

MASS MEDIA EFFECTS ON VIOLENT BEHAVIOR

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ABSTRACT

The literature on the effect of exposure to media violence (including exposure to violent pornography) on aggressive behavior is critically reviewed. Evidence and theoretical arguments regarding short-term and long-term effects are discussed. Three points are emphasized: 1. Exposure to violence in laboratory and field experiments is as likely to affect nonaggressive antisocial behavior as it does aggressive behavior. The pattern is consistent with a sponsor effect rather than a modeling effect: an experimenter who shows violent films creates a permissive atmosphere; 2. the message that is learned from the media about when it is legitimate to use violence is not much different from the message learned from other sources, with the exception that illegitimate violence is more likely to be punished in media presentations; 3. the fact that violent criminals tend to be versatile—they commit nonviolent crimes as well—is inconsistent with explanations that emphasize proviolence socialization (from the media or other sources). I conclude that exposure to television violence probably does have a small effect on violent behavior for some viewers, possibly because the media directs viewer's attention to novel forms of violent behavior that they would not otherwise consider.

INTRODUCTION

Watching violence is a popular form of entertainment. A crowd of onlookers enjoys a street fight just as the Romans enjoyed the gladiators. Wrestling is a popular spectator sport not only in the United States, but in many countries in the Middle East. People enjoy combat between animals, e.g., cock fights in Indonesia, bull fights in Spain, and dog fights in rural areas of this country. Violence is frequently depicted in folklore, fairy tales, and other literature. Local news shows provide extensive coverage of violent crimes in order to increase their ratings.

Technological advances have dramatically increased the availability of violent entertainment. The introduction of television was critical, particularly in making violent entertainment more available to children. More recently, cable systems, videocassette recorders, and video games have increased exposure. Hand-held cameras and video monitors now permit filming of actual crimes in progress. Economic competition for viewers, particularly young viewers, has placed a premium on media depictions of violence.

Not long after the introduction of television in American households, there occurred a dramatic increase in violent crime (Centerwall 1989). Some scholars and commentators see a causal connection. The most common argument is that children imitate the violence they see on television. The process of imitation is emphasized by social learning theory—a well-established approach in social psychology (Bandura 1983). For both practical and theoretical reasons, then, an interest developed in examining whether exposure to violence in the media affects the incidence of violence.

Violence usually refers to physical aggression. Aggression is usually defined as any behavior involving an intent to harm another person. Some studies of media effects, however, examine behaviors that do not involve an intent to harm. For example, a common procedure is to see whether children will hit a “Bobo” doll after observing an adult model do so or after being exposed to media violence. It seems unlikely that hitting a Bobo doll involves an intent to do harm (Tedeschi et al 1974). Other studies include measures of nonviolent criminal behavior, most of which do not involve an intent to do harm. Of course, it depends on what is meant by intent, a term most researchers do not define. Tedeschi & Felson (1994) define an intent to do harm as a behavior in which the actor expects the target will be harmed and values that harm.¹ Offenders who commit larceny and other nonviolent crimes know that the victim will be harmed, but in most cases they do not value that harm; harm is not their goal.

In the first section of this review, I discuss the empirical evidence regarding whether media violence has a causal effect on the aggressive behavior of viewers. I review the classic studies, the meta-analyses, and some more recent research. In the second section I examine the theoretical processes that might explain short-term effects, should they exist, and discuss relevant evidence. I do the same for long-term effects in the third section.²

¹An alternative definition is that intentional harm involves deliberate harm or expected harm. However, teachers sometimes give low grades with the expectation that it will make their students unhappy, but their behavior should not be defined as aggressive, unless they also value that harm. Tedeschi & Felson (1994) substitute the term coercion for aggression and include coercive actions in which the actor values compliance as well as harm.

²This chapter borrows from Tedeschi & Felson (1994).

EMPIRICAL EVIDENCE REGARDING MEDIA EFFECTS ON AGGRESSION

The relationship between exposure to media violence and aggression has been examined using laboratory experiments, field experiments, natural experiments, and longitudinal analyses based on correlational data. I review some of the key research in each of these domains.

Laboratory Experiments

Laboratory experiments examine short-term effects of media violence. Most studies show that subjects in laboratory experiments who observe media violence tend to behave more aggressively than do subjects in control groups. A meta-analysis of these studies reveals consistent and substantial media effects (Andison 1977). However, research is inconsistent in showing whether it is necessary to provoke subjects before showing violence to get an effect (Freedman 1984). Thus, it is not clear whether media exposure acts as instigator of aggression in the laboratory or merely as a facilitator.

Researchers have raised questions about the external validity of laboratory experiments in this area (Freedman 1984, Cook et al 1983). They point out that the laboratory situation is very different from situations leading to violence outside the laboratory (e.g. Tedeschi & Felson 1994). For subjects to engage in aggressive behavior in the laboratory, the behavior must be legitimated. Subjects are told, for example, that the delivery of shocks is a teaching method or a part of a game. Subjects are then subjected to an attack by a confederate and given a chance to retaliate. Unlike aggressive behavior outside the laboratory, there is no possibility that this will be punished by third parties or subject them to retaliation from the target. It is unknown to what extent these differences limit the generalizability of experimental studies. Evidence suggests that aggression measures in many laboratory studies do involve an intent to harm (Berkowitz & Donnerstein 1982). Experimental subjects may not be so different from those who engage in violence outside the laboratory, who see their behavior as legitimate and who do not consider its costs.³

The demand cues in these studies are probably a more significant problem. Demand cues are instructions or other stimuli that indicate to subjects how the

³According to Freedman (1984), effects outside the laboratory are likely to be weaker than laboratory effects because violent programs are mixed with other types of programs. Friedrich-Cofer & Huston (1986) dispute this point, arguing that experimental research underestimates media effects. They claim that the stimuli used in experimental research are brief and often less violent than typical television programs and that the presence of experimenters inhibits subjects from engaging in aggressive behavior in laboratory settings.

experimenter expects them to behave.⁴ Experimenters who show violent films are likely to communicate a message about their attitudes toward aggression. A violent film may imply to subjects that the experimenter is a permissive adult or someone not particularly offended by violence. Just a few subjects aware of the demand and compliant could account for the mean differences in aggression found between experimental conditions.

