

The Measurement of Violence in Television Programming:
Violence Indices

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Questions about the amount of violence in the mass media, particularly television programming, have been voiced almost since the advent of the media. Senate hearings about television violence were held as early as 1954. These concerns stem from fears that television violence leads to aggressive behavior, particularly among the young. An equally controversial subject has been how to define, measure, isolate, and analyze that violence. This paper will examine ways in which television violence has been measured, including violence indices. The discussion will be limited to television, even though there has been research about violence in other mass media. It will also be limited to studies of American television.

One of the richest sources of information about television -- its content and effects -- is the 1972 six volume report of the Surgeon General's Scientific Advisory Committee -- Television and Social Behavior. This report covers a large number of research projects conducted between 1967 and 1969/70 on a wide variety of television-related topics. This discussion will draw upon findings from several of these studies.

Violence in television programming has been studied in many ways. In a considerable body of research the assessment of violence is the main issue of the research; that is, the goal is to ascertain the amount of violence in television programming. Another large body of research is concerned with violence

in programming as a side issue. In these cases, researchers assess effects of programming, usually violent programming, and measures of violence are used to define experimental conditions. That is, the amount of violence is an independent variable. This research will be discussed very briefly and only in reference to how violence is defined and/or measured.

This paper will also examine definitions of violence and the ways violence is unitized. Over the past 20 years violence has probably been defined almost as many times as it has been examined. Since violence is quite complex it can be and is defined in many different ways. Researchers have also developed many different ways to isolate discrete acts of violence in programming. The discussion of definitions and unitization rules also elaborate upon some of the controversy surrounding this research. For the most part the major thrust of this paper will be methodological. Findings will be presented very briefly.

The Assessment of Violence in Television Programs

There are four basic ways in which researchers have assessed violence in television programs: (1) content analyses using trained coders and specific rules and definitions (2) ratings or consensual measures in which people ("experts" as well as "everyday") people rate the amount of violence in programs, (3) studies in which the researcher predetermines which programs are violent; and (4) studies using combinations of (2) and (3). This last set of studies usually focuses upon issues (motivation, pro-social, etc.) other than violence. Tables I and II list studies that use the first two methods. The third and fourth areas are not included because they are not concerned with measurement issues per se. Moreover, the methods actually used in these studies are usually similar to those in (1) and (2).

Content Analysis

Although most people would agree that there is violence on television, there is no consensus about the degree or amount of violence that exists. To rely upon people's perceptions or opinions raises a number of important questions, including problems of selective exposure, differences in what to consider violence, and so on. Adequate and accurate assessment of the amount of violence in television programming can only be achieved through systematic research that includes quantification of this phenomenon. Methodologically, content analysis provides a procedural framework that can be used to conduct this type of research.

Content analysis has been defined as, "any technique for making inferences by systematically and objectively identifying specified characteristics of messages."¹ The first step in content analysis is to design an appropriate recording instrument; in the case of television programming, the set of observations that must be made for each and every program in the sample. This recording instrument also includes the definitions and rules that are used to code these programs. Content analysis data are generated by coders who are trained to use this instrument; that is, they are taught to observe a phenomenon in a particular way. Thus, when a content analysis is rigorous, the coders' personal opinions should not be apparent -- any trained coder will generate exactly the same data. Moreover, this objectivity can and should be measured via reliability analysis. Thus, the researcher is assured that the data reflect actual properties of the material under investigation and not ambiguities introduced by the uncertainties in the instrument or coder ideosyncracies.

The study of television violence through content analysis usually includes the examination of several aspects of this phenomenon. Most of these analyses try to measure violence as precisely as possible. Thus, the content analysis recording instruments include not only a definition of violence, but also

rules to isolate and count the number of times violence occurs. These rules, the unitization procedures, specify what constitutes a discrete act of violence -- when it begins and when it ends.

Since 1954, many content analyses have assessed television content (see Table I) and there are several good reviews of this literature.² The earliest important studies were conducted by Dallas Smythe,³ and Sidney Head⁴. Briefly, both studies coded programs "off the air" and found that, in the early 1950's there was a considerable amount of violence in New York City television programming.

Clark and Blankenburg⁵ assessed violence in television drama over a considerably longer period of time -- 1953 through October, 1969. TV Guide synopses were used as the source material and, as the authors clearly state, their measure or assessment of violence is probably underestimated, particularly in regard to television comedies. Since the source material is limited, the research only assessed general levels of violence -- that is, a specific count of violent actions could not be done. Clark and Blandenburg found a high level of violence that appeared to be cyclical. There were peaks in 1955, 1959, 1963 and 1967 with especially high levels in the late 1950's.

Content analysis has been used by researchers to isolate different aspects of violent content.⁶ Dominick⁷ examined crime and law enforcement in prime-time programming and found that two-thirds of the programs portrayed at least one crime. He also found that violent crimes were the most prevalent -- murder, assault and armed robbery made up 60 percent of television crimes. Moreover, television tends to overrepresent crimes directed against people rather than property⁸ and to underrepresent violent crimes between family members.

The results of content analyses have been put to several interesting

uses. Slaby, Quarforth, and McConnachie⁹ related television violence to the people who sponsor it. That is, they assessed the amount of violence on television and determined the rate of violence attributable to major commercial sponsors. They found 2,796 violent episodes in 376 hours of programming or 7.43 episodes per hour. The range of violent actions was quite large -- from none to 22.5 per hour.

