

CHAPTER SEVEN

Who Will Rate the Ratings?

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I. INTRODUCTION

In January 1997, the presidents of the National Association of Broadcasters, National Cable Television Association, and the Motion Picture Association of America jointly presented the Federal Communications Commission with a description of the television industry's initial version of a rating system, the TV Parental Guidelines. After the industry submitted its initial plan, the Federal Communications Commission issued a notice seeking comment on the industry's proposal, specifying:

In particular, we seek comment on whether the industry proposal is "acceptable." Parties should specifically identify the factors they believe the Commission should consider in making this determination. We also seek comment on whether the industry proposal satisfies Congress' concerns.¹

In July 1997, the industry committee amended the TV Parental Guidelines to include indicators for violence (V), sexual situations (S), adult language (L), and suggestive dialogue (D).

In directing the FCC to determine whether the industry program rating system is "acceptable" without further defining this term, Congress potentially delegated significant decisions to the agency. Congress frequently transfers decision-making authority to agencies, in part to take advantage of their expertise and in part from a desire to pass symbolic legislation that earns credits with constituents.² Congress members may have had yet another reason for using a vague term such as "acceptable" in the Telecommunications

Act, since more specific language defining the parameters of a rating system could cause the courts to rule the rating system legislation violated the First Amendment. Spitzer (1998) argues that government pressure and legislation leading to the industry's adoption of the V-chip rating system mean that the courts may determine that the industry's "voluntary" system is in reality a product of state action, and hence subject to First Amendment scrutiny. If Congress had been more explicit in defining the form of the content ratings, then this might raise the probability that the system would be open to a successful constitutional challenge. As in many areas of media regulation, vague legislative language here may stem from concerns about possible First Amendment challenges.

In submitting the initial version of the TV Parental Guidelines system to the FCC in January 1997, the industry representatives who headed up the committee that designed the ratings made arguments consistent with the "congressional intent" and "plain meaning" doctrines (see Valenti, Anstrom, and Fritts, 1997). As the industry's filing noted:

. . . if the industry develops a voluntary system of guidelines, as it has, Congress did not expect the Commission to develop its own rating system; the Commission is to act only if the industry fails to. To be sure, the Act authorizes the Commission to appoint the advisory committee if the industry-developed system is not "acceptable." But that proviso does not alter Congress' express understanding that it was principally looking for guidelines adopted by the industry. Nor does it permit the Commission to substitute its own judgment of what might be the "best" system for the industry's choice.³

The submission by Valenti, Anstrom, and Fritts presented quotations from the *Congressional Record* to bolster the industry's interpretation of congressional intent behind the V-chip legislation. The filing also offers a "plain meaning" approach to interpretation of the FCC's responsibilities under the legislation, noting:

Further, Congress' use of the word "acceptable" also confirms that it did not intend for the Commission to demand that an industry-developed system of guidelines conform to the Commission's own or anyone else's vision of an ideal program. Given the absence of a specific definition of the term in the Act or its legislative history, the Commission should be guided by its general meaning. *Webster's Third International* defines "acceptable" as a thing that is "capable or worthy of being accepted;" as something that is "satisfactory: conforming to or equal to approved standards;" and as "barely satisfactory or adequate." Thus, if the industry-developed system is designed to accomplish Congress' stated goals, then it must be deemed "acceptable" by the Commission.⁴

When the initial age-based rating system was announced by the industry, children's advocacy groups were highly critical of the system because it failed to provide parents with specific content information about the levels of violence or sexual content in programs. In making its case, the coalition of interest groups that supported content-based ratings also relied on congressional intent and legislative history in arguing that the FCC should

find that the initial TV Parental Guidelines were not “acceptable.” As the reply comments filed by the Center for Media Education, et al. (1997) concluded:

Finally, proponents of the industry system wishfully, yet mistakenly, claim that mere industry action in developing a ratings system satisfies the legal requirements of the V-chip provision. The provision expressly states that, in order to obviate the need for an advisory committee, the FCC must find that the industry has voluntarily established an “acceptable” ratings system. The legislative history clearly shows that an “acceptable” system must specifically identify violent content and provide parents with the information necessary for them to make programming choices for their children.⁵

Members of Congress filed comments with the FCC in a letter arguing their interpretation of congressional intent meant that the industry’s age-based ratings should not be approved by the agency. They indicated that the industry rating system “has the effect of obscuring, not identifying the actual content of programming.” They declared that:

As Members of Congress who support the V-chip amendment to the Telecommunications Act of 1996, several of whom participated in the actual drafting of this amendment, we offer these comments concerning Congress’s intent in approving this legislation and sending it to the President for his signature. It is our view that the age-based ratings system proposed by the industry undermines the usefulness of the V-chip to such an extent that the purposes of the statute cannot be fulfilled.⁶

In this essay, I explore factors that might be considered in evaluating a rating system. The Telecommunications Act of 1996 provides little in the way of guidance as to how this can or should be done. Under the legislation, the Federal Communications Commission was charged with determining—if video programming distributors submitted voluntary rules (as they did)—whether that rating system is “acceptable.” The standard I will use in evaluating the rating system is efficiency, the utilitarian framework implicitly used in economic assessments of regulations across many federal agencies.⁷ In this work I will examine the economic rationale for government intervention to facilitate a program rating system and describe the individual incentives faced by parents and programmers concerned about television ratings. Though I ultimately conclude that one cannot use cost-benefit analysis here to quantify the gains and losses associated with the implementation of the V-chip and rating system, viewing the development of the rating system as an economic problem does offer insights into what the agency should do to implement the Telecommunications Act of 1996. In particular, the analysis here suggests that the broadcast industry will generally be reluctant to provide parents with detailed content information about programs because of fear of advertiser backlash. The agency’s freedom to develop rules on the design of the V-chip, however, provides it with an opportunity to encourage the spread of a technology capable of reading multiple rating systems. With the expansion of broadcasting to digital signals, ratings other than the industry classification may be

broadcast to televisions equipped with viewing software. To the extent that the FCC can encourage the use of a V-chip architecture capable of reading multiple rating systems, the agency could accept the industry's revised rating system while fostering competition from other rating sources.

