# The Gerbner Violence Profile

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*Since its inception in 1967, the Television Violence Profile has been the source of periodic discussion between social scientists and the networks. Recently, the debate was renewed with a series of letters and reports to Representative Lionel Van Deerlin, Chairman of the House Communications Subcommittee. The first of these, authored by CBS, questioned the methodology and assumptions underlying the profile. The Cultural Indicators Research Team, led by Dr. George Gerbner of the Annenberg School of Communication, replied to these criticisms in a similar report to Van Deerlin. Both parties then submitted rejoinders. The entire exchange follows in a four-part series. (Due to the length of the statements, we have, with permission of the authors, edited the reports to include the key sections.)*

*The CBS reports were authored by Dr. David Blank, Vice President and Chief Economist with CBS, Inc.*

Each year for almost a decade George Gerbner and his associates at the Annenberg School of Communications have produced a report on depictions of violence on network television, titled the Violence Profile.[1] The current Violence Profile #8, reporting on fall 1976 television network programming, incorporates three distinct areas of study. The first is the well-known Violence Index; the second deals with so-called Risk Ratios, and the third is Gerbner's Cultivation Index. In this analysis, we deal with the first two areas of study.

With regard to the Violence Index, our review indicates that the Index itself is not a measure of the amount of violence on network television, that it may, and in fact often does, change over time in different directions from the changes in the amount of television violence and that it is, in substance, an arbitrarily weighted set of arbitrarily chosen measures of aspects of violence on television, whose meaning is totally unclear. It cannot be used as a measure of the trend of televised violence over the years, or as an indicator of whether that violence is increasing or decreasing.

Gerbner's count of violent incidents, which is only one component of the overall Violence Index, has numerous and fatal deficiencies. It includes kinds of dramatic incidents which should not be included—comic violence, accidents, natural disasters. It counts as multiple acts of violence, single incidents which should be counted as single incidents. And most importantly, it rests on a single week's sample at a time in the television industry's history when programs are constantly changing and when there are no longer any typical weeks.

The Risk Ratio analysis is equally defective. Instead of directly measuring relative risks among various population segments, Gerbner devised indirect measures which do not reflect the differences in actual risk among differing population segments nor, in all likelihood, do they correspond at all to viewer's perceptions. Simpler and more direct measurements of risks often show a totally different relationship among social groups from the Gerbner measures.

## The Violence Index

The Gerbner Violence Index is deficient in a number of important ways and is, in fact, very misleading. First, the Violence Index itself is not, and does not purport to be, a measure of the amount of violence on television, although that is the way it is generally interpreted. The Violence Index is the sum of a number of measures, only one of which is Gerbner's count of violence. Another measure included in the Index, for example, is the proportion of leading characters engaged in violence. Because the Violence Index is composed of a number of factors in addition to the violence count itself, it is quite conceivable that the Violence Index could show a rise in a given year at the same time that Gerbner's own count of the amount of violence goes down.

That, in fact, is exactly what happened in the family viewing hour on CBS in the fall of 1976. Gernber's Violence Profile #8 states that "CBS . . . lifted its two-season lid on 'family viewing time' violence in 1976." In fact, the number of incidents of violence on CBS in the family viewing hour actually declined in 1976, according to the same Gerbner report. In the fall of 1975, according to Gerbner (Table 31), family viewing hour programs on CBS contained 20 incidents of violence; CBS family viewing hour programs in the fall of 1976, again according to Gerbner, contained only 11

incidents of violence![2] So the Violence Index is a measure which simply does not tell anyone whether violence on network programming is increasing or decreasing.

Other components of the Violence Index include measures of the proportion of programs that week containing any violence, of the rate of violence per program and per hour, and of the proportion of all leading characters involved in killings. These measures are combined by the use of a set of arbitrary weights. Indeed, the index is composed of so many varied and incomparable elements which are combined in such an arbitrary fashion that it is difficult to know what it means.[3]

Bruce 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 [i.e., 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." (See *Measuring Violence on Television: The Gerbner Index.* OTP Staff Research Paper OTS-SP-7, Bruce M. Owen, June 1972.) 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 (e.g., a custard pie in the face on an "I Love Lucy" program), and injuries caused by accidents or acts of nature (e.g., injuries occurring in earthquakes or hurricanes). None of these, we think, 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 (men vs. women, whites vs. nonwhites, etc.), 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 we do not believe that the count of violence should be distorted by extraneous social theories, we feel that 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 and 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 cancelled 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 1/2 or 3 to 1; that is, the week with the highest number of incidents of violence on any network was 2 1/2 or 3 times the number with the lowest

number of incidents. Accordingly, we do not believe, for statistical reasons, that one can accept the Gerbner violence counts even if we waive the deficiencies of his definitions.