There have been several grass-roots movements concerned with ascertaining the amount of violence in programming. One such movement grew out of the research of Slaby, Quarforth, and McConnachie. In 1976, the National Citizens Committee for Broadcasting (NCCB) set up a monitoring system to determine which companies were sponsoring the most and least violent programming. NCCB consulted with experts in the field to set up a system and used a commercial monitoring firm to gather the data. They reported the results of this project in Media Watch, their bi-monthly newsletter.

Another grass-roots movement that began about the same time, and is still actively involved in this work, is the National PTA's TV Action Center. This project uses thousands of PTA members throughout the country -- two units from each state -- as monitors. Specifically, monitors are asked to note instances of gratuitous violence (violence used to maintain interest, violence that is not necessary for plot development, and glorified violence). They also look for instances of "sexploitation", as well as sexual, age, and racial or ethnic stereotypes. The PTA publishes a yearly TV program review guide that provides lists of the least and most violent programs and sponsors, as well as descriptions of individual programs as based upon their monitors opinions.

An important thrust of the PTA project is that it has served to raise the level of public consciousness about this issue. The basic drawback is that the type of monitoring is not fully objective -- the PTA wants their

monitors to elicit personal opinions about programming. While the PTA does supply some definitions and a short training program, they do not measure the reliability of the codings. Thus, the results of their monitoring project should be viewed cautiously.

The networks, especially CBS, have also been active in this area. Since 1972 the Office of Social Research at CBS has conducted its own content analysis of prime-time network dramatic programming. The CBS annual analysis has focused upon counting incidents of violence within programs, and as a result has been concerned with definitional and unitization issues. The results of these analysis are presented in Comstock¹⁰. Typically, they find considerably less violence than non-industry conducted analyses -- differences that often result from methodological, definitional, and unitization issues that will be discussed later.

The Cultural Indicators Project

The most long term and extensive content analysis of television programming that includes the study of violence, is the work of the Cultural Indicators Project at the Annenberg School of Communications, University of Pennsylvania (often referred to as the "Gerbner" research). This research began in 1967-68 with a study for the National Commission on the Causes and Prevention of Violence. It continued under the sponsorship of the Surgeon General's Scientific Advisory Committee on Television and Social Behavior, the National Institute of Mental Health, the White House Office of Telecommunications Policy, the American Medical Association, and other agencies.

The research consists of two interrelated parts: (1) message system analysis -- the annual content analysis of prime-time and weekend-daytime network television dramatic programming and (2) cultivation analysis -- determining conceptions of social reality television viewing tends to cultivate

in different groups of viewers¹¹. The analyses provide information about the geography, demography, character profiles, and action structure of the world of television drama and focus these images and lessons upon specific issues, policies and topics.

The content data upon which Cultural Indicators bases its reports are gathered on a considerable number of issues other than violence. These content data are generated by coders who have undergone four to five weeks of rigorous training. Coders work in two person coding teams. During training each of these coder-pairs code a series of ten programs that have been coded by the entire message system analysis staff. Each coder-pair works independently of all other pairs and returns one joint coding for each program. After each pair completes each training program they meet with a staff member to discuss difficulties encountered in the exercise. Once training has been completed coder-pairs begin to code the annual sample of prime-time and weekend-daytime (children's) network dramatic programming. During both the training and data-collection phases, coder-pairs monitor their assigned videotaped programs as often as necessary, re-screening portions as needed. All programs in the sample are coded independently by two separate coder-pairs to provide double-coded data for reliability testing.

Reliability measures are designed to ascertain the degree to which the recorded data truly reflect the properties of the material being studied and not the contamination of observer bias or of instrument ambiguity.

The Cultural Indicators reliability assessment consists of the calculation of an agreement coefficient for each content item in the recording instrument. Only those items meeting acceptable levels of agreement are

included in subsequent analyses.¹²

The data do not reflect what a particular individual sees but what large communities absorb over long periods of time. Thus, the research does not attempt to interpret individual programs, networks, or productions, nor to draw conclusions about artistic merit. The analysis isolates the patterns and symbolic structures that exist in the samples. The purpose of this content analysis is to provide systematic, cumulative, and objective observations of the relevant aspects of the world of television drama.

Cultural Indicators has published annual reports¹³ on violence in television programming and has developed an index that is used to compare the levels of violence in different genres of programming. This discussion will focus only upon some methodological issues and controversies surrounding this research.

Measuring Violence via Ratings

The second type of study that generates measures of the amount of violence in programs uses people ("experts" such as television critics as well as "average" people) to rate the degree of violence within programs. In this research the raters are given lists of television programs and are asked to rate programs with which they are familiar on a three or five point

violence scale. These studies often manipulate whether or not raters are given a definition of violence and most of the studies have found that it does matter. For example, Greenberg and Gordon¹⁴ and Able and Beninson¹⁵ found that adult raters who were given a definition rated programs as more violent than the raters who were not given one. In the case of children, though, the opposite was true -- those rating without a definition rated programs as more violent. Other experimental conditions include having raters generate their own definition of violence either before or after completing the rating task¹⁶.