II. WHY INTERVENE IN THE MARKET FOR PROGRAM INFORMATION?

Television violence is a product of market forces. Men aged 18 to 34 are the top adult consumers of violent entertainment programming, while women aged 18 to 34 are the second highest consumers of such programming.⁸ Companies trying to reach these demographic groups will support violent shows. Cable channels in search of younger viewers will also use violent content strategically to build audiences and establish a brand name. Though broadcast networks and cable channels use violence to attract young adult viewers, the exposure of children aged 2 to 11 or teens aged 12 to 17 arises as a by-product of programming strategies. Broadcast stations are not rewarded by advertisers for attracting children to violent prime-time shows, for children are not the target audience of the products advertised on these shows. Similarly, cable renewal decisions by heads of households are unlikely to be influenced by a desire to afford children the opportunity to view unedited theatrical films containing violence. The exposure of children to violent shows represents a market failure, since neither advertisers nor programmers will consider the costs to society of children's consumption of violent fare. Though substantial research indicates that violent programming may, among some children, increase aggressive behavior, fear, or desensitization toward violence, these concerns are external to the profit maximization decisions faced by those in industry. The negative effects generated by television violence are similar to those of pollution, since in both instances companies may impose damages on society without factoring these social costs into their production decisions.⁹

If violence on television harms children, then parents should want to shield them from exposure, thereby creating a demand for products to make television "safer" for children. Federman (1996) details the large number of consumer discretion technologies available that do allow parents to block particular channels or programs. These safeguards come at an extra cost to television purchasers, however, so that parents will weigh the cost of additional technology and additional time spent programming devices versus the benefits of shielding their children from violent content. Though some parents will buy additional technology and invest time in monitoring their children's viewing, from society's perspective they will do this in less than optimal amounts. Parents will consider the reduced likelihood that their children will become aggressive or experience fright in making their decisions about how much effort to devote to monitoring television viewing. Yet parents will not factor in the broader benefits to society from shielding their children from violent programming, such as the reduced likelihood that their children will impose negative costs on others as a result of aggressive or violent behavior. This means that parents will fail to devote enough effort from society's perspective to protecting their children from violent programming.

This argument is demonstrated more formally in the graph in figure 1, which describes how many hours of a child's viewing that a parent will monitor. The costs of

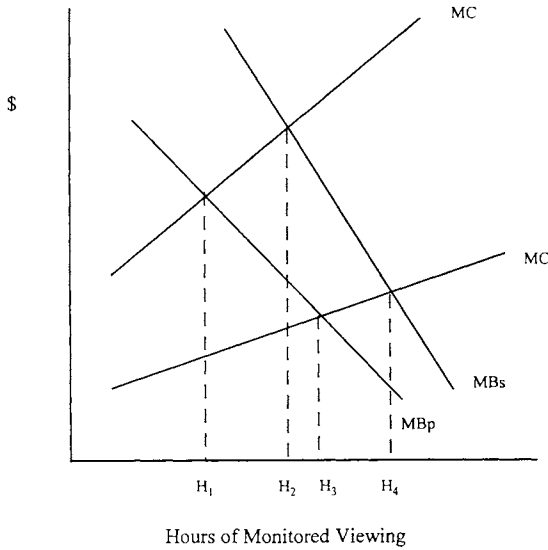


FIG. 1. Parental Monitoring

monitoring an hour of programming include information costs and other transaction costs (e.g., what type of violent or sexual content is in this program? how can I know what programs are on what channels?) and the opportunity cost of time spent checking to make sure that children are not watching a particular program. The costs of monitoring another hour of programming are reflected in the marginal cost curve MC in the diagram. Parents will consider the private benefits of shielding their children from objectionable programming, such as the reduced likelihood that the children will be stimulated to aggression. If parents block the most dangerous programs first, the marginal private benefits of monitoring decline with each additional hour monitored, as reflected in the curve MBp. Parents trading off the benefits and costs of monitoring viewing would monitor up to the point where the additional costs of monitoring equal the additional benefits of shielding children from viewing, i.e., H_1 hours of viewing.

From society's perspective, the optimal amount of monitored viewing would be H_2 hours. If parents took into account the full benefits to society of shielding their children from television violence, then they would calculate the benefits by the values reflected in the curve MBs, and would therefore engage in H_2 hours of monitoring. The difference between the private and social benefits of monitoring creates an argument for policies designed to increase parental action to shield children from violent programming. If programs carried informative ratings about violent and sexual content and parents could easily access this information, this would lower information costs for parents. If televisions carried V-chips that allowed parents to block programs based on informative ratings, this would lower the opportunity costs of the time devoted to making sure that children were not watching

programs the parents deemed inappropriate. In a world of informative ratings and V-chip technology, parents would thus face lower marginal costs to monitoring children's viewing, as reflected in the curve MC'. This curve is below the previous marginal cost curve and rises more slowly since the fixed costs of becoming informed and the opportunity costs of additional hours of monitoring are reduced by the V-chip (e.g., the parent only needs to check on viewing intermittently). Parents with the advantage of ratings and the V-chip would find shielding their children less costly and would end up monitoring more hours of viewing (H_3). Even in a world of enhanced technology, parents would not engage in the optimal amount of monitoring (H_4). Reductions in the costs of becoming informed about program content and acting on this information, however, would lead to more parental monitoring and the added benefits of shielding children from violent programming.

The graph in figure 1 leaves out many factors that a full cost-benefit analysis of a rating system and the V-chip would incorporate. It does not reflect the costs of developing and implementing a rating system, nor does it reflect the costs to parents of purchasing a V-chip. The analysis also leaves unanswered what "informative" ratings for parents would consist of and what incentives the industry would have to develop such ratings. The following sections explore in more detail evidence on the incentives of parents to demand and programmers to develop particular types of program rating information.

III. VIEWER INCENTIVES

A number of factors determine the success of systems designed to provide information about products, including the dimensions of product attributes described, the specific wording used, the availability of the information in the market, and the ease with which a consumer can process the information.¹⁰ Each of these factors will influence how useful parents will find a given type of rating system for television programs. Three different types of evidence indicate how parents (and children) may evaluate and react to different program rating formats: public opinion surveys about the potential design of program content indicators; lab experiments that gauge the reaction of parents and children to various types of program labels; and field evidence from the implementation of viewer discretion warnings and the TV Parental Guidelines system.

Federman (1996) notes that program rating formats may be categorized as *descriptive* (e.g., providing information on the type of content in a television show) or *evaluative* (e.g., recommending parental discretion or indicating the appropriateness of the program for a given age group). In the debate over television program ratings in the United States, survey data have repeatedly indicated that parents prefer ratings that provide indications of content information rather than ratings that make recommendations about the appropriateness of programs for particular viewing audiences. For example, the survey by Cantor, Stutman, and Duran (1996) indicates the preference of parents for content-based rather than age-based ratings. This study, supported by the National PTA, found that parents expressed high degrees of concern about the effects of television programs containing violence, sex, and profanity.¹¹ The level of parents' concern about particular types of content varied with the age and gender of their children, which leads the researchers to note that content indicators would allow parents to eval-

uate programs more readily based on the importance they attached to specific types of content. When asked in the survey whether there should be “an overall summary rating of a program” or “separate ratings for different types of content, such as violence, sex, and language,” 80% of the parents surveyed indicated a preference for separate indicators rather than a summary rating. When asked whether a program rating should indicate “what age of the child the program is appropriate or inappropriate for” or simply indicate “what the content of the program is (i.e., amount or type of sex, violence, and language),” 80% of the parents selected the content-based ratings rather than the age-based ratings. Although the initial TV Parental Guidelines system implemented in January 1997 used a summary indicator (e.g., TV-14) and categorized programs based in part on recommended ages of viewers (e.g., TV-Y7, TV-14), parents in survey data consistently reported that a content-based rating system would be superior to an age-based system.¹²

