

	<u>Author and Title</u>	<u>Subjects</u>	<u>Description</u>
19.	Gerbner Violence in Television Drama: Trends and Symbolic Functions		This study provided an analysis of the content of a one week sample of prime-time, entertainment programming. It described various factors relating to the frequency and symbolic characteristics of televised violence.
20.	Greenberg Television's Effects: Further Explorations		An overview of several current research projects that provide a diversity of theoretical and methodological approaches to research on the effects of television.
21.	Greenberg, Ericson & Vlahos Children's Television Behaviors as Perceived by Mother and Child	85, 4th and 5th grade children and their mothers	Mothers, interviewed at home, were asked to describe their child's television viewing patterns (e.g., program preferences, rules about viewing) while each child answered similar questions in the classroom. The child's self reported television viewing behavior was compared with the mother's description.
22.	Greenberg & Gordon Perceptions of Violence in Television Programs: Critics and the Public	53 critics 303 men and women	A telephone survey (public) and mail questionnaires (critics) asked the respondents to rate the amount of violence contained in various television entertainment programs.
23.	Greenberg & Gordon Social Class and Racial Differences in Children's Perceptions of Televised Violence	325 fifth grade boys 89 low SES white 89 low SES black 90 middle SES white 57 upper SES white	This study assessed boys evaluation violence portrayed on television in terms of the degree of perceived violence, acceptability of violence, liking, degree of arousal, and perceived reality of the violent act.
24.	Greenberg & Gordon Children's Perceptions of Television Violence: A Replication	263 eight grade boys 66 low SES black 78 low SES white 37 middle-SES white 82 upper-middle SES white	A replication of the prior study conducted with younger boys (see item #23).
25.	Gurevitch The Structure and Con- tent of Television Broadcasting in Four Countries: An Overview		An introduction to a review of the broadcasting policies of Great Britain, Israel, Sweden, and the United States.

	<u>Author and Title</u>	<u>Subjects</u>	<u>Description</u>
26.	Halloran & Croll Television Programmes in Great Britain: Content and Control		A discussion of television broadcasting in Great Britain.
27.	Johnson, Friedman & Gross Four Masculine Styles in Television Programming: A Study of the Viewing Preferences of Adolescent Males	80, 8th grade boys 39 "aggressive" 41 "non-aggressive"	This study compared the program preference patterns of boys with a history of "social aggressiveness" with their non-aggressive peers in an attempt to construct a program classification scheme based on the masculine role concept portrayed in each program.
28.	Katzman Violence and Color Television: What Children of Different Ages Learn	240, 4th, 6th and 9th grade boys	Children viewed (in either color or black-and-white format) a color television program which had been edited into either "high-violence" or "low-violence" versions. Post-viewing measures tested the child's recall of central and peripheral details and related this recall to the color/violence variations.
29.	Kenny Threats to the Internal Validity of Cross-Lagged Panel Inference, as related to "Television Violence" and Child Aggression: A Follow-up Study		A methodological note on the research design employed in a study by Lefkowitz, Eron, Walder, & Huesmann (see item #30).
30.	Lefkowitz, Eron, Walder, & Huesmann Television Violence and Child Aggression: A Follow-up Study	875 children-third grade sample 382 adolescent-eighth grade sample 427, 19 year-olds	As part of a longitudinal study of childhood aggression, the investigators queried the child and/or his parents about his television viewing patterns (e.g. program preferences). Cross-lagged correlations between television viewing at age three and adolescent aggressiveness at age 19 were obtained to provide causal inferences regarding television's role in the development of aggressive behavior.
31.	Leifer & Roberts Children's Responses to Television Violence		

