COMMENTARIES

PROLIFERATING VIOLENCE

George Gerbner

Since 1967 my colleagues and I at the Annenberg School of Communications of the University of Pennsylvania have been engaged in the scientific study of media content and effects. As part of this ongoing work we have conducted and issued a series of reports, most recently Violence Profile No. 8 in March 1977. These are the highlights of our Violence Profile No. 8, a study of trends in network television drama and viewer conceptions of social reality for the 1976 television year.

Increasing Violence

Television violence increased sharply in all categories, including "family viewing" and children's program time on all three networks. The increase resulted in the highest Violence Index on record. The only score that comes close to the current record of 203.6 was the score of 198.7 in 1967, the year of turmoil that led to the establishment of the Eisenhower Violence Commission and our TV Violence Index.

Other components of the TV Violence Profile confirmed previous findings of the unequal structure of power and risk in the world of television drama, and showed children's particular vulnerability to the effects of television. Heavy viewers revealed a significantly higher sense of personal risk, law enforcement, and mistrust and suspicion than did light viewers in the same demographic groups, exposed to the same real risks of life. The results also showed that TV's independent contributions to the cultivation of these conceptions of a "mean world" and other aspects of social reality are not significantly altered by sex, age, education, income, newspaper reading, and church attendance.

The Violence Profile is a cluster of indices sensitive to different aspects of the nature and effects as well as the amount of violence on television. The Violence Index itself is a composite of measures of the prevalence, rate, and characterizations involved in violent action.

The latest Violence Index was based on the analysis of a fall 1976 sample of prime-time, late evening, and weekend daytime network television dramatic programming. The analysis focused on clear-cut and unambiguous physical expressions of overt violence in any context. Available evidence suggests that violence in a humorous or fantasy context may be at least as effective a demonstration of some of its social lessons as "realistic" or "serious" violence.

The percentage of characters involved in violence and killing rose to the second highest, and the indicator of violent action in programs to the highest, point on record. Three-fourths (74.9 percent) of all characters were involved in some violence, compared to 65 percent in 1975. Nine out of every ten programs sampled (89.1 percent) contained some violence, compared to 78.4 percent in 1975. The saturation of programs with violence, indicated by the rate of violent episodes, rose to record heights of 6.2 per play and 9.5 per hour, compared to 5.6 and 8.1, respectively. Only killing declined slightly. The cumulative effect of the increases resulted in the unprecedented jump in the composite Violence Index.

Rating the Networks

The increase in violence cuts across program categories and times. The context of dramatic programming did not change significantly, eliminating the possibility that the upsurge of violence was due to a sudden jump in the number of action programs, or late evening, cartoon, new, or "serious" programs in the sample. All three networks increased their overall mix of violence but stayed in the same violence rank order as in 1975, with NBC the highest, ABC second, and CBS third.

Data from the past ten years show that NBC is the "leader" in overall violence and in both children's hours and late evening violence. ABC is in the middle in overall violence, due to a decline in late evening violence (in which it had been the highest before) and despite increases in family viewing and children's hours. CBS, leader in the family viewing concept, lifted its two-season lid on family viewing time violence, but still held the lowest family viewing time, late evening, and overall violence scores. Children's hour

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violence on CBS rose to above that of ABC, but below that of NBC. The Violence Index ranks CBS least and NBC most violent overall, CBS least and ABC most violent in family viewing time, CBS least and NBC most violent in late evening, and ABC least and NBC most violent in weekend children's program time.

Violents and Victims

Other components of the Violence Profile deal with the structure of power demonstrated in TV violence and with conceptions of social reality that television viewing cultivates in the minds of viewers.

The most elementary—and telling—social structure involved in a violence scenario is that of violents and victims. The ratios of those who inflict and those who suffer violence provide a calculus of life's chances for different groups of people in the world of television drama. These Risk Ratios are obtained by dividing the more numerous of these two roles by the less numerous within each group. A plus sign indicates that there are more violents or killers than victims or killed, and a minus sign indicates that there are more victims or killed than violents or killers.

The overall Violence-Victim Ratio since 1969 (when this measure was developed) is −1.21, meaning that for every violent there were 1.21 victims. However, while the overall victimization ratio for men is −1.20, for women it is higher: −1.32. Even more striking are the differential risks of fatal victimization. There were nearly two male killers for every male killed (Killer-Killed Ratio of +1.96). However, for every female killer one woman was killed (K-K Ratio of 1.00).