In addition to the Cantor, Stutman, and Duran survey, polls by the Yankelovich Partners and by the *New York Times* indicate that a substantial majority of respondents prefer a content-based system.¹³ The Valenti, Anstrom, and Fritts January 1997 filing with the FCC included a summary of survey data entitled “National survey shows widespread support by parents for TV Parental Guidelines,” which at first might seem to contradict the other polling information discussed here. Yet the survey of 1,207 parents conducted in December 1996 by Peter D. Hart Research Associates and Public Opinion Strategies frames the evaluation of the rating system in a different light. Rather than reporting the results of asking parents to choose among alternative rating systems, the Hart survey questions reported in the FCC filing have parents evaluate the TV Parental Guidelines alone. The Hart survey found that “90 percent of America’s parents favored the TV Parental Guidelines system as it has been created, with 58 percent ‘strongly’ in favor and 32 percent ‘somewhat’ in favor.” In their filing with the FCC, Valenti, Anstrom and Fritts indicate that the question before the Commission is whether the TV Parental Guidelines are “acceptable” rather than an “ideal program.”¹⁴ Their use of polling data to indicate approval or disapproval of the rating system chosen by the industry committee rather than reliance on polling data that gauged parental support for different types of rating systems is consistent with their interpretation of the standard (i.e., “acceptable” ratings) they are trying to meet.

Data from laboratory experiments offer another indication of how parents and children react to ratings. Cantor and Krmar found in a study of seventy parent-child dyads in a lab setting that these groups strongly avoided choosing programs carrying the advisory “Contains some violence. Parental discretion advised.” Parents with younger children were especially likely to indicate in discussions with their children that programs with advisories had inappropriate content.¹⁵ Most other lab studies of ratings have focused on how the wording of program labels may influence the viewing selection of child or teen viewers left to make their own viewing decisions based on program guide descriptions. In the 1996 National Television Violence Study, Cantor and Harrison found that varying the wording of viewer discretion warnings and varying the use of Motion Picture Association of America (MPAA) ratings in viewing guides affected children’s willingness to select particular programs. They concluded:

The well known admonition, "parental discretion advised" had a strong and positive effect on boys' interest in viewing reality-action programs, and the effect was strongest for boys in the older group. This same advisory had no impact on girls' tendency to choose such programs. In contrast, another frequently used advisory, "viewer discretion advised," did not increase boys' interest in viewing police-detective shows, but it decreased girls' (and especially younger girls') choices of such programs.

The MPAA ratings "G," "PG," "PG-13," and "R" also strongly affected children's desire to see a movie. Older boys were especially interested in the target movie when it was rated "PG-13" or "R" and completely avoided it when it was rated "G."¹⁶

In the 1997 National Television Violence Study, Cantor, Harrison, and Nathanson tested different rating and advisory systems by examining how descriptions in viewing guides affected the program selections of 374 children between age five and fifteen participating in their experiments. They were particularly interested in examining whether some types of program information increase children's interest because of a "forbidden fruit" effect where restricted behavior appears more desirable or because of an "information effect" where some children may choose to view programs with advisories because they seek out more violent content. They concluded:

Not only did the higher level MPAA ratings make movies more attractive to older children, they were the only one of six ratings systems tested to attract children to restricted content. Moreover, these restrictive ratings attracted younger children who like to watch television the most and who by their own admission get involved in fights with other children more frequently. Finally, the MPAA rating of "PG-13" was especially attractive to older children who like to watch violent television.

Of all the rating systems tested, then, the "forbidden fruit" effect turned out to be strongest for the rating system most like the one that has been adopted by the television industry. The new rating system seems likely to produce the same effect, because it, too, provides guidance on the appropriate age for viewing while exhorting parental control over children's access to programs.¹⁷

"Field" evidence on how parents and children actually use program information offers a third source of data on viewer reactions. In 1993, the broadcast networks announced they would place viewer discretion warnings on violent programming. A study of the impact of viewer discretion warnings placed on prime-time broadcast network movies from 1987 through 1993 indicates that viewing does change if programmers provide information about content (see Hamilton, 1998). Broadcast network movies that carried viewer warnings had, other things being equal, Nielsen ratings among children

aged 2 to 11 that were 14% lower than movies without the warnings.¹⁸ This is consistent with parents acting on these warnings and intervening in the viewing decisions of their children, which may be more likely in prime time than in other periods when parents may not be home when children are viewing. The placement of a viewer warning dropped a movie's audience by approximately 222,000 children aged 2 to 11. Ratings among teens and adults were not affected by the viewer discretion advisories.

Six weeks into the implementation of the TV Parental Guidelines, the *New York Times* survey of parents indicated awareness of the program outpaced its use in viewing decisions. In the *Times* poll, "86 percent of the parents approve of the idea of such ratings, and 73 percent say they have noticed the ratings on their television screens, but only 37 percent say they have used the ratings to guide their viewing choices."¹⁹ The level of ratings use by parents will depend, in part, on how widely available they are. Though *TV Guide* added two to three pages per issue in order to include the TV Parental Guidelines ratings, many newspapers appear reluctant to include the program rating information in their daily television grids.²⁰ The ultimate level of use of the TV Parental Guidelines should shift once the V-chip technology spreads. This will lower the transaction costs of parents of using program information, since parents can simply set the program indicator levels on the television and rely on this to screen out shows with higher ratings. Parents will still need to monitor children's viewing, but the costs of incorporating program information into viewing decisions will be radically lower once televisions carry V-chips capable of reading program ratings.²¹

IV. PROGRAMMER INCENTIVES

The debate over the format of a television program rating system is often framed as a disagreement between academics or interest groups concerned with children and industry participants concerned about parental demand for types of program information. This framing obscures the fact that parents are simply one of the many groups whose interests were considered by the committee that designed the TV Parental Guidelines. The concerns of program producers, who worried about impingement on creative freedom, and of advertisers, who were afraid of consumer backlash against supporting particular types of programs, also influenced the industry committee in its selection of rating formats. Controversy can be costly in the programming market. Some advertisers will fear association with a program's content if it raises the probability they will become the target of a consumer boycott or increases the chance their brand image will be otherwise damaged. When the American Family Association focused attention on *NYPD Blue* during the fall 1993 television season, advertising time on the program at first sold at a 45% discount because of sponsors' fear of consumer backlash.²² By the fall of 1995 the program had won critical acclaim and controversy had dissipated, so that advertising no longer sold at a discount. Even if controversy is short-lived, programmers sensitive to advertiser concerns may fear initial impacts on advertising prices and long-term impact on demand for violent programs as they consider the effects of program content ratings on advertiser decisions.