Author and Title	Subjects	Description
Experiment I	271 children 40 kindergarten 54 third 56 sixth 51 ninth 70 twelfth	Subsequent to viewing a television program which contained a number of violent acts each child was asked to evaluate the motivations and consequences surrounding each depicted act of violence. The child's understanding of these characteristics of violent act was then assessed in terms of the child's willingness to engage in aggressive behavior.
Experiment II	132 children 62 preschool 40 fifth 30 twelfth	Each child viewed a television program which was edited to provide one of four combinations of motivations/consequences for the portrayed violent acts: good-good, good-bad, bad-good, and bad-bad. Post-viewing measures were similar to the prior study.
Experiment III	160 children 51 fourth 56 seventh 53 tenth	Children viewed one of two versions of a movie in which the justifications for aggression had been edited to provide for an "aggression-less justified" version. Post-viewing measures of aggressive behavior were similar to those employed in the first experiment.
Experiment IV	349 children 99 third 138 sixth 112 tenth	The temporal separation of the motivations for an aggressive act and consequences accruing to the aggressor on the child's post-viewing aggressive behavior, was explored in this present study. Measures of aggressive behavior were similar to previous studies.
32. Liebert Some Relationships Between Viewing Violence and Behaving Aggressively	136 children (68 boys & 68 girls) (65, 5-6 year-olds) (71, 8-9 year-olds)	A review of current research on television's role in the imitation and/or disinhibition of aggressive behavior (with an additional report: Strauss & Poulos, "Television and Social Learning: A summary of the Experimental Effects of Observing Filmed Aggression").
33. Liebert & Baron Short-Term Effects of Televised Aggression on Children's Aggressive Behavior	136 children (68 boys & 68 girls) (65, 5-6 year-olds) (71, 8-9 year-olds)	In this study the child-viewer's willingness to engage in interpersonal aggression was assessed subsequent to viewing either aggressive or neutral television programming.

	<u>Author and Title</u>	<u>Subjects</u>	<u>Description</u>
34.	Liebert, Davidson, & Sobol Catharsis of Aggression Among Institutionalized Boys: Further Comments		A comment on a reply to a critique of the catharsis thesis (see items 14, 15 and 35).
35.	Liebert, Sobol, & Davidson Catharsis of Aggression Among Institutionalized Boys: Fact or Artifact?		A commentary on a study of the role of catharsis in evaluating the effects of viewing televised violence (see items 14, 15 and 34).
36.	LoSciuto A National Inventory of Television Viewing Behavior	252 families	A nation-wide sample of American families were interviewed concerning various aspects of television viewing such as; why people watch television, what they learn from programs, extent of viewing, and program preferences.
37.	Lyle Television in Day-to-Day Life: Patterns of Use		A review of current research in this program, on the role of television in some aspects of daily life.
38.	Lyle & Hoffman Children's Use of Television and Other Media	1682 children 300 first 793-877, 6th 469-505, 10th	Children were interviewed about the role television plays in their daily life (e.g. extent and duration of viewing, program preferences, attitudes toward television, use of other forms of mass media). In addition, the mothers of first graders were also interviewed concerning their perceptions of the role of television in their child's daily life.
39.	Lyle & Hoffman Explorations in patterns of television viewing by preschool children	158 children 40 3 year-olds 82 4 year-olds 35 5 year-olds 1 6 year-old	A selected sample of Caucasian, Negro and Mexican-American preschool boys and girls were interviewed concerning their television viewing (e.g. program preferences, extent of viewing recognition of television characters). In addition mothers were interviewed concerning their child's television viewing patterns and perceived extent of learning from television.
40.	McIntyre & Teevan Television and Deviant Behavior	2270 junior and senior high school students	Questionnaire responses were used to provide an estimate of the relationship between television viewing patterns (e.g. program preferences) and self-reported aggressive and delinquent behavior.