The laboratory is a setting that exaggerates the effects of conformity and social influence (see Gottfredson & Hirschi 1993). The extent of compliance in laboratory settings is dramatically demonstrated in Milgram's (1974) well-known research on obedient aggression. Subjects' behavior is easily influenced for at least three reasons: (a) The standards for behavior are unclear and the situation is novel (Nemeth 1970); (b) subjects are influenced by the prestige of the experimenter and the scientific enterprise; (c) subjects want to avoid being perceived as psychologically maladjusted by the psychologist-experimenter (Rosenberg 1969).

Field Experiments

Concerns about external validity have stimulated researchers to employ field experiments. Field experiments retain the advantages of experimental design but avoid the problem of demand cues since subjects do not usually know they are being studied. A number of such studies have been carried out in institutionalized settings (Feshbach & Singer 1971, Leyens et al 1975, Parke et al 1977). In these studies, boys are exposed to either violent or nonviolent programming, and their aggressive behavior is observed in the following days or weeks. Each of the studies has some important methodological limitations (see Freedman 1984). For example, although the boys in each treatment lived together, the studies used statistical procedures that assumed that each boy's behavior was independent. Even if one overlooks the limitations, the results from these studies are inconsistent. In fact, one of the studies found that the boys who watched violent television programs were less aggressive than the boys who viewed nonviolent shows (Feshbach & Singer 1971).

The results of field experiments have been examined in at least three meta-analyses. Hearold's (1986) meta-analysis of a broad range of experimental studies revealed an effect for laboratory experiments but no effect for field experiments. A meta-analysis that included more recent studies, however, did find an effect for field experiments (Paik & Comstock 1994). Finally, Wood et al's meta-analysis (1991) was restricted to field studies of media violence

⁴Any cue that indicates which direction the experimenter prefers would be a demand cue. In their strongest form demand cues give away the experimenter's hypothesis to subjects, who then compliantly act to confirm the hypothesis. In their weaker form, demand cues simply guide behavior without creating awareness of the hypothesis.

on unconstrained social interaction.⁵ In all of these studies children or adolescents were observed unobtrusively after being exposed to an aggressive or nonaggressive film. In 16 studies subjects engaged in more aggression following exposure to violent films, while in 7 studies subjects in the control group engaged in more aggression. In 5 of the studies there was no difference between control and experimental groups.

Natural Experiments: The Introduction of Television

These studies take advantage of the fact that television was introduced at different times in different locations. They assume that people who are exposed to television will also be exposed to a high dose of television violence. This is probably a reasonable assumption given the extremely high correlation between television viewing and exposure to television violence (Milavsky et al 1982).

Hennigan et al (1982) compared crime rates in American cities that already had television with those that did not. No effect of the presence or absence of television was found on violent crime rates in a comparison of the two kinds of cities. Furthermore, when cities without television obtained it, there was no increase in violent crime. There was an increase in the incidence of larceny, which the authors attributed to relative deprivation suffered by viewers observing affluent people on television.⁶

Joy et al (1986) examined changes in the aggressive behavior of children after television was introduced into an isolated Canadian town in the 1970s. The town was compared to two supposedly comparable towns that already had television. Forty-five children in the three towns were observed on the school playground in first and second grade and then again two years later. The frequency of both verbal and physical aggression increased in all three communities, but the increase was significantly greater in the community in which television was introduced during the study. Some of the results were not consistent with a television effect, however. In the first phase of the study, the children in the community without television were just as aggressive as the children in the communities that already had television. Without television they should have been less aggressive. The children in the community where television was introduced then became more aggressive than the children in the other communities in the second phase, when all three communities had television. At this point, the level of aggressive behavior in the three communities should have been similar. To accept the findings, one must assume that the community without television at the beginning of the study had more

⁵Some of the studies were in laboratory settings, but subjects did not know that their aggressive behavior was being observed as part of the study.

⁶The hypothesis that consumerism, promoted by advertising and the depiction of wealth on television, leads to more financially motivated crime has never been tested, to my knowledge.

aggressive children than the other communities for other reasons, but that this effect was counteracted in the first phase by the fact that they were not exposed to television. That assumption implies that there are other differences between the communities and thus casts doubt on the findings of the study.

Centerwall (1989) examined the relationship between homicide rates and the introduction of television in three countries: South Africa, Canada, and the United States. Television was introduced in South Africa in 1975, about 25 years after Canada and the United States. The white homicide rate increased dramatically in the United States and Canada about 15 years after the introduction of television, when the first generation of children who had access to television were entering adulthood. The white homicide rate declined slightly in South Africa during this time period. While Centerwall ruled out some confounding factors (e.g. differences in economic development), causal inference is difficult, given the many differences between the countries involved. In addition, Centerwall could not determine at the time he wrote whether the level of violence had increased 15 years after the introduction of television in South Africa; thus an important piece of evidence was missing.

Centerwall also examined the effect of the introduction of television in the United States. He found that urban areas acquired television before rural areas, and their homicide rates increased earlier. However, social changes in general are likely to occur in urban areas before they occur in rural areas. He also found that households of whites acquired television sets before households of blacks, and their homicide rates increased earlier as well. It is difficult to imagine an alternative explanation of this effect.

Still, the methodological limitations of these studies make it difficult to have confidence in a causal inference about media effects. The substantial differences between the comparison groups increase the risk that the relationship between the introduction of television and increases in aggression is spurious.