Broadcaster experiences with the parental discretion warnings placed on network

prime-time movies offer some evidence for the incentives created by program labeling. Hamilton (1998) demonstrates that the placement of a warning on a prime-time broadcast network movie between 1987 and 1993 reduced the viewership of the film among children aged 2 to 11 by 14%, or 222,000 children. The warnings had no impact on ratings of teens or adults. Since children are not the target of advertisers on prime-time broadcast network films, one might assume that the fact that adult audiences remain unchanged should mean that advertiser behavior does not change if a movie receives a warning label. The placement of a label on a film such as "Due to some violent content, parental discretion is advised," however, may make it more likely that a firm is associated with support for "violent content." In theory, advertisers will face different incentives to react to the prospect of consumer backlash caused by support of violent programming depending on the demographics of who consumes their products.

Assessments of advertiser reactions to movie warnings bear out that the amount of paid advertising and the identity of advertisers changes when viewer warnings are placed on network broadcast movies. Don Ohlmeyer of NBC has indicated that the placement of a warning on movies causes some advertisers to pull out of sponsorship, though these ad spots are sometimes sold to other firms willing to trade potential association with controversy for a lower ad price.²³ In studying a sample of over 19,000 commercials on 251 broadcast network movies shown during 1995 and 1996, I found that the violent theatrical films that carried warnings had fewer general product ads and more network promotions than violent theatrical films without warnings. This is consistent with advertiser pullouts causing prices to drop and leading networks to be more willing to run internal promotions. Companies with products whose customers are less likely to be offended by television violence, e.g., males or younger viewers, may be more willing to buy time on movies with warnings since they face less consumer backlash.²⁴ In analyzing ads on broadcast network movies, I found:

Violent theatrical films with warnings were more likely to have products aimed at younger consumers, males, and households without children. Products aimed at these consumers, such as sports and leisure and alcoholic beverages, are more likely to advertise on theatrical movies with warnings. Products from industries where "family" brand images are important, such as food or kitchen products, are less likely to sponsor ads on theatrical films with warnings.²⁵

If broadcasters fear that labeling programs will cause prices to drop and the mix of advertisers to change, then one would expect they would be less willing to label truly violent programming as "violent." The UCLA Center for Communication Policy studies, funded by the broadcast networks, and the National Television Violence Study, supported by the cable industry, all indicate that in the 1994–95 and 1995–96 television seasons violent programming often went unlabeled on the broadcast networks. For the 1994–95 television season, the UCLA Center (1995) found that of 118 theatrical films shown on the broadcast networks, 50 raised issues of concern with respect to violence but 22 of these films did not carry viewer warnings. The UCLA study (1996) found improvement in the 1995–96 season, with only 33 of 113 theatrical films raising issues of concern about

use of violent content (and only 10 of the 33 films lacked warnings). In its analysis of a composite week of television on broadcast and cable channels during the 1995–96 season, the NTVS researchers found that overall only 5% of the programs that contained violence carried viewer advisories.²⁶

Do the incentives of network programmers to avoid advertiser backlash affect their application of the TV Parental Guidelines? One way to measure this would be to examine the content of a sample of programs shown on television in 1997 and compare TV Parental Guideline ratings with the content of the programs. As another way to examine this question, I have compared how the TV Parental Guideline ratings relate to program ratings from the Parents Television Council (PTC). If broadcast networks fear advertiser backlash, they should be less willing to use “higher” content codes than interest groups. In addition, broadcasters concerned about a potential drop in advertising prices should be more willing to “underlabel” shows with higher advertising rates.

Both these hypotheses are confirmed by data from the early implementation of the TV Parental Guidelines. For all rated prime-time program episodes (except movies) on the six broadcast networks from January 25 through April 18, 1997 (N=1,039 shows), 22.9% were rated TV-G, 65.7% were rated TV-PG, and 11.4% were rated TV-14. The Parents Television Council rated these programs at the start of the 1996–97 television season into three categories: green (“family-friendly show promoting responsible themes and traditional values”); yellow (“series’ adult-oriented themes and dialogue may be inappropriate for youngsters”); or red (“may include gratuitous sex, explicit dialogue, violent content, or obscene language, and is unsuitable for children”).²⁷ The PTC ratings of these programs (N=904 episodes) at the start of the season placed 25.3% in the green category, 50.9% in the yellow, and 23.8% in the red. The interest group was much more willing than programmers to place programs in the most controversial rating classification.²⁸ From the perspective of the Parents Television Council ratings, the programs the industry “underlabeled” had higher advertising prices (as measured at the beginning of the season, before the rating system could effect prices).²⁹ For the programs rated by the PTC as red, the average 1996 fall ad price per 30-second commercial was \$253,000 for those “red” programs the networks rated as TV-PG. The average 1996 fall ad price for the “red” programs that the networks were willing to rate as TV-14 was \$198,000. The prospects for controversy and advertiser backlash may thus lead broadcast programmers to “underlabel” content in programs that earn higher advertising rates.

Though fears of advertiser reactions may drive broadcast programmers to resist content-based ratings, arguments about the costs of implementing program ratings that convey the specific presence of violence, sex, or adult language have also been offered as potential explanations for why the industry should not offer more information in program ratings. Several factors indicate, however, that the industry could provide low-cost content ratings. Since programmers need to establish viewer expectations about program content, shows are likely to contain similar content across weeks. In the January to April 1997 sample of 130 prime-time, regularly scheduled program series on the six broadcast networks, 11 had no ratings (because they were news programs), 89 had the same category ratings across episodes, and 30 had two different ratings depending on episode content during the sample period. I have found that based simply on the genre of a program, one

can correctly predict 90 percent of the time whether a program contains a number of violent acts per hour greater than the average number for prime-time network broadcast shows.³⁰ A great deal of content information exists that is currently not made public to viewers. Advertisers may receive detailed information on prime-time network broadcast programming prior to its airing from AIS, a company that prescreens such programming and alerts advertisers to potential concerns they might have because of their customer demographics.