Particularly high risks of victimization (relative to the ability to inflict violence) are borne by children (−1.73), old women (−3.00), unmarried women (−1.50), lower-class women (−2.25), nonwhites (−1.40), and particularly nonwhite women (−2.50). "Good" characters were more likely to be victimized (−1.28) than "bad" characters (−1.02), although the latter were more often fatal victims. "Good" women were even more likely victims (−1.47) than "good" men (−1.24). But "bad" women had the most favorable (and only positive) Violent-Victim Ratio of all groups (+1.16). Committing violence seems more likely to mark a female than a male character "bad" in the world of television. Exceptionally high relative risks of fatal victimization are borne by the old and the poor, particularly among women.

The patterns of viewer responses to questions about social reality given by different groups of children and adults confirm previous findings that the cultivation of fear and mistrust may be among the most pervasive effects of heavy exposure to the violent and risky world of television drama. In giving the "television answer" to questions about violence, law enforcement, and trust, children tended to score higher and learn more from television than adults. Heavy viewers in all sex, age, education, income, reading, and church attendance groups were more imbued with the television view of a "mean world" than were light viewers in the same groups.

CBS Criticisms

The CBS answering report of April 1977 deals with two of three areas of the annual Violence Profile. It discusses the Violence Index and the Risk Ratios showing relative levels of victimization. It is unfortunate that the third area of our research, that of television's effects (or Cultivation Analysis), is ignored. The answers to some issues raised in the CBS material come from our study of television viewers rather than from program content alone. By omitting results that would answer its questions, CBS serves its own convenience rather than the need for objective judgment based on all available evidence.

Organized in logical order, the CBS report focuses on four main criticisms:

- The Violence Index is deficient because it defines violence too broadly and because it is composed of "an arbitrarily weighted set of arbitrarily chosen measures of violence on television, whose meaning is totally unclear."
- The Violence Index employs faulty units of analysis because "it counts as multiple acts of violence,single incidents which should be counted as single incidents."
- A single week's sample is inadequate for representing an entire television season.
- "The Risk Ratio analysis is equally defective" because it measures relative rather than absolute victimization which "in all likelihood" does not correspond "to viewers' perceptions."

Each of these claims rests on erroneous—if convenient—assumptions and results in highly misleading conclusions.

Violence Index

CBS claims that the Violence Index is deficient because "it includes kinds of dramatic incidents which should not be included—comic violence, accidents, natural disasters." The report suggests the unlikely example of a "pie in the face," and amplifies its conception of what *should* be included: violence "which might conceivably make potentially wayward youths wayward" and violence "in what reasonable citizens would consider to be potentially harmful dramatic forms."

The fact is that our analysis of television content as reported in the Violence Index does not presume effects—useful or harmful. The reporting of trends in the Gross National Product, the Employment Index, or in weather conditions, cannot depend on the presumed effects of the facts being reported—be they good, bad, indifferent, or mixed. CBS confuses communications *content* with the scientific study of communications *effects* and thus ignores our study of television viewers. Yet only by studying the conceptions and behaviors of the public, rather than speculating about "wayward youths" or what seems "potentially harm-

ful," can one determine the actual consequence of exposure to any form of violence.

CBS would also prefer to discount all violence in a comic context, which is especially frequent in children's programming. But CBS recently published *Learning While They Laugh*, a public relations booklet extolling the educational virtues of its children's programming, including cartoons. The weight of scientific evidence, including the recent Rand Corporation research summaries compiled by George Comstock, indicates that a comic context is a highly effective form of conveying serious lessons. If CBS wants to maintain that comedy teaches only what they wish for it to teach, the burden of proof lies with it.

Overall, the Violence Index for fall 1976 shows that violence occurs at the average rate of nearly 10 incidents per program hour. Yet CBS—and other industry spokesmen—typically attack these findings by the supposedly disarming example of the "pie in the face." First, we do not think there has been "pie in the face" in one of our samples of TV drama in a long time. Second, the Violence Index rules specifically exclude any noncredible comic gesture or verbal abuse. We classify as violence only the credible indication or actual infliction of overt physical pain, hurt, or killing. Thus, if a pie in the face does that—which depends on the actual incident—it is violence and should be so recorded.

The contention that "serious" violence is only what "reasonable citizens would consider harmful" is equally specious. It again confuses communication content with the assessment of effect. For example, we know from independent studies of the physical environment and of foods and pharmaceuticals that citizens are not necessarily aware of the full range of consequences of many of our industrial activities and products, including the products of the television industry. That is why independent research is needed. That is why the scientific diagnosis of a complex cultural-industrial phenomena—such as television—cannot be left to conventional wisdom, and even less to rationalizations by the corporate interests involved.