	<u>Author and Title</u>	<u>Subjects</u>	<u>Description</u>
41.	McLeod, Atkin, & Chaffee Adolescent, Parents and Television Use: Self-Report and Other Report Measures from the Wisconsin Sample	648 students Maryland sample 229 7th Graders 244 10th Graders Wisconsin sample 68 7th Graders 83 10th Graders	Self-report, peer, and "other" rated indices of aggressive behavior were related to various aspects of the adolescent's pattern of television use (e.g. extent of viewing, program preferences, cognitive reactions to televised violence).
42.	McLeod, Atkin & Chaffee Adolescent, Parents and Television Use: Adolescent Self-Report Measures from Maryland and Wisconsin Sample		See item #41: A comparison between adolescent television viewing and self-reported aggressive or delinquent behavior.
43.	Murray Television in Inner-City Homes: Viewing Behavior of Young Boys	27, 5-6 year-old boys	Observation of in-home television viewing, parent-child interviews, diary records of one week's television viewing, and measures of cognitive and social development were used to provide a description of the role television plays in the daily lives of a selected sample of young boys (with an additional report: Furfey, "First Graders Watching Television").
44.	Neale Comment on: Television Violence and Child Aggression: A Follow-up Study		A methodological note on the Lefkowitz, Eron, Walder, & Huesmann study (see item #30).
45.	Rabinovich, MacLean, Markham, & Talbott Children's Violence Perception as a Function of Television Violence	57 6th grade children 24 girls 33 boys	This study was designed to assess changes in the child's perception of violence as a result of viewing televised violence. Children viewed either an aggressive or nonaggressive television program and were then presented with a discrimination task (i.e. identifying a tachistoscopically presented slide as either "violent" or "non-violent").
46.	Robinson Television's Impact on Everyday Life: Some Cross-National Evidence		This study was focussed on the respondent's allocation of time ("time-budgets") to various activities (e.g. work, child care, leisure, mass media use) in his daily life. Time budgets were sampled in 15 cities in 11 countries.

	<u>Author and Title</u>	<u>Subjects</u>	<u>Description</u>
47.	Robinson Toward Defining the Functions of Television		A review of current research on the role of television in relation to other daily activities.
48.	Robinson & Bachman Television Viewing Habits and Aggression	1559, 19 year-old males	As part of a nation-wide survey of the changing characteristics of youth, respondents were asked to indicate the extent of their television viewing, program preferences, and the locus of "greatest-learning-about-life"—television vs. school. These findings were then related to the respondents self-reported incidence of aggressive and delinquent behaviors.
49.	Robinson & Israel Demographic Charac- teristics of Viewers of Television Violence and News Programs	6, 834 adults	Information on preferences and viewing patterns of a nation-wide survey of adult television viewers were related to various demographic characteristics (e.g. age, education, income and sex).
50.	Shinar Structure and Content of Television Broadcast- ing in Israel		A review of television broadcasting policies in Israel.
51.	Stein & Friedrich Television Content and Young Children's Behavior	97, 3½ to 5½ year-olds 52 boys 45 girls	Preschool children were exposed to either an "aggressive, neutral, or prosocial" television diet and then observed during the course of their daily interaction with other children in their classroom. The observations were conducted over a nine-week period including three-week baseline, four-week controlled viewing, and two-week follow-up periods. Changes (over baseline) in either aggressive or prosocial behaviors were used to provide a measure of the impact of television programming.
52.	Stevenson Television and the Behavior of Preschool Children		A discussion of research findings on the impact of television in early childhood and suggestions for future research.

	<u>Author and Title</u>	<u>Subjects</u>	<u>Description</u>
53.	Tannenbaum Studies in Film-and TV- Mediated Arousal and Aggression		A review of research and theory on mediating factors (e.g. emotional arousal) in the relationships between viewing televised violence and subsequent aggressive behavior.
54.	Wackman, Reale & Ward Racial Differences in Responses to Advertising Among Adolescents	1149, 8th-12th graders 1049 whites 100 blacks	This study was focused on a comparison of the responses of black and white adolescents to television advertising in terms of their favorite ads, extent of "learning consumer roles", and reasons offered for viewing commercials.
55.	Ward Effects of Television Advertising on Children and Adolescents		A review and discussion of research, in the current program, on the impact of television advertising.
56.	Ward, Levinson & Wackman Children's Attention to Television Advertising	134 mothers of 5-12 year old children	Interviews were conducted with the mothers of young children in order to determine the short-term consequences of watching television advertising.
57.	Ward, Reale, & Levison Children's Perceptions, Explanations, and Judgments of Television Advertising: A further Exploration		An elaboration of the Blatt, Spencer, & Ward study (see item #3.)
58.	Ward & Robertson Adolescent Attitudes Toward Television Advertising	1094, 8th-12th graders	This study was designed to relate adolescent's attitudes toward television advertising to demographic characteristics, family communication patterns, and television use.
59.	Ward & Wackman Family and Media Influences on Adolescent Consumer Learning	1094, 8th-12th graders	This survey assessed the adolescent's "consumer skills" (i.e., recall of advertising content, attitudes toward commercials, materialistic attitudes, and buying behavior) and related these skills to various demographic character.

