten, Barton, Durstine and Osborn, Inc. Network Programming Department, 1978.

Breed, Warren and James DeFoe. "Bringing Alcohol Into the Open." Columbia Journalism Review, 17, 1978, pp. 18-19.

Breed, Warren and James R. DeFoe. "The Portrayal of The Drinking Process on Prime-Time Television." Journal of Communication, 31:1, Winter 1981, pp. 58-67.

Cantor, Muriel G. "Our Days and Our Nights on TV." Journal of Communication, 29:4, Autumn 1979, pp. 66-80.

Cassata, Mary B., Thomas D. Skill, and Samuel Osei Boadu. "In Sickness and In Health." Journal of Communication, 29:4, Autumn 1979, pp. 73-80.

Choate, Robert B. Testimony before the Federal Trade Commission in the matter of a trade regulation rule on food nutrition advertising. Washington, D.C.: Council on Children, Media and Merchandising, 1976.

Choate, Robert B. Statement before the Subcommittee on Communications of the Committee on Interstate and Foreign Commerce. United States House of Representatives, Washington, D.C., July 14, 1975.

Comstock, George. "Television and Alcohol Consumption and Abuse." Rand Corporation Staff Paper, 1976.

Council on Children, Media and Merchandising. "Edible T.V.: Your Child and Food Commercials." Washington, D.C., June 1977.

Curran, William J. "Medicine, Medicolegal Programs and the Press: A Reassessment." New England Journal of Medicine, 29:9, 1977, pp. 283-284.

DeFleur, Melvin. "Occupational Roles as Portrayed on Television." Public Opinion Quarterly, Spring 1964, pp. 57-74.

DeFleur, Melvin and Lois B. DeFleur. "The Relative Contribution of Television as a Learning Source for Children's Occupational Role Knowledge." American Sociological Review, 32, 1967, pp. 777-789.

DeFoe, J.R. and W. Breed. "The Problems of Alcohol Advertisements in College Newspapers." Journal of the American College Health Association, 27, 1979, pp. 195-199.

DeFoe, J.R. and W. Breed. "The Mass Media and Alcohol Education: A New Direction." Journal of Alcohol and Drug Education, 25, 1980, pp. 48-58.

Dienstfrey, Harris. "Doctors, Lawyers and Other TV Heroes." In Horace Newcomb (Ed.), Television: The Critical View. New York: Oxford University Press, 1976.

Dillon, J. "TV Drinking: How Networks Pour Liquor into Your Living Room." Christian Science Monitor, June 30, 1975a.

Dillon, J. "TV Drinking: Do Networks Follow Own Code?" Christian Science Monitor, July 1, 1975b.

Dillon, J. "TV Drinking Does Not Mirror U.S." Christian Science Monitor, July 11, 1975c.

Downing, Mildred. "The World of Daytime Television Serial Drama." Unpublished Ph.D. dissertation, University of Pennsylvania, Philadelphia, PA, 1975.

Downing, Mildred. "Heroine of the Daytime Serial." Journal of Communication, 24:2, Spring 1974, pp. 130-139.

Dussere, S. "The Effects of Television Advertising on Children's Eating Habits." Unpublished Master's thesis. Department of Health, University of Massachusetts, Amherst, 1974.

Fernandez-Collado, C.F. and B.S. Greenberg, with F. Korzenny and C.K. Atkin. "Sexual Intimacy and Drug Use in TV Series." Journal of Communication, Summer 1978, pp. 30-37.

Futch, Emily, Marilyn J. Geller, and Stephen A. Lisman. "Analysis of Alcohol Use on Prime-Time Television." Unpublished paper, State University of New York at Binghamton, 1980.

Galst, J.P. and M.A. White. "The Unhealthy Persuader: The Reinforcing Value of Television and Children's Purchase-influencing Attempts at the Supermarket." Child Development, 47:4, December 1976, pp. 1089-1096.

Garlington, W.K. "Drinking on Television: A Preliminary Study with Emphasis on Method." Journal of Studies on Alcohol, 38, 1977, pp.2199-2205.

General Mills, Inc. "The General Mills American Family Report 1978-79: Family Health in an Era of Stress." Minneapolis: General Mills, 1979.

Gerbner, George. "Psychology, Psychiatry and Mental Illness in the Mass Media: A Study of Trends, 1900-1959." Mental Hygiene, 45, January 1961a, pp. 89-93.

Gerbner, George. "Regulation of Mental Illness Content in Motion Pictures and Television." Gazette, 6, 1961b, pp. 365-385.

Gerbner, George and Percy H. Tannenbaum. "Mass Media Censorship and the Portrayal of Mental Illness: Some Effects of Industry-Wide Controls in Motion Pictures and Television." In W. Schramm (Ed.), Studies of Innovation and of Communication to the Public. Stanford University, 1962.