The best known of the rating studies is that conducted by Greenberg and Gordon¹⁷ as part of the Surgeon General's three year study of television. This research compared the ratings made by television critics with those of the public (adults). Greenberg and Gordon also manipulated, for the public, whether or not a definition of violence was supplied (the critics were given a definition and also asked to supply their own if it was different). They found that there was unanimity between the critics and the public about the 20 most violent shows in the 1969 television season. Moreover, the critics judged programs as more violent than the public. Finally, violence ratings increased when raters were given a definition of violence.

Thus, it appears that requiring raters to adhere to an explicit definition may inflate perceived violence levels. But, it should be stressed that absolute levels are misleading and not the central issue. Again, a primary value of systematic research is that it provides a way to compare trends reliably over time. And, agreements or disagreements about individual programs are far less important than the phenomena contained in the total, coherent system of messages.

Key Issues: Definitions, Unitization, and Sampling

The measurement of violence rests upon three key issues that are also the basis for disagreements about the findings of violence-related content analyses. These are (1) the way violence is defined and what to include as violence, (2) the way violence is isolated or unitized, and (3) the nature of the sample.

Definitions of Violence

The rating studies revealed that when raters were given a definition of violence, programs were usually rated as more violent. Thus, the way violence is defined is a very important methodological issue. Although almost every study supplies its own definition of violence, most of the definitions have a common core that includes physical hurting and/or killing. Some of the specific definitions that have been used in this research are given below.

The most widely used¹⁸ definition is that developed for the Cultural Indicators Project. These researchers define violence as,

"the overt expression of physical force (with or without a weapon, against self or other) compelling action against one's will or pain of being hurt or killed, or actually hurting or killing."¹⁹

The definition of violence used in the CBS monitoring project is:

"the use of physical force against persons or animals, or the articulated, explicit threat of physical force to compel particular behavior on the part of a person."²⁰

The PTA isolates gratuitous violence which they define as:

"violence to maintain interest, violence not necessary for plot development, glorified violence."²¹

And, PTA monitors are instructed to focus primarily upon violence to persons, to property and to laws.

Clark and Blankenburg²² define violence as,

"physical acts or the threat of physical acts by humans designed to inflict physical injury to persons or damage to property."

Harvey Sprafkin & Rubinstein²³ and Scheutz & Sprafkin²⁴ focus upon aggression, rather than violence, which they define as,

"acts involving the use of force, threat of force, or intent of force against others."

As noted above, some of the ratings studies manipulated whether or not raters were given a definition of violence before commencing upon the rating task.

These definitions also focus upon physical violence such as hurting. Smith defined a violent program as,

"a program where usually at some point the action results in injury or destruction to some object, animal, or human. The injury may be psychological or physical...a result of verbal or motor action."²⁵

Greenberg & Gordon²⁶ and Abel & Beninson²⁷ used the same definition,

"how much fighting, shooting, yelling or killing there usually is in the show."

Finally, some of the rating researchers had raters supply their own definitions of violence -- either before or after rating the programs. Again physical violence predominates. For example, Murray, Cole and Fedler²⁸ found that teenagers' definitions of violence generally involved three types of acts:

- (1) Physical: violence to persons, damage to property
- (2) mental: psychological and emotional (eg. fear and hatred), and
- (3) Verbal: verbal abuse.

For the most part these definitions are remarkably similar -- most deal with physical force including hurting and killing. One basic difference is whether or not the definition includes violence to property and emotional or psychological violence. Cultural Indicators, CBS, and Greenberg and Gordon, do not, but most of the others do. These differences seem to have been accepted and no major arguments have arisen because of them. The arguments that do exist are those between industry-related research and the Cultural Indicators study. The differences focus not upon the definition of violence per se, but upon whether or not to include certain "forms" of violence -- that is, comic violence, accidents or acts of nature.

The network researchers -- CBS²⁹ and NBC³⁰ argue against the inclusion of these disputed forms. Cultural Indicators research, on the other hand, records all incidents of violence as long as they meet the criteria set forth in the definition and coding instructions.³¹ In regard to comic violence, Cultural Indicators records all violence that occurs in a realistic or "serious" context along with violence in a fantasy or "humorous" context. CBS, however, would not count as violence that which occurs "in a context which would ordinarily produce laughter" and violence that is "not of a serious character". The network critics attack inclusion of comic violence by the supposedly disarming example of a "pie in the face." Cultural Indicators, however, classifies 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 will depend upon the specific incident -- it is violence and would be recorded as such.

There is substantial empirical evidence indicating that a comic context is a highly effective form in which to convey serious lessons.³² Moreover, CBS has been quick to point out that children can learn (perceive) pro-social

messages in comic context.³³ Although CBS may assume that children will only pick up "good" messages in a "humorous context," Cultural Indicators does not.

The second area of definition-related contention is whether or not to include accidents and/or acts of nature. Again, the networks have long argued against their inclusion (except those that occur in a violent context such as someone killed in an accident while escaping from a crime³⁴) without offering a reason other than accidents are not "reasonable" types of violence. Cultural Indicators research has always included both violence that occurs as a result of accidents and/or acts of nature because, in fact, there are no "accidents" in fiction. The author invents (or producer inserts) dramatic disasters, accidents and "acts of nature" to serve a purpose -- often to eliminate or incapacitate a character. Moreover, the pattern of violent victimization revealed through these occurrences may be a significant and telling part of television violence. It is hardly accidental that certain types of characters are accident or disaster-prone in the world of television. And, these patterns may have significant effects upon some viewer's conceptions of life as well as their own risks in life. Therefore, if one is concerned with the full range of potential significant consequences from violence in television programming, the only choice is to identify and report all types of violence that fit the strict definition.