The notion that broadcasters would have to bear significant additional expenses to ascertain whether their programs contained violent or sexual content ignores the fact that these product attributes are explicitly used by the broadcast networks to build audiences. Consider table 1, reproduced from Hamilton, 1998. These results indicate that for movies shown on the four major broadcast networks from 1987 through 1993, overall, the networks strategically used certain types of violent content more often during sweeps months, when local ratings are measured and advertising rates thus established. Movies with murder themes, family crime themes, or a true crime focus were all aired more frequently during sweeps months than in nonsweeps months. Programmers explicitly analyzed their use of movies along these dimensions. Assessing the performance of films during the 1993–94 season, Ted Harbert, then the president of ABC Entertainment, said:

... this season, ABC's best performance was with family crime. The domestic crisis movies that were nonviolent averaged a point lower than the true crime movies and two points lower than the family crime movies.³¹

Analysis of the scheduling of 11,000 films shown from 6:00 A.M. to midnight on 32 channels from February 1995 to March 1996 indicates that the strategic use of violence by broadcast and cable channels to build audiences still continues. In analyzing the use of films during this time period, I found:

Channels specifically schedule particular types of violent programming at given days and times, so that viewers will have an expectation that violence will be used in that programming. At times this is a publicly announced marketing campaign, such as TNT's "Saturday Nitro" programming of violent films at 10 P.M. on Saturdays. In other cases it is a programming strategy pursued privately without fanfare, such as HBO's counterprogramming of violent films on Thursdays at 9 P.M. to compete with *Seinfeld* in 1995. The changes in the use of violence and sexual content during sweeps months when ratings are measured provide strong evidence that these movie characteristics are strategically chosen to develop audiences.³²

During the 1995–96 sample period, I found that Fox increased its use of violent movies from 42.1% of films during nonsweeps months to 84.2% during sweeps periods. Similarly, the basic cable "superstation" WGN had violent films 70.1% of the time in nonsweeps periods and 88.7% during sweeps. Strategic decisions about whether and when to offer violent and sexual content thus indicate that programmers do possess information on program content they could summarize and provide to viewers.

TABLE 1

**Use of Violent Content in Prime-Time Broadcast Network Movies,
Sweeps vs. Non-Sweeps Months, 1987–1993**

| | % of Films in | | |
|---|--------------------------|-----------------------------------|--|
| | Sweeps Months (N=944) | Non-Sweeps Months (N=1,723) | Difference of Proportions Test (Z Statistic) |
| Murder Theme | 32.7 | 28.9 | 2.1** |
| Family Crime Theme | 6.5 | 3.3 | 3.8*** |
| True Story | 23.2 | 16.5 | 4.2*** |
| True Murder | 10.7 | 4.6 | 5.9*** |
| True Family Crime | 4.2 | 1.6 | 4.2*** |
| <i>TV Guide</i> Ad Features Homicide | 13.9 | 9.5 | 3.4*** |
| <i>TV Guide</i> Ad Features Dead Body | 0.9 | 0.3 | 2.0** |
| <i>TV Guide</i> Indicates Film is Particularly Violent | 4.1 | 3.1 | 1.3 |
| Warning Provided | 2.8 | 3.3 | -0.7 |
| Murder Theme and Warning Provided | 1.0 | 2.0 | -2.0** |

Note: ***=Statistically significant at 1% level

**=Statistically significant at 5% level

If broadcast networks chose a program ratings system based on the concerns of parents rather than advertisers, what might such a system look like? The rating format used by premium channels offers a natural contrast to the decisions of broadcast networks, since premium channels do not carry advertising and therefore are not constrained by advertiser concerns. The content advisory format used by HBO and Showtime includes, in addition to the provision of MPAA ratings for movies, the possible use of ten indicators: adult language (AL); graphic language (GL); mild violence (MV); violence (V); graphic

violence (GV); nudity (N); brief nudity (BN); adult content (AC); strong sexual content (SC); and rape (RP).³³ This system demonstrates that it is possible to design and implement a content-based program ratings system that would convey to parents information on levels of different types of material they might want to shield their children from.

Faced with heavy criticism of the age-based ratings system, the developers of the TV Parental Guidelines announced in July 1997 that the original rating system would be amended so that content indicators would be added to program ratings. Children's programs in the TV-Y7 category could be supplemented with an FV indicator for shows "where fantasy violence may be more intense or more combative."³⁴ Shows in the TV-PG, TV-14, or TV-MA categories could also carry indicators for content, but the meaning of these indicators would vary with the program category. For shows classified as TV-PG, the programs could carry indicators for "moderate violence (V), some sexual situations (S), infrequent coarse language (L), or some suggestive dialogue (D)." For shows in the TV-14 category, the new indicators would be used to denote "intense violence (V), intense sexual situations (S), strong coarse language (L), or intensely suggestive dialogue (D)." For shows in the TV-MA category, the indicators denote "graphic violence (V), explicit sexual content (S), or crude indecent language (L)." The major broadcast networks, with the exception of NBC, announced that they would adopt these new categories.

The development and implementation of the revised ratings underscores the importance of economics to the willingness of broadcasters to provide program information. Although the industry committee agreed to provide content indicators, the same indicator (V) is used to convey different levels of violence. Though the combination of the age-based rating and content indicator will alert a viewer to the intensity of violence, the industry committee (cognizant of the concerns of broadcasters and advertisers) developed a scheme that avoided the use of premium channel indicators that directly convey content intensity (e.g., GV for graphic violence). The television industry committee agreed to the revised guidelines in part in exchange for assurances from advocacy groups and some legislators that they would not press for additional legislation directed at content. Potential losses from advertisers were thus balanced against potential losses from future legislative activity, including proposals dealing with an auction of the spectrum rights which broadcasters currently enjoy for free.³⁵ Describing the calculations that went into the revised guidelines, MPAA president Jack Valenti declared, "This is not what I would've done if I didn't think I had to. We went into these negotiations for one reason, and that was to shut the flow of legislation that we thought was inimical to our future and that may trespass on the First Amendment."³⁶

When the revised guidelines were announced in July 1997, NBC issued a statement declaring, "The ultimate aim of the current system's critics is to dictate programming content. NBC is disappointed that the industry capitulated to political and special-interest pressure and did not look more seriously at the implications of the flawed process in which they engaged. Therefore, NBC will not be a part of the new agreement."³⁷ The network's resistance to adopting content indicators was hailed by some in the television industry as a principled defense of creative freedom. The network may also have had the most to lose in advertiser backlash, however, if program ratings were made more specific. Analysis of the PTC program ratings indicates that among the four major broadcast

networks NBC had the highest mean 1996 ad price for episodes of shows rated as red by the PTC, a classification the group used for shows containing “gratuitous sex, explicit dialogue, violent content, or obscene language.”³⁸ The network may have thus feared that more content indicators would result in higher backlashes among advertisers on its successful prime-time programs.

V. DIFFICULTIES IN APPLYING A COST-BENEFIT FRAMEWORK

Television violence represents a market failure, since programmers and advertisers may not consider the full costs to society of scheduling and sponsoring violent programs. They do not incorporate the increased likelihood of aggression, fear, and desensitization that may arise among some children from exposure to violent images in television programs. Parents who believe television violence is harmful may act to shield their children from such programming.³⁹ Since they do not calculate the broader benefits to society from protecting their children from violent programming, parents will not engage in the optimal amount of program monitoring from society’s point of view.

This reasoning demonstrates that the actions of programmers and parents are likely to be inefficient. Programmers will offer more violent shows or shows with greater amounts of violence than they would if they considered the social damages arising from these programs. Parents will fail to monitor children’s viewing sufficiently to protect them from violent programs. The existence of these market failures, however, does not guarantee the existence of a remedy to correct these problems. In correcting the negative externalities that arise from pollution, analysts often use cost-benefit analysis to examine whether there are net gains from the imposition of a particular policy. In analyzing whether a particular ratings system would pass a cost-benefit test, however, there are at least two major impediments to the answering this question—the imprecision of damage estimates and the special nature of values associated with free expression.

