

DRAFT

Review of
TELEVISION AND AGGRESSION: A PANEL STUDY

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NBC's massive, slick, expensive, and seemingly impregnable thirteen year study (three for data collection; ten for analysis) on television and aggression is likely to go down as the Finnegans Wake of television research. Joycean in scope and purpose, and virtually as arcane to the uninitiated, the project deserves the boasts of NBC publicists as "one of the most ambitious studies ever undertaken by a corporate research department," at a cost of at least \$1.5 million. Everyone in the field, whether of industry or academic affiliation, will talk about it, refer to it, praise it, or criticize it. Yet, like the Wake, I suspect that hardly anyone will actually read it, beyond the tidy, confident, and duly cautious nine page conclusion. For one thing, there are probably few whose minds are still open on the question of television and violence, especially after twenty years of vast quantities of research articles, journalistic reports, congressional hearings, and public debate. For another, some may be intimidated by the text's 260 tables, mostly of complex statistical coefficients.

This is, clearly, no attempt at light, popular reading, but a full-blown, sophisticated, and scholarly treatment of whether violence on television stimulates aggressive behavior among children and adolescents. Nevertheless, those who believe that televised violence does contribute to aggressive behavior may be tempted to dismiss the study as a public relations stunt, about as valid as the protestations of the tobacco industry or the Flat Earth Society. As noted by a columnist in a local paper, "I feel so relieved now that the giant N.B.C. has completed a study showing that violence on television does not cause aggressive behavior patterns in children. Hog Wash!" (Amherst Record, August 17, 1983).

Similar prejudgements (phrased, one presumes, less explicitly), along with the mounds of numbers, footnotes, and appendices, may thus deter many from reading the book very closely. If so, this is unfortunate, because Television and Aggression is an extremely readable book, and it should be rewardingly compre-

hensible to anyone with even a minimum of statistical and methodological knowledge. The presentation is sharp, clear, and persuasive (though not necessarily convincing). The authors have done a commendable, even exemplary job of sorting, presenting, and interpreting a mammoth body of data; their explanations of relatively new, complex procedures are for the most part excellent, object lessons in the use of these techniques.

Due to a number of factors -- its corporate sponsorship, its statistical complexity, the ten-year publication lag, and the fact that its stated conclusions run counter to the vast bulk of the published literature -- the study is likely to receive far more methodological criticism than any other study of television and aggression. Their "burden of proof" far exceeds what the research community would expect of a university-based study, and they know it.

To frustrate the efforts of nitpickers like myself, the authors have anticipated, discussed, and usually rejected (at least to their own satisfaction) an enormous number of possible deathblows. Specialized analyses attempt to acknowledge and overcome a wide variety of threats to the validity of their inferences. Some of these problems are obvious, some not; some are successfully dealt with, some not. But, on the whole, the study indeed remains as good, if not better, than most. No one will be surprised by the results; but the authors have done an admirable job of covering their bases and maintaining an empirical rigor well beyond what is usually expected of a social scientific write-up.

At least one area, however, is given insufficient attention. The book gives short shrift to the fundamental problem of why their results differ from those of so many other studies. Essentially, they argue that their design, their measures of violence exposure and aggressive behavior, and their analysis techniques are better than the rest. Each is worth a brief -- and admittedly selective -- look.

Design. The NBC project is a longitudinal panel study, which means that the same groups of children and adolescents were studied over time. Six times, at irregular intervals over 3 years, for elementary school boys and girls; five times for teenage boys. This kind of design, rarely employed due to the time and money involved, allows a different kind of conclusion than either laboratory experiments or one-shot, "cross-sectional" surveys. The artificiality of lab studies usually limits their generalizability; surveys can reveal whether some relationship does occur, but not "which came first." In other words, while most surveys show that those who watch more violent television are also more likely to behave aggressively at the same point in time, such surveys are unable to clarify which is "cause" and which is "effect" (or, as is most likely, whether each contributes to the other in a reciprocal, mutual fashion).

NBC reports same-time findings that jibe well with most published research, namely small-to-moderate positive associations between exposure to televised violence and aggressive behavior. But when the patterns are examined over time, to see whether earlier violence viewing "causes" (in heavy quotes) subsequent aggressive behavior, they find no evidence that television is "causally implicated" in promoting aggression. Most coefficients do remain positive (i.e., the more TV earlier, the more aggression later), but so small as to be (allegedly) meaningless.