Gerbner, George, Larry Gross, Marilyn Jackson-Beeck, Suzanne Jeffries-Fox, and Nancy Signorielli. "Cultural Indicators: Violence Profile No. 9." Journal of Communication, 28:3, Summer 1978, pp. 176-207.

Gerbner, George, Larry Gross, Nancy Signorielli, Michael Morgan, and Marilyn Jackson-Beeck. "The Demonstration of Power: Violence Profile No. 10." Journal of Communication, 24:3, Summer 1979, pp. 177-196.

Gerbner, George, Larry Gross, Michael Morgan, and Nancy Signorielli. "Media and the Family: Images and Impact." Paper prepared for the National Research Forum on Family Issues, White House Conference on Families, Washington, D.C., 1980a.

Gerbner, George, Larry Gross, Michael Morgan, and Nancy Signorielli. "The 'Mainstreaming' of America: Violence Profile No. 11." Journal of Communication, 30:3, Summer 1980b, pp. 10-27.

Gerbner, George, Larry Gross, Michael Morgan, and Nancy Signorielli. "Television's Contribution to Public Understanding of Science: A Pilot Project." Report to the National Science Foundation, 1980c.

Greenberg, B.S., C. Fernandez-Collado, D. Graef, F. Korzenny, and C.K. Atkin. "Trends in the Use of Alcohol and Other Substances on Television." In B.S. Greenberg (Ed.), Life on Television. Norwood, N.J.: Ablex, 1980.

Gussow, J. "Counternutritional Messages of T.V. Ads Aimed at Children." Journal of Nutrition Education, Spring 1972.

Hanneman, G. and W. McEwen. "The Use and Abuse of Drugs: An Analysis of Mass Media Content." In R. Ostman (Ed.), Communication Research and Drug Education. Beverly Hills: Sage Publications, 1976.

Healey, J.M., Jr. "The Quinlin Case and the Mass Media." American Journal of Public Health, 66:3, 1976, pp. 295-296.

Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention. U.S. Department of Health, Education, and Welfare, Public Health Service. Washington, D.C.: U.S. Government Printing Office, 1979.

Katzman, Natan. "Television Soap Operas: What's Been Going On Anyway?" Public Opinion Quarterly, 36:2, 1972, pp. 200-212.

Jeffrey, D. Balfour, Robert W. McLellarn, J. Scott Hickey, Nancy B. Lemnitzer, M. Joan Hess, Julia M. Stroud. "Television Food Commercials and Children's Eating Behavior: Some Empirical Evidence." Journal of the University Film Association, XXXII: 1 & 2, Winter-Spring 1980a, pp. 41-43.

Jeffrey, D. Balfour, Douglas Bolin, Nancy B. Lemnitzer, J. Scott Hickey, M. Joan Hess, and Julia M. Stroud. "The Impact of Television Advertising on Children's Eating Behavior: An Integrative Review." Unpublished research report. Missoula, MT: Department of Psychology, University of Montana, 1980b.

Kaufman, Lois. "Prime-Time Nutrition." Journal of Communication, 30:3, Summer 1980, pp. 37-46.

Kinzer, Nora Scott. "Soapy Sin in the Afternoon." Psychology Today, August 1973, pp. 46-48.

Leaman, Frederick A. "Television's 'Fruitless' Image: A Cultivation Analysis of Children's Nutritional Knowledge and Behavior." Unpublished M.A. thesis, The Annenberg School of Communications, University of Pennsylvania, 1973.

Maccoby, Nathan and John W. Farquhar. "Bringing the California Health Report Up to Date." Journal of Communication, 26:1, Winter 1976, pp. 56-57.

Maccoby, Nathan and John W. Farquhar. "Communication for Health: Unselling Heart Disease." Journal of Communication, 25:3, 1975, pp. 114-126.

Maloney, L.R. (Ed.) "Children's T.V.: Sugar Makes Cents." American Academy of Pediatrics, 24:6, July 1973, pp. 10-12.

Masover, Lynne. "Television Food Advertising: A Positive or Negative Contribution to Nutrition Education?" Unpublished M.A. thesis, Northwestern University, IL, 1977.

Mauro, Frank J. and R.P. Feins. "Kids, Food and Television: The Compelling Case for State Action." Report for the Office of Research and Analysis Program and Committee Staff, New York State Assembly, March 1977.

McEwen, W. and G. Hanneman. "The Depiction of Drug Use in Television Programming." Journal of Drug Education, 4:3, 1974, pp. 281-293.

McLaughlin, James. "Characteristics and Symbolic Functions of Fictional Televised Medical Professionals and Their Effect on Children." Unpublished M.A. thesis, The Annenberg School of Communications, University of Pennsylvania, 1975a.