CBS also argues for the exclusion from the definition of TV violence dramatic incidents portraying "accidents," and "acts of nature." But there are no "accidents" in fiction. The author invents (or the producer inserts) dramatic disasters and "acts of nature" for a purpose. The pattern of violent victimization through such inventions may be a significant and telling part of television violence. It is hardly accidental that certain types of characters are accident-prone or disaster-prone in the world of television. Such TV content patterns may have significant effects on some viewers' conceptions of life and of their own risks in life. These patterns are, therefore, important to report if one is concerned with the full range of potentially significant consequences.

Another objection raised by CBS is that the Violence Index includes a set of measures rather than only a single indicator, and that different measures may move in different directions. The CBS report also cites a paper by Bruce M. Owen as complaining that the index "involves adding apples

and oranges." CBS could just as easily criticize any set of comprehensive indicators such as the GNP, labor statistics, or the weather report.

As pointed out in our response to the Owen paper, the usefulness of any index is precisely that it combines measures of different aspects of a complex phenomenon. One *must* add apples and oranges if one wants to know about *fruit*. The Violence Index reports all its components separately as well as in combination. That has made it possible for any user of the Violence Index, including CBS, to observe the movement of each component, and to weight each as it sees fit.

The CBS report correctly notes that the absolute number of violent incidents in CBS family hour programs declined in 1976, while other components of the index showed an increase. CBS fails to discuss the nature of these other measures. It also ignores the reasons for including them in the index. John A. Schneider of the CBS/Broadcast Group further confuses the issue by claiming that the index rose "apparently because we had the 'wrong people' involved in the action."

The *kind* of people involved had nothing to do with it. As Violence Profile No. 8 clearly shows, 23.1 percent of *all* leading CBS family hour characters were involved in violence in 1975, compared to 31.8 percent in 1976. Even more important, violence was more broadly distributed in 1976 CBS family hour programming, making it more difficult for viewers to avoid (or have their children avoid) violence during family viewing time. While in the 1975 sample only 27.3 percent of CBS family hour programs contained violence, in the 1976 sample 62.5 percent contained violence. So, although the number of violent acts was reduced in 1976, the percent of leading characters involved in violence increased and violence was found in many more programs. Much as we empathize with the CBS attempt to get credit for partial effort, we cannot agree that such contrary evidence should be covered up or omitted from the index.

Units of Analysis

The CBS complaint about counting multiple acts of violence when single acts should be counted is unfounded. In the tradition of such research since the first studies of the 1950s, our coding instructions specify that a violent act is "a scene of some violence confined to the same agents. Even if the scene is interrupted by a flashback, etc., as long as it continues in 'real time' it is the same act. However, if new agent(s) enter the scene it becomes another act."

The CBS coding instructions define a violent act as "one sustained, dramatically continuous event involving violence, with essentially the same group of participants and with no major interruption in continuity." The two definitions are similar except for the ambiguous CBS qualification of "essentially." Since the criteria for determining the "essential" set of agents are not specified, the CBS rule permits the arbitrary and subjective manipulation of the unit of violence. Such ambiguity not only tends to reduce the reliability of the measure, but also gives the coder employed by CBS the opportunity to stretch the rule on which all other measures depend. For example, under the CBS rule it would be possible to ignore shifting participation in a long series of violent scenes, possibly involving an entire program, as not "essential" and thus to code the whole program as a single violent incident. Such a defective measure cannot be accepted as the basis for the sole standard of network performance.

Sampling

CBS asserts that we measure only one week of television, which can lead to "statistical errors of horrendous proportion." Elsewhere its report states that CBS research found wide variability in its own count of violent incidents.

Plausible as that claim seems, in fact it reflects the limitations, instabilities, and ambiguities of the CBS definition. Our own interest in assessing the representativeness of the one-week sample led to an initial analysis in 1969, to repeated spring-season test samplings in 1975 and 1976, and to an analysis of six additional weeks of fall 1976 programming. These studies indicate that while a larger sample may increase precision, given our operational definitions and multi-dimensional measures that are sensitive to a variety of significant aspects of TV violence, the one-week sample yields remarkably stable results with high cost-efficiency.

With respect to the number of violent actions per program (the measure of most concern to CBS), our six-week analysis found the same rank-order of the three networks no matter which week was chosen, except for one instance when ABC and CBS were tied. CBS claims it found that the week with the highest number of incidents on any network had 2.5 to 3 times the number of incidents of the lowest week. We found in our six-week test that this multiple was 1.98 to 1 for CBS; for the others, it was even less: 1.29 to 1 for NBC, 1.23 to 1 for ABC.