	<u>Author and Title</u>	<u>Subjects</u>	<u>Description</u>
60.	Ward & Wackman Television Advertising and Intra-Family Influence: Children's Purchase Influence Attempts and Parental Yielding	109 mothers of 5-12 year-old children	Interviewers asked the mothers of young children to describe the "effects of television advertising" in terms of the frequency and intensity of their child's "requests" for advertised products.

Appendix C: Experiments on Children's Imitation of Aggressive Behavior

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Appendix D: Experiments on Disinhibition of Aggressive Behavior

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Appendix E: The Interpretation of Correlation Coefficients

The Pearson product moment correlation coefficient is an abstract statistic which, under certain restrictive conditions, precisely describes the relationship between two variables. Although the restrictive conditions or “assumptions” underlying the application of the correlation coefficient (normal distributions in both variables, strict linearity of regression, stratified random sampling in one of the variables, and homoscedasticity or equal variance in the arrays) are seldom if ever met in practice, the correlation coefficient is widely used—albeit with a grain of salt—as a crude indicator of a relationship.

Many misunderstandings arise from what appears to be a general tendency to misinterpret or overinterpret correlation coefficients.

At certain levels, there can be no mistake in interpretation. A correlation coefficient of 1.0 means unequivocally that, as the value of one variable increases, the value of the other variable increases proportionately; a correlation coefficient of -1.0 means that increase in one variable is accompanied by proportionate decrease in the other. A value of 0.0 clearly means that there is no linear relationship between the two variables.

But what about the cases where the correlation coefficient is in some middle range, like the .30 relationships which stand out from the mass of trivial relationships reported in these studies? If, indeed, the assumptions listed above are met, one can still say that, as one variable increases in value, the *mean* value of the other variable increases, although at each level of the first variable, there is considerable variation around the mean of the second variable. Furthermore, if the assumptions are not met (as in many of the correlation coefficients in these studies), such a bland statement of a functional relationship is clearly misleading. Thus, if the requirements for linearity and homoscedasticity are not met, two important pitfalls await the unwary interpreter of correlation coefficients:

(1) The functional relationship may exist strongly in one or more parts of the range of the variables, but not in other parts of the range.

(2) Frequently, the locus of the relationship is at the very top or very bottom of the range in both variables, so that a relatively small number of outlying cases may produce a relationship which exists nowhere else.

Statisticians universally advise users of summary statistics to examine the data. In the use of correlation coefficients, such advice calls for examination of bivariate distributions or scatter diagrams.