Natural Experiments: Publicized Violence

The effects of highly publicized violent events on fluctuations in homicide and suicide rates over time have been examined in a series of studies (see Phillips 1986 for a review). Phillips (1983) found an increase in the number of homicides after highly publicized heavyweight championship fights. Modeling effects were only observed when the losing fighter and the crime victims were similar in race and sex. The loss of prize fights by white fighters was followed by increases in deaths through homicide of white males on days 2 and 8. The loss of prize fights by blacks was followed by an increase in homicide deaths for black males on days 4 and 5. The rise in the homicide rate was not canceled out by a subsequent drop, suggesting that the prize fights affected the incidence and not just the timing of homicides.

Baron & Reiss (1985) attribute these effects to the fact that prize fights tend to occur during the week and homicides are more likely to occur on weekends. They were able to replicate Phillips' findings selecting weeks without prizefights and pretending that they had occurred. In response to this critique, Phillips & Bollen (1985) selected different weeks and showed that the weekend effect could not account for all of the findings. Miller et al (1991) replicated some of Phillips' results, but found that the effect only occurred on Saturdays following highly publicized fights.

Freedman (1984) has criticized Phillips' research on other methodological grounds, and Phillips (1986) has addressed these criticisms. There are still unresolved questions such as why effects tended to occur on different days for different races. In addition, experimental results suggest that watching boxing films does not affect the viewer's aggressive behavior. Geen (1978) found that, when provoked, college students were more aggressive after viewing vengeful aggression but not after viewing a boxing match (see also Hoyt 1970).

Longitudinal Surveys

Survey research demonstrates that the correlation between the amount of exposure to television violence and frequency of aggressive behavior generally varies between .10 and .20 (Freedman 1984, see Paik & Comstock 1994 for slightly higher estimates). There are good reasons to think the relationship is at least partly spurious. For example, children with favorable attitudes toward violence may be more likely to engage in violence and also more likely to find violence entertaining to watch. Also, children who are more closely supervised may be less likely to engage in violence and less likely to watch television. Intelligence, need for excitement, level of fear, and commitment to school are other possible confounding variables. Wiegman et al (1992) found that intelligence was negatively associated with both exposure to violence and aggressive behavior.

Longitudinal data has been used to examine whether viewing television violence produces changes in aggressive behavior. These studies statistically control for aggression at T1 in order to isolate causal effects on aggression at T2. Spuriousness is still possible if some third variable is associated with exposure to media violence and changes in aggressive behavior over time.

The main longitudinal evidence for a causal link between viewing violence and aggressive behavior has been provided by Eron, Huesmann, and their associates (Eron et al 1972, Huesmann & Eron 1986). In the first study, they examined the effect of children's exposure to television violence at age eight on aggressive behavior at age eighteen. A measure of viewing television violence at Time 1 was obtained by asking parents the names of their children's favorite television shows. These shows were coded for the level of violence depicted.

Aggressive behavior at Time 2 was measured by ratings of aggressiveness by peers, self-reports, and the aggression subscale on the MMPI.⁷ Effects of television violence were found only for boys and only on the peer nomination measure.

In addition to the inconsistent results, there are some measurement problems in this study (see Surgeon General's Report on Television Violence 1972, Freedman 1984). First, the aggression measure included items referring to antisocial behavior that do not involve aggression. Second, the measure of television exposure is based on parents' beliefs about the favorite programs of their children. Later research found that parental reports of their children's favorite programs are not strongly correlated to children's self-reports of total exposure (Milavsky et al 1982).

Three-year longitudinal studies of primary school children were later carried out in five countries: Australia, Israel, Poland, Finland, and the United States (Huesmann & Eron 1986). Aggression was measured by the same peer nomination measure as the one used in the earlier research. The children were asked to name one or two of their favorite programs and to indicate how often they watched them. Complex and inconsistent results were obtained. In the United States, television violence had a significant effect on the later aggressiveness of females but not males, a reversal of the effect found in their first study (Huesmann & Eron 1986). An effect of the violence of favorite programs on later aggression was found only for boys who rated themselves as similar to violent and nonviolent television characters. A similar conditional effect was found for males in Finland, but there was no effect of viewing television violence on later aggressiveness of females (Lagerspetz & Viemero 1986). In Poland a direct effect of violence in favorite programs was found on later aggressiveness for both males and females (Fraczek 1986). No effect of early viewing of television violence was found on subsequent aggressiveness for either males or females in Australia (Sheehan 1986), or among children living in a Kibbutz in Israel (Bachrach 1986). A television effect was found for city children in Israel when the measure of aggression was a single item asking "who never fights." But the effect did not occur on the same peer nomination measure that had been used in the other cross-national studies.

Negative evidence was obtained in a large-scale, methodologically sophisticated, longitudinal study carried out by Milavsky et al (1982). Their study was based on data collected from 3200 students in elementary and junior high schools in Fort Worth and Minneapolis. Students identified the programs they

⁷An important requirement of such studies is that they control for the aggressiveness of the viewer at the earlier time period, when looking at the effect of earlier exposure on later aggression. Eron & Huesmann do so in later reanalyses of their data.

had watched in the last four weeks and indicated how many times they had watched them; these were coded for violent content.⁸ The authors refined the peer nomination measure of aggression used by Eron et al to include intentional acts of harm-doing, but not general misbehavior.

There was no evidence that any of the measures of exposure to television violence produced changes in aggressive behavior over time. The authors corrected for measurement error and used a variety of time lags, subsamples, and measures of exposure to television violence and aggressive behavior. In spite of a thorough exploration of the data, they found no evidence that exposure to violence on television affected the aggressive behavior of children. While the coefficients in most of the analyses were positive, they were all close to zero and statistically insignificant. The abundance of positive correlations led some critics to reject Milavsky et al's conclusion of no effect (e.g. Friedrich-Cofer & Huston 1986).