The explanation for the discrepancy between our results and those of CBS lies more in differences of methodology than of sampling. CBS limits its observation of violence to those acts its coders presume to be intentionally harmful and excludes the majority of violent presentations they judge to be "comedic" or "accidental." These arbitrary limitations involve much subjective speculation and introduce variability and instability leading to gross statistical aberrations.

Sharply reducing both the number and potential reliability of observations, and then limiting the analysis to a single unstable measure, do indeed lead to "statistical errors of horrendous proportion." These are the errors that our broadly based and precisely operationalized methods are designed to overcome.

Risk Ratios

The Violence Index reports absolute as well as relative risks. It makes clear, for example, that women are less likely to get involved in violence on television than men. But it also finds that, when involved, relatively more women than men

end up as victims. CBS claims that relative victimization (that is, victimization compared to the commission of violence across different social types) is difficult to grasp, and is, therefore, a "meaningless statistic."

We must repeat that the validity of a TV content indicator does not depend on viewers' conscious understanding of its meaning. Our Cultivation Analysis shows that exposure to violence-laden television drama cultivates a sense of exaggerated fear and mistrust in the minds of heavy viewers. Young women—with an especially unfavorable Risk Ratio—are particularly affected, despite the fact that in absolute terms they are not as likely to get involved in violence as are the men. What CBS terms a "meaningless statistic" turns out to be potentially important in its consequences.

Our analysis of the CBS report and methodology confirms the judgment of social scientists, legislators, and the general public that only a scientifically tested, independent, and comprehensive set of indicators, measuring both TV content and effects, can be the basis for judging network performance. Our experience indicates that the Violence Index and Profile provide such a set of indicators. For independent confirmation we recommend the findings of an international panel of distinguished industry-affiliated and academic social scientists. This group's recommendations provide broad scientific support for the general direction and methodology of the Violence Index and Profile and offer advice which is directly opposed to the CBS methodology.

Inadequate Research

We have subjected the CBS materials and methodology to careful analysis and have found important features of the CBS methodology unreliable. That may account for the widely fluctuating results. The CBS objections to our Violence Index and Profile stem from an inadequate conception of the task of scientific research. They reflect a corporate defense mechanism rather than a broad and multifaceted investigation into the nature and effects of television violence. That basic misconception, coupled with questionable methods, makes the CBS contentions scientifically unacceptable.

The claims that all components of an index must move in the same direction, that a solid week sample cannot be representative of a season's programming, that "comic" or "accidental" violence should be ignored, and that relative victimization is a "meaningless statistic" represent confusion and wishful thinking. Congress and the American public need not revert to the era when self-serving claims and public relations gestures were the only bases for judging network performance. Our analysis of the CBS claims and complaints confirms the position that only an independent and scientifically tested comprehensive set of measures, such as the Violence Index and Profile, can do justice to the need for an objective standard of network performance in the public domain.

Much as we empathize with the CBS attempt to reduce indicators of network performance to the narrowest and most manageable basis, we cannot agree that such limitations would yield a valid measure of television violence. Network executives have long complained about "mechanical counts" of violence divorced from meaningful social and dramatic context. The Social Science Research Council and the National Institute of Mental Health committees of experts examined our methods and commended the use of a multidimensional profile sensitive to a variety of important aspects of violent representations. It is ironic that CBS now wants to go back to a one-dimensional count of a single and highly unstable measure.

Our methodology was developed and tested over many years both before and after the start of the current series of television violence studies in 1967. It was designed to avoid the sorts of flaws and errors typified by the CBS methodology. For example, it uses a more precise and comprehensive definition and a multidimensional set of indicators. Each component is reported separately so that any single measure (including the one to which CBS would like us to limit the entire research) can be seen by itself, as well as in combination with others.

It is true, of course, that some measures may show a decline while others increase, whenever that is in fact the case. Violence Profile No. 8 reported a decline in CBS family hour violent acts but an increase in the percentage of programs in which violence occurred. In other words, violence was reduced but spread to more programs. Thus viewers who wished to escape violence by turning to what they assumed to be nonviolent programs found that now those programs had some violence. This spreading of violence to more programs is a significant fact that should be reported regardless of whether CBS finds the results convenient.

We agree with previous statements of CBS and other television executives, writers, and analysts that meaningful and responsible analysis of television violence is not a simple matter. Thus it should not be dealt with by a simplistic count. Violence is a social relationship whose full and responsible understanding requires a multiple analysis of perpetrators, victims, actions, and consequences. But we must emphatically disagree that the study of TV violence should be reduced to those areas that are easily perceived by the average viewer or that have led to criticism of network policy. Indeed, the less readily detectable long-range consequences may be the most important to illuminate. All significant lessons of exposure to violence—be they good, bad, or indifferent to corporate interests—should be scrutinized.