Unitization of Violence

The second area of disagreement about how to measure violence is how to isolate specific incidents of violence. That is, where does a violent action start and where does it end? Although any decision in this area is somewhat arbitrary and open to debate and it is up to these researchers to operationalize the concept in the most appropriate, meaningful, simple, and comprehensible way.

In the tradition of content research since the first studies of the 1950's Cultural Indicators' coding instructions specify that a violent action is a scene of some violence confined to the same participants. If a scene is interrupted by flashback or shifts to another scene, but continues in "real time," it is still the same episode. Any change in the cast of characters -- such as a new agent of violence entering the scene -- starts another episode.

The CBS study, which is essentially the only other major study (aside from the NCCB monitoring³⁵) that measures levels of violence and counts the number of actions within programs, defines a violent action somewhat similarly. In this case, it is

"one sustained, dramatically continuous event involving violence, with essentially the same group of participants and with no major interruption in continuity."³⁶

The major difference between the two rules is the ambiguous inclusion of the word "essentially" in the CBS instructions. Moreover, since the criteria for determining the "essential" set of agents are not specified, the CBS study seems to present a somewhat arbitrary and subjective manipulation of the unit of analysis. In fact, their instructions to coders are vague on this issue stating that,

"A violent incident is not absolutely synonymous with an "act." One "incident" might include brief breaks in the action, as in a protracted chase scene, interrupted by pauses for regrouping and reloading or acts of violence by more than one person, as, for example, in a fight scene involving several people."³⁷

AS a result of these differences the findings of these two major studies are different -- but different in a very predictable way. CBS, as expected, finds much less violence than Cultural Indicators³⁸.

Sampling

Another area where there has been considerable debate and criticism of Cultural Indicators research is the nature of the sample used for the annual message system analysis -- a single week of programming broadcast in the fall of each season. In particular, CBS has argued that there is no such thing as a typical television week. Cultural Indicators has been aware of the dangers of using too small a sample and has conducted a number of sampling studies to assess the representativeness of a one-week sample. These studies include an initial analysis in 1969,³⁹ repeated spring-season test samplings in 1975 and 1976, and an analysis of seven weeks of Fall 1976 prime-time programming.

In the 1976 study, violence-related content data were collected for seven consecutive weeks, including the week originally selected for the Fall 1976 sample, of prime-time programming. A large number of analyses, including several analyses of variance, were conducted and all led to the same conclusion -- each of the seven sample weeks yielded basically similar findings. That is, there were no significant differences by week for dependent measures such as the number of violent actions, the duration of violence, and the significance of violence. There were, however, significant main-effects for program-related variables including network, type of program, time of broadcast, new or continued program and so on; but, there were no significant interactions. Thus, for example, while the networks differed significantly overall from each other on these measures (see Table III) they did not do so on a week-by-week basis. Moreover, for the number of violent actions, the network rankings are remarkably stable during this time period.

We 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.

These studies thus indicate that while a larger sample may increase precision, given our operational definitions and multidimensional measures that are sensitive to a variety of significant aspects of television violence, the one-week sample yields remarkably stable results with high cost-efficiency.

Indices of Violence

Indices abound in American culture. Most Americans are aware of economic indices such as the Consumer Price Index, and, more recently, the Pollution Index has been gaining recognition.

In research, indices are usually developed and used as data reduction devices. Basically, the usefulness of an index is its ability to reduce a lot of data to a simple number that is easy to interpret and understand.

An index has been defined as,

"a type of composite measure that summarizes several specific observations and represents some more general dimension."⁴⁰

Most of the studies that measure violence in television programming are not concerned with indices. As noted above, the rating and pre-determined studies label programs from very violent to not violent. When researchers want more sophisticated data, they are likely to use the number of violent actions as a measure of the degree of violence in different genres of programming. Ratings and the number of acts are useful because they give a very general measure of the amount of violence in programming.

But violence is a complex phenomenon -- and a sophisticated analysis involves paying attention not only to specific actions but also to who is hurt, who does the hurting, etc. Thus, while simple measures, such as the number of violent incidents, reveal fluctuations in the basic levels of violence, by itself this type of measure does not yield very rich analytic information.

Since 1969, Cultural Indicators research has developed and reported, on a yearly basis, an index of violence that combines several violence-related measures. The index is calculated for many genres of programs. It is not, however, calculated for the individual programs within the yearly samples.

The Cultural Indicators violence index is composed of three sets of direct observational data. These measures reveal the extent to which violence occurs at all in the program samples, the frequency and rate of violent

episodes, and the number of roles calling for characterization as violent, victims, or both. These data sets are called prevalence, rate and role, respectively.

Prevalence (%P) is the percent of programs containing any violence in a particular sample of programs. Rate expresses the frequency of violent actions or episodes in units of programming and in units of time. The number of such episodes divided by the total number programs (violent or not) yields the rate per program (R/P). The rate per hour (R/H) is the number of episodes divided by the number of program hours in the sample. The latter measures the concentration or saturation of violence in time, and compensates for the difference in rates between a long program unit, such as movie, and a short one, such as a ten minute cartoon.