Yet, the value of their design is seriously confounded by a high level of panel mortality -- the loss of respondents over time. At the most extreme end, we find that among the original, first-wave sample of 805 elementary school boys, data on both aggression and television viewing were obtained at all six waves for only 142 (17.6% of the original sample); counting only those categorized as valid reporters of television viewing (see pp. 95-102), we have only 58 (7.2%) from the original 805 with data from all six waves. While the study is touted as being based on 3200 kids, most analyses use only a few hundred.

More importantly, those who were "lost" from wave to wave seem to differ systematically from those who were retained. In addition to being of lower social class, we find in a footnote that they were also more aggressive. This reduces the overall level of aggressiveness in the final samples and implies that their results reflect underestimates of television's contribution. Moreover, the question of panel bias -- i.e., whether repeated testing of the same groups influences the data or results in sensitization -- is all but ignored. Similar kinds of criticisms can of course be applied to all social research, but they cannot easily be wished away by bold rhetoric.

Measures. Any study stands or falls on the quality of its measures. In practice, measurement is never perfect and rarely horrible; most of the time, our variables reflect our concepts with marginal to moderate reliability, unknown validity, and lots of error. The NBC study goes to enormous lengths to demonstrate the quality of their measures, in ways that other researchers would be well advised to follow. But problems remain.

Exposure to televised violence was measured by giving respondents checklists of television programs and asking them to indicate how many times they had watched each show in the last four weeks. The checklists contained only about 25% of the programs shown when school children can watch, and about half of the available "violent" programs. The programs were then assigned "violence weights" vaguely extrapolated from earlier research on the public's perceptions of the amount of violence in various programs. Unfortunately, public consensus by no means necessitates "truth." Alternative manipulations of these data do nothing to change the authors' minds about TV's effects -- or to change my mind about the limitations of their measure. And, as they note, from 24 to 41% of their observed viewing scores consists of measurement error (p. 148).

The measure of aggressive behavior is likewise drawn from earlier studies.

Respondents (and teachers), were asked to indicate which of their classmates engaged in various aggressive actions. For example: "Who tries to hurt others by saying mean things to them?" "Who hits or punches other people to hurt them?" These peer nominations among children, as with the rather different measures used in the teenage sample, result in markedly skewed distributions, with most respondents getting low scores. Here, as throughout the book, the authors go to great lengths to support the reliability and validity of their measures (although they seem to have some trouble estimating the reliability of the aggression items).

Nevertheless, serious questions remain. As my colleague Larry Cross has suggested, the NBC aggression measure may reflect a "self-fulfilling prophecy," a kind of pygmalion effect of asking for these nominations over three years. There is a non-trivial ethical issue involved; when teachers and peers are repeatedly asked to rate students' aggressiveness, the designators may then perceive and evoke aggressiveness that has been suggested by the measure itself. (This does not necessarily apply to the teenage sample, who rated their own aggressive behavior.)

Analysis. Space does not permit even a cursory review of their highly ambitious, thorough, and competent analysis. I refer the reader to an excellent treatment of its strengths and weaknesses by Thomas D. Cook and his associates in a recent issue of Public Opinion Quarterly (Summer, 1983). It is, however, worth noting Cook, et al.'s argument that while the authors seemingly left no stone unturned in the quest to find any long-term impact of viewing, their models do not include or assess all the paths through which exposure to violence might cumulatively contribute to aggressive behavior.

The models they did analyze, though, led them to a conclusion of no effects and to juxtapose their findings against most other research. But what did they find? My reading of the book says they found a consistent pattern of positive,

but very small, associations. With measurement error statistically removed, they report that the greatest potential impact of long-term exposure to televised violence is to increase the average amount of aggressiveness among children by about six percent (p. 164).

The authors dismiss this effect as "small in substantive terms." This is the critical issue, and suggests that their work is not as contrary as they presume. Exposure to violence is, of course, not the only potential source of aggressive behavior and probably not even a major contributor. But, as has been pointed out innumerable times, it is probably among the easiest to change, institutional stubbornness notwithstanding. Whether that six percent is trivial or monumental is a matter of interpretation among policy makers.

On a final note, it is worth bemoaning the obsession of the public and the press with the simplistic and misleading question of whether television causes violence. The recently released NIMH "Update" of the 1972 report of the Surgeon General's Scientific Advisory Committee on Television and Social Behavior gave relatively little attention to this question. Instead, it reflected the tremendous expansion of research interests over the past decade into such areas as television and health, cognitive and affective functioning, role socialization, fear and mistrust, conceptions of social reality, interpersonal relations, and much more. Yet the press gave nary a glance to these issues, and the headlines droned on about violence. The delay in the publication of the NBC study can only help continue to deflect attention away from these other crucial issues.