Extensive research exists on how the context of violent portrayals may influence viewer reactions to violent content. A key innovation of the National Television Violence Study (1996) is the development of a coding scheme to describe violent content that is based on research about media effects. The NTVS researchers identified a large set of contextual factors that laboratory experiments and other research indicate may influence learning of aggression, fear, and desensitization: attractive perpetrator; attractive target; justified violence; unjustified violence; presence of weapons; extensive/graphic violence; realistic violence; rewards; punishments; pain/harm cues; and humor.⁴⁰ These results may tell parents the types of programming they may wish to shield their children from. Yet the research is not developed enough to allow one to estimate the particular harms that will arise from the airing of a given program. Since many of the effects relating to stimulation of aggression or crime occur years after viewing, one cannot trace particular crimes to particular programs. The interactive effects of particular types of violent content have not been fully explored, so that one cannot know how the combination of the different harmful contexts identified by the NTVS researchers affects viewers. The research is sufficient to suggest that certain types of violent content are harmful, but the results are

not developed enough to quantify the harms arising from particular programs. This quantification would be a key element in a cost-benefit analysis of a given rating system, for it would allow one to value the reduction in exposures of children to programming arising from the implementation of a rating system and the V-chip.

In the evaluation of environmental policies, “existence values” may play a prominent role in the analysis of the costs and benefits of a change in environmental outcomes. Consider, for example, the valuation of the preservation of the Grand Canyon. Some individuals will place a value on the preservation of this national park, even if they do not ever plan on visiting it. They may have a willingness to pay to preserve the park because they gain happiness from knowing it exists (i.e., an existence value) or because they wish to pass the park on to future generations (i.e., a bequest motive). Economists try to measure these values through the survey methodology of contingent valuation.⁴¹ At least two types of existence values are evident in the debate over television violence. Some people involved in the debate may prefer a society without violence on television based on moral or ideological grounds, independent of any negative effects that violent content may have on behavior.

Others may place a value on free expression, independent of concerns about the negative outcomes that may arise from this expression. In a cost-benefit analysis of the particular form of program ratings, individuals who place a strong value on First Amendment freedoms may interpret a rating system as a product of government action. They may place a great value on the freedom of programmers to broadcast without placing ratings in their signals. In theory, the values placed on free expression would be measured through contingent valuation surveys, although here again the difficulties of empirical measurement could make this approach to incorporating First Amendment values into decision making extremely hard.

The imprecision of measuring damages from particular programs and the values placed on free expression mean that a cost-benefit analysis for a given rating system would be unlikely to yield empirical measures of costs or benefits. Another approach would assert that asking whether a rating system would pass a cost-benefit test is immaterial, since the First Amendment rules out rating systems because they are a product of state action.⁴² This again parallels the treatment of some pollution problems, since the ability of regulators to consider the costs and benefits of particular instruments to control pollution will vary by the particulars of the specific environmental legislation setting up a program.⁴³

VI. POLICY RECOMMENDATIONS

For an analyst judging policies by the standard of efficiency, the decisions about the optimal program rating system would involve consideration of the type of program information valued by parents, the accessibility and feasibility of using this information with the V-chip, and the transaction costs for the industry in designing and implementing the program. The industry letter from Valenti, Anstrom, and Fritts (1997) submitting the initial TV Parental Guidelines to the FCC makes clear that they believe that the Telecommunications Act of 1996 does not require the FCC to engage in such a search. They stress that the legislation’s use of the word “acceptable” means that Congress “did

not intend for the Commission to demand that an industry-developed system of guidelines conform to the Commission's own or anyone else's vision of an ideal program."⁴⁴

The debate over the age-based system initially chosen by the industry and the content-based system supported by many educators and interest groups was often framed as a debate over what type of rating system would be "ideal" for parents. This essay has presented theoretical and empirical evidence on why the interests of parents and programmers may diverge in the design of a rating system. While content-based ratings could provide parents with more information to make viewing decisions, this information might also generate more backlash for advertisers. Consider, for example, the difference between the statement "Pepsico advertises on programs inappropriate for children under 14" and "Pepsico advertises on programs with graphic violence."⁴⁵ The latter statement might be more likely to damage the brand image of Pepsi and make the company a focus of interest group scrutiny. The revised guidelines announced in July 1997 represent a compromise between age-based and content-based systems, for they provide parents with some information on the intensity of violence or sexual content but do not make this information easily accessible as in the premium channel program rating system. How the FCC interprets whether the revised TV Parental Guidelines are "acceptable" may depend on the delegation doctrine invoked. Even if the agency were to reject the industry's system, the industry would be under no obligation to incorporate an alternative rating system in their broadcast signals. If Congress passed legislation requiring content-based ratings, this might increase the probability that the rating system would be found unconstitutional by the courts.

I believe that at least two policy lessons emerge from this analysis of the TV Parental Guidelines. The first is that the form of industry program ratings will be driven by profit maximization, just as the form of industry programming is. Broadcasters currently receive their licenses essentially for free, in return for a promise to broadcast in the "public interest, convenience, and necessity." Many analysts have interpreted the "public interest" requirement to be synonymous with profit maximization. Making this argument in the 1980s, FCC Chairman Mark Fowler declared that television is simply a "toaster with pictures," so that television programming should simply be left to the functioning of the free market.⁴⁶ With the backdrop of debates about a spectrum auction, industry participants often point to particular television practices (e.g., coverage of presidential debates, limited experiments with free time for presidential candidates) as evidence that networks will at times trade off profits for the "public interest." In the design of the rating system, the industry initially chose not to risk a reduction in profits for greater information for parents. After the threat of legislation that might impose additional costs on the industry, however, the industry committee adopted ratings that provided more content information. The reluctance of broadcast networks to provide more program content information than premium channels or some Internet sites does not stem from a greater distribution of altruism in these other media. The potential for advertiser backlash and the larger role that advertisers play in broadcast television means that networks have incentives to resist the provision of content-based information. Future debates about whether the broadcast spectrum should be auctioned should note whether the unwillingness of broadcasters to forego some profits affects the promised provision of content-based ratings by the broadcast networks.

A second policy lesson emerges from the prospect of the evolution of digital broadcasting and television technology. As the number of channels expands, television viewing may eventually involve software to aid viewer selections. In this world, software may include options to block out given types of programming (e.g., by genre), so that parents may be empowered to make choices at a low cost about what programs to shield their children from. The FCC may play a role in encouraging the use of more detailed ratings in its future rule making on the V-chip. The V-chip technology may already require some "reasoning," in the sense that the chip may have to differentiate between settings for children's shows (e.g. TV-Y, TV-Y7) and adult shows. Spitzer (1998) notes that the question exists about whether a program rated TV-Y7 will pass through a V-chip set for TV-PG. The FCC could, through its rule making on V-chip technology, encourage the adoption of technology capable of being used with multiple types of rating systems, so parents could choose to invoke one rating system or another through their use of the V-chip.