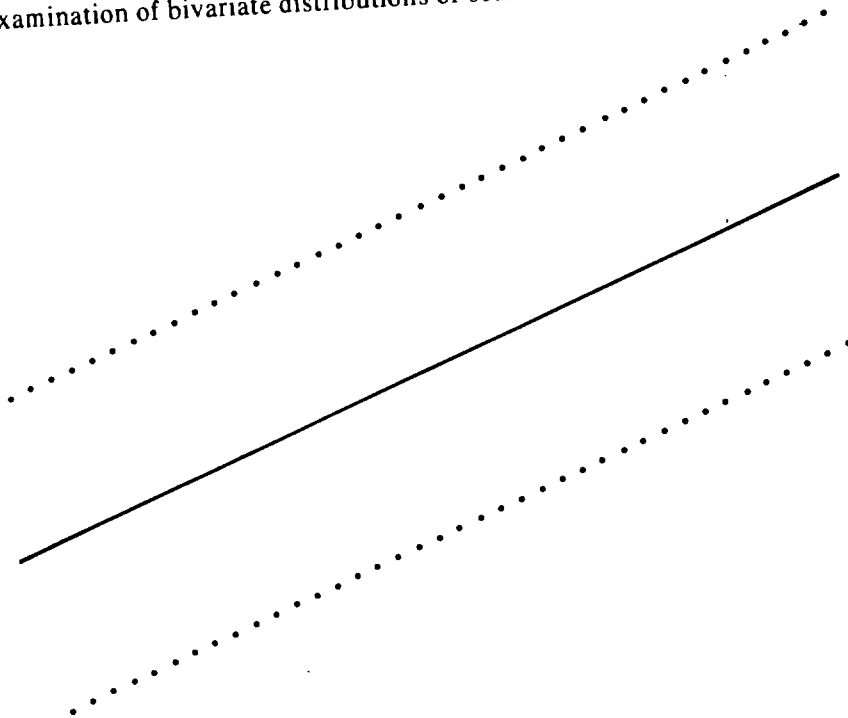


Figure E-1: Linear, homoscedastic

Figures E-1 through E-4 illustrate, in a highly stylized way, the variety of data configurations that can lead to approximately equal correlation coefficients. In each figure, each dot represents an individual case; the solid line represents the least-squares regression line. We have not attempted to make these figures precise, nor to use real data. Adjustment of scale and frequencies can modify the size of the correlation coefficients. Nevertheless, comparison of the four figures will indicate that similar correlation coefficients can summarize different situations which vary markedly in regard to the actual overall relationship between two variables among a group of individuals.

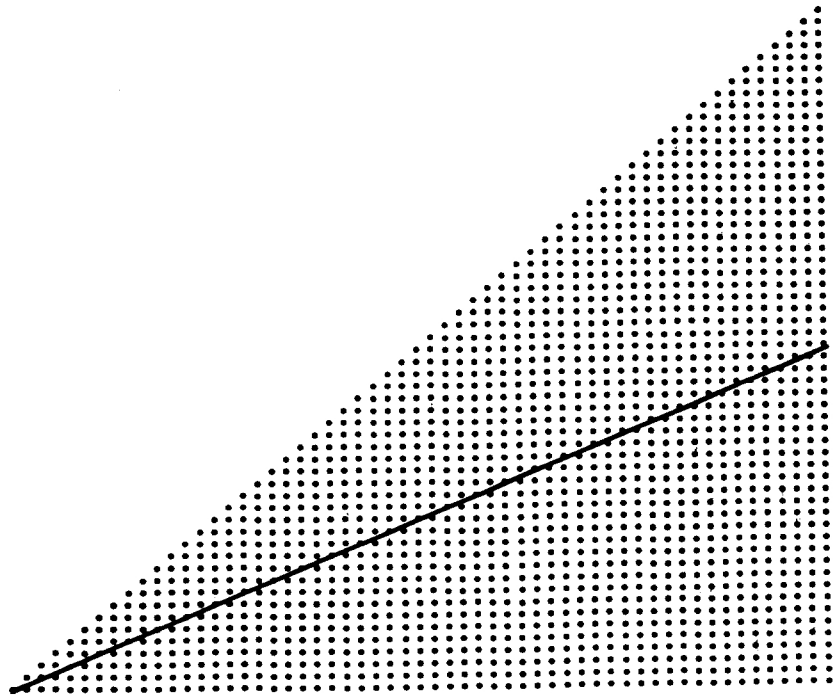


Figure E-2: Linear, heteroscedastic

Variance accountability

The square of the correlation coefficient is legitimately interpreted as the "proportion of variance accounted for." This powerful-sounding accomplishment is perhaps even more widely misapplied and misunderstood than the correlation coefficient itself. Each of the component variables is characterized by a "variance"—i.e., an abstract indicator of dispersion of values around the mean of the variable. If certain conditions (homoscedasticity and linearity) are met, and if the correlation coefficient is greater than zero, then, for any given value of one of the variables, the associated values of the other variable will cluster more closely around their mean (i.e., have less variance) than the original variance of the second variable. The proportionate reduction in variance thus achieved, is the "variance accounted for." Thus a correlation coefficient of .30 would lead to the statement that nine percent of the variance in each variable is accounted for by variation in the other. This phenomenon is sometimes popularly phrased in terms of improvement over chance in the ability to guess at the value of one of the variables, given knowledge of the value of the other. Of course, if the specified