A more recent longitudinal study in the Netherlands also failed to find a media effect (Wiegman et al 1992). The children were surveyed in either the second or fourth grade and then again two years later. Peer nominations were used as a measure of aggressive behavior. The lagged effect of exposure on aggressive behavior was small and statistically insignificant.

It is difficult to reach a conclusion on the long-term effects of viewing television violence from these longitudinal studies. The studies that used better measurement failed to find an effect. In the studies where an effect was found, the relationship was between favorite show violence and subsequent aggression, rather than the amount of exposure to television violence, and Milavsky, et al did not replicate that effect. The findings reported in the cross-national studies were inconsistent and had as many negative findings as positive ones. Therefore one must conclude that longitudinal studies have not demonstrated a relationship between the amount of violence viewed on television and subsequent aggressive behavior.⁹

THEORETICAL EXPLANATIONS OF SITUATIONAL EFFECTS

The experimental results described above show that exposure to media violence can have at least a short-term effect on aggressive behavior. In this section, I

⁸Also included were parental reports of a child's favorite programs, and self-reports of children of their favorite programs. These measures of exposure to television violence were poor indicators of overall exposure.

⁹Valkenburg et al (1992) found that violent programming increased the level of aggressive-heroic fantasies found in a longitudinal analyses among Dutch children. However, nonviolent dramatic programming had the same effect.

consider theoretical reasons for expecting situational effects. I also review some of the evidence regarding these theoretical mechanisms.

Cognitive Priming

According to a cognitive priming approach, the aggressive ideas in violent films can activate other aggressive thoughts in viewers through their association in memory pathways (Berkowitz 1984). When one thought is activated, other thoughts that are strongly connected are also activated. Immediately after a violent film, the viewer is primed to respond aggressively because a network of memories involving aggression is retrieved. Evidence indicates that media violence does elicit thoughts and emotional responses related to aggression (Bushman & Geen 1990).

Huesmann (1982) makes a similar argument. He suggests that children learn problem-solving scripts in part from their observations of others' behavior. These scripts are cognitive expectations about a sequence of behaviors that may be performed in particular situations. Frequent exposure to scenes of violence may lead children to store scripts for aggressive behavior in their memories, and these may be recalled in a later situation if any aspect of the original situation—even a superficial one—is present.

The classic studies of these effects involve the exposure of subjects to the fight scene from a film, *The Champion*, starring Kirk Douglas. In one of these studies subjects were either shocked frequently or infrequently by a confederate, witnessed the fight scene, or viewed a neutral film, and then had an opportunity to shock the confederate, whose name was either Bob or Kirk (Berkowitz & Geen 1966). Subjects gave the confederate the most shocks in the condition when they had been provoked, had viewed the violent film, and the confederate had the same name as the film's star.

Tedeschi & Norman (1985) attribute the results from these studies to demand cues (see also Tedeschi & Felson 1994). They point out that experimenters mention the fact that the confederate's first name is the same as Kirk Douglas' in their instructions, and that they justify to subjects the beating that Kirk Douglas received. A series of studies have shown that it is necessary to provide this justification to get a violent film effect (Geen & Berkowitz 1967, Berkowitz 1965, Berkowitz et al 1962, Berkowitz & Rawlings 1963, Meyer 1972b).

Josephson (1987) examined the combined effects of exposure to a violent film and retrieval cues in a field experiment with second and third grade boys. The boys were exposed to either a violent film—in which a walkie-talkie was used—or a nonviolent film. The boys were also frustrated either before or after the film. Later they were interviewed by someone holding either a walkie-talkie or a microphone. After the interview, the boys played a game of field hockey and their aggressive behavior was recorded. It was predicted that boys

who were exposed to both violent television and a walkie-talkie would be most aggressive in the game, since the walkie-talkie would lead them to retrieve scripts associated with the violent film. The hypothesis was confirmed for boys who were, according to teacher ratings, aggressive. Boys who were identified as nonaggressive inhibited their aggression when exposed to the walkie-talkie and the film. Josephson suggested that for these nonaggressive boys, aggression may be strongly associated with negative emotions such as guilt and fear which, when primed, may inhibit aggression. If we accept this post-hoc interpretation, it suggests that media violence may increase or inhibit the violent behavior of viewers depending on their initial predisposition. Such effects are likely to be short-term, and they may have no effect on the overall rate of violence.

Arousal from Pornography

According to Bandura (1973), emotional arousal facilitates and intensifies aggressive behavior. The facilitating effect of emotional arousal occurs only when the individual is already prone to act aggressively. If the individual is predisposed to behave in some other way, then emotional arousal will facilitate that behavior. Arousal energizes any behavior that is dominant in the situation.

Zillmann (1983) explains the facilitative effects of arousal in terms of excitation transfer. He has proposed that arousal from two different sources may combine with one another and be attributable to the same source. When the combined arousal is attributed to anger, the individual is likely to be more aggressive than would have been the case if only the anger-producing cue has been present.

Some research has examined whether the arousal produced by pornography facilitates aggressive behavior. A series of experiments have been carried out in which subjects are exposed to sexual stimuli and then allowed to aggress against another person, who may or may not have provoked them. The prediction is that arousal produced by pornography should increase aggression when a subject has been provoked. The message communicated by pornography and the gender of actor and target should not matter unless they affect the level of arousal.

Experiments that have examined the effects of arousal from pornography have produced mixed results. Some studies have found that erotic films increased the aggressiveness of subjects who had been provoked by the victim, while others have shown that pornography has an inhibitory effect (Zillman 1971, Meyer 1972a, Zillmann et al 1974, Baron & Bell 1973, 1977, Donnerstein et al 1975).