Questions about multiple ratings systems and V-chip technology have been debated in comments submitted during the FCC's consideration of the TV Parental Guidelines. The Consumer Electronics Manufacturers Association (1997, p. 2) argued for "the Commission's approval of a single consensus ratings system such as the Industry Proposal, with the understanding that, once established, the ratings system will not be changed in the foreseeable future." The association stressed that changes in a rating system made after technology had been placed in television sets could render some receivers obsolete. OKTV, a nonprofit developing its own program rating format based on research on program impacts on children, argued (1997a) for the development of a universal ratings format protocol that would facilitate the use of multiple rating systems. In its reply comments (1997b), OKTV, indicated that the FCC should adopt a "must-carry" policy so that television signals in line 21 of the vertical blanking interval will have to carry multiple program ratings. This would involve specification of a common ratings data structure, transmission protocol, and blocking technology, and would ultimately allow consumers to choose among different rating classifications carried in a signal. The Benton Foundation (1997) also proposed that alternative rating codes gain guaranteed rights of carriage in television signals. The American Medical Association (1997) urged the commission to adopt an "open" technological standard, so that if alternative ratings systems were developed in the future they would not be foreclosed by the design of the V-chip.

Currently television signals contain program identifiers that allow advertisers to more easily determine if ads have run during particular programs.⁴⁷ Programmers may be unwilling to include a rating other than the TV Parental Guideline indicator in a program's signal. In an era of digital broadcasting, however, a channel such as the local public broadcast station may be willing to transmit data on multiple program rating systems for shows on broadcast and cable channels in an area. Televisions could "download" this information, which would be used in conjunction with software and/or the V-chip to allow a viewer to draw on ratings from many different interest groups. If the FCC were dissatisfied with the TV Parental Guidelines submitted by the industry, the agency might still be able to encourage the proliferation and use of alternative rating systems through future decisions made about the design of the V-chip. Though broadcasters may be reluctant to provide viewers with detailed content information on programs, the possibilities for data transmis-

sion opened up by digital broadcasting mean that a single channel could transmit ratings information that could allow a television equipped with software to block programs based on detailed ratings. The FCC should investigate the degree that its decisions about the V-chip technology can ultimately encourage the use of multiple ratings systems.

Notes

1. Federal Communications Commission, 1997, p. 3.
2. For a discussion of congressional incentives and the delegation of decision-making power to agencies, see Arnold, 1990, and McCubbins, Noll, and Weingast, 1987.
3. See Valenti, Anstrom, and Fritts, 1997, p. 7. In their joint reply comments, the National Association of Broadcasters, National Cable Television Association, and Motion Picture Association of America stress that the issue before the FCC is only whether the TV Parental Guidelines are "acceptable." These organizations note (1997, p. 2): "Whether the Guidelines can or should be fine-tuned—or whether another system would also be 'acceptable'—is *not* the issue."
4. Valenti, Anstrom, and Fritts, 1997, p. 8.
5. See the reply comments of the Center for Media Education, et al., 1997, summary page 2.
6. See Markey, et al., 1997, p. 1.
7. See Sunstein, 1990, for a discussion of frameworks used to evaluate regulations. Landes and Posner (1987, p. 16) offer a simple definition of efficiency: "We use efficiency throughout this book in the Kaldor-Hicks (or potential Pareto superiority) sense, in which a policy change is said to be efficient if the winners from the change could compensate the losers, that is, if the winners gain more from the change than the losers lose, whether or not there is actual compensation."
8. For a more detailed discussion of the economics of television violence and empirical evidence for many of theories discussed here, see Hamilton, 1998. The incentives that broadcasters face to broadcast particular types of programming are also described in Hamilton, 1996.
9. Pollution and television violence are both examples of negative externalities, which are costs that are not incorporated into marketplace decisions. Economists define externalities by two conditions (Baumol and Oates, 1988, p. 17):

Condition 1: An externality is present whenever some individual's (say A's) *utility* or *production* relationships include real (that is, nonmonetary) variables, whose values are chosen by others (persons, corporations, governments) without particular attention to the effects on A's welfare. . . .

Condition 2: The decision maker, whose activity affects others' utility levels or enters their production functions, does not receive (pay) in compensation for this activity an amount equal in value to the resulting benefits (or costs) to others.

A parallel between pollution and violence exists if violence on television generates negative impacts on society. The National Television Violence Study (1996) provides an excellent overview of the research demonstrating how violent programming may generate aggression, fear, and desensitization among some child and adult viewers. The NTVS emphasizes that the context of how violence is portrayed may increase or decrease the likelihood that the programming may have undesirable effects on some audiences. Though children are unintended audiences for violent programs aimed at adults, the second year research report by the National Television Violence Study researchers (1997) indicates that programming specifically aimed at children contains a high level of violence and uses violent portrayals that carry high risks for young viewers.

10. See Magat and Viscusi, 1992, for empirical evidence on the attributes of successful labeling efforts for hazardous chemical products. Ippolito and Mathios (1990) demonstrate how information provisions about the health effects of fiber caused consumers to alter their cereal purchases and led producers to engage in product innovation to respond to changes in consumer demand.
11. The parent survey (based on 679 completed questionnaires) by Cantor, Stutman, and Duran also focused on the impact of television on children's fright and risk-taking reactions. The results of the survey were presented to the industry committee developing the rating system, which initially chose an age-based rather than content-based system. Comments filed with the FCC by Cantor (1997) summarize the polling data on parents' views about the format of television program ratings.