Insuring Proper Standards

A comparison of the CBS methodology with that of our study shows that, in fact, it is the limitations of the CBS method that lead to the "fatal flaws" of which Schneider complains. Had we followed the CBS method of measuring violence, we might indeed be subject to those "statistical

errors of horrendous proportion" that Schneider attributes to our study.

The Violence Index is in fact a valid and reliable indicator of television violence. True, it is more broadly based than CBS would like. But to reduce it to a single narrow measure of questionable reliability would be a disservice to the Congress, the public, and—in the long run—to the industry that also needs an independent and objective standard.

Instead of trying to explain away findings when they happen to be inconvenient, CBS should take the lead in responding to our call for pooling research data in the national television archive of the Library of Congress. Librarian of Congress Daniel Boorstin is receptive to such a project, and Congress could expedite such collaboration in the public interest. That would be a truly fruitful and productive way to compare methodologies and to reach an open consensus on the most appropriate indicators and standards of network performance.□

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Bruce M. Owen of the Office of Telecommunications Policy, in a staff research paper which addressed the meaning and validity of the Gerbner Index, stated that "this exercise [that is, combining and arbitrarily weighting the various components of the Violence Index] involves adding apples and oranges.... One is always free to add apples and oranges if one wishes, but it isn't at all clear what the result means, and some people may take it seriously." Unfortunately, many people have taken Gerbner's Violence Index seriously.

When Gerbner's violence count itself is examined, a variety of deficiencies are apparent. Violence is counted presumably to measure the number of incidents depicted on network television which might conceivably make potentially wayward youths wayward. On this view Gerbner includes a number of kinds of dramatic action which clearly ought not to be included in a count of violence. Thus he includes comic violence and injuries caused by accidents or acts of nature. None of these are included in what reasonable citizens would consider to be potentially harmful dramatic forms.

A second difference in definition is related to a very complex set of social hypotheses which Gerbner superimposes upon his violence counts. Because Gerbner's hypotheses relate to the power relationships among individuals, he counts as new violent actions a period of violence in which a new person enters the action. Thus if two men are fighting in a restaurant, and one of them knocks down a waiter while trying to escape, Gerbner would count this as two separate episodes of violence. Since the count of violence should not be distorted by extraneous social theories, the proper count is the number of violent incidents themselves, not affected by changes in the participants of the action.

The result of these differences between the Gerbner measure of violence, and what we consider to be the more rational measure that we use, is that Gerbner's count results in a much higher number than is valid. Furthermore, it may often move in an opposite direction than to that indicated by the count one would get on a more reasonable basis.

A final deficiency of the Gerbner violence count is the size of the sample Gerbner uses. Since its inception the Gerbner effort has measured violence during one week a year. In the last two seasons he has added a second week in the spring, purportedly to verify the results of the fall count, but he does not use this week in his year-to-year comparisons of the magnitude of violence.

From the beginning of our monitoring we felt that there was too much change between fall and spring network schedules to permit reliance on a single week's results. So we always measured two weeks a year, one in the initial network season and one in the so-called second network season. Several years ago, as the network schedules became increasingly variable from week to week, with series being canceled and new series being brought on board all through the year and with mini-series becoming a new programming category, we decided to review the statistical basis of our count. As a result of this review, we concluded that one could no longer make statistically valid comments about the level of violence on network television without a much larger sample of weeks. Accordingly, in the fall of 1975 we began to monitor 13 weeks a season and have continued that practice.

We have measured violence on the television networks for 13 weeks in each of two years; on the basis of these data we have learned that estimates of current year-to-year changes in television violence, based on single-week samples, are normally subject to too much random error to be valid. For we have found in the 1976–77 season that the range in the weekly number of incidents of violence on individual television networks is on the order of 2.5 or 3 to 1; that is, the week with the highest number of incidents of violence on any network was 2.5 or 3 times the number with the lowest number of incidents. Accordingly, for statistical reasons we cannot accept the Gerbner violence counts even if we waive the deficiencies of his definitions.

Risk Ratio

Since 1969 Gerbner has made much of a statistic to which he variously refers as the "Victimization Ratio," "the Risk Ratio," the "Violence Victim Ratio," and which will here simply be called "RR." This statistic is obtained by noting, in reference to specific population subgroups, the number of such characters in "principal roles" who are depicted as "violents" (aggressors), the number who are depicted as victims, and dividing the larger number by the smaller. If