## The 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"[4] who are depicted as "violents" (aggressors), the number who are depicted as victims, and dividing the larger number by the smaller. If victims exceed violents, the figure is preceded by a minus sign; if violents exceed victims, by a plus sign.

Gerbner considers that these RR's "provide a calculus of life's chances for different groups of people in the world of television drama" (p.8). He occasionally modifies this description in an important manner by stating that the RR's are indices of "risks of victimization (relative to the ability to inflict violence)" (p. 8). As the terms "Victimization Ratio" and "Risk Ratio" suggest, he is primarily interested in the groups with minus sign RR's—i.e., those in which victims exceed violents. He considers the RR's indexes, or at least clues, to "conceptions of social reality that television viewing cultivates in the minds of viewers" (p. 8) regarding "the structure of power." In "Highlights of TV Violence Profile #8" he notes especially the high negative RR's of women, children, old women, unmarried women, and various other groups. Explicitly or implicitly, Gerbner regards the RR's as either distortions of social reality or perpetuations of existing stereotypes, regards negative RR's as reason to believe that viewers regard such groups as relatively powerless, and believes that viewers themselves become fearful of becoming victims of violence.

At least two important questions arise regarding the meaning of the RR and its presumed effects. First, the RR is not a measure of simple risk, in reference to which the number of "violents" is irrelevant. If, as Gerbner's tables show, 243 of 697 women (34.9 percent) in "principal roles" across 10 sample weeks since 1969 were depicted as "victims," what matter whether the number depicted as "violents" is, as he indicates, 184, or whether it is 284 or 26? The

"risk" is the same. (Comparative risks are further discussed below.)

The RR is also not a measure of "victimization (relative to the ability to inflict violence)," since the *ability* to do so is not normally a theme of television drama. The fact that 513 of the 697 women were not portrayed as inflicting violence is not an indication of their *inability* to do so. What the RR actually measures is victimization relative to the *commission* of violence. The implications of such an index are somewhat difficult to conceive.

Second, it is very difficult to believe that viewers would become aware, consciously or unconsciously, of the differential RR's—i.e., the relative proportions of different groups which are depicted as violents or victims, and the differences between groups in this regard. It is not at all difficult to believe, however, that viewers would become to one or another degree aware of something much simpler and more easily statistically stated, namely, that certain groups are more often victims than others (or more often violent than others, or more often involved in violence, one way or another, than others).

Maintaining the emphasis on risk, the more telling statistics would seem to be the simple number of persons in that group who are depicted as victims, or, for somewhat greater refinement, the percentage so depicted (the number of victims divided by the total number of persons in that group who are depicted at all). These are, to the best of our knowledge, the measures used in calculating risks of contracting given diseases, the likelihood of being in an automobile accident, and other "risk" statistics.

When Gerbner's tables are examined in terms of these simpler statistics, what emerges is often a very different picture from the RR. Briefly, it is frequently found that a group with a *higher* RR than other groups is both numerically and proportionately *less* often depicted either as involved in violence at all or as victims.

By way of example, women have a higher RR (-1.32) than do men (-1.20). The simpler statistics (Gerbner's Table 44) reveal that Gerbner observed 2,328 male characters, of whom 1,604 (68.9 percent) were involved in violence and 1,400 (60.1 percent) depicted as victims. In comparison, 697 females were observed, of whom 311 (44.6 percent) were involved in violence and 243 (34.9 percent) depicted as victims. Of what is the viewer more likely to

become aware: the complex fact that female victims outnumbered female violents to a greater degree than male victims outnumbered male violents, or the simpler facts that, both in terms of absolute numbers and proportionately, women were less often than men involved in violence at all, and far less often than men depicted as victims? This same sort of situation applies to various other groups which Gerbner notes as having high RR's.

In summary, the RR is not a measure of *risk* as such, and the simpler and more telling statistics often reveal that groups with *higher* RR's than others are in fact *less often* than the others depicted as victims, both numerically and proportionately to their depiction.

[1] We are aware that the authorship of current Violence Profiles is credited to a number of people in addition to George Gerbner. However, for ease of reference and because Gerbner is normally the spokesman for the group, we refer to the various materials produced by the group as if they were prepared by Gerbner alone.

[2] All page and table references herein relate to Violence Profile #8.