Role is defined as the portrayal of characters as violent (committing violence) or victims (subjected to violence) or both, and yields several measures. They are percent of violent out of all characters in a sample; percent of victims out of all character in a sample; all those involved as violent or victims or both (%V); percent of killers (those who commit fatal violence); percent of killed (victims of lethal violence); and all those involved in killing, either as killers, killed or both (%K).

The findings from these data are combined to form the index. This index is the sum of the five measures: the percent of programs containing any violence (%P), twice the rate of violent incidents per program (2R/P), twice the rate of violent incidents per hour (2R/H), the percent of characters involved in any violence (%V), and the percent of characters involved in killing (%K). That is,

$$VI = (\%P) + (2R/P) + (2R/H) + (\%V) + (\%K).^{41}$$

Prevalence, rate, and role are thus reflected in the index, giving it a multi-dimensional quality sensitive to a variety of measures of violence portrayals and lending it a certain stability not easily altered or manipulated by superficial script changes. The index itself is not a statistical finding but serves to illustrate trends and to facilitate gross comparisons.⁴²

The Cultural Indicators Violence Index has been subjected to intense criticism. CBS has criticized the Index, because it includes a set of measures rather than only a single indicator, such as the number of violent actions, and that the different measures may move in different directions. But this criticism basically says that the Violence Index is faulty because it meets the criteria of an index. And the same criticism should be levied at any set of comprehensive indicators such as the GNP, the Dow Jones, many labor statistics or even the weather report.

Unfortunately, CBS and other critics fail to realize that the primary usefulness and strength of any index is that it combines measures of different aspects of a complex phenomenon. Cultural Indicators reports have consistently presented all components of the Violence Index separately as well as in combination. Thus, any one who wants to assess or use this index has access to each component and can observe individual as well as combined movement. Moreover, researchers are free to use this data to develop their own indices.

Testing The Index

The components of the Violence Index have consistently achieved high inter-coder reliability; over the last eleven years, the agreement coefficients for individual items range from .65 to .86. Most importantly, the Violence Index meets the critical statistical and empirical requirements of an index: unidimensionality and internal homogeneity. A major criticism of the Violence Index has been that it may be combining "apples and oranges," that it mixes together disparate and unrelated dimensions.⁴³ If, indeed, the components of the Index are not measuring the same thing, then it is wrong to combine them; but if they are manifestations of the same underlying dimension, then the Index yields a measure of television violence far more reliable and valid than any individual item.

In short, the Index provides a highly reliable measure of television violence, particularly in prime-time programs. Factor analysis reveals that there is only one factor underlying the five components of the Index for both early evening (8-9 p.m. EST) or late evening (9-11 p.m. EST) programs. In terms of internal homogeneity, Cronbach's alpha for all prime-time samples from 1967 to 1978 is a very high .89. Thus, the items are measuring a single dimension, and they are measuring it quite well (see Table IV).

Critics have also argued that the weights we use in creating the Index are arbitrary and unjustified. Yet, it turns out that the Violence Index produces lower reliability estimates when the rate of violent acts per program and per hour are not weighted by two. In each time period (and overall), as shown in Table IV, weighting these two components adds about .05 to the alpha.

Finally, in weekend-daytime programs the internal homogeneity is somewhat lower, but still acceptable (alpha = .66). This is due, primarily, to one

item: the percent of characters involved in killing. In general, weekend-daytime programs have the highest rates of violent acts and the greatest number of programs containing violence -- but they also have the smallest proportion of characters involved in killing. In fact, within weekend programs, killing is negatively related to the rate of violent acts per hour! Evidently, there is a tremendous amount of non-lethal violence on children's shows; and when killing does appear it seems to be accented as a central action while other aspects of violence are downplayed.

Despite this qualification, these items clearly are providing a reliable, unidimensional, internally homogeneous and efficient measure of television violence.

Summary

Over the past quarter century, there has been considerable concern and research about television violence. Violence has been assessed in two ways -- through content analysis and rating procedures. Content analyses provide objective and quantitative measures of violence while ratings give judgments that reflect raters' personal opinions.

Two controversial issues were discussed -- how violence is defined and unitized. Specifically, debate has centered on whether or not to include violence that occurs in a comic context, or violence that is the result of an accident and/or act of nature, and how to isolate (unitize) discrete acts of violence within a program. These issues are quite important because differences in their conceptualization has led to predictable differences in the research results.

Although most researchers have focused only upon one aspect of violence -- the frequency of violent actions -- it is only part of the picture. Violence is a complex phenomenon that not only involves specific actions but also relates to lessons of victimization, risk, fate and power. Consequently its assessment should combine several violence-related measures. The annual Cultural Indicators Violence Index does just this -- it incorporates measures of the prevalence, rate and role of violence in television programming. The index is a simple measure that is reported both as a summary figure and in terms of its individual components. It is not itself a statistical finding, but serves to illustrate trends and to facilitate gross comparisons.

The Cultural Indicators Violence Index and its components have revealed that, over the past decade, despite year-to-year changes for specific networks, various time-periods, and individual genres, the amount of violence in

the entire system of television's messages has remained remarkably consistent. Thus, it is reasonable to expect that television programs will continue to feature violence at the fairly high levels that have been observed since 1967.

But that there is more to the problem than the sheer quantity of violence television presents, and Cultural Indicators research does not call for the total elimination of television violence. Symbolic violence is a story-telling device which can serve many purposes. Our task is more to monitor and interpret rather than to judge, but we report our findings in terms of general standards of equity, fairness, and justice. Our concern is with the kinds of violence shown, the systematic and resilient patterns of who commits violence and who is victimized. These lessons of power, powerlessness, risks, and fates may be critical mechanisms of social control. The roles of both the violent and the victim are there to be learned by the viewers. In cultivating among the many a fear of the power of the few, television violence may achieve its greatest effect.