Researchers have developed hypotheses to provide explanations for the conditions under which opposite effects are obtained (Baron 1974, White 1979). Zillmann et al (1981) explained the contradictory findings using an arousal-affect hypothesis. They proposed that arousal has both an excitation component and an affective component. If arousal is accompanied by negative affect, it

should add to the arousal produced by anger, and increase the level of aggression. If arousal is accompanied by positive affect, it should subtract from the arousal produced by anger, and decrease the level of aggression. The findings from research on the arousal-affect hypothesis are inconclusive (see Sapolski 1984, Tedeschi & Felson 1994 for reviews).

Even if these results are real, their significance for pornography effects outside the experimental lab seems trivial. They suggest, for example, that a man enjoying a pornographic film is less dangerous when provoked, while a man who dislikes the film, but is still aroused by it, is more likely to retaliate for a provocation. Perhaps the findings have more implications for the effects of arousal from other sources. For example, it is possible that arousal from the car chase in the Rodney King incident contributed to the violent behavior of the police.

It is difficult to manipulate arousal in the laboratory without also affecting the meanings subjects give to those manipulations (Neiss 1988). Experimenters who show pornographic films communicate information about their values and expectations and thus create demand cues. I discuss this issue in the next section.

Sponsor Effects

Demand cues provide a general explanation of short-term media effects in the experimental laboratory. Wood et al (1991) suggest that demand cues may be a type of "sponsor effect" that occurs outside the experimental laboratory as well:

Viewers are likely to believe that the violent presentation is condoned by the media sponsor, whether it be an experimenter, one's family, the television networks or movie studios, or society in general. . . . Sponsor effects are not artifacts of laboratory procedures; they also occur in field settings (Wood 1991:373).

Wood et al's (1991) concept of sponsor effects appears to include both social learning and situational conformity. Social learning involves socialization and enduring effects on the viewer. Viewers may be more likely to internalize a media message if they think it is sponsored by someone they respect. A sponsor effect would enhance whatever message is being conveyed.

Field and laboratory experiments seem more likely to produce sponsor effects involving situational conformity. By showing a violent film, sponsors may communicate that they are not very strict or that they have a permissive attitude toward aggressive behavior. Young people, who are normally inhibited in front of adults, may engage in aggressive behavior if they think that they can get away with it. For example, students often misbehave when they encounter less experienced substitute teachers. According to this line of thinking, young

people who are exposed to media violence should feel disinhibited and should be more likely to misbehave in a variety of ways, at least while adults are present. When the sponsors of the film are no longer present, the effects should disappear.

Meta-analyses show that exposure to violence is related to nonaggressive forms of antisocial behavior. Hearold (1986) performed a meta-analysis of experiments that included studies of effects of exposure to media violence on antisocial behavior generally. The effects of media violence on antisocial behavior were just as strong as the effects of media violence on violent behavior. A more recent meta-analysis that focused on all types of studies yielded similar results (Paik & Comstock 1994).

A study performed by Friedrich & Stein (1973) provides an example of an experiment showing general effects of exposure to media violence on antisocial behaviors. They found that nursery school children exposed to violent cartoons displayed more aggression during free play than children exposed to neutral films. However, they also found that children exposed to violence had lower tolerance for minor delays, lower task persistence, and displayed less spontaneous obedience in regard to school rules. These behaviors clearly do not involve an intent to harm.

Additional evidence for a sponsor effect comes from a study by Leyens et al (1975). They found that subjects delivered more shock to another person when they anticipated that the experimenter would show them violent films; it was not necessary for them to actually see the films. The investigators attributed this effect to priming, based on the assumption that the mere mention of violent films primes aggressive thoughts. It seems just as likely that sponsor effects were involved: an experimenter who is willing to show a violent film is perceived as more permissive or more tolerant of aggression.

The effects of exposure to television violence on antisocial behavior generally cast doubt on many of the theoretical explanations usually used to explain media effects on violence. Explanations involving cognitive priming or arousal cannot explain why those who view violence should engage in deviant behavior generally. Explanations that stress modeling (to be discussed) cannot explain this pattern of effects either. It is possible, however, that viewers imitate the low self-control behaviors of the characters they observe in television and films, rather than violence specifically. Children model the self-control behavior of adults in experimental situations (Bandura & Walters 1963), but it is not clear whether socialization or short-term situational effects are involved.

Sponsor effects may also explain the results of experimental studies involving exposure to pornography. Paik & Comstock's (1994) meta-analysis shows effects of both pornography and violent pornography on antisocial behavior

in general. Experimenters who show pornography, especially violent pornography, may imply that they condone or at least are tolerant of taboo behavior (Reiss 1986). Subjects may be disinhibited in this permissive atmosphere and engage in more antisocial behavior.

In sum, these studies suggest that subjects may assume a more permissive atmosphere when they are shown a violent film, and their inhibitions about misbehavior generally are reduced. It is not yet clear whether their behavior reflects short-term conformity or longer-term socialization. Research is needed to determine whether subjects who view violent films in experiments engage in more aggression and other misbehavior in the absence of sponsors.

Television Viewing as a Routine Activity

According to the routine activity approach, crime should be less frequent when the routine activities of potential offenders and victims reduce their opportunities for contact (e.g. M Felson 1986). Any activity that separates those who are prone to violence from each other, or from potential victims, is likely to decrease the incidence of violence.

Messner uses this approach to argue that watching television can decrease the incidence of violence in society (Messner 1986, Messner & Blau 1987). Since people watch television at home, the opportunities for violence, at least with people outside the family, are probably reduced. When people watch television, they may also interact less often with other family members, so the opportunities for domestic violence may also be reduced. Messner found that cities with high levels of television viewing have lower rates of both violent and nonviolent crime (Messner 1986, Messner & Blau 1987). However, in an aggregate analysis of this type, one cannot determine the specific viewing habits of offenders or victims of criminal violence.¹⁰

The routine activities of young adult males are particularly important since they are most prone to use violence. Young adult males do not spend as much time as other groups watching television (Dimmick et al 1979). According to the routine activity approach, their level of violence would be lower if they did.