12. Surveys may provide information that the “logic of collective action” (Olson, 1971) predicts might not be otherwise expressed by parents. Though industry participants suggest that they have not received many complaints about the age-based ratings from parents, economic theory would predict that if parents prefer content-based ratings to the age-based format, they would be unlikely to contact the networks to complain because they have such a low probability of influencing network decisions. Some parents may participate in the debate over ratings and contact the networks and the government because they believe this is the right thing to do. The FCC has radically lowered the costs to individuals of participating in the ratings inquiry by encouraging individuals to e-mail their comments to the agency. Reply comments from the Center for Media Education, et al. (1997, p. 3) stress that complaints about the ratings format may rise as the V-chip technology is implemented and more parents attempt to use the industry ratings.
13. The Yankelovich survey of 1,753 respondents included 1,001 parents with children living at home. This survey, released in March 1997, found “70% of those polled preferring a content-based system vs. 18% who prefer an age-based system.” See Bash, 1997. The *New York Times* poll of 394 parents with children between age 2 and 17 conducted six weeks after the implementation of the TV Parental Guidelines found that “many parents also said they would prefer to see two separate rating labels, for violence and for sexual content, instead of the single, age-specific labels now in use.” See Mifflin, 1997.
14. See Valenti, Anstrom, Fritts, 1997, p. 8.
15. For details of the Cantor and Krcmar study, see National Television Violence Study, 1996. Parents and children were offered program guides in a lab and asked to choose programs to watch. Shows in the viewing guides were randomly labeled with the parental discretion warning. The parent-child pairs were videotaped discussing their program selection decision.
16. National Television Violence Study, 1996, p. III-45.
17. National Television Violence Study, 1997, p. 321.
18. Hamilton, 1998, examined all movies shown on the four major broadcast networks during prime time from September 14, 1987 to September 26, 1993, a sample of 2,295 films. According to *TV Guide*, the networks placed viewer discretion warnings on approximately 2% of these films. Ratings regressions controlled for variables such as movie starting time, genre, network, and airing year. The regressions indicated that adult males had higher ratings for movies described by *TV Guide* as particularly violent, while adult females had higher ratings for family crime movies. The data also indicate that the networks were more likely to use movies with murder themes, family crimes, or true murder stories during sweeps months. Hamilton, 1998, discusses how violent content is often used strategically in broadcast and cable programming.
19. See Mifflin, 1997, p. 1–8.
20. Hatch, 1997, suggests that many daily newspapers do not carry the program ratings, in part because of higher printing costs associated with including this information on a daily basis. A survey by the U.S. House Committee on Energy and Commerce Subcommittee on Telecommunications and Finance similarly found in 1994 that newspapers did not often carry viewer discretion warnings in their television grids.
21. Note that the V-chip could allow parents to incorporate information on many different types of content (e.g., levels of violence, sex, or adult language) at a low cost. While industry participants initially argued in favor of age-based summary indicators on the basis that other suggested ratings systems are too “complex,” the V-chip technology would allow parents to consider many different dimensions of programming simply by selecting particular levels of a given type of content (e.g., violence) to block out.
22. Hamilton, 1998, demonstrates that the estimated ad price for 30-second spots on *NYPD Blue* during November 1993 was \$163,200, based on the demographic groups watching the program. The reported price for ads on the program, however, was only \$89,800. I attribute the difference in ad prices to the controversy surrounding the program rather than to the specific wording of the warnings attached to the show, which generally focused on adult language or content. The American Family Association focused on the program’s use of language and nudity rather than violence. The UCLA Center for Communication Policy monitoring report (1995, p. 59) indicated that “the show was never found to be irresponsible in its use of violence.”
23. See Federman, 1996, p. 19.
24. Males and younger adults (e.g., those aged 18 to 34) are less likely to report in surveys that they believe television violence is offensive or has a negative impact on society. See Hamilton, 1998.
25. Hamilton, 1998, p. 5–4.
26. Viewers may have additional information about program content for movies previously released in theaters. Of the 357 prime-time movies scheduled to air on ABC, CBS, Fox, and NBC from May 1, 1995 through February 29, 1996, 36% were previously released in theaters (see Hamilton, 1998). One might

be tempted to argue that the MPAA ratings for these films, which are listed in *TV Guide*, provide viewers with indications of the prevalence of violence. I found for a sample of 1,210 movies released between 1982 and 1992 that in terms of the violent acts per hour measure used by the National Coalition on Television Violence, there was no statistical difference between the average number of violent acts per hour in a PG movie (20.1) and a PG-13 movie (19.8). There were clear differences between the average number of violent acts per hour in G (12.9) versus R (33.1) movies. Cantor, Harrison, and Nathanson (1997) make the point that it is hard to predict the particular combination of adult content, nudity, violence, and language that a PG or PG-13 movie will contain. They also note the importance of recognizing that the PG-13 rating was not used before 1984, so PG movies prior to that year may contain more potentially objectionable content than current PG films.

27. See Parents Television Council, 1996, for program evaluations.
28. In this analysis I compare the use of the TV-14 rating with the PTC red warning. None of the prime-time broadcast network series programs carried the TV-M or MA rating. The movie *Schindler's List*, broadcast on February 23, 1997 on NBC, did carry a TV-M rating. Note that the TV Parental Guidelines indicator for "Mature Audience Only" programs was eventually changed from an initial designation of TV-M to TV-MA.
29. See Hamilton, 1998, for a fuller comparison between the PTC and industry ratings.
30. For prime-time broadcast network programs between 1980 and 1991 examined by the National Coalition on Television Violence, the mean number of violent acts per hour calculated was 8.4. Of 534 programs classified as "nonviolent" based on genre, only 34 shows had counts of violent acts per hour greater than the sample mean of 8.4 (e.g., were false negatives). Of the 233 shows in violent genres, only 34 had violence counts lower than the sample mean (e.g., were false positives). Note that the ability to predict violent content from genre does not reduce the need for a ratings system, since the presence of indicators in signals will allow parents to use a V-chip to block programming more easily than they would in a world where they had to read program guides, determine genre, and then monitor viewing.
31. See Shales, 1994.
32. See Hamilton, 1998, p. 4-33.
33. See Rice and Brown, 1996.
34. For a detailed description of the revised TV Parental Guidelines, see PR Newswire Association, 1997 and Albiniak, 1997.
35. See Albiniak, 1997 and Pottinger, 1997.
36. Pottinger, 1997.
37. Albiniak, 1997, p. 6.
38. Average 1996 prices for 30-second ads on episodes of programs rated as red by PTC were \$239,000 for ABC, \$223,000 for CBS, \$178,000 for Fox, and \$340,000 for NBC. For more information on the sample of programs and analysis, see Hamilton, 1998.
39. In analyzing survey responses from parents about whether they had switched channels during news broadcasts to shield their children from programming, I found that the estimated probability a parent had switched channels was .53. For a parent who reported being bothered by violence on television, the probability was higher by .18 than for a parent who was not bothered by television violence. See Hamilton, 1998.
40. See National Television Violence Study, 1996, p. I-17.
41. See the report released by the National Oceanic and Atmospheric Administration, 1993, for a description of and debate over the contingent valuation methodology.
42. Spitzer, 1998, demonstrates that the rating system would be likely to survive a court challenge, even though the courts would probably determine that the system was a product of state action.
43. Sunstein, 1990, contains an excellent discussion of rationales for regulation and the problems that may arise in the implementation of rules.
44. Valenti, Anstrom, and Fritts, 1997, p. 8.
45. In the sample of 251 movies on prime-time network broadcast television I examined from May 1995 through February 1996, Pepsico had the most ads on violent theatrical films that carried warnings and was the number three advertiser on violent theatrical films that did not carry warnings. See Hamilton, 1998, Appendix Table 5.6.
46. Hamilton, 1996, examines the economics of "public interest" programming.
47. See Federal Communications Commission, 1996, which indicates that signals have carried since 1989 Nielsen Automated Measurement of Lineup (AMOL) codes in line 22. These codes allow advertisers to monitor which programs carry their ads. Identification codes for programs also facilitate the ability of viewers to record programs with a VCR.

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