ENDNOTES

*Some of the discussion in this paper is based upon the theoretical and methodological framework of the Cultural Indicators Project at the Annenberg School of Communications, University of Pennsylvania. The results of recent Cultural Indicators research also appeared in George Gerbner, Larry Gross, Michael Morgan and Nancy Signorielli, "The 'Mainstreaming' of America: Violence Profile No. 11," Journal of Communication, 30:3 (1980). I particularly would like to thank Heather Harr-Mazer, Wendy Wolfenson, Larry Gross and Michael Morgan for their help in preparing this paper.

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- ⁸According to U.S. statistics, most crimes are directed at property rather than people. See, for example, Criminal Victimization in the United States, 1974, A National Crime Survey Report. Washington, D.C.: U.S. Government Printing Office 1974).
- ⁹Ronald G. Slaby, Gary R. Quarforth, and Gene A. McConnachie, "Television Violence and Its Sponsors," Journal of Communication, 26:1 (1976), 88-96.
- ¹⁰George Comstock, Steven Chaffee, Natan Katzman, Maxwell McCombs, and Donald Roberts, Television and Social Behavior (New York: Columbia University Press, 1978).
- ¹¹This research design has been documented in a number of publications. The best description of the methodology is given in George Gerbner, Larry Gross, Marilyn Jackson-Beeck, Suzanne Jeffries-Fox, and Nancy Signorielli, "Cultural Indicators: Violence Profile No. 9," Journal of Communication, 28:3 (1978), 176-207. The conceptual framework is presented in George Gerbner, "Cultural Indicators: The Third Voice," in George Gerbner, Larry Gross and William Melody, eds., Communications Technology and Social Policy (New York: John Wiley, 1973). And the article by Larry Gross and Michael Morgan in this book ("Television and Encluturation: What does Television Cause?") provides a good description of cultivation analysis. Further refinements are presented in George Gerbner, Larry Gross, Michael Morgan and Nancy Signorielli, "The 'Mainstreaming' of America: Violence Profile No. 11," Journal of Communication, 30:3 (1980).

Endnotes (p.2)

- ¹² Five computational formulae are used; their variations depend upon the scale type of the particular variable being analyzed. Except for their respective scale-appropriate sensitivity to deviations from perfect agreement, the coefficients make the same basic assumptions as the prototype for nominal scales devised by Scott, (1955). Thus, in the case of a binary variable, all formulae yield identical results. For the derivation of the formulae and a discussion of their properties see Klaus Krippendorff, "Bivariate Agreement Coefficients for the Reliability of Data," in E.F. Borgatta, ed., Sociological Methodology:1970, (San Francisco: Jossey-Bass, 1970). Also see, George Gerbner, Larry Gross, Michael Morgan and Nancy Signorielli, "Violence Profile No. 11: Trends in Network Television Drama and Viewer Conceptions of Social Reality," (Annenberg School of Communications, University of Pennsylvania, 1980).
- ¹³ George Gerbner and Larry Gross, "Living With Television: The Violence Profile," Journal of Communication, 26:2 (1976), 173-199; George Gerbner, Larry Gross, Michael Eleey, Marilyn Jackson-Beeck, Suzanne Jeffries-Fox and Nancy Signorielli, "TV Violence Profile No. 8: The Highlights," Journal of Communication, 27:2 (1977), 171-180; George Gerbner et. al., Cultural Indicators: Violence Profile No. 9" op. cit.; and George Gerbner, Larry Gross, Nancy Signorielli, Michael Morgan and Marilyn Jackson-Beeck, "The Demonstration of Power: Violence Profile No. 10," Journal of Communication, 29:3 (1979), 177-196; George Gerbner, Larry Gross, Michael Morgan and Nancy Signorielli, "The 'Mainstreaming' of America: Violence Profile No. 11," Journal of Communication, 30:3 (1980).
- ¹⁴ Bradley S. Greenberg and Thomas F. Gordon, "Critics and Public Perceptions of Violence in Television Programs," Journal of Broadcasting, 15.1 (1970-1) 24-43.
- ¹⁵ John D. Abel and Maureen E. Beninson, "Perceptions of TV Program Violence by Children and Mothers," Journal of Broadcasting, 20:3 (1976), 355-363.
- ¹⁶ Randall L. Murray, Richard R. Cole and Fred Fedler, "Teenagers and TV Violence: How They Rate and View It," Journalism Quarterly, 47 (1970), 247-255.
- ¹⁷ Greenberg and Gordon, op. cit.
- ¹⁸ The Cultural Indicators definition of violence was also used by Slaby, Quarforth and McConnachie, op. cit. and in the NCCB monitoring project.
- ¹⁹ Gerbner, et. al., Violence Profile No. 11" op. cit.
- ²⁰ Office of Social Research, CBS Inc. "Network Prime-Time Violence Tabulations for 1976-1977 Season" and "Instructions to Coders" p. 15.
- ²¹ Individual Monitoring Form, National PTA TV Action Center, 700 N. Rush St. Chicago, Illinois, 60611.
- ²² Clark and Blankenburg, op. cit.