THEORETICAL EXPLANATIONS INVOLVING SOCIALIZATION

It is widely believed that people are more violent because they learn to be violent from their parents, their peers, and the mass media. These socialization effects

¹⁰Viewing violent television and viewing television are so highly correlated across cities that it does not matter which measure is used in analysis. The notion of catharsis provides an alternative explanation, but it cannot explain the negative relationship between exposure to television violence and the incidence of nonviolent crime.

tend to endure since they involve changes in the individual. The evidence on the versatility of criminal offenders casts doubt on the importance of this socialization process. Considerable evidence suggests that those who commit violent crime tend to commit nonviolent crime and other deviant acts as well. Studies of arrest histories based on both official records and self-reports show a low level of specialization in violent crime. For example, West & Farrington (1977) found that 80% of adults convicted of violence also had convictions for crimes involving dishonesty. Violent acts were also related to noncriminal forms of deviant behavior, such as sexual promiscuity, smoking, heavy drinking, gambling, and having an unstable job history.

The evidence that most offenders are versatile challenges the notion that violent offenders are more violent because of a special proclivity to engage in violence, due to exposure to media violence or any other factor. Individual differences in the propensity to engage in criminal violence reflect for the most part individual differences in antisocial behavior generally. Variations in the socialization of self-control and other inhibitory factors are probably important causal factors (Gottfredson & Hirschi 1990). Theories that emphasize specific socialization to violence are likely to be limited in their utility, since most violent offenders are generalists.

The versatility argument should not be overstated. Some people do specialize in violence, and exposure to media violence may play a role in their socialization. There are a variety of reasons one might expect viewers to learn aggressive behavior from the media. First, media depictions of violence may suggest novel behaviors to viewers that they otherwise might not have considered. Second, vicarious reinforcements and legitimization of violent actions may increase the tendency to model media violence. Third, viewers become desensitized about violence after a heavy diet of it on television. Finally, people may get a false idea of reality from observing a great deal of violence on television and develop unrealistic fears. I now examine each of the processes more closely.

Learning Novel Forms of Behavior

Bandura (1983) has argued that television can shape the forms that aggressive behavior takes. Television can teach skills that may be useful for committing acts of violence, and it can direct the viewer's attention to behaviors that they may not have considered. For example, young people may mimic karate and judo moves, or they may learn effective tactics for committing violent crime. This information may give direction to those who are already motivated to engage in aggression. Such a modeling process could lead to more severe forms of aggression. It could increase the frequency of violence if people who are motivated to harm someone choose a violent method they have observed on television.

There is anecdotal evidence that bizarre violent events have followed soon after their depiction on television, suggesting a form of copycat behavior. In one widely reported case in Boston, six young men set fire to a woman after forcing her to douse herself with fuel. The scene had been depicted on television two nights before. In another instance, four teenagers raped a nine-year-old girl with a beer bottle, enacting a scene similar to one in the made-for-TV movie *Born Innocent*. Such incidents may be coincidental, but they suggest the possibility that unusual and dramatic behaviors on television are imitated by viewers who might never otherwise have imagined engaging in such behaviors.

Modeling can also be used to explain contagion effects observed for highly publicized violence, such as airline hijackings, civil disorders, bombings, and political kidnapping. The tendency for such events to occur in waves suggests that at least some viewers imitate real events that are reported on television. However, the central argument about the relationship of viewing violence on television and viewers' aggressive behavior focuses on fictional events.

Vicarious Reinforcement and Legitimations

Bandura (1983) also suggested that television may inform viewers of the positive and negative consequences of violent behavior. Audiences can be expected to imitate violent behavior that is successful in gaining the model's objectives in fictional or nonfictional programs. When violence is justified or left unpunished on television, the viewer's guilt or concern about consequences is reduced. Thus Paik & Comstock's (1994) meta-analysis found that the magnitude of media effects on antisocial behavior was greater when the violent actor was rewarded or the behavior was legitimated.

It is not at all clear what message is learned from viewing violence on television. In most plots, the protagonist uses violence for legitimate ends while the villain engages in illegitimate violence. The protagonist usually uses violence in self-defense or to mete out an appropriate level of punishment to a dangerous or threatening criminal. Television conveys the message that while some forms of violence are necessary and legitimate, criminal violence is evil.

The consequences of the illegitimate violence portrayed in fictional television and film are more negative than the consequences of illegitimate violence in real life. In real life violent people often evade punishment, while in television, the villain is almost always punished. Thus, one could argue that television violence might reduce the incidence of criminal violence, since crime doesn't pay for TV criminals. Another difference is in the appeal of those who engage in illegitimate violence. In fictional television, those who engage in illegitimate violence tend to lack any attractive qualities that would lead to sympathy or identification. In real life, illegitimate violence may be committed by loved ones or others who are perceived to have desirable qualities.

Other factors may limit the effects of any message about the legitimacy, or the rewards and costs of violence. First, the lessons learned from the media about violence may be similar or redundant to the lessons learned about the use of violence conveyed by other sources. In fact, most viewers probably approve of the violent behavior of the protagonists. The influence of television on viewers who already agree with its message would be weak at best. Second, the audience may not take the message from fictional plots seriously. Modeling is more likely to occur after viewing nonfiction than after viewing fiction (Feshbach 1972, Berkowitz & Alioto 1973).¹¹ Third, the violent contexts and provocations observed on television are likely to be very different from the contexts and provocations people experience in their own lives. Evidence suggests that viewers take context and intentions into account before they model aggressive behavior (Geen 1978, Hoyt 1970). Straus (Baron & Straus 1987), on the other hand, suggests that people are likely to be influenced by the violence they observe regardless of its context, message, or legitimacy. According to cultural spillover theory, violence in one sphere of life leads to violence in other spheres.