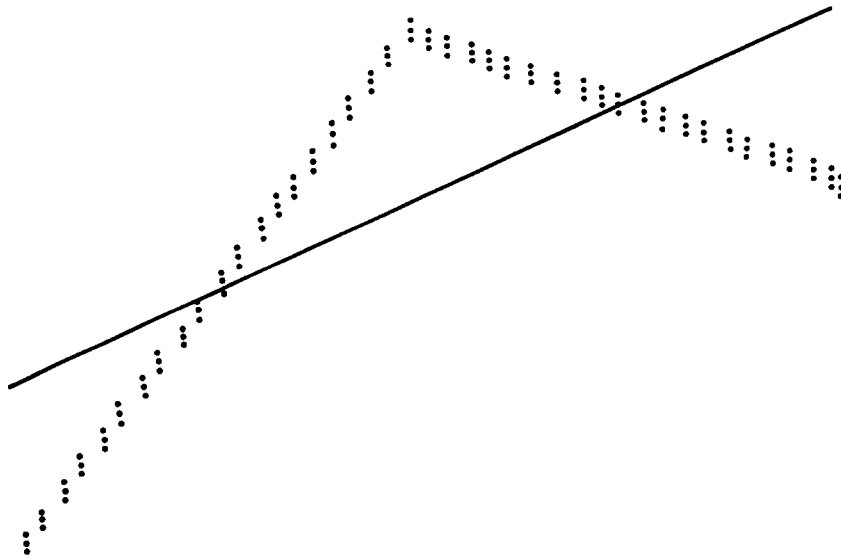


Figure E-3: Non-linear, homoscedastic

conditions do not apply (as in Figures E-2 through E-4), then the proportion of variance accounted for is an average across the range of the two variables and may be higher in certain parts of the range and lower in others.

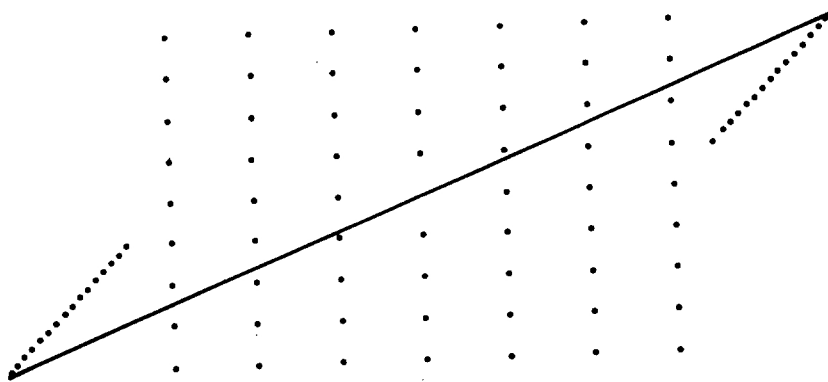


Figure E-4: Non-linear, heteroscedastic

Chance and unreliability

In dealing with a mass of reported summary statistics, as this committee has tried to do, two opposing kinds of criticism are likely to be heard:

- (1) With so many correlation coefficients being reported on the relationship of television exposure and aggressive tendencies, some few of

them will turn out to be significant by chance alone. Indeed, the results here reviewed include a distribution of values for correlation coefficients all purporting to be of operational measures of the same underlying variables. The majority of the values are trivially small, but the central tendency of the values is clearly positive. En masse, they indicate a small positive relationship between amount of violence viewing and aggressive behavior. We have paid particular attention to the few larger correlation values, because it is reasonable to assume that some specific quality of the measures used accounts for the stronger relationship found. But, ultimately, only replication will establish whether the stronger relationships derive from such characteristics of the measures or whether they are products of chance.

(2) Since the measures used in these relationships are not highly reliable (in a psychometric sense), the observed relationships among them are likely to be underestimates of the "true" relationships between the concepts. This, too, is an untestable assertion, since, both for sampling reasons and for reliability reasons, any observed relationship may be either an underestimate or an overestimate of a "true" relationship. In particular, if the "true" relationship is 0.0, the probability that an observed relationship is an underestimate is exactly equal to the probability that it is an overestimate. On the other hand, if the "true" relationship is positive, then the probability that an observed relationship will, because of unreliability, be an underestimate is larger than the probability that it will be an overestimate. In the absence of knowledge about the nature of the "true" relationship, any conclusions on this point would be technically unjustified. If we were to assume that the mass of data would lead us to the conclusion that, in truth, there is a low positive relationship between the concepts under consideration, we could say that because of unreliability, the possibility that we are reporting underestimates is very slightly higher than the probability that we are reporting overestimates.

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