Endnotes (p.3)

²³Harvey, Sprafkin and Rubinstein, op. cit.

²⁴Schuetz and Sprif Sprafkin, op. cit.

²⁵James R. Smith, "Television Violence and Driving Behavior," Educational Broadcasting Review, 3:4, (1969), 23-28.

²⁶Greenberg and Gordon, op. cit.

²⁷Abel and Beninson, op. cit.

²⁸Murray, Cole and Fedler, op. cit.

²⁹David M. Blank, "The Gerbner Violence Profile" and "Final Comments on the Violence Profile," Journal of Broadcasting 21:3 (1977) 273-279 and 287-296.

³⁰Thomas E. Coffin and Sam Tuchman, "Rating Television Programs for Violence: A Comparison of Five Surveys" and "A Question of Validity: Some Comments on 'Apples, Oranges and the Kitchen Sink'," Journal of Broadcasting, 17:1 (1972-3), 3-20 and 31-33.

³¹The Cultural Indicators replies to the above cited critiques are in the following articles: George Gerbner, Larry Gross, Michael Eley, Marilyn Jackson-Beeck, Suzanne Jeffries-Fox and Nancy Signorielli, "The Gerbner Violence Profile -- An Analysis of the CBS Report" and "One More Time: An Analysis of the CBS 'Final Comments on the Violence Profile'," Journal of Broadcasting, 21:3 (1977) 280-286 and 297-303; and Michael F. Eley, George Gerbner and Nancy (Tedesco) Signorielli, "Apples, Oranges and the Kitchen Sink: An Analysis and Guide to the Comparison of 'Violence Ratings'" and "Validity, Indeed!" Journal of Broadcasting, 17:1 (1972-3) 21-30 and 34-35.

³²See, for example, Albert Bandura, Dorothea Ross and Sheila Ross, "Transmission of Aggression through Imitation of Aggressive Models," Journal of Abnormal and Social Psychology, 63 (1967) 575-582; Albert Bandura, Dorothea Ross and Sheila Ross, "Imitation of Film-Mediated Aggression Models," Journal of Abnormal and Social Psychology, 66 (1963) 3-11; Glenn Thomas Ellis and Francis Sekura III, "The Effect of Aggressive Cartoons on the Behavior of First Grade Children," Journal of Psychology, 81 (1972), 7-43; O.I. Lovas, "Effect of Exposure to Symbolic Aggression on Aggressive Behavior," Child Development, 32 (1961), 37-44.

³³"They Learn While They Laugh," a CBS published public relations booklet extolling the educational virtues of its children's programming, including cartoons.

³⁴Office of Social Research, CBS, Inc., op. cit.

³⁵For the most part, the NCCB project used Cultural Indicators methodology and unitization rules.

Endnotes (p.4)

³⁶ Office of Social Research, CBS, Inc., op. cit.

³⁷ ibid.

³⁸ The differences in the results of the two studies are discussed in Comstock, et. al., op. cit.

³⁹ Michael F. Eleey, "Variations in Generalizability Resulting from Sampling Characteristics of Content Analysis Data: A Case Study," (The Annenberg School of Communications, University of Pennsylvania, 1969).

⁴⁰ Earl R. Babbie, Practice of Social Research (Belmont, Cal: Wadsworth, 1973) p. 495.

⁴¹ The rates were weighted by a factor of two in the Cultural Indicators index so as to increase their importance. That is, the rates are usually very small numbers (on the order of 4 to 9) and weighting increases their contribution in the index.

⁴² The National Citizens Committee on Broadcasting (NCCB) has reported two indices that are based essentially upon the Cultural Indicators methodology. It must be noted, though, that in some of their reports, NCCB distinguishes between the "Gerbner" definition (including comic violence, accidents and acts of nature) and a definition which does not include these types of actions. The NCCB program index is the sum of (1) the ratio of incidents of violence in a program to the total number of incidents and (2) the ratio of the time of violence (in minutes and tenths) in the program to the total time of violence in prime time. This index is used to rank programs from least to most violent. Advertisers are ranked by an index made by summing (1) the ratio of the length of violent programming sponsored by an advertiser to the total length of programming with violence in prime time, (2) the ratio of the number of incidents of violence in programming sponsored by the advertiser to the total number of violent incidents in prime time, and (3) the ratio of the length of violent incidents sponsored by the advertiser to the total length of violent incidents (in minutes and tenths) in prime time. ("Prime Time Violence Profiles," National Citizens Committee for Broadcasting and BI Associates, 1976)

⁴³ Coffin and Tuckman, 1972, op. cit.

Additional References

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Table IV

Reliability Coefficients for the Violence Index

	UNWEIGHTED INDEX			WEIGHTED INDEX		
	<u>raw</u> <u>alpha</u>	<u>standardized</u> <u>alpha</u>	<u>theta</u>	<u>raw</u> <u>alpha</u>	<u>standardized</u> <u>alpha</u>	<u>theta</u>
ALL PROGRAM DATA (N=162)	.70	.76	.82	.75	.78	.82
8 - 9 P.M. EST (N=60)	.69	.85	.86	.74	.85	.86
9 - 11 P.M. EST (N=60)	.74	.88	.88	.79	.88	.86
Weekend Day (N=42)	.69	.66	.71	.65	.66	.71
PRIME TIME TOTAL (N=120)	.75	.89	.89	.80	.89	.89

The UNIT OF OBSERVATION is the time period (8-9 p.m., 9-11 p.m., and weekend daytime), for each network. The reliability estimates are based on all fall samples (1967 - 1978), the two spring samples (1975 and 1976) and the six-week special sample (1976; for prime time only).