Finally, some young children may miss the more subtle aspects of television messages, focusing on overt acts rather than on the intentions or contexts in which such acts occur. Collins et al (1984) found that kindergarten and second grade children were relatively unaffected by an aggressor's motives in their understanding of a violent program. They focused more on the aggressiveness of the behavior and its ultimate consequences. However, even if young children imitate the violence of models, it is not at all clear that they will continue to exhibit violence as they get older. When they are older, and they pay attention to the intentions and context in violent television, their behavior is more likely to reflect the messages they learn. It is also at these later ages that violent behavior, if it should occur, is likely to be dangerous.

Creating Unrealistic Fear

Bandura (1983) claims that television distorts knowledge about the dangers and threats present in the real world. The notion that television viewing fosters a distrust of others and a misconception of the world as dangerous has been referred to as the "cultivation effect" (Gerbner & Gross 1976). Research shows that heavy television viewers are more distrustful of others and overestimate their chances of being criminally victimized (see Ogles 1987 and Gunter 1994 for reviews).¹² The assumption is that these fears will lead viewers to perceive

¹¹In Paik & Comstock's (1994) meta-analyses the strongest effects were observed for cartoon programs. However, the subjects in these studies were children, and children may be more easily influenced.

¹²There is some evidence that the relationship is spurious; see Gunter's (1994) review.

threats that do not exist and to respond aggressively. It is just as plausible that such fears would lead viewers to avoid aggressive behavior against others, if they feel it is dangerous, and might lead to victimization. Persons who fear crime may also be less likely to go out at night or go to places where they may be victimized. If viewing television violence increases fear, it might decrease the level of violence.

Desensitization

Frequent viewing of television violence may cause viewers to be less anxious and sensitive about violence. Someone who becomes desensitized to violence may be more likely to engage in violence. This argument assumes that anxiety about violence inhibits its use.

Desensitization has been examined indirectly using measures of arousal. Research shows that subjects who view violent films are less aroused by violence later on (Thomas et al 1977; see Rule & Ferguson 1986 for a review). In addition, heavy viewers of television violence tend to respond less emotionally to violence than do light viewers.

There is no evidence that desensitization produces lower levels of violent behavior.¹³ Nor is it clear what effect should occur. Studies of desensitization measure arousal not anxiety, and arousal can facilitate violent behavior, according to the literature cited earlier (e.g. Zillmann 1983). If viewers are exposed to a heavy diet of television violence, one might argue that they will be less aroused by violence and therefore less likely to engage in violence. In addition, if viewers become desensitized to violent behavior on television, they may become indifferent to its message. Desensitization could thereby weaken the effect of a heavy diet of television violence.

Messages from Pornography

The discussion of situational effects of pornography on aggression focused on arousal as a mediating variable. Feminists have argued that pornography has special effects on violence against women because of the message it communicates (Dworkin 1981, MacKinnon 1984). Exposure to pornography supposedly leads to negative attitudes toward women which, in turn, affects the likelihood of rape and other forms of violence against women. It is argued, for example, that pornography leads male viewers to think of women as sex objects or as promiscuous (Linz & Malamuth 1993). Furthermore, some erotica portrays scenes of rape and sadomasochism. In such fictional forms the female victim may express pleasure during and after being raped, suggesting that women enjoy such treatment. Males who view such films may be induced to believe that

¹³Emergency room personnel may become desensitized to the consequences of violent behavior, but there is no evidence that they are more violent than other groups of people.

forceful sexual acts are desired by women. In addition, unlike illegitimate violence not associated with sex, violence in pornographic films rarely has negative consequences for the actor (Palys 1986, Smith 1976).

Evidence does not support the hypothesis that exposure to nonviolent pornography leads to violence toward women. Most experimental studies show no difference in aggression toward women between subjects exposed to pornographic films and control groups (for reviews, see Donnerstein 1984, Linz & Malamuth 1993). Research outside the laboratory has not demonstrated that exposure to pornography and violence toward women are even correlated, much less causally related. There is evidence that rapists report less exposure to pornography than controls, not more (see Linz & Malamuth 1993 for a review). Studies of the relationship between exposure to pornography and use of sexual coercion among college students yields mixed results (Demare et al 1993, Boeringer 1994).

Research using aggregate data has also failed to demonstrate a relationship between exposure to pornography and violence against women. Studies of the effect of changes in restrictions on pornography on rape rates show inconsistent results. States in which sex-oriented magazines are popular tend to have high rape rates (Baron & Straus 1987). However, it is questionable whether the state is a meaningful unit of analysis, given the heterogeneity within states. Gentry (1991) found no relationship between rape rates and circulation of sexually oriented magazines across metropolitan areas.

Effects of violent pornography have been reported in laboratory experiments, at least under certain conditions (see Linz & Malamuth 1993 for a review). Some studies show that an effect is obtained only if the sexual assault has positive consequences. In this case, subjects are told that the woman became a willing participant in the coercive sexual activities, and she is shown smiling and on friendly terms with the man afterwards (Donnerstein 1980). However, in a more recent study, exposure to a rape scene with positive consequences did not increase subjects' aggression toward women (Fisher & Grenier 1994).

The effects of exposure to violence with positive consequences have been examined in a field experiment. College students were exposed either to two films that showed women responding positively to men who had attacked them or to two neutral films (Malamuth & Check 1981). Subjects completed a survey that they thought was unrelated to the films several days later. Males who had viewed the violent films showed greater acceptance of violence against women. Note that these films did not involve pornography. Pornographic films in which the victim of sexual aggression is perceived as experiencing a positive outcome are quite rare (Garcia & Milano 1990).