[3] The formula for the Gerbner Violence index is:

$$100\frac{P_V}{P} + 2\frac{R}{P} + 2\frac{R}{H} + 100\frac{N_V + N_k}{N};$$

where, $P_V$ is the number of programs containing any violence; P is the number of programs; R is the number of violent episodes; H is the number of hours of programming; $N_V$ the number of leading characters involved in violence; $N_k$ the number of leading characters involved in killing or death; and N, the number of leading characters.

[4] On p.14 of his Violence Profile #8, Gerbner states that "The findings summarized in this report include the analysis of major characters only." He defines "major characters" as those in "principle roles essential to the story," whereas "minor characters (subjected to a less detailed analysis) are all other speaking roles." It is therefore here assumed that the RR applies only to "major characters."

# "The Gerbner Violence Profile"—An Analysis of the CBS Report

THE CULTURAL INDICATORS RESEARCH TEAM

*The Cultural Indicators Research Team is composed of George Gerbner, Larry Gross, Michael F. Eleey, Marilyn Jackson-Beeck, Suzanne Jeffries-Fox and Nancy Signorielli.* *(Readers are reminded that all four parts of this extended discussion are best read together, as constant reference is made to remarks in previous articles in the series.)*

The CBS report 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. . . .

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

1. The Violence Index is deficient because (a) it defines violence too broadly and (b) it is composed of "an arbitrarily weighted set of arbitrarily chosen measures of violence on television, whose meaning is totally unclear."
2. 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."
3. A single week's sample is inadequate for representing an entire television season.
4. "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 result in highly misleading conclusions. We shall analyze them in turn.

## The Index

CBS claims that the Violence Index is deficient because "It includes kinds of dramatic incidents which should not be in-

cluded—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 harmful," 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, "They Learn 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 them.

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 "a pie in the face" in one of our samples of TV drama in a long time. Second, the Violence Index rules specifically exclude any non-credible 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 effects. 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 on OTP Staff 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 (dated July 13, 1972, and also distributed through OTP but not cited by CBS), 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 they see 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. Mr. Schneider's letter 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 Table 31 of Violence Profile No. 8 (to which the CBS report refers) 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 emphasize 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 1950's, 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." As 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 "Dr. Gerbner only measures one week of television, which can lead to statistical errors of horrendous proportion." Elsewhere the 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 (see Table I).

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 one for CBS; for the others, it was even less: 1.29 to one for NBC, 1.23 to one 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

TABLE I

Analysis of Six Weeks of Fall 1976 Programming

| | Test Sample Week | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | F76* | Total |
| Total | | | | | | | |
| No. of programs | 58 | 58 | 57 | 58 | 61 | 61 | 353 |
| No. of violent acts | 345 | 342 | 365 | 365 | 341 | 342 | 2,100 |
| Rate (Acts per program) | 5.9 | 5.9 | 6.4 | 6.3 | 5.6 | 5.6 | 5.9 |
| ABC | | | | | | | |
| No. of programs | 20 | 20 | 19 | 19 | 20 | 19 | 117 |
| No. of violent acts | 114 | 107 | 112 | 132 | 116 | 110 | 691 |
| Rate (Acts per program) | 5.7 | 5.4 | 5.9 | 6.9 | 5.8 | 5.8 | 5.9 |
| Network rank | 2 | 2 | 1.5 | 2 | 2 | 2 | 2 |
| CBS | | | | | | | |
| No. of programs | 22 | 21 | 22 | 21 | 21 | 24 | 131 |
| No. of violent acts | 90 | 91 | 130 | 97 | 66 | 84 | 558 |
| Rate (Acts per program) | 4.1 | 4.3 | 5.9 | 4.6 | 3.1 | 3.5 | 4.3 |
| Network rank | 1 | 1 | 1.5 | 1 | 1 | 1 | 1 |
| NBC | | | | | | | |
| No. of programs | 16 | 17 | 16 | 18 | 20 | 18 | 105 |
| No. of violent acts | 141 | 144 | 123 | 136 | 159 | 148 | 851 |
| Rate (Acts per program) | 8.8 | 8.5 | 7.7 | 7.6 | 8.0 | 8.2 | 8.1 |
| Network rank | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

*Fall 1976 week reported in *Violence Profile No. 8.*

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 (i.e. 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 "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 charged by the Social Science Research Council conducting a year- long investigation "to conceptualize and give scientific context to the research required for the development of a multi-dimensional profile of violence in television programming." The recommendations, published in the *Annual Report* for 1974-75 of the Social Science Research Council (pages 67-72), 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. A detailed study comparing the Violence Index and Profile with CBS methods will be published in the near future, providing further documentation.