The UNWEIGHTED INDEX estimates represent reliability obtained by simply adding up the five components (percent of programs containing violence, rate of violent acts per hour, rate of violent acts per program, percent of characters involved in violence, and percent of characters involved in killing).

The WEIGHTED INDEX doubles the absolute value of two items: acts per hour, and rate of violent acts per program.

The RAW alpha indicates the reliability the index would have when its components are simply added up (in raw form).

The STANDARDIZED ALPHA indicates the reliability the index would have if the items were standardized before they are added up. That is, the index would have this reliability if the raw scores were subtracted from the mean and divided by the standard deviation.

The THETA indicates the reliability the index would have if the items were both standardized and weighted by their factor score coefficients before they were added up. This is generally the maximum reliability possible to achieve in a given index.

TABLE 4

Analysis of Seven Weeks of Fall 1976 Programming

	Test Sample Week						Fall 1976	Total
	1	2	3	4	5	6		
Total								
No. of programs	58	58	57	58	61	56	61	409
No. of violent acts	345	342	365	365	341	294	342	2,394
Rate (Average acts per program)	5.9	5.9	6.4	6.3	5.6	5.2	5.6	5.9
ABC								
No. of programs	20	20	19	19	20	19	19	136
No. of violent acts	114	107	112	132	116	106	110	797
Rate (Average acts per program)	5.7	5.4	5.9	6.9	5.8	5.6	5.8	5.9
CBS								
No. of programs	22	21	22	21	21	23	24	154
No. of violent acts	90	91	130	97	66	102	84	660
Rate (Average acts per program)	4.1	4.3	5.9	4.6	3.1	4.4	3.5	4.3
NBC								
No. of programs	16	17	16	18	20	14	18	119
No. of violent acts	141	144	123	136	159	86	148	937
Rate (Average acts per program)	8.8	8.5	7.7	7.6	8.0	6.1	8.2	7.9

Analysis of Variance of No. of Violent Acts

	<u>F</u>	<u>df</u>	<u>p</u>
Week	.248	6	ns
Network	11.989	2	p < .001
Week by Network	.342	12	ns
Residual		380	

Table 1

Measuring Violence Via Content Analysis

<u>Authors</u>	<u>Phenomenon</u>	<u>Who Codes</u>	<u>Definition</u>	<u>How Used</u>
Cultural Indicators Gerbner Gross Signorielli Morgan Jackson-Beeck	annual weekly samples of prime-time, weekend-daytime network dramatic programs	trained coders (12-16)	yes	To ascertain content on number of basic issues such as violence, aging, sex-roles, and minority presentation
Harvey Sprafkin Rubinstein	week long sample of Prime-time programs (video-taped)	trained coders	yes	To determine the impact of family viewing time policy on content; to isolate prosocial and aggressive behavior
Schuetz Sprafkin	week-long sample of Saturday a.m. commercials (video-taped)	two trained raters	yes	To isolate prosocial behavior in children's TV commercials
Deiner DeFour	12 adventure programs	30 trained undergraduates	yes	To answer question: does television content enhance program popularity?
Franzblau Sprafkin Rubinstein	week-long sample of prime-time programs (video-taped)	four trained raters	yes	To ascertain amount of sexually aggressive (e.g. rape, aggressive touching) behavior in TV programs
CBS, Office of Social Research	samples of prime-time programming	trained coders	yes	To ascertain the amount of violence in programming
Slaby Quarforth McConnachie	week-long sample of programs (off-air)	undergraduates (trained & practiced)	yes (Gerbner based)	To access violence on TV and attribute to major sponsors
Dominick	week-long sample of prime-time programs (off-air)	7 trained coders	yes	To ascertain portrayal of criminal victims and law enforcement on TV
Clark Blankenburg	TV Guide Synopsis (1953-1969)	coders	yes	To ascertain trends in amount of violence in prime-time programs
Head	13 week sample of programs (4 episodes/ programs) (off-air)	4 coders	yes	To analyze TV content
Smythe	samples of programs (off-air)	trained coders	yes	To ascertain content of television programs on a number of basic issues

Table 2
Measuring Violence Via Ratings

<u>Authors</u>	<u>Type of Phenomenon Directly Observed</u>	<u>Who Observes</u>	<u>Provided Definition</u>	<u>How Results Used</u>
Murray Cole Fedler	List of Programs	teenagers	their own; half before half after rating	Determine whether teenagers who watch television, especially violent programs possess characteristics which are different from teenagers who prefer less violent programming
Greenberg Gordon	List of Programs	TV critics, public(adults)	half	To determine how much violence TV critics perceive in programming in comparison to that perceived by viewers
Abel Beninson	List of Programs	children and their mothers	half	To determine if there is agreement between children and their mother's perception of violence
Israel Robinson	List of Programs	TV critics, graduate students	half	To ascertain demagogical characteristics of viewers of violent programs
Smith	Programs List	graduate students	yes	To determine if "bad" drivers have a greater preference for viewing violent TV programs than "good" drivers
Loye	Lists	psychiatrists psychologists parents, etc.	unknown	To measure psychological effect of watching different types of dramatic content