The experimental evidence is mixed concerning whether pornography or violent pornography affects male attitudes toward women, according to Linz's (1989) review of the literature. Evidence that men who have negative attitudes toward women are more likely to engage in violence against women is also inconsistent. Some studies find that men who engage in sexual coercion have different attitudes toward women and rape than do other men, while other studies do not (Kanin 1969, Malamuth 1986, Ageton 1983, Rapaport & Burkhart 1984). It may be that sexually aggressive men are more likely to have antisocial attitudes generally. Thus, convicted rapists are similar to males convicted of other offenses in their attitudes toward women and women's rights (e.g. Howells & Wright 1978) and in their belief in rape myths (Hall et al 1986).

The literature on violence and attitudes toward women is plagued by conceptual and measurement problems. Measures of belief in rape myths are problematic (Tedeschi & Felson 1994). In addition, traditional attitudes about gender roles do not necessarily involve negative attitudes toward women and may be negatively associated with violence toward women and exposure to pornography. Thus, rape rates are twice as high at private colleges and major universities than at religiously affiliated institutions (Koss et al 1987). Males who report greater exposure to pornography have more (not less) liberal attitudes toward gender roles (Reiss 1986). Finally, even if a correlation between certain attitudes regarding women and violence could be established, the causal interpretation would be unclear. For example, it may be that men express certain beliefs to justify coercive behavior already performed (Koss et al 1985).

One limitation on the impact of pornography or any media effect is selective exposure (McGuire 1986). Media effects are likely to be limited to the extent that viewers choose programming that already reflects their values and interests. The argument in regard to media violence is that violence is so pervasive on television that all viewers, including impressionable children, are exposed. In the case of pornography, particularly violent pornography, there is much more selective exposure, since those interested in viewing this material must make a special effort to do so. In addition, the viewers of pornography are usually adults, not children.

Pornography provides fantasies for masturbation. Viewers may select material depicting activities that they already fantasize about. When they substitute commercially produced fantasies for their own fantasies, the content is not necessarily more violent. Palys (1986) found that less than 10% of scenes in pornography videos involved some form of aggression. A study of college students revealed that approximately 39% of men and women reported that they had fantasized about forced sex (Loren & Weeks 1986).

The versatility evidence is also relevant to the literature on pornography and rape. Most rapists do not specialize in rape nor in violent crime (Alder 1984, Kruttschnitt 1989). Therefore, theories that emphasize socialization of rape-supportive attitudes, whether learned from the media or elsewhere, are going to have limited utility for understanding individual differences in the proclivity to rape.

In summary, some experimental research suggests that violent pornography that depicts women enjoying the event can lead male subjects to engage in violence against women in the laboratory. The effect of these films appears to be similar to the effects of violent films without a sexual theme. Demand cues provide an alternative explanation of these results as well (see Reiss 1986). The external validity of these studies is questionable given the rarity of these themes in pornography, and given selective exposure.

SUMMARY AND CONCLUSIONS

The inconsistencies of the findings make it difficult to draw firm conclusions about the effects of exposure to media violence on aggressive behavior. Most scholars who have reviewed research in the area believe that there is an effect (Friedrich-Cofer & Huston 1986, Centerwall 1989). Other scholars have concluded that the causal effects of exposure to television have not been demonstrated (Freedman 1984, McGuire 1989).

Given the pervasiveness of media violence, it would be surprising if it had no effect on viewers. I agree with those scholars who think that exposure to television violence probably does have a small effect on violent behavior (Cook et al 1983). The reason that media effects are not consistently observed is probably because they are weak and affect only a small percentage of viewers. These weak effects may still have practical importance since, in a large population, they would produce some death and injuries. However, it seems unlikely that media violence is a significant factor in high crime rates in this country. Changes in violent crimes mirror changes in crime rates generally. In addition, the people who engage in criminal violence also commit other types of crime. An explanation that attributes violent behavior to socialization that encourages violence cannot easily explain the versatility of most violent criminals.

It seems likely that some people would be more susceptible to media influence than others. Therefore it is puzzling that research has not shown any consistent statistical interactions involving individual difference factors and media exposure. The failure to find individual difference factors that condition the effects of media exposure on aggressive behavior contributes to skepticism about media effects.

It seems reasonable to believe that the media directs viewers' attention to novel forms of violent behavior they might not otherwise consider. The anecdotal evidence is convincing in this area. There appear to be documented cases in which bizarre events on television are followed by similar events in the real world; the similarities seem too great to be coincidental. In addition, hijackings and political violence tend to occur in waves. Many parents have observed their children mimicking behaviors they've observed in films. Whether this process leads to a greater frequency of violence is unclear.

There is some evidence that the effects observed in laboratory experiments, and less consistently in field experiments, are due to sponsor effects. The fact that children who are exposed to violence tend to misbehave generally casts doubt on most of the other theoretical explanations of media effects. The issue has particular significance for laboratory research, where subjects know they are being studied and may be responding to demand cues. Research is needed in which sponsor effects are isolated and controlled. A field experiment in which subjects imitate violent behavior they have observed in the absence of the sponsor, but do not misbehave otherwise, would be convincing. Alternatively, there may need to be further development of the theoretical argument that self-control behavior is modelled.

It is not clear what lesson the media teaches about the legitimacy of violence, or the likelihood of punishment. To some extent that message is redundant with lessons learned from other sources of influence. The message is probably ambiguous and is likely to have different effects on different viewers. Young children may imitate illegitimate violence, if they do not understand the message, but their imitative behavior may have trivial consequences. Out of millions of viewers, there must be some with highly idiosyncratic interpretations of television content who intertwine the fantasy with their own lives, and as a result have an increased probability of engaging in violent behavior.

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