McLaughlin, James. "The Doctor Shows." Journal of Communication, 25:3, 1975, pp. 182-184.

Milavsky, Ronald J., Burton Pekowsky, and Horst Stipp. "TV Drug Advertising and Proprietary and Illicit Drug Use among Teenage Boys." Public Opinion Quarterly, 39, Winter 1975-76, pp. 457-481.

Morgan, Michael and Larry Gross. "Television Viewing, IQ, and Academic Achievement." Journal of Broadcasting, Spring 1980, 24:2, 117-133.

Newcomb, Horace. "Doctors and Lawyers: Counselors and Confessors." In TV: The Most Popular Art. Garden City, N.Y.: Anchor, 1974.

Nunnally, Jum C., Jr. Public Conceptions of Mental Health. New York: Holt, Rinehart, and Winston, Inc., 1961, Chapters 6 & 7.

Perloff, Marjorie G. "Television: Soap Bubbles." New Republic, 172, May 10, 1975, pp. 27-30.

Real, Michael. "Marcus Welby and the Medical Genre." In Mass-Mediated Culture. Englewood Cliffs, N.J.: Prentice-Hall, 1977.

Rubinstein, Eli A., George A. Comstock, and J.P. Murray. Television and Social Behavior: Volume IV. Washington, D.C.: Government Printing Office, 1971.

Sandman, Peter, M. "Medicine and Mass Communication: An Agenda for Physicians." Annals of Internal Medicine, 85, 1976, pp. 378-383.

Schmeling, David G. and Edward C. Wotring. "Agenda-Setting Effects of Drug Abuse Public Service Ads." Journalism Quarterly, 53:4, 1977, pp. 743-746.

Shaw, Donald L. and Paul Van Nevel. "The Informative Value of Medical Science News." Journalism Quarterly, Autumn 1967, p. 548.

Sherburne, E.G., Jr. "Science on Television: A Challenge to Creativity." Journalism Quarterly, 40, Summer 1963, pp. 300-305.

Smart, R.G. and M. Krakowski. "The Nature and Frequency of Drugs Content in Magazines and on Television." Journal of Alcohol and Drug Education, 18, 1973, pp. 16-23.

Stimson, Gerry V. "The Message of Psychotropic Drug Ads." Journal of Communication, 25:3, 1975, pp. 153-160.

Tan, Alexis. "TV Beauty Ads and Role Expectations of Adolescent Females." Journalism Quarterly, 56, 1979, pp. 283-288.

Turow, Joseph. "Advising and Ordering: Daytime, Prime Time." Journal of Communication, 24:2, Spring 1974, pp. 138-141.

U.S. Senate, Select Committee on Nutrition and Human Needs. "Dietary Goals for the United States." Washington, D.C.: Government Printing Office, 1977.

Volgy, Thomas J. and John E. Schwartz. "TV Entertainment Programming and Sociopolitical Attitudes." Journalism Quarterly, 57:1, 1980, pp. 150-155.

Ward, S. "Effects of Television Advertising on Children and Adolescents." In E.A. Rubinstein, G.A. Comstock, and J.P. Murray (Eds.), Television and Social Behavior, Volume 4. Washington, D.C.: Government Printing Office, 1971.

Ward, S., G. Reale, and D. Levinson. "Children's Perception, Exploration and Judgments of Television's Advertising: A Further Exploration." In E.A. Rubinstein, G.A. Comstock, and J.P. Murray (Eds.), Television and Social Behavior, Volume 4. Washington, D.C.: Government Printing Office, 1971.

Ward, S. and D.B. Wackman. "Television Advertising and Intrafamily Influence: Children's Purchase Influence Attempts and Parental Yielding." In E.A. Rubinstein, G.A. Comstock, and J.P. Murray (Eds.), Television and Social Behavior, Volume 4. Washington, D.C.: Government Printing Office, 1971.

Ward, S., D.B. Wackman, and E. Wartella. How Children Learn to Buy. Beverly Hills, Ca.: Sage Publications, 1977.

Warner, Carin Irene. "The World of Prime-Time Television Doctors." Unpublished M.A. thesis, University of Pennsylvania, 1979.

White, Mary Alice and Barbara Sandberg. "The Television Prime-Time Diet." Unpublished paper presented at APA Symposium, Montreal, Canada, September 1980.

Williams. S.E. "Medicine and the Mass Media." The Medical Journal of Australia, 1, 1975, pp. 395-401.

Winick, C. and M.P. Winick. "Drug Education and the Content of Mass Media Dealing with 'Dangerous Drugs' and Alcohol." In R. Ostman (Ed.), Communication Research and Drug Education. Beverly Hills: Sage, 1976, pp. 15-37.

Wright, W. Russell. "Mass Media as Sources of Medical Information." Journal of Communication, 25:3, 1975, pp. 171-174.